



September 27, 2022

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

**Re: Closure Request
King Tut Federal Com 001H
Incident Numbers NAPP2127234076 and NAPP2216436957
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 site assessment, excavation, and soil sampling activities performed at the King Tut Federal Com 001H. The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following two release events at the Site. Based on the excavation activities and laboratory analytical results from the soil sampling events, COG is submitting this Closure Request, describing remediation that has occurred and requesting closure for Incident Numbers NAPP2127234076 and NAPP2216436957.

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 (32.194700° N, 103.718300°W) and is associated with oil and gas exploration and production operations on Bureau of Land Management (BLM) Federal Land.

NAPP2127234076

On September 10, 2021, a low discharge pressure led to the discovery of a hole in the saltwater disposal (SWD) line. Approximately 14.5 barrels (bbls) of produced water were released into the adjacent pasture. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; however, there were no free-standing fluids to recover. COG reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on September 24, 2021. The release was assigned Incident Number NAPP2127234076.

NAPP2216436957

On June 6, 2022, a transfer line ruptured causing a release of approximately 14.89 barrels (bbls) of produced water into the adjacent pasture. No released fluids were recovered. COG reported the release to the NMOCD on a Release Notification Form C-141 on June 13, 2022. The release was assigned Incident Number NAPP2216436957.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. On September 15, 2022, borehole BH01 (New Mexico Office of the State Engineer (NMOSE) file number C-4665) was advanced to a depth of 120 feet bgs via air rotary drill rig. The borehole was located approximately 0.4 miles east of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Appendix A. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period, groundwater was not observed and it was confirmed that groundwater beneath the Site is greater than 120 feet bgs. The borehole was properly abandoned using hydrated bentonite chips. All wells used for depth to groundwater determination are depicted on Figure 1 and the associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an emergent wetland, located approximately 2.28 miles northeast 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 1 Closure Criteria (Closure Criteria) apply:

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet of the pasture area that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.

SITE ASSESSMENT ACTIVITIES

On October 4, 2021, site assessment activities were conducted to evaluate the September 10, 2021 release extent based on information provided on the Form C-141 and visual observations. Four preliminary assessment soil samples (SS01 through SS04) were collected within the release extent from a depth of 0.5 feet bgs. The preliminary soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The September 10, 2021 release extent and preliminary soil sample locations were mapped utilizing a handheld global positioning system (GPS) unit and are depicted on Figure 2.

On August 10, 2022, personnel visited the Site to evaluate the June 6, 2022 release extent. Five preliminary assessment soil samples (SS01 through SS05) were collected from a depth of 0.5 feet bgs. The preliminary samples were field screened as described above. The June 6, 2022 release extent and preliminary soil sample locations are depicted on Figure 2.

All soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS01 through SS04, collected from release event NAPP2127234076, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the reclamation standard. Laboratory analytical results for preliminary soil samples SS01 through SS05, collected from release event NAPP2216436957, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Results from soil samples SS04 and SS05 provided lateral delineation to the most stringent Table 1 Closure Criteria for the northern portion of release event NAPP2216436957. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix C. Based on visible staining in the release area, timing of the releases, and the unrecovered volume of produced water, additional delineation and excavation activities were warranted.

DELINEATION ACTIVITIES

On July 20, 2022, Ensolum personnel were at the Site to oversee more comprehensive delineation and excavation activities. Eight boreholes (BH01 and BH08) were advanced via hand-auger within and around the release extent for release event NAPP2127234076 and the southern extent of NAPP221643957, which overlapped. The boreholes were advanced to a depth of 4 feet bgs. Delineation soil samples were collected from each pothole from depths ranging from 1-foot to 4 feet bgs. Soil from the boreholes was field screened for VOCs and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the potholes were logged on lithologic soil sampling logs, which are included in Appendix A. The delineation soil sample locations are depicted on Figure 3.

Laboratory analytical results for delineation soil samples BH04/BH04A through BH08/BH08A indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the reclamation requirement for samples collected in the top four feet of pasture areas. Because soil samples BH05/BH05A through BH08/BH08A were collected around the release extent, compliant results successfully defined the lateral extent. Laboratory analytical results for delineation soil samples BH01/BH01A through BH03/BH03A, advanced within the overlapping release footprint, indicated chloride concentrations exceeded the reclamation requirement. The sample collected at terminal depth (4 feet bgs) indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

EXCAVATION ACTIVITIES

Impacted soil was excavated from the off-pad release area as indicated by visible staining and laboratory analytical results for the delineation soil samples BH01 through BH03. Excavation activities were performed to a depth of 4 feet bgs using track-mounted track hoe, hydrovac, and transport vehicle. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS13 were collected from the floor of the excavation at a depth of 4 feet bgs. Composite soil samples SW01 through SW06 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 4 feet bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 4.

The excavation area measured approximately 2,626 square feet and a total of 400 cubic yards of impacted soil were removed. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

Laboratory analytical results for excavation soil samples FS01 through FS13, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for excavation sidewall samples SW01 through SW06, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the reclamation requirement.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address impacted soil resulting from two release events at the Site. Both releases were laterally delineated to the most stringent of Table 1 Closure Criteria. Soil was excavated to a depth of 4 feet bgs from an area off pad where the two releases overlapped. Laboratory analytical results for the excavation floor soil samples indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and excavation sidewall samples were compliant with the reclamation requirements. Based on the soil sample analytical results, no further remediation was required. COG will backfill the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. The disturbed pasture area will be re-seeded with an approved Bureau of Land Management (BLM) seed mixture.

Excavation of impacted soil supported efforts to remediate and reclaim this Site following the September 2021 and June 2022 release events. Depth to groundwater has been determined to be greater than 100 feet bgs and no sensitive receptors were identified near the release extents. COG believes these remedial actions are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Numbers NAPP2127234076 and NAPP2216436957. The Final C-141 is included in Appendix E.

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

COG Operating, LLC
Soil Remediation
King Tut Federal Com 001H

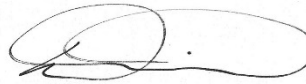
September 24, 2022

Page 5

Sincerely,
Ensolum, LLC



Kalei Jennings
Senior Scientist



Daniel, R. Moir, PG
Senior Managing Geologist

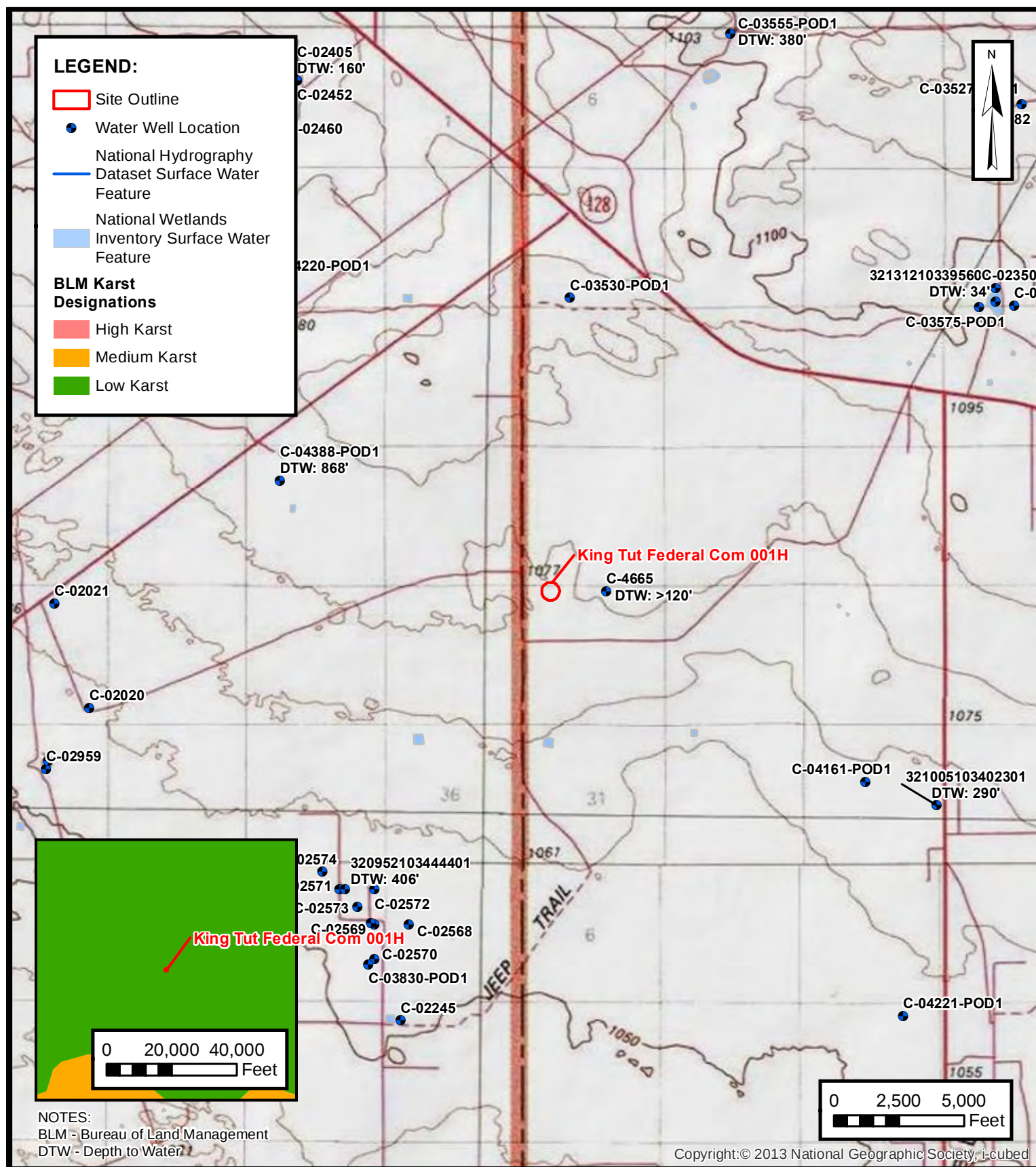
cc: Charles Beauvais, COG Operating, LCC
Bureau of Land Management

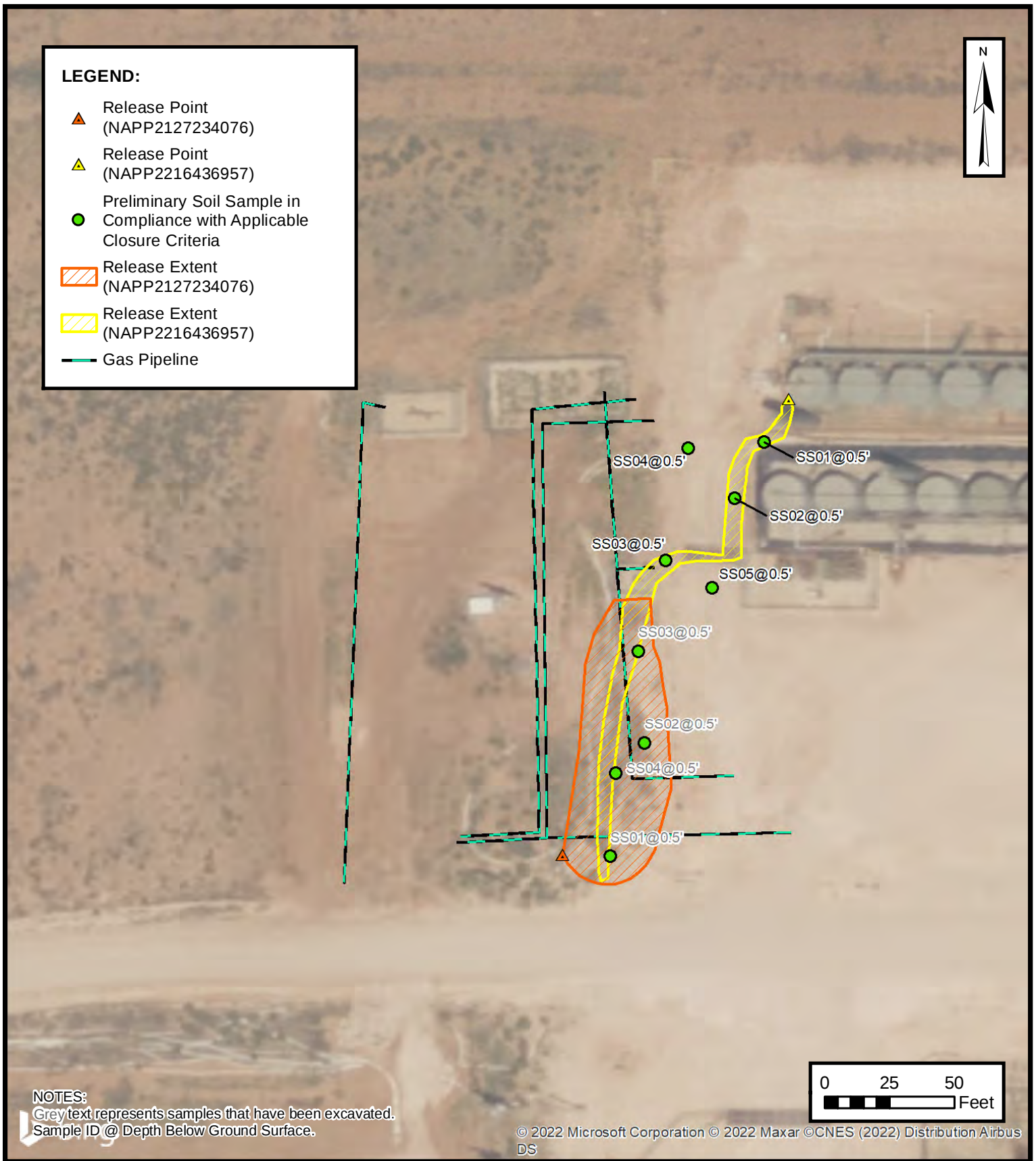
Attachments:

Figure 1	Site Receptor Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Lithologic/Soil Sampling Log
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports
Appendix D	NMOCD Notifications
Appendix E	Final C-141



FIGURES

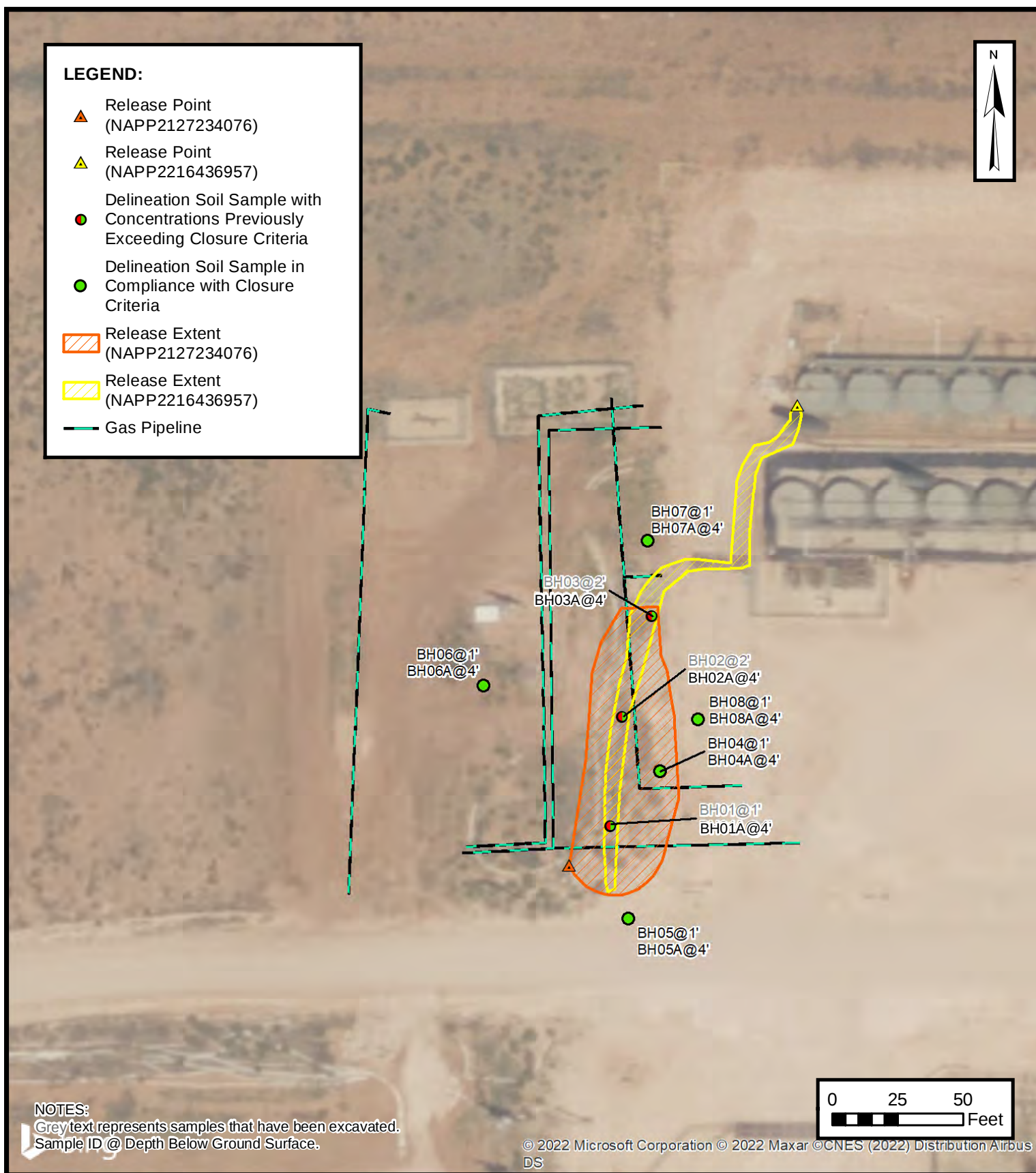




PRELIMINARY SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
 KING TUT FEDERAL COM 001H
 NAPP2127234076 and NAPP2216436957
 Unit D Sec 30 T24S R32E
 Lea County, New Mexico

FIGURE
2



DELINEATION SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
 KING TUT FEDERAL COM 001H
 NAPP2127234076 and NAPP2216436957
 Unit D Sec 30 T24S R32E
 Lea County, New Mexico

FIGURE
3

LEGEND:

-  Release Point (NAPP2127234076)
-  Release Point (NAPP2216436957)
-  Excavation Floor Sample in Compliance with Closure Criteria
-  Excavation Sidewall Sample in Compliance with Closure Criteria
-  Excavation Extent
-  Gas Pipeline



SW01@0-4'

FS01@4'

FS03@4'

FS02@4'

SW02@0-4'

SW03@0-4'

FS05@4'

FS04@4'

FS07@4'

FS06@4'

SW04@0-4'

FS08@4'

FS09@4'

SW05@0-4'

FS11@4'

FS10@4'

FS12@4'

FS13@4'

SW06@0-4'

NOTES:
Sample ID @ Depth Below Ground Surface.

0 25 50
Feet

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EXCAVATION SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
KING TUT FEDERAL COM 001H
NAPP2127234076 and NAPP2216436957
Unit D Sec 30 T24S R32E
Lea County, New Mexico

FIGURE**4**

ENSOLUM
Environmental & Hydrogeologic Consultants



TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 King Tut Federal Com 001H
 COG Operating, LLC
 Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Preliminary Assessment Soil Samples (NAPP2127234076)										
SS01	10/04/2021	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	419*
SS02	10/04/2021	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	560*
SS03	10/04/2021	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	533*
SS04	10/04/2021	0.5	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	600*
Preliminary Assessment Soil Samples (NAPP2216436957)										
SS01	08/10/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	6,050
SS02	08/10/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	53.9	<49.9	53.9	6,940
SS03	08/10/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	406
SS04	08/10/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	474
SS05	08/10/2022	0.5	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	335
Delineation Soil Samples										
BH01	07/20/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	3,150*
BH01A	07/20/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	1,530
BH02	07/20/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,720*
BH02A	07/20/2022	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	44.3
BH03	07/20/2022	2	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	4,510*
BH03A	07/20/2022	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	589
BH04	07/20/2022	1	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	72.4*
BH04A	07/20/2022	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	26.0
BH05	07/20/2022	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	60.3*
BH05A	07/20/2022	4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	11.7
BH06	07/20/2022	1	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	7.98*
BH06A	07/20/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	5.22
BH07	07/20/2022	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	13.2*
BH07A	07/20/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	17.1
BH08	07/20/2022	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	24.5*
BH08A	07/20/2022	4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	10.2
Excavation Floor Samples										
FS01	07/26/2022	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	620
FS02	07/28/2022	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	1,510
FS03	07/28/2022	4	<0.00200	<0.00401	<50.0	61.1	<50.0	61.1	61.1	65.8
FS04	07/28/2022	4	<0.00202	<0.00403	<50.0	71.4	<50.0	71.4	71.4	1,470



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 King Tut Federal Com 001H
 COG Operating, LLC
 Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
FS05	07/28/2022	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	1,170
FS06	07/28/2022	4	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	373
FS07	07/28/2022	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	3,180
FS08	07/28/2022	4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	73.1
FS09	07/28/2022	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	1,610
FS10	07/28/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	35.2
FS11	07/29/2022	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	586
FS12	07/29/2022	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	2,210
FS13	07/29/2022	4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	357
Excavation Sidewall Samples										
SW01	07/28/2022	0 - 4	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	563*
SW02	07/28/2022	0 - 4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	381*
SW03	07/29/2022	0 - 4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	165*
SW04	07/29/2022	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	13.9*
SW05	07/29/2022	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	100*
SW06	07/29/2022	0 - 4	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	148*

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

* indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard for chloride in the top 4 feet is 600 mg/kg

Grey text represents samples that have been excavated



APPENDIX A

Lithologic Soil Sampling Logs

		Client: <u>CONOCO PHILLIPS</u> Project Name: <u>KING TUT FEDERAL CO2H</u> Project Location: <u>LEA COUNTY, NM</u> Project Manager: <u>KALEI TENNING</u>		BORING LOG NUMBER <u>BH01</u> Project No. <u>0302024002</u>						
		Date Sampled: <u>09/15/2022</u> Drilled by: <u>WTWWS</u> Driller: <u>RUSSELL SOUTHERLAND</u> Logged by: <u>HADLIE GREEN</u> Sampler: <u>HADLIE GREEN</u>		Ground Surface Elevation: _____ Top of Casing Elevation: _____ North Coordinate: _____ West Coordinate: _____ Bench Mark Elevation: _____ * At Completion * At Well Stabilization		Borehole Diameter: <u>6"</u> Casing Diameter: _____ Well Materials: _____ Surface Completion: _____ Boring Method: <u>AIR ROTARY</u>				
DEPTH (ft)	SAMPLE INTERVAL	SAMPLE ID	RECOVERY (%)	FTD/PID READING (ppm)	POTENTIAL METRIC SURFACE	GEOLOGIC LOG SYMBOL	GEOLOGIC DESCRIPTION	BORING / WELL COMPLETION (GRAPHIC DEPICTION)		
pg. 1 of 2										
0						0'	CLICHE	CALICHE, light tan, fine to medium grain, up to 1" limestone clasts, slightly moist, no stain/odor.		
10						10'	SM	SILTY SAND, pinkish red, fine grain, 1-2 cm limestone clasts, well sorted, moderate grade, slightly consolidated, no stain/odor.		
20										
30										
40						5M	SM	SAA, reddish brown, trace limestone clasts (1-2 cm).		
50										
60						SM	SM	SAA, abundant subrounded mud clasts up to 1".		
70										
80										
90						SM	SM	90': SAA, some green mud clasts (1-3 mm), slightly consolidated.		
100										

100' 120'

 ENSOLUM								Sample Name: BH01		Date: 07/20/2022	
								Site Name: King Tut Federal 001H			
								Incident Number: NAPP2127234076 and NAPP2216436957			
								Job Number: 03D2024010 and 03D2024082			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: CS		Method: Hand-auger	
Coordinates:								Hole Diameter: 1'		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. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	2,456	0.4	Y	BH01	0	0	CCHE	Caliche-brown, well rounded, medium fine, grained sandstone SAA			
D	2,368	0.4	Y	BH01A	1	1	CCHE				
D	1,585	0.0	N	BH01B	2	2	CCHE				
					4	4	CCHE	SAA			
								TD @ 4 feet bgs			

								Sample Name: BH02		Date: 07/20/2022	
								Site Name: King Tut Federal 001H			
								Incident Number: NAPP2127234076 and NAPP2216436957			
								Job Number: 03D2024010 and 03D2024082			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: CS		Method: Hand-auger	
Coordinates:								Hole Diameter: 1'		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. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	456	0.6	Y	BH02	0	0	CCHE	Caliche-brown, well rounded, medium fine, grained sandstone SAA			
D	868	0.4	Y	BH02A	1	1	CCHE				
D	<168	0.0	N	BH02B	2	2	CCHE				
					4	4	CCHE	SAA			
								TD @ 4 feet bgs			

 ENSOLUM								Sample Name: BH03		Date: 07/20/2022	
								Site Name: King Tut Federal 001H			
								Incident Number: NAPP2127234076 and NAPP2216436957			
								Job Number: 03D2024010 and 03D2024082			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: CS		Method: Hand-auger	
Coordinates:								Hole Diameter: 1'		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. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	1,568	0.6	Y	BH03	0	0	CCHE	Caliche-brown, well rounded, medium fine, grained sandstone SAA			
D	4,267	0.4	Y	BH03A	1	1	CCHE				
D	596	0.0	N	BH03B	2	2	CCHE				
					4	4	CCHE	SAA			
								TD @ 4 feet bgs			

								Sample Name: BH04		Date: 07/20/2022	
								Site Name: King Tut Federal 001H			
								Incident Number: NAPP2127234076 and NAPP2216436957			
								Job Number: 03D2024010 and 03D2024082			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: CS		Method: Hand-auger	
Coordinates:								Hole Diameter: 1'		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. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	345	0.6	Y	BH04	0	0	CCHE	Caliche-brown, well rounded, medium fine, grained sandstone SAA			
D	<168	0.4	Y	BH04A	1	1	CCHE				
D	<168	0.0	N	BH04B	2	2	CCHE				
					4	4	CCHE	SAA			
								TD @ 4 feet bgs			

								Sample Name: BH05		Date: 07/20/2022	
								Site Name: King Tut Federal 001H			
								Incident Number: NAPP2127234076 and NAPP2216436957			
								Job Number: 03D2024010 and 03D2024082			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: CS		Method: Hand-auger	
Coordinates:								Hole Diameter: 1'		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. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	<168	0.6	Y	BH05	0	0	CCHE	Caliche-brown, well rounded, medium fine, grained sandstone SAA			
D	<168	0.4	Y	BH05A	1	1	CCHE				
D	<168	0.0	N	BH05B	2	2	CCHE				
					4	4	CCHE	SAA			
								TD @ 4 feet bgs			

								Sample Name: BH06		Date: 07/20/2022	
								Site Name: King Tut Federal 001H			
								Incident Number: NAPP2127234076 and NAPP2216436957			
								Job Number: 03D2024010 and 03D2024082			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: CS		Method: Hand-auger	
Coordinates:								Hole Diameter: 1'		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. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	<168	0.6	Y	BH06	0	0	CCHE	Caliche-brown, well rounded, medium fine, grained sandstone SAA			
D	<168	0.4	Y	BH06A	1	1	CCHE				
D	<168	0.0	N	BH06B	2	2	CCHE				
					4	4	CCHE	SAA			
								TD @ 4 feet bgs			

 ENSOLUM								Sample Name: BH07		Date: 07/20/2022	
								Site Name: King Tut Federal 001H			
								Incident Number: NAPP2127234076 and NAPP2216436957			
								Job Number: 03D2024010 and 03D2024082			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: CS		Method: Hand-auger	
Coordinates:								Hole Diameter: 1'		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. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	168	0.6	Y	BH07	0	0	CCHE	Caliche-brown, well rounded, medium fine, grained sandstone SAA			
D	168	0.4	Y	BH07A	1	1	CCHE				
D	<168	0.0	N	BH07B	2	2	CCHE				
					4	4	CCHE	SAA			
								TD @ 4 feet bgs			

								Sample Name: BH08		Date: 07/20/2022	
								Site Name: King Tut Federal 001H			
								Incident Number: NAPP2127234076 and NAPP2216436957			
								Job Number: 03D2024010 and 03D2024082			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: CS		Method: Hand-auger	
Coordinates:								Hole Diameter: 1'		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. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	<168	0.6	Y	BH08	0	0	CCHE	Caliche-brown, well rounded, medium fine, grained sandstone SAA			
D	<168	0.4	Y	BH08A	1	1	CCHE				
D	<168	0.0	N	BH08B	2	2	CCHE				
					4	4	CCHE	SAA			
								TD @ 4 feet bgs			



APPENDIX B

Photographic Log

**Photographic Log**

COG Operating, LLC

King Kut Federal Com 001H

Incident Numbers NAPP2127234076 and NAPP2216436957



Photograph 1

Date: 10/04/2021

Description: View of release area during initial assessment activities.



Photograph 2

Date: 10/04/2021

Description: View of release area during initial assessment activities.



Photograph 3

Date: 10/04/2021

Description: View of release area during initial assessment activities.



Photograph 4

Date: 10/04/2021

Description: View of release area during initial assessment activities.



Photographic Log

COG Operating, LLC

King Kut Federal Com 001H

Incident Numbers NAPP2127234076 and NAPP2216436957



Photograph 1

Date: 07/26/2022

Description: View of excavation activities.



Photograph 2

Date: 07/26/2022

Description: View of excavation activities.



Photograph 3

Date: 07/28/2022

Description: View of excavation activities.



Photograph 4

Date: 07/28/2022

Description: View of excavation activities.



APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation



Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-1370-1

Laboratory Sample Delivery Group: 31402909.180

Client Project/Site: King Tut Federal Com 001H

For:

WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Kalei Jennings

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
10/15/2021 3:58:12 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

LINKS

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

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

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Laboratory Job ID: 890-1370-1
SDG: 31402909.180

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Qualifiers

GC VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high 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.
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.
α	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

Eurofins Xenco, Carlsbad

Case Narrative

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Job ID: 890-1370-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1370-1

Receipt

The samples were received on 10/6/2021 9:40 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 2.4°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-9203 and analytical batch 880-9437 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-9371 and analytical batch 880-9354 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was 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: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Client Sample ID: SS01

Lab Sample ID: 890-1370-1

Date Collected: 10/04/21 14:58

Matrix: Solid

Date Received: 10/06/21 09:40

Sample Depth: 0 - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1	0.00200	mg/Kg		10/11/21 11:51	10/15/21 06:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/11/21 11:51	10/15/21 06:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/11/21 11:51	10/15/21 06:38	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		10/11/21 11:51	10/15/21 06:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/11/21 11:51	10/15/21 06:38	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		10/11/21 11:51	10/15/21 06:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	10/11/21 11:51	10/15/21 06:38	1
1,4-Difluorobenzene (Surr)	104		70 - 130	10/11/21 11:51	10/15/21 06:38	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/14/21 15:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/11/21 13:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	49.9	mg/Kg		10/13/21 11:33	10/13/21 21:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/13/21 11:33	10/13/21 21:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/13/21 11:33	10/13/21 21:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	10/13/21 11:33	10/13/21 21:54	1
o-Terphenyl	114		70 - 130	10/13/21 11:33	10/13/21 21:54	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	419		4.96	mg/Kg			10/15/21 11:45	1

Client Sample ID: SS02

Lab Sample ID: 890-1370-2

Date Collected: 10/04/21 15:02

Matrix: Solid

Date Received: 10/06/21 09:40

Sample Depth: 0 - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *1	0.00201	mg/Kg		10/11/21 11:51	10/15/21 06:58	1
Toluene	<0.00201	U	0.00201	mg/Kg		10/11/21 11:51	10/15/21 06:58	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		10/11/21 11:51	10/15/21 06:58	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		10/11/21 11:51	10/15/21 06:58	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		10/11/21 11:51	10/15/21 06:58	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/11/21 11:51	10/15/21 06:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	10/11/21 11:51	10/15/21 06:58	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Client Sample ID: SS02

Lab Sample ID: 890-1370-2

Date Collected: 10/04/21 15:02

Matrix: Solid

Date Received: 10/06/21 09:40

Sample Depth: 0 - 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	127		70 - 130	10/11/21 11:51	10/15/21 06:58	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/14/21 15:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			10/11/21 13:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		10/13/21 11:33	10/13/21 22:56	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		10/13/21 11:33	10/13/21 22:56	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		10/13/21 11:33	10/13/21 22:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130			10/13/21 11:33	10/13/21 22:56	1
o-Terphenyl	123		70 - 130			10/13/21 11:33	10/13/21 22:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	560		4.95	mg/Kg			10/15/21 11:51	1

Client Sample ID: SS03

Lab Sample ID: 890-1370-3

Date Collected: 10/04/21 15:17

Matrix: Solid

Date Received: 10/06/21 09:40

Sample Depth: 0 - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *1	0.00199	mg/Kg		10/11/21 11:51	10/15/21 07:18	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/11/21 11:51	10/15/21 07:18	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/11/21 11:51	10/15/21 07:18	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/11/21 11:51	10/15/21 07:18	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/11/21 11:51	10/15/21 07:18	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/11/21 11:51	10/15/21 07:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	10/11/21 11:51	10/15/21 07:18	1
1,4-Difluorobenzene (Surr)	105		70 - 130	10/11/21 11:51	10/15/21 07:18	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/14/21 15:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/11/21 13:34	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Client Sample ID: SS03

Lab Sample ID: 890-1370-3

Date Collected: 10/04/21 15:17

Matrix: Solid

Date Received: 10/06/21 09:40

Sample Depth: 0 - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/13/21 11:33	10/13/21 23:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/13/21 11:33	10/13/21 23:16	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/13/21 11:33	10/13/21 23:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130			10/13/21 11:33	10/13/21 23:16	1
o-Terphenyl	120		70 - 130			10/13/21 11:33	10/13/21 23:16	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	533		5.04	mg/Kg			10/15/21 11:56	1

Client Sample ID: SS04

Lab Sample ID: 890-1370-4

Date Collected: 10/04/21 15:24

Matrix: Solid

Date Received: 10/06/21 09:40

Sample Depth: 0 - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1	0.00200	mg/Kg		10/11/21 11:51	10/15/21 07:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/11/21 11:51	10/15/21 07:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/11/21 11:51	10/15/21 07:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/11/21 11:51	10/15/21 07:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/11/21 11:51	10/15/21 07:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/11/21 11:51	10/15/21 07:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			10/11/21 11:51	10/15/21 07:39	1
1,4-Difluorobenzene (Surr)	103		70 - 130			10/11/21 11:51	10/15/21 07:39	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			10/14/21 15:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/11/21 13:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/12/21 10:29	10/13/21 06:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/12/21 10:29	10/13/21 06:28	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/12/21 10:29	10/13/21 06:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			10/12/21 10:29	10/13/21 06:28	1
o-Terphenyl	92		70 - 130			10/12/21 10:29	10/13/21 06:28	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Client Sample ID: SS04
Date Collected: 10/04/21 15:24
Date Received: 10/06/21 09:40
Sample Depth: 0 - 0.5

Lab Sample ID: 890-1370-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	600		4.95	mg/Kg			10/15/21 12:02	1	

Surrogate Summary

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

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)
890-1368-A-1-H MSD	Matrix Spike Duplicate	124	10 S1-
890-1368-A-1-J MS	Matrix Spike	1186 S1+	49 S1-
890-1370-1	SS01	96	104
890-1370-2	SS02	110	127
890-1370-3	SS03	92	105
890-1370-4	SS04	100	103
LCS 880-9203/1-A	Lab Control Sample	87	80
LCSD 880-9203/2-A	Lab Control Sample Dup	85	100
MB 880-9203/5-A	Method Blank	101	104
MB 880-9306/5-A	Method Blank	100	106
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-6818-A-1-I MS	Matrix Spike	101	94
880-6818-A-1-J MSD	Matrix Spike Duplicate	105	98
890-1370-1	SS01	102	114
890-1370-1 MS	SS01	115	115
890-1370-1 MSD	SS01	112	111
890-1370-2	SS02	110	123
890-1370-3	SS03	107	120
890-1370-4	SS04	92	92
LCS 880-9289/2-A	Lab Control Sample	90	85
LCS 880-9371/2-A	Lab Control Sample	81	82
LCSD 880-9289/3-A	Lab Control Sample Dup	87	81
LCSD 880-9371/3-A	Lab Control Sample Dup	86	86
MB 880-9289/1-A	Method Blank	102	106
MB 880-9371/1-A	Method Blank	107	123
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-9203/5-A

Matrix: Solid

Analysis Batch: 9437

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 9203

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/11/21 11:51	10/15/21 00:15	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/11/21 11:51	10/15/21 00:15	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/11/21 11:51	10/15/21 00:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/11/21 11:51	10/15/21 00:15	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/11/21 11:51	10/15/21 00:15	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/11/21 11:51	10/15/21 00:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	10/11/21 11:51	10/15/21 00:15	1
1,4-Difluorobenzene (Surr)	104		70 - 130	10/11/21 11:51	10/15/21 00:15	1

Lab Sample ID: LCS 880-9203/1-A

Matrix: Solid

Analysis Batch: 9437

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 9203

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07006		mg/Kg		70	70 - 130
Toluene	0.100	0.07910		mg/Kg		79	70 - 130
Ethylbenzene	0.100	0.08412		mg/Kg		84	70 - 130
m-Xylene & p-Xylene	0.200	0.1588		mg/Kg		79	70 - 130
o-Xylene	0.100	0.08688		mg/Kg		87	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	80		70 - 130

Lab Sample ID: LCSD 880-9203/2-A

Matrix: Solid

Analysis Batch: 9437

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 9203

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1032	*1	mg/Kg		103	70 - 130	38	35
Toluene	0.100	0.1035		mg/Kg		103	70 - 130	27	35
Ethylbenzene	0.100	0.1105		mg/Kg		110	70 - 130	27	35
m-Xylene & p-Xylene	0.200	0.2112		mg/Kg		106	70 - 130	28	35
o-Xylene	0.100	0.1090		mg/Kg		109	70 - 130	23	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 890-1368-A-1-H MSD

Matrix: Solid

Analysis Batch: 9437

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 9203

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U *1 F1 F2	0.0990	0.006864	F1 F2	mg/Kg		7	70 - 130	183	35

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

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

Lab Sample ID: 890-1368-A-1-H MSD

Matrix: Solid

Analysis Batch: 9437

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 9203

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	<0.00199	U F1 F2	0.0990	0.002203	F1 F2	mg/Kg		2	70 - 130	186	35
Ethylbenzene	<0.00199	U F1 F2	0.0990	0.01848	F1 F2	mg/Kg		19	70 - 130	71	35
m-Xylene & p-Xylene	<0.00398	U F1	0.198	0.05743	F1	mg/Kg		29	70 - 130	7	35
o-Xylene	<0.00199	U F1 F2	0.0990	0.03581	F1 F2	mg/Kg		36	70 - 130	63	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	124		70 - 130								
1,4-Difluorobenzene (Surr)	10	S1-	70 - 130								

Lab Sample ID: 890-1368-A-1-J MS

Matrix: Solid

Analysis Batch: 9437

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 9203

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U *1 F1 F2	0.100	0.1553	F1	mg/Kg		155	70 - 130		
Toluene	<0.00199	U F1 F2	0.100	0.06144	F1	mg/Kg		61	70 - 130		
Ethylbenzene	<0.00199	U F1 F2	0.100	0.03870	F1	mg/Kg		39	70 - 130		
m-Xylene & p-Xylene	<0.00398	U F1	0.201	0.05344	F1	mg/Kg		27	70 - 130		
o-Xylene	<0.00199	U F1 F2	0.100	0.06883	F1	mg/Kg		69	70 - 130		
Surrogate	MS %Recovery	MS Qualifier	Limits								
4-Bromofluorobenzene (Surr)	1186	S1+	70 - 130								
1,4-Difluorobenzene (Surr)	49	S1-	70 - 130								

Lab Sample ID: MB 880-9306/5-A

Matrix: Solid

Analysis Batch: 9437

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 9306

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/12/21 12:26	10/14/21 12:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/12/21 12:26	10/14/21 12:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/12/21 12:26	10/14/21 12:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/12/21 12:26	10/14/21 12:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/12/21 12:26	10/14/21 12:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/12/21 12:26	10/14/21 12:41	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			10/12/21 12:26	10/14/21 12:41	1
1,4-Difluorobenzene (Surr)	106		70 - 130			10/12/21 12:26	10/14/21 12:41	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

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

Lab Sample ID: MB 880-9289/1-A

Matrix: Solid

Analysis Batch: 9267

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 9289

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		10/12/21 10:29	10/12/21 21:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/12/21 10:29	10/12/21 21:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/12/21 10:29	10/12/21 21:31	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130			10/12/21 10:29	10/12/21 21:31	1
o-Terphenyl	106		70 - 130			10/12/21 10:29	10/12/21 21:31	1

Lab Sample ID: LCS 880-9289/2-A

Matrix: Solid

Analysis Batch: 9267

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 9289

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	936.6		mg/Kg		94	70 - 130
Diesel Range Organics (Over C10-C28)	1000	928.8		mg/Kg		93	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
1-Chlorooctane	90		70 - 130				
o-Terphenyl	85		70 - 130				

Lab Sample ID: LCSD 880-9289/3-A

Matrix: Solid

Analysis Batch: 9267

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 9289

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	856.5		mg/Kg		86	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	1000	945.9		mg/Kg		95	70 - 130	2	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	87		70 - 130						
o-Terphenyl	81		70 - 130						

Lab Sample ID: 880-6818-A-1-I MS

Matrix: Solid

Analysis Batch: 9267

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 9289

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	876.6		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	938.7		mg/Kg		94	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

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

Lab Sample ID: 880-6818-A-1-I MS

Matrix: Solid

Analysis Batch: 9267

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 9289

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 880-6818-A-1-J MSD

Matrix: Solid

Analysis Batch: 9267

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 9289

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	<49.9	U	1000	928.9		mg/Kg		91	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	994.0		mg/Kg		99	70 - 130	6	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: MB 880-9371/1-A

Matrix: Solid

Analysis Batch: 9354

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 9371

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		10/13/21 11:33	10/13/21 20:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/21 11:33	10/13/21 20:52	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/21 11:33	10/13/21 20:52	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane	107		70 - 130	10/13/21 11:33	10/13/21 20:52	1		
o-Terphenyl	123		70 - 130	10/13/21 11:33	10/13/21 20:52	1		

Lab Sample ID: LCS 880-9371/2-A

Matrix: Solid

Analysis Batch: 9354

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 9371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1243		mg/Kg		124	70 - 130
Diesel Range Organics (Over C10-C28)	1000	848.4		mg/Kg		85	70 - 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	82		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

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

Lab Sample ID: LCSD 880-9371/3-A

Matrix: Solid

Analysis Batch: 9354

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 9371

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1252		mg/Kg		125	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	831.2		mg/Kg		83	70 - 130	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	86		70 - 130						
o-Terphenyl	86		70 - 130						

Lab Sample ID: 890-1370-1 MS

Matrix: Solid

Analysis Batch: 9354

Client Sample ID: SS01

Prep Type: Total/NA

Prep Batch: 9371

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	997	1402	F1	mg/Kg		141	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1076		mg/Kg		106	70 - 130		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1-Chlorooctane	115		70 - 130								
o-Terphenyl	115		70 - 130								

Lab Sample ID: 890-1370-1 MSD

Matrix: Solid

Analysis Batch: 9354

Client Sample ID: SS01

Prep Type: Total/NA

Prep Batch: 9371

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	<49.9	U F1	1000	1334	F1	mg/Kg		133	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	1043		mg/Kg		103	70 - 130	3	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	112		70 - 130								
o-Terphenyl	111		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-9409/1-A

Matrix: Solid

Analysis Batch: 9528

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			10/15/21 09:50	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-9409/2-A

Matrix: Solid

Analysis Batch: 9528

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	255.4		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-9409/3-A

Matrix: Solid

Analysis Batch: 9528

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	256.1		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-1368-A-1-K MS

Matrix: Solid

Analysis Batch: 9528

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	173	F1	249	389.0	F1	mg/Kg		87	90 - 110		

Lab Sample ID: 890-1368-A-1-K MSD

Matrix: Solid

Analysis Batch: 9528

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	173	F1	249	390.5	F1	mg/Kg		87	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

GC VOA

Prep Batch: 9203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1370-1	SS01	Total/NA	Solid	5035	
890-1370-2	SS02	Total/NA	Solid	5035	
890-1370-3	SS03	Total/NA	Solid	5035	
890-1370-4	SS04	Total/NA	Solid	5035	
MB 880-9203/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-9203/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-9203/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1368-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
890-1368-A-1-J MS	Matrix Spike	Total/NA	Solid	5035	

Prep Batch: 9306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-9306/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 9437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1370-1	SS01	Total/NA	Solid	8021B	9203
890-1370-2	SS02	Total/NA	Solid	8021B	9203
890-1370-3	SS03	Total/NA	Solid	8021B	9203
890-1370-4	SS04	Total/NA	Solid	8021B	9203
MB 880-9203/5-A	Method Blank	Total/NA	Solid	8021B	9203
MB 880-9306/5-A	Method Blank	Total/NA	Solid	8021B	9306
LCS 880-9203/1-A	Lab Control Sample	Total/NA	Solid	8021B	9203
LCSD 880-9203/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	9203
890-1368-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	9203
890-1368-A-1-J MS	Matrix Spike	Total/NA	Solid	8021B	9203

Analysis Batch: 9497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1370-1	SS01	Total/NA	Solid	Total BTEX	
890-1370-2	SS02	Total/NA	Solid	Total BTEX	
890-1370-3	SS03	Total/NA	Solid	Total BTEX	
890-1370-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 9189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1370-1	SS01	Total/NA	Solid	8015 NM	
890-1370-2	SS02	Total/NA	Solid	8015 NM	
890-1370-3	SS03	Total/NA	Solid	8015 NM	
890-1370-4	SS04	Total/NA	Solid	8015 NM	

Analysis Batch: 9267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1370-4	SS04	Total/NA	Solid	8015B NM	9289
MB 880-9289/1-A	Method Blank	Total/NA	Solid	8015B NM	9289
LCS 880-9289/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	9289
LCSD 880-9289/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	9289
880-6818-A-1-I MS	Matrix Spike	Total/NA	Solid	8015B NM	9289
880-6818-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	9289

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

GC Semi VOA

Prep Batch: 9289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1370-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-9289/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-9289/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-9289/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-6818-A-1-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-6818-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 9354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1370-1	SS01	Total/NA	Solid	8015B NM	9371
890-1370-2	SS02	Total/NA	Solid	8015B NM	9371
890-1370-3	SS03	Total/NA	Solid	8015B NM	9371
MB 880-9371/1-A	Method Blank	Total/NA	Solid	8015B NM	9371
LCS 880-9371/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	9371
LCSD 880-9371/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	9371
890-1370-1 MS	SS01	Total/NA	Solid	8015B NM	9371
890-1370-1 MSD	SS01	Total/NA	Solid	8015B NM	9371

Prep Batch: 9371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1370-1	SS01	Total/NA	Solid	8015NM Prep	
890-1370-2	SS02	Total/NA	Solid	8015NM Prep	
890-1370-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-9371/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-9371/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-9371/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1370-1 MS	SS01	Total/NA	Solid	8015NM Prep	
890-1370-1 MSD	SS01	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 9409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1370-1	SS01	Soluble	Solid	DI Leach	
890-1370-2	SS02	Soluble	Solid	DI Leach	
890-1370-3	SS03	Soluble	Solid	DI Leach	
890-1370-4	SS04	Soluble	Solid	DI Leach	
MB 880-9409/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-9409/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-9409/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1368-A-1-K MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1368-A-1-K MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 9528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1370-1	SS01	Soluble	Solid	300.0	9409
890-1370-2	SS02	Soluble	Solid	300.0	9409
890-1370-3	SS03	Soluble	Solid	300.0	9409
890-1370-4	SS04	Soluble	Solid	300.0	9409
MB 880-9409/1-A	Method Blank	Soluble	Solid	300.0	9409
LCS 880-9409/2-A	Lab Control Sample	Soluble	Solid	300.0	9409

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

HPLC/IC (Continued)

Analysis Batch: 9528 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-9409/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	9409
890-1368-A-1-K MS	Matrix Spike	Soluble	Solid	300.0	9409
890-1368-A-1-K MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	9409

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Client Sample ID: SS01

Lab Sample ID: 890-1370-1

Date Collected: 10/04/21 14:58

Matrix: Solid

Date Received: 10/06/21 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	9203	10/11/21 11:51	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9437	10/15/21 06:38	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			9497	10/14/21 15:26	MR	XEN MID
Total/NA	Analysis	8015 NM		1			9189	10/11/21 13:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	9371	10/13/21 11:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			9354	10/13/21 21:54	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	9409	10/13/21 18:21	CA	XEN MID
Soluble	Analysis	300.0		1			9528	10/15/21 11:45	CH	XEN MID

Client Sample ID: SS02

Lab Sample ID: 890-1370-2

Date Collected: 10/04/21 15:02

Matrix: Solid

Date Received: 10/06/21 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	9203	10/11/21 11:51	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9437	10/15/21 06:58	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			9497	10/14/21 15:26	MR	XEN MID
Total/NA	Analysis	8015 NM		1			9189	10/11/21 13:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	9371	10/13/21 11:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			9354	10/13/21 22:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	9409	10/13/21 18:21	CA	XEN MID
Soluble	Analysis	300.0		1			9528	10/15/21 11:51	CH	XEN MID

Client Sample ID: SS03

Lab Sample ID: 890-1370-3

Date Collected: 10/04/21 15:17

Matrix: Solid

Date Received: 10/06/21 09:40

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	9203	10/11/21 11:51	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9437	10/15/21 07:18	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			9497	10/14/21 15:26	MR	XEN MID
Total/NA	Analysis	8015 NM		1			9189	10/11/21 13:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	9371	10/13/21 11:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			9354	10/13/21 23:16	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	9409	10/13/21 18:21	CA	XEN MID
Soluble	Analysis	300.0		1			9528	10/15/21 11:56	CH	XEN MID

Client Sample ID: SS04

Lab Sample ID: 890-1370-4

Date Collected: 10/04/21 15:24

Matrix: Solid

Date Received: 10/06/21 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	9203	10/11/21 11:51	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	9437	10/15/21 07:39	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			9497	10/14/21 15:26	MR	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Client Sample ID: SS04
Date Collected: 10/04/21 15:24
Date Received: 10/06/21 09:40

Lab Sample ID: 890-1370-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			9189	10/11/21 13:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	9289	10/12/21 10:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			9267	10/13/21 06:28	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	9409	10/13/21 18:21	CA	XEN MID
Soluble	Analysis	300.0		1			9528	10/15/21 12:02	CH	XEN MID

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

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Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Laboratory: Eurofins Xenco, Midland

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

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

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

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

- 1
- 2
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Method Summary

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: King Tut Federal Com 001H

Job ID: 890-1370-1
SDG: 31402909.180

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1370-1	SS01	Solid	10/04/21 14:58	10/06/21 09:40	0 - 0.5
890-1370-2	SS02	Solid	10/04/21 15:02	10/06/21 09:40	0 - 0.5
890-1370-3	SS03	Solid	10/04/21 15:17	10/06/21 09:40	0 - 0.5
890-1370-4	SS04	Solid	10/04/21 15:24	10/06/21 09:40	0 - 0.5



Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 704-1286
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 820-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 889-6704
Atlanta, GA (770) 449-8800

Atlanta, GA (770) 449-8800

Work Order No:

www.xenco.com

Page 1 of 1

Project Manager:		Kalel Jennings		Bill to: (if different)	
Company Name:		WSP USA		Company Name:	
Address:		3300 North A Street		Address:	
City, State ZIP:		Midland, TX 79705		City, State ZIP:	
Phone:		(817) 683-2503		Email: kalel.jennings@wsp.com	

Work Order Comments					
Program: UST/PS ☐ PR ☐ Brownfields ☐ RRC ☐ Superfund ☐ State of Project:					
Reporting Level: ☐		Level ☐		PST/US ☒ TR ☐ Level ☐	
Deliverables: EDD ☐		ADAPT ☐		Other: ☐	

Project Name:		King Tut Federal Com 001H		Turn Around					
Project Number:		31402909, 180		Routine: ☒					
Location:		Lea County		Rush:					
Sampler's Name:		Fatima Smith		Due Date:					
SAMPLE RECEIPT		Temp Blank: ☒ Yes ☒ No		Wet Ice: ☒ Yes ☒ No					
Temperature (°C):		2.4/2.4		Thermometer ID					
Received Intact:		☒ Yes ☒ No		INM 003					
Cooler Custody Seals:		Yes ☒ No ☒		Correction Factor:					
Sample Custody Seals:		Yes ☒ No ☒		Total Containers: 0.2					
Sample Identification		Matrix		Date Sampled		Time Sampled		Depth	
SS01		S		10/4/2021		1458		0 - 0.5'	
SS02		S		10/4/2021		1502		0 - 0.5'	
SS03		S		10/4/2021		1517		0 - 0.5'	
SS04		S		10/4/2021		1524		0 - 0.5'	
Signature: 		Number of Containers							
		TPH (EPA 8015)							
		BTX (EPA 0-8021)							
		Chloride (EPA 300.0)							
890-1370 Chain of Custody 									
TAT starts the day received by the lab if received by 4:30pm									
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	SiO2	Na	Sr	TI	Sn	U	Zn
Circles Method(s)	and Meta(s)	to be analyzed	TCLP / SPLP	6010:	8RCRA	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	TI	U										
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.																																
1631 / 245.1 / 7470 / 7474 : Hg																																

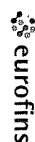
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>[Signature]</i>	<i>[Signature]</i>	10.10.21	2 <i>[Signature]</i>		
3 <i>[Signature]</i>			4		
5			6		

Eurofins Xenco, Carlsbad

1089 N Canal St
Carlsbad NM 88220

Phone 575-988-3199 Fax 575-988-3199

Chain of Custody Record



**Environment Testing
America**

[illegible]

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1370-1

SDG Number: 31402909.180

Login Number: 1370

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Xenco, 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.	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	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1370-1

SDG Number: 31402909.180

Login Number: 1370

List Number: 2

Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland

List Creation: 10/07/21 11:15 AM

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	2.1 / 2.6
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.	True	
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").	True	



Environment Testing
America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2606-1

Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: King Tut Federal Com 001H

For:

Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:

8/1/2022 7:58:18 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS

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results through



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

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

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Laboratory Job ID: 890-2606-1
SDG: Lea County NM

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Definitions/Glossary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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.
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.

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 Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Job ID: 890-2606-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-2606-1****Receipt**

The samples were received on 7/21/2022 9:40 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 18.1°C

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: BH01 (890-2606-1), BH01 (890-2606-2), BH02 (890-2606-3), BH02 (890-2606-4), BH03 (890-2606-5), BH03 (890-2606-6), BH04 (890-2606-7), BH04 (890-2606-8), BH05 (890-2606-9), BH05 (890-2606-10), BH06 (890-2606-11), BH06 (890-2606-12), BH07 (890-2606-13), BH07 (890-2606-14), BH08 (890-2606-15) and BH08 (890-2606-16). This does not meet regulatory requirements. The client was contacted regarding this issue, and the laboratory was instructed to <CHOOSE_ONE> proceed with/cancel analysis.

Samples were 18.3/18.1 c over the 0-6 c- client wants samples runned

GC VOA

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-30796 and analytical batch 880-30748 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30893 and analytical batch 880-31046 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.

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-30658 and analytical batch 880-30649 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-2618-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30666 and analytical batch 880-30643 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.

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 Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH01

Lab Sample ID: 890-2606-1

Date Collected: 07/20/22 09:05

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 14:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 14:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 14:16	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/26/22 10:29	07/27/22 14:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 14:16	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/26/22 10:29	07/27/22 14:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	07/26/22 10:29	07/27/22 14:16	1
1,4-Difluorobenzene (Surr)	104		70 - 130	07/26/22 10:29	07/27/22 14:16	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 11:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U F1	50.0	mg/Kg		07/26/22 08:35	07/26/22 11:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 11:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	07/26/22 08:35	07/26/22 11:53	1
o-Terphenyl	104		70 - 130	07/26/22 08:35	07/26/22 11:53	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3150		24.8	mg/Kg			07/27/22 01:35	5

Client Sample ID: BH01

Lab Sample ID: 890-2606-2

Date Collected: 07/20/22 09:10

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/26/22 10:29	07/27/22 14:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/26/22 10:29	07/27/22 14:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/26/22 10:29	07/27/22 14:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/26/22 10:29	07/27/22 14:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/26/22 10:29	07/27/22 14:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/26/22 10:29	07/27/22 14:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	07/26/22 10:29	07/27/22 14:37	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH01

Lab Sample ID: 890-2606-2

Date Collected: 07/20/22 09:10

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	106		70 - 130	07/26/22 10:29	07/27/22 14:37	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 12:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 12:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 12:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130			07/26/22 08:35	07/26/22 12:58	1
o-Terphenyl	94		70 - 130			07/26/22 08:35	07/26/22 12:58	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1530		24.8	mg/Kg			07/27/22 01:42	5

Client Sample ID: BH02

Lab Sample ID: 890-2606-3

Date Collected: 07/20/22 09:15

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/26/22 10:29	07/27/22 14:57	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/26/22 10:29	07/27/22 14:57	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/26/22 10:29	07/27/22 14:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/26/22 10:29	07/27/22 14:57	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/26/22 10:29	07/27/22 14:57	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/26/22 10:29	07/27/22 14:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	07/26/22 10:29	07/27/22 14:57	1
1,4-Difluorobenzene (Surr)	103		70 - 130	07/26/22 10:29	07/27/22 14:57	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/27/22 09:04	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH02

Lab Sample ID: 890-2606-3

Date Collected: 07/20/22 09:15

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 13:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 13:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 13:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130			07/26/22 08:35	07/26/22 13:19	1
o-Terphenyl	97		70 - 130			07/26/22 08:35	07/26/22 13:19	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1720		25.0	mg/Kg			07/27/22 01:50	5

Client Sample ID: BH02

Lab Sample ID: 890-2606-4

Date Collected: 07/20/22 09:20

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		07/26/22 10:29	07/27/22 17:37	1
Toluene	<0.00201	U	0.00201	mg/Kg		07/26/22 10:29	07/27/22 17:37	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		07/26/22 10:29	07/27/22 17:37	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		07/26/22 10:29	07/27/22 17:37	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		07/26/22 10:29	07/27/22 17:37	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		07/26/22 10:29	07/27/22 17:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130			07/26/22 10:29	07/27/22 17:37	1
1,4-Difluorobenzene (Surr)	104		70 - 130			07/26/22 10:29	07/27/22 17:37	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 13:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 13:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 13:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130			07/26/22 08:35	07/26/22 13:41	1
o-Terphenyl	99		70 - 130			07/26/22 08:35	07/26/22 13:41	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH02

Lab Sample ID: 890-2606-4

Date Collected: 07/20/22 09:20

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44.3		5.04	mg/Kg			07/27/22 02:14	1

Client Sample ID: BH03

Lab Sample ID: 890-2606-5

Date Collected: 07/20/22 09:25

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		07/26/22 10:29	07/27/22 17:57	1
Toluene	<0.00202	U	0.00202	mg/Kg		07/26/22 10:29	07/27/22 17:57	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		07/26/22 10:29	07/27/22 17:57	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		07/26/22 10:29	07/27/22 17:57	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		07/26/22 10:29	07/27/22 17:57	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		07/26/22 10:29	07/27/22 17:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			07/26/22 10:29	07/27/22 17:57	1
1,4-Difluorobenzene (Surr)	112		70 - 130			07/26/22 10:29	07/27/22 17:57	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 14:02	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 14:02	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 14:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	77		70 - 130			07/26/22 08:35	07/26/22 14:02	1
o-Terphenyl	89		70 - 130			07/26/22 08:35	07/26/22 14:02	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4510		25.3	mg/Kg			07/27/22 02:22	5

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH03

Lab Sample ID: 890-2606-6

Date Collected: 07/20/22 09:30

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 18:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 18:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 18:18	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/26/22 10:29	07/27/22 18:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 18:18	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/26/22 10:29	07/27/22 18:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	07/26/22 10:29	07/27/22 18:18	1
1,4-Difluorobenzene (Surr)	106		70 - 130	07/26/22 10:29	07/27/22 18:18	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 14:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 14:23	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 14:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	76		70 - 130	07/26/22 08:35	07/26/22 14:23	1
o-Terphenyl	90		70 - 130	07/26/22 08:35	07/26/22 14:23	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	589		5.03	mg/Kg			07/27/22 02:29	1

Client Sample ID: BH04

Lab Sample ID: 890-2606-7

Date Collected: 07/20/22 09:35

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 03:20	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 03:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 03:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/28/22 09:46	07/31/22 03:20	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 03:20	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/28/22 09:46	07/31/22 03:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	07/28/22 09:46	07/31/22 03:20	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH04

Lab Sample ID: 890-2606-7

Date Collected: 07/20/22 09:35

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	85		70 - 130	07/28/22 09:46	07/31/22 03:20	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 14:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 14:45	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 14:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130			07/26/22 08:35	07/26/22 14:45	1
o-Terphenyl	91		70 - 130			07/26/22 08:35	07/26/22 14:45	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	72.4		5.03	mg/Kg			07/27/22 02:37	1

Client Sample ID: BH04

Lab Sample ID: 890-2606-8

Date Collected: 07/20/22 09:40

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 03:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 03:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 03:41	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/28/22 09:46	07/31/22 03:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 03:41	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/28/22 09:46	07/31/22 03:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	07/28/22 09:46	07/31/22 03:41	1
1,4-Difluorobenzene (Surr)	89		70 - 130	07/28/22 09:46	07/31/22 03:41	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/27/22 09:04	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH04

Lab Sample ID: 890-2606-8

Date Collected: 07/20/22 09:40

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 15:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 15:06	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 15:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	79		70 - 130			07/26/22 08:35	07/26/22 15:06	1
o-Terphenyl	93		70 - 130			07/26/22 08:35	07/26/22 15:06	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26.0		5.00	mg/Kg			07/27/22 02:45	1

Client Sample ID: BH05

Lab Sample ID: 890-2606-9

Date Collected: 07/20/22 09:45

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		07/28/22 09:46	07/31/22 04:01	1
Toluene	<0.00201	U	0.00201	mg/Kg		07/28/22 09:46	07/31/22 04:01	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		07/28/22 09:46	07/31/22 04:01	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		07/28/22 09:46	07/31/22 04:01	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		07/28/22 09:46	07/31/22 04:01	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		07/28/22 09:46	07/31/22 04:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130			07/28/22 09:46	07/31/22 04:01	1
1,4-Difluorobenzene (Surr)	87		70 - 130			07/28/22 09:46	07/31/22 04:01	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 15:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 15:27	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 15:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130			07/26/22 08:35	07/26/22 15:27	1
o-Terphenyl	90		70 - 130			07/26/22 08:35	07/26/22 15:27	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH05

Lab Sample ID: 890-2606-9

Date Collected: 07/20/22 09:45

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	60.3		4.97	mg/Kg			07/27/22 02:53	1

Client Sample ID: BH05

Lab Sample ID: 890-2606-10

Date Collected: 07/20/22 09:50

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 04:21	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 04:21	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 04:21	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		07/28/22 09:46	07/31/22 04:21	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 04:21	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		07/28/22 09:46	07/31/22 04:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			07/28/22 09:46	07/31/22 04:21	1
1,4-Difluorobenzene (Surr)	78		70 - 130			07/28/22 09:46	07/31/22 04:21	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 15:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 15:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 15:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130			07/26/22 08:35	07/26/22 15:49	1
o-Terphenyl	90		70 - 130			07/26/22 08:35	07/26/22 15:49	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.7		5.02	mg/Kg			07/27/22 03:16	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH06

Lab Sample ID: 890-2606-11

Date Collected: 07/20/22 10:00

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		07/28/22 09:46	07/31/22 04:42	1
Toluene	<0.00202	U	0.00202	mg/Kg		07/28/22 09:46	07/31/22 04:42	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		07/28/22 09:46	07/31/22 04:42	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		07/28/22 09:46	07/31/22 04:42	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		07/28/22 09:46	07/31/22 04:42	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		07/28/22 09:46	07/31/22 04:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	07/28/22 09:46	07/31/22 04:42	1
1,4-Difluorobenzene (Surr)	88		70 - 130	07/28/22 09:46	07/31/22 04:42	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 16:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 16:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130	07/26/22 08:35	07/26/22 16:33	1
o-Terphenyl	83		70 - 130	07/26/22 08:35	07/26/22 16:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.98		5.05	mg/Kg			07/27/22 03:24	1

Client Sample ID: BH06

Lab Sample ID: 890-2606-12

Date Collected: 07/20/22 10:10

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 05:02	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 05:02	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 05:02	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/28/22 09:46	07/31/22 05:02	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 05:02	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/28/22 09:46	07/31/22 05:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	07/28/22 09:46	07/31/22 05:02	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH06

Lab Sample ID: 890-2606-12

Date Collected: 07/20/22 10:10

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	88		70 - 130	07/28/22 09:46	07/31/22 05:02	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 16:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 16:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 16:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	79		70 - 130			07/26/22 08:35	07/26/22 16:54	1
o-Terphenyl	93		70 - 130			07/26/22 08:35	07/26/22 16:54	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.22		5.05	mg/Kg			07/27/22 03:48	1

Client Sample ID: BH07

Lab Sample ID: 890-2606-13

Date Collected: 07/20/22 10:20

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		07/28/22 09:46	07/31/22 05:23	1
Toluene	<0.00201	U	0.00201	mg/Kg		07/28/22 09:46	07/31/22 05:23	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		07/28/22 09:46	07/31/22 05:23	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		07/28/22 09:46	07/31/22 05:23	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		07/28/22 09:46	07/31/22 05:23	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		07/28/22 09:46	07/31/22 05:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	07/28/22 09:46	07/31/22 05:23	1
1,4-Difluorobenzene (Surr)	89		70 - 130	07/28/22 09:46	07/31/22 05:23	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/27/22 09:04	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH07

Lab Sample ID: 890-2606-13

Date Collected: 07/20/22 10:20

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 17:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 17:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 17:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	79		70 - 130			07/26/22 08:35	07/26/22 17:15	1
o-Terphenyl	93		70 - 130			07/26/22 08:35	07/26/22 17:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.2		5.05	mg/Kg			07/27/22 03:56	1

Client Sample ID: BH07

Lab Sample ID: 890-2606-14

Date Collected: 07/20/22 10:30

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/28/22 09:46	07/31/22 05:43	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/28/22 09:46	07/31/22 05:43	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/28/22 09:46	07/31/22 05:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/28/22 09:46	07/31/22 05:43	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/28/22 09:46	07/31/22 05:43	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/28/22 09:46	07/31/22 05:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			07/28/22 09:46	07/31/22 05:43	1
1,4-Difluorobenzene (Surr)	84		70 - 130			07/28/22 09:46	07/31/22 05:43	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 17:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 17:36	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 17:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130			07/26/22 08:35	07/26/22 17:36	1
o-Terphenyl	84		70 - 130			07/26/22 08:35	07/26/22 17:36	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH07

Lab Sample ID: 890-2606-14

Date Collected: 07/20/22 10:30

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.1		4.98	mg/Kg			07/27/22 04:04	1

Client Sample ID: BH08

Lab Sample ID: 890-2606-15

Date Collected: 07/20/22 10:40

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 06:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 06:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 06:04	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/28/22 09:46	07/31/22 06:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 06:04	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/28/22 09:46	07/31/22 06:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130			07/28/22 09:46	07/31/22 06:04	1
1,4-Difluorobenzene (Surr)	74		70 - 130			07/28/22 09:46	07/31/22 06:04	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 17:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 17:57	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/26/22 08:35	07/26/22 17:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130			07/26/22 08:35	07/26/22 17:57	1
o-Terphenyl	78		70 - 130			07/26/22 08:35	07/26/22 17:57	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.5		5.04	mg/Kg			07/27/22 04:11	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH08

Lab Sample ID: 890-2606-16

Date Collected: 07/20/22 10:50

Matrix: Solid

Date Received: 07/21/22 09:40

Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 06:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 06:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 06:24	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		07/28/22 09:46	07/31/22 06:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/31/22 06:24	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		07/28/22 09:46	07/31/22 06:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130	07/28/22 09:46	07/31/22 06:24	1
1,4-Difluorobenzene (Surr)	91		70 - 130	07/28/22 09:46	07/31/22 06:24	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			07/27/22 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/27/22 09:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/26/22 10:41	07/27/22 01:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/26/22 10:41	07/27/22 01:07	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 10:41	07/27/22 01:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130	07/26/22 10:41	07/27/22 01:07	1
o-Terphenyl	87		70 - 130	07/26/22 10:41	07/27/22 01:07	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.2		4.98	mg/Kg			07/27/22 04:19	1

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Surrogate Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-17402-A-2-D MS	Matrix Spike	96	103
880-17402-A-2-E MSD	Matrix Spike Duplicate	93	99
880-17457-A-4-B MS	Matrix Spike	97	85
880-17457-A-4-C MSD	Matrix Spike Duplicate	90	83
890-2602-A-3-D MS	Matrix Spike	99	99
890-2602-A-3-E MSD	Matrix Spike Duplicate	104	98
890-2606-1	BH01	101	104
890-2606-2	BH01	104	106
890-2606-3	BH02	98	103
890-2606-4	BH02	105	104
890-2606-5	BH03	100	112
890-2606-6	BH03	99	106
890-2606-7	BH04	98	85
890-2606-8	BH04	112	89
890-2606-9	BH05	113	87
890-2606-10	BH05	101	78
890-2606-11	BH06	111	88
890-2606-12	BH06	114	88
890-2606-13	BH07	113	89
890-2606-14	BH07	108	84
890-2606-15	BH08	97	74
890-2606-16	BH08	117	91
LCS 880-30665/1-A	Lab Control Sample	99	97
LCS 880-30796/1-A	Lab Control Sample	96	104
LCS 880-30893/1-A	Lab Control Sample	102	97
LCSD 880-30665/2-A	Lab Control Sample Dup	98	102
LCSD 880-30796/2-A	Lab Control Sample Dup	103	105
LCSD 880-30893/2-A	Lab Control Sample Dup	102	99
MB 880-30595/5-A	Method Blank	107	89
MB 880-30665/5-A	Method Blank	95	100
MB 880-30796/5-A	Method Blank	95	101
MB 880-30893/5-A	Method Blank	98	90

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-2606-1	BH01	91	104
890-2606-1 MS	BH01	70	70
890-2606-1 MSD	BH01	71	73
890-2606-2	BH01	80	94
890-2606-3	BH02	81	97
890-2606-4	BH02	84	99
890-2606-5	BH03	77	89

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Surrogate Summary

Client: Ensolum

Job ID: 890-2606-1

Project/Site: King Tut Federal Com 001H

SDG: Lea County NM

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-2606-6	BH03	76	90
890-2606-7	BH04	81	91
890-2606-8	BH04	79	93
890-2606-9	BH05	78	90
890-2606-10	BH05	75	90
890-2606-11	BH06	74	83
890-2606-12	BH06	79	93
890-2606-13	BH07	79	93
890-2606-14	BH07	75	84
890-2606-15	BH08	71	78
890-2606-16	BH08	82	87
890-2618-A-1-E MS	Matrix Spike	82	78
890-2618-A-1-F MSD	Matrix Spike Duplicate	67 S1-	64 S1-
LCS 880-30658/2-A	Lab Control Sample	106	111
LCS 880-30666/2-A	Lab Control Sample	90	92
LCSD 880-30658/3-A	Lab Control Sample Dup	94	101
LCSD 880-30666/3-A	Lab Control Sample Dup	93	95
MB 880-30658/1-A	Method Blank	74	83
MB 880-30666/1-A	Method Blank	100	108

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30595/5-A

Matrix: Solid

Analysis Batch: 31046

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30595

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/25/22 14:01	07/30/22 11:57	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/25/22 14:01	07/30/22 11:57	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/25/22 14:01	07/30/22 11:57	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/25/22 14:01	07/30/22 11:57	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/25/22 14:01	07/30/22 11:57	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/25/22 14:01	07/30/22 11:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	07/25/22 14:01	07/30/22 11:57	1
1,4-Difluorobenzene (Surr)	89		70 - 130	07/25/22 14:01	07/30/22 11:57	1

Lab Sample ID: MB 880-30665/5-A

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30665

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 11:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 11:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 11:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/26/22 10:29	07/27/22 11:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/26/22 10:29	07/27/22 11:24	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/26/22 10:29	07/27/22 11:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	07/26/22 10:29	07/27/22 11:24	1
1,4-Difluorobenzene (Surr)	100		70 - 130	07/26/22 10:29	07/27/22 11:24	1

Lab Sample ID: LCS 880-30665/1-A

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08575		mg/Kg		86	70 - 130
Toluene	0.100	0.09899		mg/Kg		99	70 - 130
Ethylbenzene	0.100	0.08864		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	0.200	0.1803		mg/Kg		90	70 - 130
o-Xylene	0.100	0.1065		mg/Kg		106	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: LCSD 880-30665/2-A

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30665

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09395		mg/Kg		94	70 - 130	9	35

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

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

Lab Sample ID: LCSD 880-30665/2-A

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30665

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.09339		mg/Kg		93	70 - 130	6	35
Ethylbenzene	0.100	0.08016		mg/Kg		80	70 - 130	10	35
m-Xylene & p-Xylene	0.200	0.1615		mg/Kg		81	70 - 130	11	35
o-Xylene	0.100	0.09544		mg/Kg		95	70 - 130	11	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: 890-2602-A-3-D MS

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 30665

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.101	0.08512		mg/Kg		85	70 - 130
Toluene	<0.00199	U	0.101	0.09717		mg/Kg		97	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.08485		mg/Kg		84	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1725		mg/Kg		85	70 - 130
o-Xylene	<0.00199	U	0.101	0.1032		mg/Kg		103	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 890-2602-A-3-E MSD

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30665

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0990	0.09277		mg/Kg		94	70 - 130	9	35
Toluene	<0.00199	U	0.0990	0.1048		mg/Kg		106	70 - 130	8	35
Ethylbenzene	<0.00199	U	0.0990	0.09261		mg/Kg		94	70 - 130	9	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1883		mg/Kg		95	70 - 130	9	35
o-Xylene	<0.00199	U	0.0990	0.1121		mg/Kg		113	70 - 130	8	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: MB 880-30796/5-A

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30796

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/27/22 10:51	07/27/22 23:50	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/27/22 10:51	07/27/22 23:50	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/27/22 10:51	07/27/22 23:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/27/22 10:51	07/27/22 23:50	1

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

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

Lab Sample ID: MB 880-30796/5-A

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30796

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/27/22 10:51	07/27/22 23:50	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/27/22 10:51	07/27/22 23:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	07/27/22 10:51	07/27/22 23:50	1
1,4-Difluorobenzene (Surr)	101		70 - 130	07/27/22 10:51	07/27/22 23:50	1

Lab Sample ID: LCS 880-30796/1-A

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30796

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1007		mg/Kg		101	70 - 130
Toluene	0.100	0.1029		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.08841		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	0.200	0.1796		mg/Kg		90	70 - 130
o-Xylene	0.100	0.1046		mg/Kg		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-30796/2-A

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30796

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1010		mg/Kg		101	70 - 130	0	35
Toluene	0.100	0.1017		mg/Kg		102	70 - 130	1	35
Ethylbenzene	0.100	0.08578		mg/Kg		86	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1737		mg/Kg		87	70 - 130	3	35
o-Xylene	0.100	0.1008		mg/Kg		101	70 - 130	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 880-17402-A-2-D MS

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 30796

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F1	0.100	0.09432		mg/Kg		93	70 - 130
Toluene	0.00229	F1	0.100	0.09433		mg/Kg		92	70 - 130
Ethylbenzene	0.00281	F1	0.100	0.07991		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	0.00683	F1	0.201	0.1610		mg/Kg		77	70 - 130
o-Xylene	0.00434	F1	0.100	0.09334		mg/Kg		89	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

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

Lab Sample ID: 880-17402-A-2-D MS

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 30796

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 880-17402-A-2-E MSD

Matrix: Solid

Analysis Batch: 30748

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30796

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
Toluene	0.00229	F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
Ethylbenzene	0.00281	F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35
m-Xylene & p-Xylene	0.00683	F1	0.198	<0.00396	U F1	mg/Kg		0	70 - 130	NC	35
o-Xylene	0.00434	F1	0.0990	<0.00198	U F1	mg/Kg		0	70 - 130	NC	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: MB 880-30893/5-A

Matrix: Solid

Analysis Batch: 31046

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30893

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/30/22 22:33	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/30/22 22:33	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/30/22 22:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/28/22 09:46	07/30/22 22:33	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/28/22 09:46	07/30/22 22:33	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/28/22 09:46	07/30/22 22:33	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
4-Bromofluorobenzene (Surr)	98		70 - 130	07/28/22 09:46	07/30/22 22:33	1		
1,4-Difluorobenzene (Surr)	90		70 - 130	07/28/22 09:46	07/30/22 22:33	1		

Lab Sample ID: LCS 880-30893/1-A

Matrix: Solid

Analysis Batch: 31046

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30893

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.07636		mg/Kg		76	70 - 130
Toluene	0.100	0.07525		mg/Kg		75	70 - 130
Ethylbenzene	0.100	0.07655		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	0.200	0.1566		mg/Kg		78	70 - 130
o-Xylene	0.100	0.08861		mg/Kg		89	70 - 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

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

Lab Sample ID: LCS 880-30893/1-A

Matrix: Solid

Analysis Batch: 31046

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30893

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: LCSD 880-30893/2-A

Matrix: Solid

Analysis Batch: 31046

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30893

	LCS	LCS							%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit		
Benzene	0.100	0.08496		mg/Kg		85	70 - 130	11	35		
Toluene	0.100	0.08283		mg/Kg		83	70 - 130	10	35		
Ethylbenzene	0.100	0.08403		mg/Kg		84	70 - 130	9	35		
m-Xylene & p-Xylene	0.200	0.1660		mg/Kg		83	70 - 130	6	35		
o-Xylene	0.100	0.09377		mg/Kg		94	70 - 130	6	35		

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 880-17457-A-4-B MS

Matrix: Solid

Analysis Batch: 31046

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 30893

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00201	U F1	0.0998	0.008077	F1	mg/Kg		8	70 - 130		
Toluene	0.00237	F1	0.0998	0.01293	F1	mg/Kg		11	70 - 130		
Ethylbenzene	0.00203	F1	0.0998	0.01245	F1	mg/Kg		10	70 - 130		
m-Xylene & p-Xylene	0.00684	F1	0.200	0.02690	F1	mg/Kg		10	70 - 130		
o-Xylene	0.00277	F1	0.0998	0.01677	F1	mg/Kg		14	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

Lab Sample ID: 880-17457-A-4-C MSD

Matrix: Solid

Analysis Batch: 31046

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30893

	Sample	Sample	Spike	MSD	MSD				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1	0.0994	0.01078	F1	mg/Kg		11	70 - 130	29	35
Toluene	0.00237	F1	0.0994	0.01290	F1	mg/Kg		11	70 - 130	0	35
Ethylbenzene	0.00203	F1	0.0994	0.01203	F1	mg/Kg		10	70 - 130	3	35
m-Xylene & p-Xylene	0.00684	F1	0.199	0.02672	F1	mg/Kg		10	70 - 130	1	35
o-Xylene	0.00277	F1	0.0994	0.01595	F1	mg/Kg		13	70 - 130	5	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	83		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

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

Lab Sample ID: MB 880-30658/1-A

Matrix: Solid

Analysis Batch: 30649

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30658

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		07/26/22 08:35	07/26/22 10:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 10:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 08:35	07/26/22 10:49	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130			07/26/22 08:35	07/26/22 10:49	1
o-Terphenyl	83		70 - 130			07/26/22 08:35	07/26/22 10:49	1

Lab Sample ID: LCS 880-30658/2-A

Matrix: Solid

Analysis Batch: 30649

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30658

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1058		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1146		mg/Kg		115	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
1-Chlorooctane	106		70 - 130				
o-Terphenyl	111		70 - 130				

Lab Sample ID: LCSD 880-30658/3-A

Matrix: Solid

Analysis Batch: 30649

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30658

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1120		mg/Kg		112	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	1009		mg/Kg		101	70 - 130	13	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	94		70 - 130						
o-Terphenyl	101		70 - 130						

Lab Sample ID: 890-2606-1 MS

Matrix: Solid

Analysis Batch: 30649

Client Sample ID: BH01

Prep Type: Total/NA

Prep Batch: 30658

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1102		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	660.1	F1	mg/Kg		66	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

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

Lab Sample ID: 890-2606-1 MS

Matrix: Solid

Analysis Batch: 30649

Client Sample ID: BH01

Prep Type: Total/NA

Prep Batch: 30658

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

Lab Sample ID: 890-2606-1 MSD

Matrix: Solid

Analysis Batch: 30649

Client Sample ID: BH01

Prep Type: Total/NA

Prep Batch: 30658

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	<50.0	U	999	1138		mg/Kg		111	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	999	702.8		mg/Kg		70	70 - 130	6	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	71		70 - 130
o-Terphenyl	73		70 - 130

Lab Sample ID: MB 880-30666/1-A

Matrix: Solid

Analysis Batch: 30643

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 30666

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		07/26/22 10:41	07/26/22 20:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		07/26/22 10:41	07/26/22 20:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/26/22 10:41	07/26/22 20:25	1

	MB	MB		Prepared	Analyzed	Dil Fac
Surrogate	%Recovery	Qualifier	Limits			
1-Chlorooctane	100		70 - 130	07/26/22 10:41	07/26/22 20:25	1
o-Terphenyl	108		70 - 130	07/26/22 10:41	07/26/22 20:25	1

Lab Sample ID: LCS 880-30666/2-A

Matrix: Solid

Analysis Batch: 30643

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 30666

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1067		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	1000	914.2		mg/Kg		91	70 - 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	92		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

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

Lab Sample ID: LCSD 880-30666/3-A

Matrix: Solid

Analysis Batch: 30643

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 30666

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1056		mg/Kg		106	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	902.3		mg/Kg		90	70 - 130	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	93		70 - 130						
o-Terphenyl	95		70 - 130						

Lab Sample ID: 890-2618-A-1-E MS

Matrix: Solid

Analysis Batch: 30643

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 30666

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec		
	Result	Qualifier	Added	Result	Qualifier			Limits	Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	1000	1169		mg/Kg		114	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	853.5		mg/Kg		84	70 - 130		
Surrogate	MS	MS									
	%Recovery	Qualifier	Limits								
1-Chlorooctane	82		70 - 130								
o-Terphenyl	78		70 - 130								

Lab Sample ID: 890-2618-A-1-F MSD

Matrix: Solid

Analysis Batch: 30643

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 30666

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	999	943.2	F2	mg/Kg		92	70 - 130	21	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	999	704.6	F1	mg/Kg		69	70 - 130	19	20
							</				

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30599/1-A

Matrix: Solid

Analysis Batch: 30689

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			07/27/22 00:40	1

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-30599/2-A

Matrix: Solid

Analysis Batch: 30689

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	255.1		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-30599/3-A

Matrix: Solid

Analysis Batch: 30689

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	256.1		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 880-17267-A-1-B MS

Matrix: Solid

Analysis Batch: 30689

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	16.4		249	288.5		mg/Kg		109	90 - 110		

Lab Sample ID: 880-17267-A-1-C MSD

Matrix: Solid

Analysis Batch: 30689

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	16.4		249	289.5		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 890-2606-9 MS

Matrix: Solid

Analysis Batch: 30689

Client Sample ID: BH05

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	60.3		249	329.8		mg/Kg		108	90 - 110		

Lab Sample ID: 890-2606-9 MSD

Matrix: Solid

Analysis Batch: 30689

Client Sample ID: BH05

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	60.3		249	329.7		mg/Kg		108	90 - 110	0	20

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

GC VOA

Prep Batch: 30595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30595/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 30665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-1	BH01	Total/NA	Solid	5035	
890-2606-2	BH01	Total/NA	Solid	5035	
890-2606-3	BH02	Total/NA	Solid	5035	
890-2606-4	BH02	Total/NA	Solid	5035	
890-2606-5	BH03	Total/NA	Solid	5035	
890-2606-6	BH03	Total/NA	Solid	5035	
MB 880-30665/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30665/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30665/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2602-A-3-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2602-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-1	BH01	Total/NA	Solid	8021B	30665
890-2606-2	BH01	Total/NA	Solid	8021B	30665
890-2606-3	BH02	Total/NA	Solid	8021B	30665
890-2606-4	BH02	Total/NA	Solid	8021B	30665
890-2606-5	BH03	Total/NA	Solid	8021B	30665
890-2606-6	BH03	Total/NA	Solid	8021B	30665
MB 880-30665/5-A	Method Blank	Total/NA	Solid	8021B	30665
MB 880-30796/5-A	Method Blank	Total/NA	Solid	8021B	30796
LCS 880-30665/1-A	Lab Control Sample	Total/NA	Solid	8021B	30665
LCS 880-30796/1-A	Lab Control Sample	Total/NA	Solid	8021B	30796
LCSD 880-30665/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30665
LCSD 880-30796/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30796
880-17402-A-2-D MS	Matrix Spike	Total/NA	Solid	8021B	30796
880-17402-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30796
890-2602-A-3-D MS	Matrix Spike	Total/NA	Solid	8021B	30665
890-2602-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30665

Prep Batch: 30796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30796/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30796/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30796/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17402-A-2-D MS	Matrix Spike	Total/NA	Solid	5035	
880-17402-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-1	BH01	Total/NA	Solid	Total BTEX	
890-2606-2	BH01	Total/NA	Solid	Total BTEX	
890-2606-3	BH02	Total/NA	Solid	Total BTEX	
890-2606-4	BH02	Total/NA	Solid	Total BTEX	
890-2606-5	BH03	Total/NA	Solid	Total BTEX	
890-2606-6	BH03	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

GC VOA (Continued)

Analysis Batch: 30854 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-7	BH04	Total/NA	Solid	Total BTEX	
890-2606-8	BH04	Total/NA	Solid	Total BTEX	
890-2606-9	BH05	Total/NA	Solid	Total BTEX	
890-2606-10	BH05	Total/NA	Solid	Total BTEX	
890-2606-11	BH06	Total/NA	Solid	Total BTEX	
890-2606-12	BH06	Total/NA	Solid	Total BTEX	
890-2606-13	BH07	Total/NA	Solid	Total BTEX	
890-2606-14	BH07	Total/NA	Solid	Total BTEX	
890-2606-15	BH08	Total/NA	Solid	Total BTEX	
890-2606-16	BH08	Total/NA	Solid	Total BTEX	

Prep Batch: 30893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-7	BH04	Total/NA	Solid	5035	
890-2606-8	BH04	Total/NA	Solid	5035	
890-2606-9	BH05	Total/NA	Solid	5035	
890-2606-10	BH05	Total/NA	Solid	5035	
890-2606-11	BH06	Total/NA	Solid	5035	
890-2606-12	BH06	Total/NA	Solid	5035	
890-2606-13	BH07	Total/NA	Solid	5035	
890-2606-14	BH07	Total/NA	Solid	5035	
890-2606-15	BH08	Total/NA	Solid	5035	
890-2606-16	BH08	Total/NA	Solid	5035	
MB 880-30893/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30893/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30893/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17457-A-4-B MS	Matrix Spike	Total/NA	Solid	5035	
880-17457-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-7	BH04	Total/NA	Solid	8021B	30893
890-2606-8	BH04	Total/NA	Solid	8021B	30893
890-2606-9	BH05	Total/NA	Solid	8021B	30893
890-2606-10	BH05	Total/NA	Solid	8021B	30893
890-2606-11	BH06	Total/NA	Solid	8021B	30893
890-2606-12	BH06	Total/NA	Solid	8021B	30893
890-2606-13	BH07	Total/NA	Solid	8021B	30893
890-2606-14	BH07	Total/NA	Solid	8021B	30893
890-2606-15	BH08	Total/NA	Solid	8021B	30893
890-2606-16	BH08	Total/NA	Solid	8021B	30893
MB 880-30595/5-A	Method Blank	Total/NA	Solid	8021B	30595
MB 880-30893/5-A	Method Blank	Total/NA	Solid	8021B	30893
LCS 880-30893/1-A	Lab Control Sample	Total/NA	Solid	8021B	30893
LCSD 880-30893/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30893
880-17457-A-4-B MS	Matrix Spike	Total/NA	Solid	8021B	30893
880-17457-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30893

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

GC Semi VOA

Analysis Batch: 30643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-16	BH08	Total/NA	Solid	8015B NM	30666
MB 880-30666/1-A	Method Blank	Total/NA	Solid	8015B NM	30666
LCS 880-30666/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30666
LCSD 880-30666/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30666
890-2618-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30666
890-2618-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30666

Analysis Batch: 30649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-1	BH01	Total/NA	Solid	8015B NM	30658
890-2606-2	BH01	Total/NA	Solid	8015B NM	30658
890-2606-3	BH02	Total/NA	Solid	8015B NM	30658
890-2606-4	BH02	Total/NA	Solid	8015B NM	30658
890-2606-5	BH03	Total/NA	Solid	8015B NM	30658
890-2606-6	BH03	Total/NA	Solid	8015B NM	30658
890-2606-7	BH04	Total/NA	Solid	8015B NM	30658
890-2606-8	BH04	Total/NA	Solid	8015B NM	30658
890-2606-9	BH05	Total/NA	Solid	8015B NM	30658
890-2606-10	BH05	Total/NA	Solid	8015B NM	30658
890-2606-11	BH06	Total/NA	Solid	8015B NM	30658
890-2606-12	BH06	Total/NA	Solid	8015B NM	30658
890-2606-13	BH07	Total/NA	Solid	8015B NM	30658
890-2606-14	BH07	Total/NA	Solid	8015B NM	30658
890-2606-15	BH08	Total/NA	Solid	8015B NM	30658
MB 880-30658/1-A	Method Blank	Total/NA	Solid	8015B NM	30658
LCS 880-30658/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30658
LCSD 880-30658/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30658
890-2606-1 MS	BH01	Total/NA	Solid	8015B NM	30658
890-2606-1 MSD	BH01	Total/NA	Solid	8015B NM	30658

Prep Batch: 30658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-1	BH01	Total/NA	Solid	8015NM Prep	
890-2606-2	BH01	Total/NA	Solid	8015NM Prep	
890-2606-3	BH02	Total/NA	Solid	8015NM Prep	
890-2606-4	BH02	Total/NA	Solid	8015NM Prep	
890-2606-5	BH03	Total/NA	Solid	8015NM Prep	
890-2606-6	BH03	Total/NA	Solid	8015NM Prep	
890-2606-7	BH04	Total/NA	Solid	8015NM Prep	
890-2606-8	BH04	Total/NA	Solid	8015NM Prep	
890-2606-9	BH05	Total/NA	Solid	8015NM Prep	
890-2606-10	BH05	Total/NA	Solid	8015NM Prep	
890-2606-11	BH06	Total/NA	Solid	8015NM Prep	
890-2606-12	BH06	Total/NA	Solid	8015NM Prep	
890-2606-13	BH07	Total/NA	Solid	8015NM Prep	
890-2606-14	BH07	Total/NA	Solid	8015NM Prep	
890-2606-15	BH08	Total/NA	Solid	8015NM Prep	
MB 880-30658/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30658/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30658/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2606-1 MS	BH01	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

GC Semi VOA (Continued)

Prep Batch: 30658 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-1 MSD	BH01	Total/NA	Solid	8015NM Prep	

Prep Batch: 30666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-16	BH08	Total/NA	Solid	8015NM Prep	
MB 880-30666/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30666/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30666/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2618-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2618-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-1	BH01	Total/NA	Solid	8015 NM	
890-2606-2	BH01	Total/NA	Solid	8015 NM	
890-2606-3	BH02	Total/NA	Solid	8015 NM	
890-2606-4	BH02	Total/NA	Solid	8015 NM	
890-2606-5	BH03	Total/NA	Solid	8015 NM	
890-2606-6	BH03	Total/NA	Solid	8015 NM	
890-2606-7	BH04	Total/NA	Solid	8015 NM	
890-2606-8	BH04	Total/NA	Solid	8015 NM	
890-2606-9	BH05	Total/NA	Solid	8015 NM	
890-2606-10	BH05	Total/NA	Solid	8015 NM	
890-2606-11	BH06	Total/NA	Solid	8015 NM	
890-2606-12	BH06	Total/NA	Solid	8015 NM	
890-2606-13	BH07	Total/NA	Solid	8015 NM	
890-2606-14	BH07	Total/NA	Solid	8015 NM	
890-2606-15	BH08	Total/NA	Solid	8015 NM	
890-2606-16	BH08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-1	BH01	Soluble	Solid	DI Leach	
890-2606-2	BH01	Soluble	Solid	DI Leach	
890-2606-3	BH02	Soluble	Solid	DI Leach	
890-2606-4	BH02	Soluble	Solid	DI Leach	
890-2606-5	BH03	Soluble	Solid	DI Leach	
890-2606-6	BH03	Soluble	Solid	DI Leach	
890-2606-7	BH04	Soluble	Solid	DI Leach	
890-2606-8	BH04	Soluble	Solid	DI Leach	
890-2606-9	BH05	Soluble	Solid	DI Leach	
890-2606-10	BH05	Soluble	Solid	DI Leach	
890-2606-11	BH06	Soluble	Solid	DI Leach	
890-2606-12	BH06	Soluble	Solid	DI Leach	
890-2606-13	BH07	Soluble	Solid	DI Leach	
890-2606-14	BH07	Soluble	Solid	DI Leach	
890-2606-15	BH08	Soluble	Solid	DI Leach	
890-2606-16	BH08	Soluble	Solid	DI Leach	
MB 880-30599/1-A	Method Blank	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

HPLC/IC (Continued)

Leach Batch: 30599 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-30599/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30599/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17267-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17267-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2606-9 MS	BH05	Soluble	Solid	DI Leach	
890-2606-9 MSD	BH05	Soluble	Solid	DI Leach	

Analysis Batch: 30689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2606-1	BH01	Soluble	Solid	300.0	30599
890-2606-2	BH01	Soluble	Solid	300.0	30599
890-2606-3	BH02	Soluble	Solid	300.0	30599
890-2606-4	BH02	Soluble	Solid	300.0	30599
890-2606-5	BH03	Soluble	Solid	300.0	30599
890-2606-6	BH03	Soluble	Solid	300.0	30599
890-2606-7	BH04	Soluble	Solid	300.0	30599
890-2606-8	BH04	Soluble	Solid	300.0	30599
890-2606-9	BH05	Soluble	Solid	300.0	30599
890-2606-10	BH05	Soluble	Solid	300.0	30599
890-2606-11	BH06	Soluble	Solid	300.0	30599
890-2606-12	BH06	Soluble	Solid	300.0	30599
890-2606-13	BH07	Soluble	Solid	300.0	30599
890-2606-14	BH07	Soluble	Solid	300.0	30599
890-2606-15	BH08	Soluble	Solid	300.0	30599
890-2606-16	BH08	Soluble	Solid	300.0	30599
MB 880-30599/1-A	Method Blank	Soluble	Solid	300.0	30599
LCS 880-30599/2-A	Lab Control Sample	Soluble	Solid	300.0	30599
LCSD 880-30599/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30599
880-17267-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30599
880-17267-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30599
890-2606-9 MS	BH05	Soluble	Solid	300.0	30599
890-2606-9 MSD	BH05	Soluble	Solid	300.0	30599

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Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH01

Lab Sample ID: 890-2606-1

Date Collected: 07/20/22 09:05

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30665	07/26/22 10:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30748	07/27/22 14:16	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 11:53	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		5			30689	07/27/22 01:35	CH	XEN MID

Client Sample ID: BH01

Lab Sample ID: 890-2606-2

Date Collected: 07/20/22 09:10

Matrix: Solid

Date Received: 07/21/22 09:40

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	30665	07/26/22 10:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30748	07/27/22 14:37	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 12:58	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		5			30689	07/27/22 01:42	CH	XEN MID

Client Sample ID: BH02

Lab Sample ID: 890-2606-3

Date Collected: 07/20/22 09:15

Matrix: Solid

Date Received: 07/21/22 09:40

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	30665	07/26/22 10:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30748	07/27/22 14:57	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 13:19	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		5			30689	07/27/22 01:50	CH	XEN MID

Client Sample ID: BH02

Lab Sample ID: 890-2606-4

Date Collected: 07/20/22 09:20

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	30665	07/26/22 10:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30748	07/27/22 17:37	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID

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Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH02

Lab Sample ID: 890-2606-4

Date Collected: 07/20/22 09:20

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 13:41	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 02:14	CH	XEN MID

Client Sample ID: BH03

Lab Sample ID: 890-2606-5

Date Collected: 07/20/22 09:25

Matrix: Solid

Date Received: 07/21/22 09:40

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	30665	07/26/22 10:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30748	07/27/22 17:57	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 14:02	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		5			30689	07/27/22 02:22	CH	XEN MID

Client Sample ID: BH03

Lab Sample ID: 890-2606-6

Date Collected: 07/20/22 09:30

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30665	07/26/22 10:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30748	07/27/22 18:18	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 14:23	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 02:29	CH	XEN MID

Client Sample ID: BH04

Lab Sample ID: 890-2606-7

Date Collected: 07/20/22 09:35

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	30893	07/28/22 09:46	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31046	07/31/22 03:20	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 14:45	AJ	XEN MID

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Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH04

Lab Sample ID: 890-2606-7

Date Collected: 07/20/22 09:35

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 02:37	CH	XEN MID

Client Sample ID: BH04

Lab Sample ID: 890-2606-8

Date Collected: 07/20/22 09:40

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30893	07/28/22 09:46	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31046	07/31/22 03:41	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 15:06	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 02:45	CH	XEN MID

Client Sample ID: BH05

Lab Sample ID: 890-2606-9

Date Collected: 07/20/22 09:45

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	30893	07/28/22 09:46	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31046	07/31/22 04:01	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 15:27	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 02:53	CH	XEN MID

Client Sample ID: BH05

Lab Sample ID: 890-2606-10

Date Collected: 07/20/22 09:50

Matrix: Solid

Date Received: 07/21/22 09:40

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	30893	07/28/22 09:46	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31046	07/31/22 04:21	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 15:49	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 03:16	CH	XEN MID

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Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH06

Lab Sample ID: 890-2606-11

Date Collected: 07/20/22 10:00

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	30893	07/28/22 09:46	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31046	07/31/22 04:42	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 16:33	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 03:24	CH	XEN MID

Client Sample ID: BH06

Lab Sample ID: 890-2606-12

Date Collected: 07/20/22 10:10

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30893	07/28/22 09:46	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31046	07/31/22 05:02	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 16:54	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 03:48	CH	XEN MID

Client Sample ID: BH07

Lab Sample ID: 890-2606-13

Date Collected: 07/20/22 10:20

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	30893	07/28/22 09:46	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31046	07/31/22 05:23	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 17:15	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 03:56	CH	XEN MID

Client Sample ID: BH07

Lab Sample ID: 890-2606-14

Date Collected: 07/20/22 10:30

Matrix: Solid

Date Received: 07/21/22 09:40

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	30893	07/28/22 09:46	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31046	07/31/22 05:43	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Client Sample ID: BH07

Lab Sample ID: 890-2606-14

Date Collected: 07/20/22 10:30

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 17:36	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 04:04	CH	XEN MID

Client Sample ID: BH08

Lab Sample ID: 890-2606-15

Date Collected: 07/20/22 10:40

Matrix: Solid

Date Received: 07/21/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	30893	07/28/22 09:46	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31046	07/31/22 06:04	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30658	07/26/22 08:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30649	07/26/22 17:57	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 04:11	CH	XEN MID

Client Sample ID: BH08

Lab Sample ID: 890-2606-16

Date Collected: 07/20/22 10:50

Matrix: Solid

Date Received: 07/21/22 09:40

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	30893	07/28/22 09:46	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31046	07/31/22 06:24	AJ	XEN MID
Total/NA	Analysis	Total BTEX		1			30854	07/27/22 18:56	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30768	07/27/22 09:04	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 01:07	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	30599	07/25/22 15:17	KS	XEN MID
Soluble	Analysis	300.0		1			30689	07/27/22 04:19	CH	XEN MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

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	T104704400-22-24	06-30-23

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2606-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2606-1	BH01	Solid	07/20/22 09:05	07/21/22 09:40	1
890-2606-2	BH01	Solid	07/20/22 09:10	07/21/22 09:40	4
890-2606-3	BH02	Solid	07/20/22 09:15	07/21/22 09:40	2
890-2606-4	BH02	Solid	07/20/22 09:20	07/21/22 09:40	4
890-2606-5	BH03	Solid	07/20/22 09:25	07/21/22 09:40	2
890-2606-6	BH03	Solid	07/20/22 09:30	07/21/22 09:40	4
890-2606-7	BH04	Solid	07/20/22 09:35	07/21/22 09:40	1
890-2606-8	BH04	Solid	07/20/22 09:40	07/21/22 09:40	4
890-2606-9	BH05	Solid	07/20/22 09:45	07/21/22 09:40	1
890-2606-10	BH05	Solid	07/20/22 09:50	07/21/22 09:40	4
890-2606-11	BH06	Solid	07/20/22 10:00	07/21/22 09:40	1
890-2606-12	BH06	Solid	07/20/22 10:10	07/21/22 09:40	4
890-2606-13	BH07	Solid	07/20/22 10:20	07/21/22 09:40	1
890-2606-14	BH07	Solid	07/20/22 10:30	07/21/22 09:40	4
890-2606-15	BH08	Solid	07/20/22 10:40	07/21/22 09:40	1
890-2606-16	BH08	Solid	07/20/22 10:50	07/21/22 09:40	4



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) 986-3199

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager: Kalei Jennings **Bill To: (if different):** Kalei Jennings
Company Name: Ensolum **Company Name:** Ensolum
Address: 3122 National Parks HWY **Address:** 3122 National Parks HWY
City, State ZIP: Carlsbad, NM 88220 **City, State ZIP:** Carlsbad, NM 88220
Phone: 817-683-2503 **Email:** kjennings@ensolum.com

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 Com 001H **Turn Around:** ☒ Routine ☐ Rush
Project Number: 03D2024010
Project Location: Lea County, NM **Due Date:** 5 Day TAT
Sampler's Name: Gilbert Moreno **TAT starts the day received by the lab, if received by 4:30pm**
CC #: _____

SAMPLE RECEIPT Temp Blank: ☒ Yes ☐ No Wet Ice: ☒ Yes ☐ No
Samples Received Intact: ☒ Yes ☐ No Thermometer ID: TMM-003
Cooler Custody Seals: Yes No N/A Correction Factor: -0.2
Sample Custody Seals: Yes No N/A Temperature Reading: 18.3
Total Containers: Corrected Temperature: 18.1

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	ANALYSIS REQUEST	Preservative Codes
BH01	S	7.20.22	9:05	1'	Grab/	1	CHLORIDES (EPA: 300.0)	None: NO DI Water: H ₂ O
BH01	S	7.20.22	9:10	4'	Grab/	1	TPH (8015)	Cool: Cool MeOH: Me
BH02	S	7.20.22	9:15	2'	Grab/	1	BTEX (8021)	HCL: HC HNO ₃ : HN
BH02	S	7.20.22	9:20	4'	Grab/	1		H ₂ SO ₄ : H ₂
BH03	S	7.20.22	9:25	2'	Grab/	1		H ₃ PO ₄ : HP
BH03	S	7.20.22	9:30	4'	Grab/	1		NaHSO ₄ : NABIS
BH04	S	7.20.22	9:35	1'	Grab/	1		Na ₂ S ₂ O ₃ : NaSO ₃
BH04	S	7.20.22	9:40	4'	Grab/	1		Zn Acetate+NaOH: Zn
BH05	S	7.20.22	9:45	1'	Grab/	1		NaOH+Ascorbic Acid: SAPC
BH05	S	7.20.22	9:50	4'	Grab/	1		

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti 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 Ti U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$86.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	7.21.22 0940			



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

Chain of Custody

Work Order No: _____

Page 2 of 2
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Project Manager:	Katei Jennings	Bill to: (if different)	Katei Jennings
Company Name:	Ensolum	Company Name:	Ensolum
Address:	3122 National Parks HWY	Address:	3122 National Parks HWY
City, State ZIP:	Carlsbad, NM 86220	City, State ZIP:	Carlsbad, NM 86220
Phone:	817-683-2503	Email:	kjennings@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 Com 001H	Turn Around		ANALYSIS REQUEST										Preservative Codes		
Project Number:	03D2024010	☒ Routine	☐ Rush	Pres. Code											None: NO	DI Water: H ₂ O
Project Location:	Lea County, NM	Due Date:	5 Day TAT												Cool: Cool	MeOH: Me
Sampler's Name:	Gilbert Moreno	TAT starts the day received by the lab, if received by 4:30pm													HCL: HC	HNO ₃ : HN
CC #:															H ₂ SO ₄ : H ₂	NaOH: Na
SAMPLE RECEIPT		Temp Blank:	Yes: No	Thermometer ID	Wet Ice:	Yes	No								H ₃ PO ₄ : HP	
Samples Received Inact:	Yes	No		Corrected Factor											NaHSO ₄ : NABIS	
Cooler Custody Seals:	Yes	No	N/A	Temperature Reading:											Na ₂ S ₂ O ₃ : NaSO ₃	
Sample Custody Seals:	Yes	No	N/A	Corrected Temperature:											Zn Acetate+NaOH: Zn	
Total Containers:															NaOH+Ascorbic Acid: SAFC	

[illegible]

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 Ti Sn U V Zr
TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U			Hg: 1631 / 245.1 / 7470 / 7471

(Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xeno, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xeno will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xeno. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xeno, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			7.21.22 0940			
2						
3						
4						
5						
6						

Revised Date: 08/25/2020 Row: 2020

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2606-1

SDG Number: Lea County NM

Login Number: 2606

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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2606-1

SDG Number: Lea County NM

Login Number: 2606

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 07/22/22 10:18 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	



Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2690-1

Laboratory Sample Delivery Group: 03D2024010

Client Project/Site: King Tut Federal Com 001H

For:

Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:

8/12/2022 7:53:16 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Laboratory Job ID: 890-2690-1
SDG: 03D2024010

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Definitions/Glossary

Client: Ensolum

Job ID: 890-2690-1

Project/Site: King Tut Federal Com 001H

SDG: 03D2024010

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high 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, low 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.
α	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

Eurofins Carlsbad

Case Narrative

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Job ID: 890-2690-1

Laboratory: Eurofins Carlsbad**Narrative****Job Narrative
890-2690-1****Receipt**

The samples were received on 8/1/2022 8:23 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 5.2°C

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS07 (890-2690-7). 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 880-31680 and analytical batch 880-31685 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample duplicate (LCSD) recovery was within acceptance limits.

Method 8021B: o-Xylene biased high in LCS. Since only an acceptable LCS or LCSD is required per the method, the data has been qualified and reported.(LCS 880-31680/1-A)

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31801 and analytical batch 880-31685 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31417 and analytical batch 880-31455 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS03 (890-2690-3) and FS04 (890-2690-4). Evidence of matrix interferences is not obvious.

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 880-31444 and analytical batch 880-31665 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 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31429 and analytical batch 880-31662 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery 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 Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS01

Lab Sample ID: 890-2690-1

Date Collected: 07/26/22 14:05

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 15:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 15:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 15:09	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		08/08/22 08:17	08/08/22 15:09	1
o-Xylene	<0.00200	U *	0.00200	mg/Kg		08/08/22 08:17	08/08/22 15:09	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		08/08/22 08:17	08/08/22 15:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	08/08/22 08:17	08/08/22 15:09	1
1,4-Difluorobenzene (Surr)	93		70 - 130	08/08/22 08:17	08/08/22 15:09	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		08/03/22 13:28	08/04/22 14:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/03/22 13:28	08/04/22 14:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/03/22 13:28	08/04/22 14:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	08/03/22 13:28	08/04/22 14:46	1
o-Terphenyl	111		70 - 130	08/03/22 13:28	08/04/22 14:46	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	620	F1	4.98	mg/Kg			08/09/22 14:38	1

Client Sample ID: FS02

Lab Sample ID: 890-2690-2

Date Collected: 07/28/22 13:00

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/05/22 21:51	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/05/22 21:51	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/05/22 21:51	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/05/22 11:28	08/05/22 21:51	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/05/22 21:51	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/05/22 11:28	08/05/22 21:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	08/05/22 11:28	08/05/22 21:51	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS02

Lab Sample ID: 890-2690-2

Date Collected: 07/28/22 13:00

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	98		70 - 130	08/05/22 11:28	08/05/22 21:51	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 15:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 15:07	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 15:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130			08/03/22 13:28	08/04/22 15:07	1
o-Terphenyl	105		70 - 130			08/03/22 13:28	08/04/22 15:07	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1510		5.03	mg/Kg			08/09/22 15:02	1

Client Sample ID: FS03

Lab Sample ID: 890-2690-3

Date Collected: 07/28/22 13:05

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/05/22 22:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/05/22 22:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/05/22 22:12	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		08/05/22 11:28	08/05/22 22:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/05/22 22:12	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		08/05/22 11:28	08/05/22 22:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	08/05/22 11:28	08/05/22 22:12	1
1,4-Difluorobenzene (Surr)	110		70 - 130	08/05/22 11:28	08/05/22 22:12	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	61.1		50.0	mg/Kg			08/05/22 08:59	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS03

Lab Sample ID: 890-2690-3

Date Collected: 07/28/22 13:05

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 15:55	1
Diesel Range Organics (Over C10-C28)	61.1		50.0	mg/Kg		08/03/22 13:28	08/04/22 15:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 15:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130			08/03/22 13:28	08/04/22 15:55	1
o-Terphenyl	0.06	S1-	70 - 130			08/03/22 13:28	08/04/22 15:55	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	65.8		5.05	mg/Kg			08/09/22 15:10	1

Client Sample ID: FS04

Lab Sample ID: 890-2690-4

Date Collected: 07/28/22 13:10

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		08/05/22 11:28	08/05/22 23:37	1
Toluene	<0.00202	U	0.00202	mg/Kg		08/05/22 11:28	08/05/22 23:37	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		08/05/22 11:28	08/05/22 23:37	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		08/05/22 11:28	08/05/22 23:37	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		08/05/22 11:28	08/05/22 23:37	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		08/05/22 11:28	08/05/22 23:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			08/05/22 11:28	08/05/22 23:37	1
1,4-Difluorobenzene (Surr)	98		70 - 130			08/05/22 11:28	08/05/22 23:37	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	71.4		50.0	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 16:16	1
Diesel Range Organics (Over C10-C28)	71.4		50.0	mg/Kg		08/03/22 13:28	08/04/22 16:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 16:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			08/03/22 13:28	08/04/22 16:16	1
o-Terphenyl	0.05	S1-	70 - 130			08/03/22 13:28	08/04/22 16:16	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS04

Lab Sample ID: 890-2690-4

Date Collected: 07/28/22 13:10

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1470	F1	24.9	mg/Kg			08/11/22 19:45	5

Client Sample ID: FS05

Lab Sample ID: 890-2690-5

Date Collected: 07/28/22 13:15

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/05/22 23:57	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/05/22 23:57	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/05/22 23:57	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/05/22 11:28	08/05/22 23:57	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/05/22 23:57	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/05/22 11:28	08/05/22 23:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			08/05/22 11:28	08/05/22 23:57	1
1,4-Difluorobenzene (Surr)	112		70 - 130			08/05/22 11:28	08/05/22 23:57	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 16:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 16:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 16:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130			08/03/22 13:28	08/04/22 16:38	1
o-Terphenyl	112		70 - 130			08/03/22 13:28	08/04/22 16:38	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1170		4.98	mg/Kg			08/11/22 20:09	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS06

Lab Sample ID: 890-2690-6

Date Collected: 07/28/22 13:20

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 00:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 00:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 00:18	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		08/05/22 11:28	08/06/22 00:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 00:18	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		08/05/22 11:28	08/06/22 00:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	08/05/22 11:28	08/06/22 00:18	1
1,4-Difluorobenzene (Surr)	100		70 - 130	08/05/22 11:28	08/06/22 00:18	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		08/03/22 13:28	08/04/22 16:59	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		08/03/22 13:28	08/04/22 16:59	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		08/03/22 13:28	08/04/22 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	08/03/22 13:28	08/04/22 16:59	1
o-Terphenyl	107		70 - 130	08/03/22 13:28	08/04/22 16:59	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	373		5.04	mg/Kg			08/11/22 20:17	1

Client Sample ID: FS07

Lab Sample ID: 890-2690-7

Date Collected: 07/28/22 13:25

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 00:39	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 00:39	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 00:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/05/22 11:28	08/06/22 00:39	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 00:39	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/05/22 11:28	08/06/22 00:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130	08/05/22 11:28	08/06/22 00:39	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS07

Lab Sample ID: 890-2690-7

Date Collected: 07/28/22 13:25

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	91		70 - 130	08/05/22 11:28	08/06/22 00:39	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 17:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 17:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 17:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			08/03/22 13:28	08/04/22 17:21	1
o-Terphenyl	108		70 - 130			08/03/22 13:28	08/04/22 17:21	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3180		25.1	mg/Kg			08/11/22 20:25	5

Client Sample ID: FS08

Lab Sample ID: 890-2690-8

Date Collected: 07/28/22 13:15

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 01:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 01:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 01:00	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		08/05/22 11:28	08/06/22 01:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 01:00	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		08/05/22 11:28	08/06/22 01:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	08/05/22 11:28	08/06/22 01:00	1
1,4-Difluorobenzene (Surr)	94		70 - 130	08/05/22 11:28	08/06/22 01:00	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			08/05/22 08:59	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS08

Lab Sample ID: 890-2690-8

Date Collected: 07/28/22 13:15

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		08/03/22 13:28	08/04/22 17:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/03/22 13:28	08/04/22 17:43	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/03/22 13:28	08/04/22 17:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130			08/03/22 13:28	08/04/22 17:43	1
o-Terphenyl	113		70 - 130			08/03/22 13:28	08/04/22 17:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73.1		5.02	mg/Kg			08/11/22 20:33	1

Client Sample ID: FS09

Lab Sample ID: 890-2690-9

Date Collected: 07/28/22 13:30

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/06/22 01:21	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/06/22 01:21	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/06/22 01:21	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/05/22 11:28	08/06/22 01:21	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:28	08/06/22 01:21	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/05/22 11:28	08/06/22 01:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130			08/05/22 11:28	08/06/22 01:21	1
1,4-Difluorobenzene (Surr)	108		70 - 130			08/05/22 11:28	08/06/22 01:21	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 18:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 18:05	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 18:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130			08/03/22 13:28	08/04/22 18:05	1
o-Terphenyl	107		70 - 130			08/03/22 13:28	08/04/22 18:05	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS09

Lab Sample ID: 890-2690-9

Date Collected: 07/28/22 13:30

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1610		25.2	mg/Kg			08/11/22 21:20	5

Client Sample ID: FS10

Lab Sample ID: 890-2690-10

Date Collected: 07/28/22 13:35

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 01:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 01:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 01:41	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		08/05/22 11:28	08/06/22 01:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 01:41	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		08/05/22 11:28	08/06/22 01:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			08/05/22 11:28	08/06/22 01:41	1
1,4-Difluorobenzene (Surr)	107		70 - 130			08/05/22 11:28	08/06/22 01:41	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 18:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 18:26	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 18:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130			08/03/22 13:28	08/04/22 18:26	1
o-Terphenyl	108		70 - 130			08/03/22 13:28	08/04/22 18:26	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.2		4.97	mg/Kg			08/11/22 22:12	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS11

Lab Sample ID: 890-2690-11

Date Collected: 07/29/22 13:20

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 02:02	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 02:02	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 02:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/05/22 11:28	08/06/22 02:02	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 02:02	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/05/22 11:28	08/06/22 02:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	08/05/22 11:28	08/06/22 02:02	1
1,4-Difluorobenzene (Surr)	86		70 - 130	08/05/22 11:28	08/06/22 02:02	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 13:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 13:40	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 13:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130	08/03/22 15:56	08/04/22 13:40	1
o-Terphenyl	99		70 - 130	08/03/22 15:56	08/04/22 13:40	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	586		4.99	mg/Kg			08/11/22 22:20	1

Client Sample ID: FS12

Lab Sample ID: 890-2690-12

Date Collected: 07/29/22 13:25

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 02:23	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 02:23	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 02:23	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/05/22 11:28	08/06/22 02:23	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:28	08/06/22 02:23	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/05/22 11:28	08/06/22 02:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	08/05/22 11:28	08/06/22 02:23	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS12

Lab Sample ID: 890-2690-12

Date Collected: 07/29/22 13:25

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	109		70 - 130	08/05/22 11:28	08/06/22 02:23	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 14:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 14:02	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 14:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130			08/03/22 15:56	08/04/22 14:02	1
o-Terphenyl	101		70 - 130			08/03/22 15:56	08/04/22 14:02	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2210		25.0	mg/Kg			08/11/22 22:28	5

Client Sample ID: FS13

Lab Sample ID: 890-2690-13

Date Collected: 07/29/22 13:30

Matrix: Solid

Date Received: 08/01/22 08:23

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 02:44	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 02:44	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 02:44	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		08/05/22 11:28	08/06/22 02:44	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/06/22 02:44	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		08/05/22 11:28	08/06/22 02:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	08/05/22 11:28	08/06/22 02:44	1
1,4-Difluorobenzene (Surr)	112		70 - 130	08/05/22 11:28	08/06/22 02:44	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			08/08/22 15:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS13
Date Collected: 07/29/22 13:30
Date Received: 08/01/22 08:23
Sample Depth: 4'

Lab Sample ID: 890-2690-13
Matrix: Solid

Method: 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 14:24	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 14:24	1	
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 14:24	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	83		70 - 130			08/03/22 15:56	08/04/22 14:24	1	
o-Terphenyl	98		70 - 130			08/03/22 15:56	08/04/22 14:24	1	

Method: 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	357		5.00	mg/Kg			08/11/22 22:36	1	

Surrogate Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-17510-A-1-D MS	Matrix Spike	94	107
880-17510-A-1-E MSD	Matrix Spike Duplicate	99	99
880-17530-A-5-E MS	Matrix Spike	125	97
880-17530-A-5-F MSD	Matrix Spike Duplicate	128	103
880-17833-A-1-A MS	Matrix Spike	106	94
880-17833-A-1-B MSD	Matrix Spike Duplicate	112	92
890-2690-1	FS01	114	93
890-2690-2	FS02	114	98
890-2690-3	FS03	105	110
890-2690-4	FS04	103	98
890-2690-5	FS05	103	112
890-2690-6	FS06	105	100
890-2690-7	FS07	146 S1+	91
890-2690-8	FS08	104	94
890-2690-9	FS09	105	108
890-2690-10	FS10	106	107
890-2690-11	FS11	105	86
890-2690-12	FS12	107	109
890-2690-13	FS13	98	112
LCS 880-31574/1-A	Lab Control Sample	90	105
LCS 880-31680/1-A	Lab Control Sample	125	92
LCS 880-31801/1-A	Lab Control Sample	103	97
LCSD 880-31574/2-A	Lab Control Sample Dup	108	103
LCSD 880-31680/2-A	Lab Control Sample Dup	106	95
LCSD 880-31801/2-A	Lab Control Sample Dup	106	97
MB 880-31574/5-A	Method Blank	94	95
MB 880-31680/5-A	Method Blank	98	90
MB 880-31801/5-A	Method Blank	104	91
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-17530-A-1-E MS	Matrix Spike	79	79
880-17530-A-1-F MSD	Matrix Spike Duplicate	81	90
880-17544-A-1-D MS	Matrix Spike	69 S1-	73
880-17544-A-1-E MSD	Matrix Spike Duplicate	79	81
890-2690-1	FS01	101	111
890-2690-2	FS02	97	105
890-2690-3	FS03	84	0.06 S1-
890-2690-4	FS04	100	0.05 S1-
890-2690-5	FS05	103	112
890-2690-6	FS06	98	107
890-2690-7	FS07	100	108

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Surrogate Summary

Client: Ensolum

Job ID: 890-2690-1

Project/Site: King Tut Federal Com 001H

SDG: 03D2024010

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-2690-8	FS08	103	113
890-2690-9	FS09	97	107
890-2690-10	FS10	101	108
890-2690-11	FS11	81	99
890-2690-12	FS12	83	101
890-2690-13	FS13	83	98
LCS 880-31417/2-A	Lab Control Sample	124	130
LCS 880-31439/2-A	Lab Control Sample	86	97
LCSD 880-31417/3-A	Lab Control Sample Dup	123	127
LCSD 880-31439/3-A	Lab Control Sample Dup	88	101
MB 880-31417/1-A	Method Blank	82	98
MB 880-31439/1-A	Method Blank	96	118

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31574/5-A

Matrix: Solid

Analysis Batch: 31617

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31574

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/05/22 18:43	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/05/22 18:43	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/05/22 18:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/05/22 11:28	08/05/22 18:43	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:28	08/05/22 18:43	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/05/22 11:28	08/05/22 18:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	08/05/22 11:28	08/05/22 18:43	1
1,4-Difluorobenzene (Surr)	95		70 - 130	08/05/22 11:28	08/05/22 18:43	1

Lab Sample ID: LCS 880-31574/1-A

Matrix: Solid

Analysis Batch: 31617

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31574

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1178		mg/Kg		118	70 - 130
Toluene	0.100	0.1060		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.08769		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	0.200	0.1821		mg/Kg		91	70 - 130
o-Xylene	0.100	0.08916		mg/Kg		89	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: LCSD 880-31574/2-A

Matrix: Solid

Analysis Batch: 31617

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31574

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08890		mg/Kg		89	70 - 130	28	35
Toluene	0.100	0.1103		mg/Kg		110	70 - 130	4	35
Ethylbenzene	0.100	0.1009		mg/Kg		101	70 - 130	14	35
m-Xylene & p-Xylene	0.200	0.2213		mg/Kg		111	70 - 130	19	35
o-Xylene	0.100	0.1081		mg/Kg		108	70 - 130	19	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 880-17510-A-1-D MS

Matrix: Solid

Analysis Batch: 31617

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31574

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.1056		mg/Kg		105	70 - 130
Toluene	<0.00200	U	0.100	0.09624		mg/Kg		96	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

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

Lab Sample ID: 880-17510-A-1-D MS

Matrix: Solid

Analysis Batch: 31617

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31574

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.08030		mg/Kg		78	70 - 130
m-Xylene & p-Xylene	0.00528		0.201	0.1651		mg/Kg		80	70 - 130
o-Xylene	0.00401		0.100	0.08112		mg/Kg		77	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 880-17510-A-1-E MSD

Matrix: Solid

Analysis Batch: 31617

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31574

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0998	0.08498		mg/Kg		85	70 - 130	22	35
Toluene	<0.00200	U	0.0998	0.09819		mg/Kg		98	70 - 130	2	35
Ethylbenzene	<0.00200	U	0.0998	0.08653		mg/Kg		85	70 - 130	7	35
m-Xylene & p-Xylene	0.00528		0.200	0.1858		mg/Kg		90	70 - 130	12	35
o-Xylene	0.00401		0.0998	0.09094		mg/Kg		87	70 - 130	11	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: MB 880-31680/5-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31680

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/08/22 08:17	08/08/22 12:03	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/08/22 08:17	08/08/22 12:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	08/08/22 08:17	08/08/22 12:03	1
1,4-Difluorobenzene (Surr)	90		70 - 130	08/08/22 08:17	08/08/22 12:03	1

Lab Sample ID: LCS 880-31680/1-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09608		mg/Kg		96	70 - 130
Toluene	0.100	0.1059		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1185		mg/Kg		118	70 - 130
m-Xylene & p-Xylene	0.200	0.2507		mg/Kg		125	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

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

Lab Sample ID: LCS 880-31680/1-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	0.100	0.1380	*+	mg/Kg		138	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: LCSD 880-31680/2-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1071		mg/Kg		107	70 - 130	11	35
Toluene	0.100	0.1066		mg/Kg		107	70 - 130	1	35
Ethylbenzene	0.100	0.1143		mg/Kg		114	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2280		mg/Kg		114	70 - 130	10	35
o-Xylene	0.100	0.1244		mg/Kg		124	70 - 130	10	35

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

Lab Sample ID: 880-17530-A-5-E MS

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.101	0.1066		mg/Kg		105	70 - 130
Toluene	<0.00199	U	0.101	0.1147		mg/Kg		114	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.1313		mg/Kg		130	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.202	0.2708	F1	mg/Kg		134	70 - 130
o-Xylene	<0.00199	U F1 *+	0.101	0.1474	F1	mg/Kg		146	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-17530-A-5-F MSD

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31680

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.1056		mg/Kg		105	70 - 130	1	35
Toluene	<0.00199	U	0.100	0.1115		mg/Kg		111	70 - 130	3	35
Ethylbenzene	<0.00199	U	0.100	0.1213		mg/Kg		121	70 - 130	8	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.2484		mg/Kg		124	70 - 130	9	35
o-Xylene	<0.00199	U F1 *+	0.100	0.1355	F1	mg/Kg		135	70 - 130	8	35

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

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

Lab Sample ID: 880-17530-A-5-F MSD

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31680

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: MB 880-31801/5-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31801

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1	
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/08/22 15:42	08/08/22 22:58	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/08/22 15:42	08/08/22 22:58	1	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/08/22 15:42	08/08/22 22:58	1	

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil	Fac		
4-Bromofluorobenzene (Surr)	104		70 - 130	08/08/22 15:42	08/08/22 22:58	1			
1,4-Difluorobenzene (Surr)	91		70 - 130	08/08/22 15:42	08/08/22 22:58	1			

Lab Sample ID: LCS 880-31801/1-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31801

	Spike	LCS	LCS					%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	0.100	0.1012		mg/Kg		101	70 - 130		
Toluene	0.100	0.09868		mg/Kg		99	70 - 130		
Ethylbenzene	0.100	0.1031		mg/Kg		103	70 - 130		
m-Xylene & p-Xylene	0.200	0.2069		mg/Kg		103	70 - 130		
o-Xylene	0.100	0.1139		mg/Kg		114	70 - 130		

	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	103		70 - 130						
1,4-Difluorobenzene (Surr)	97		70 - 130						

Lab Sample ID: LCSD 880-31801/2-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31801

	Spike	LCSD	LCSD					%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit		
Benzene	0.100	0.09009		mg/Kg		90	70 - 130	12	35		
Toluene	0.100	0.08972		mg/Kg		90	70 - 130	10	35		
Ethylbenzene	0.100	0.09649		mg/Kg		96	70 - 130	7	35		
m-Xylene & p-Xylene	0.200	0.1946		mg/Kg		97	70 - 130	6	35		
o-Xylene	0.100	0.1077		mg/Kg		108	70 - 130	6	35		

	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	106		70 - 130								

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

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

Lab Sample ID: LCSD 880-31801/2-A

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31801

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-17833-A-1-A MS

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31801

	Sample	Sample	Spike	MS	MS			%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00201	U F1	0.0998	0.05435	F1	mg/Kg		54	70 - 130
Toluene	<0.00201	U F1	0.0998	0.03513	F1	mg/Kg		35	70 - 130
Ethylbenzene	<0.00201	U F1	0.0998	0.02412	F1	mg/Kg		24	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.04804	F1	mg/Kg		24	70 - 130
o-Xylene	<0.00201	U F1 F2	0.0998	0.02474	F1	mg/Kg		25	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-17833-A-1-B MSD

Matrix: Solid

Analysis Batch: 31685

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31801

	Sample	Sample	Spike	MSD	MSD			%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U F1	0.0996	0.04430	F1	mg/Kg		44	70 - 130	20	35
Toluene	<0.00201	U F1	0.0996	0.02686	F1	mg/Kg		27	70 - 130	27	35
Ethylbenzene	<0.00201	U F1	0.0996	0.01866	F1	mg/Kg		19	70 - 130	26	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.03797	F1	mg/Kg		19	70 - 130	23	35
o-Xylene	<0.00201	U F1 F2	0.0996	0.01578	F1 F2	mg/Kg		16	70 - 130	44	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

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

Lab Sample ID: MB 880-31417/1-A

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31417

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 10:03		1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 10:03		1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 10:03		1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil	Fac		
1-Chlorooctane	82		70 - 130	08/03/22 13:28	08/04/22 10:03		1		
o-Terphenyl	98		70 - 130	08/03/22 13:28	08/04/22 10:03		1		

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

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

Lab Sample ID: LCS 880-31417/2-A

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31417

Analyte			Spike	LCS	LCS				%Rec		
			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1021		mg/Kg		102	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1000		mg/Kg		100	70 - 130		
		LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	124		70 - 130								
o-Terphenyl	130		70 - 130								

Lab Sample ID: LCSD 880-31417/3-A

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31417

Analyte			Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
			Added	Result	Qualifier			Limits	Limit		
Gasoline Range Organics (GRO)-C6-C10			1000	955.6		mg/Kg		96	70 - 130	7	20
Diesel Range Organics (Over C10-C28)			1000	958.9		mg/Kg		96	70 - 130	4	20
Surrogate	LCSD	LCSD	Limits								
	%Recovery	Qualifier									
1-Chlorooctane	123		70 - 130								
o-Terphenyl	127		70 - 130								

Lab Sample ID: 880-17530-A-1-E MS

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31417

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec		
	Result	Qualifier	Added	Result	Qualifier			Limits	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1036		mg/Kg		104	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	624.2	F1	mg/Kg		62	70 - 130		
Surrogate	MS	MS	Limits								
	%Recovery	Qualifier									
1-Chlorooctane	79		70 - 130								
o-Terphenyl	79		70 - 130								

Lab Sample ID: 880-17530-A-1-F MSD

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31417

	Sample	Sample	Spike	MSD	MSD			%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1002		mg/Kg		100	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	720.1		mg/Kg		72	70 - 130	14	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	81		70 - 130								

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

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

Lab Sample ID: 880-17530-A-1-F MSD

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31417

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
<i>o</i> -Terphenyl	90		70 - 130

Lab Sample ID: MB 880-31439/1-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31439

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 10:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 10:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 10:03	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	08/03/22 15:56	08/04/22 10:03	1
<i>o</i> -Terphenyl	118		70 - 130	08/03/22 15:56	08/04/22 10:03	1

Lab Sample ID: LCS 880-31439/2-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31439

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	974.8		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	1000	955.3		mg/Kg		96	70 - 130

Surrogate	LCS	LCS	Limits
1-Chlorooctane	86		70 - 130
<i>o</i> -Terphenyl	97		70 - 130

Lab Sample ID: LCSD 880-31439/3-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31439

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1034		mg/Kg		103	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	985.7		mg/Kg		99	70 - 130	3	20

Surrogate	LCSD	LCSD	Limits
1-Chlorooctane	88		70 - 130
<i>o</i> -Terphenyl	101		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

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

Lab Sample ID: 880-17544-A-1-D MS

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31439

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	936.9		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	766.8		mg/Kg		77	70 - 130		
		</									

Lab Sample ID: 880-17544-A-1-E MSD

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31439

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	<49.9	U	999	908.2		mg/Kg		88	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	866.8		mg/Kg		87	70 - 130	12	20
										</	

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31429/1-A

Matrix: Solid

Analysis Batch: 31662

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			08/11/22 19:22	1

Lab Sample ID: LCS 880-31429/2-A

Matrix: Solid

Analysis Batch: 31662

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	241.3		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-31429/3-A

Matrix: Solid

Analysis Batch: 31662

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	242.5		mg/Kg		97	90 - 110	0	20

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2690-4 MS

Matrix: Solid

Analysis Batch: 31662

Client Sample ID: FS04

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	1470	F1	1250	3453	F1	mg/Kg		159	90 - 110		

Lab Sample ID: 890-2690-4 MSD

Matrix: Solid

Analysis Batch: 31662

Client Sample ID: FS04

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1470	F1	1250	3454	F1	mg/Kg		159	90 - 110	0	20

Lab Sample ID: 890-2691-A-1-E MS

Matrix: Solid

Analysis Batch: 31662

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	663	F1	251	876.5	F1	mg/Kg		85	90 - 110		

Lab Sample ID: 890-2691-A-1-F MSD

Matrix: Solid

Analysis Batch: 31662

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	663	F1	251	884.5	F1	mg/Kg		89	90 - 110	1	20

Lab Sample ID: MB 880-31444/1-A

Matrix: Solid

Analysis Batch: 31665

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			08/09/22 14:15	1

Lab Sample ID: LCS 880-31444/2-A

Matrix: Solid

Analysis Batch: 31665

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	250	233.6		mg/Kg		93	90 - 110		

Lab Sample ID: LCSD 880-31444/3-A

Matrix: Solid

Analysis Batch: 31665

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	234.4		mg/Kg		94	90 - 110	0	20

Lab Sample ID: 890-2690-1 MS

Matrix: Solid

Analysis Batch: 31665

Client Sample ID: FS01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	620	F1	249	828.0	F1	mg/Kg		83	90 - 110		

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-2690-1 MSD

Matrix: Solid

Analysis Batch: 31665

Client Sample ID: FS01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	620	F1	249	833.1	F1	mg/Kg		85	90 - 110	1	20

Lab Sample ID: 890-2695-A-4-C MS

Matrix: Solid

Analysis Batch: 31665

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	81.0		251	328.8		mg/Kg		99	90 - 110		

Lab Sample ID: 890-2695-A-4-D MSD

Matrix: Solid

Analysis Batch: 31665

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	81.0		251	327.2		mg/Kg		98	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

GC VOA

Prep Batch: 31574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-2	FS02	Total/NA	Solid	5035	
890-2690-3	FS03	Total/NA	Solid	5035	
890-2690-4	FS04	Total/NA	Solid	5035	
890-2690-5	FS05	Total/NA	Solid	5035	
890-2690-6	FS06	Total/NA	Solid	5035	
890-2690-7	FS07	Total/NA	Solid	5035	
890-2690-8	FS08	Total/NA	Solid	5035	
890-2690-9	FS09	Total/NA	Solid	5035	
890-2690-10	FS10	Total/NA	Solid	5035	
890-2690-11	FS11	Total/NA	Solid	5035	
890-2690-12	FS12	Total/NA	Solid	5035	
890-2690-13	FS13	Total/NA	Solid	5035	
MB 880-31574/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31574/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31574/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17510-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-17510-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-2	FS02	Total/NA	Solid	8021B	31574
890-2690-3	FS03	Total/NA	Solid	8021B	31574
890-2690-4	FS04	Total/NA	Solid	8021B	31574
890-2690-5	FS05	Total/NA	Solid	8021B	31574
890-2690-6	FS06	Total/NA	Solid	8021B	31574
890-2690-7	FS07	Total/NA	Solid	8021B	31574
890-2690-8	FS08	Total/NA	Solid	8021B	31574
890-2690-9	FS09	Total/NA	Solid	8021B	31574
890-2690-10	FS10	Total/NA	Solid	8021B	31574
890-2690-11	FS11	Total/NA	Solid	8021B	31574
890-2690-12	FS12	Total/NA	Solid	8021B	31574
890-2690-13	FS13	Total/NA	Solid	8021B	31574
MB 880-31574/5-A	Method Blank	Total/NA	Solid	8021B	31574
LCS 880-31574/1-A	Lab Control Sample	Total/NA	Solid	8021B	31574
LCSD 880-31574/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31574
880-17510-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	31574
880-17510-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31574

Prep Batch: 31680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-1	FS01	Total/NA	Solid	5035	
MB 880-31680/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31680/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31680/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17530-A-5-E MS	Matrix Spike	Total/NA	Solid	5035	
880-17530-A-5-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-1	FS01	Total/NA	Solid	8021B	31680
MB 880-31680/5-A	Method Blank	Total/NA	Solid	8021B	31680

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

GC VOA (Continued)

Analysis Batch: 31685 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31801/5-A	Method Blank	Total/NA	Solid	8021B	31801
LCS 880-31680/1-A	Lab Control Sample	Total/NA	Solid	8021B	31680
LCS 880-31801/1-A	Lab Control Sample	Total/NA	Solid	8021B	31801
LCSD 880-31680/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31680
LCSD 880-31801/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31801
880-17530-A-5-E MS	Matrix Spike	Total/NA	Solid	8021B	31680
880-17530-A-5-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31680
880-17833-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	31801
880-17833-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31801

Analysis Batch: 31800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-1	FS01	Total/NA	Solid	Total BTEX	
890-2690-2	FS02	Total/NA	Solid	Total BTEX	
890-2690-3	FS03	Total/NA	Solid	Total BTEX	
890-2690-4	FS04	Total/NA	Solid	Total BTEX	
890-2690-5	FS05	Total/NA	Solid	Total BTEX	
890-2690-6	FS06	Total/NA	Solid	Total BTEX	
890-2690-7	FS07	Total/NA	Solid	Total BTEX	
890-2690-8	FS08	Total/NA	Solid	Total BTEX	
890-2690-9	FS09	Total/NA	Solid	Total BTEX	
890-2690-10	FS10	Total/NA	Solid	Total BTEX	
890-2690-11	FS11	Total/NA	Solid	Total BTEX	
890-2690-12	FS12	Total/NA	Solid	Total BTEX	
890-2690-13	FS13	Total/NA	Solid	Total BTEX	

Prep Batch: 31801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31801/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31801/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31801/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17833-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-17833-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 31417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-1	FS01	Total/NA	Solid	8015NM Prep	
890-2690-2	FS02	Total/NA	Solid	8015NM Prep	
890-2690-3	FS03	Total/NA	Solid	8015NM Prep	
890-2690-4	FS04	Total/NA	Solid	8015NM Prep	
890-2690-5	FS05	Total/NA	Solid	8015NM Prep	
890-2690-6	FS06	Total/NA	Solid	8015NM Prep	
890-2690-7	FS07	Total/NA	Solid	8015NM Prep	
890-2690-8	FS08	Total/NA	Solid	8015NM Prep	
890-2690-9	FS09	Total/NA	Solid	8015NM Prep	
890-2690-10	FS10	Total/NA	Solid	8015NM Prep	
MB 880-31417/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31417/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

GC Semi VOA (Continued)

Prep Batch: 31417 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17530-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17530-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 31439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-11	FS11	Total/NA	Solid	8015NM Prep	
890-2690-12	FS12	Total/NA	Solid	8015NM Prep	
890-2690-13	FS13	Total/NA	Solid	8015NM Prep	
MB 880-31439/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31439/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31439/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17544-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17544-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-1	FS01	Total/NA	Solid	8015B NM	31417
890-2690-2	FS02	Total/NA	Solid	8015B NM	31417
890-2690-3	FS03	Total/NA	Solid	8015B NM	31417
890-2690-4	FS04	Total/NA	Solid	8015B NM	31417
890-2690-5	FS05	Total/NA	Solid	8015B NM	31417
890-2690-6	FS06	Total/NA	Solid	8015B NM	31417
890-2690-7	FS07	Total/NA	Solid	8015B NM	31417
890-2690-8	FS08	Total/NA	Solid	8015B NM	31417
890-2690-9	FS09	Total/NA	Solid	8015B NM	31417
890-2690-10	FS10	Total/NA	Solid	8015B NM	31417
MB 880-31417/1-A	Method Blank	Total/NA	Solid	8015B NM	31417
LCS 880-31417/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31417
LCSD 880-31417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31417
880-17530-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	31417
880-17530-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31417

Analysis Batch: 31457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-11	FS11	Total/NA	Solid	8015B NM	31439
890-2690-12	FS12	Total/NA	Solid	8015B NM	31439
890-2690-13	FS13	Total/NA	Solid	8015B NM	31439
MB 880-31439/1-A	Method Blank	Total/NA	Solid	8015B NM	31439
LCS 880-31439/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31439
LCSD 880-31439/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31439
880-17544-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	31439
880-17544-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31439

Analysis Batch: 31548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-1	FS01	Total/NA	Solid	8015 NM	
890-2690-2	FS02	Total/NA	Solid	8015 NM	
890-2690-3	FS03	Total/NA	Solid	8015 NM	
890-2690-4	FS04	Total/NA	Solid	8015 NM	
890-2690-5	FS05	Total/NA	Solid	8015 NM	
890-2690-6	FS06	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

GC Semi VOA (Continued)

Analysis Batch: 31548 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-7	FS07	Total/NA	Solid	8015 NM	
890-2690-8	FS08	Total/NA	Solid	8015 NM	
890-2690-9	FS09	Total/NA	Solid	8015 NM	
890-2690-10	FS10	Total/NA	Solid	8015 NM	
890-2690-11	FS11	Total/NA	Solid	8015 NM	
890-2690-12	FS12	Total/NA	Solid	8015 NM	
890-2690-13	FS13	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-4	FS04	Soluble	Solid	DI Leach	
890-2690-5	FS05	Soluble	Solid	DI Leach	
890-2690-6	FS06	Soluble	Solid	DI Leach	
890-2690-7	FS07	Soluble	Solid	DI Leach	
890-2690-8	FS08	Soluble	Solid	DI Leach	
890-2690-9	FS09	Soluble	Solid	DI Leach	
890-2690-10	FS10	Soluble	Solid	DI Leach	
890-2690-11	FS11	Soluble	Solid	DI Leach	
890-2690-12	FS12	Soluble	Solid	DI Leach	
890-2690-13	FS13	Soluble	Solid	DI Leach	
MB 880-31429/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31429/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31429/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2690-4 MS	FS04	Soluble	Solid	DI Leach	
890-2690-4 MSD	FS04	Soluble	Solid	DI Leach	
890-2691-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2691-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 31444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-1	FS01	Soluble	Solid	DI Leach	
890-2690-2	FS02	Soluble	Solid	DI Leach	
890-2690-3	FS03	Soluble	Solid	DI Leach	
MB 880-31444/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31444/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31444/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2690-1 MS	FS01	Soluble	Solid	DI Leach	
890-2690-1 MSD	FS01	Soluble	Solid	DI Leach	
890-2695-A-4-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2695-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-4	FS04	Soluble	Solid	300.0	31429
890-2690-5	FS05	Soluble	Solid	300.0	31429
890-2690-6	FS06	Soluble	Solid	300.0	31429
890-2690-7	FS07	Soluble	Solid	300.0	31429
890-2690-8	FS08	Soluble	Solid	300.0	31429
890-2690-9	FS09	Soluble	Solid	300.0	31429

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

HPLC/IC (Continued)

Analysis Batch: 31662 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-10	FS10	Soluble	Solid	300.0	31429
890-2690-11	FS11	Soluble	Solid	300.0	31429
890-2690-12	FS12	Soluble	Solid	300.0	31429
890-2690-13	FS13	Soluble	Solid	300.0	31429
MB 880-31429/1-A	Method Blank	Soluble	Solid	300.0	31429
LCS 880-31429/2-A	Lab Control Sample	Soluble	Solid	300.0	31429
LCSD 880-31429/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31429
890-2690-4 MS	FS04	Soluble	Solid	300.0	31429
890-2690-4 MSD	FS04	Soluble	Solid	300.0	31429
890-2691-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	31429
890-2691-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31429

Analysis Batch: 31665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2690-1	FS01	Soluble	Solid	300.0	31444
890-2690-2	FS02	Soluble	Solid	300.0	31444
890-2690-3	FS03	Soluble	Solid	300.0	31444
MB 880-31444/1-A	Method Blank	Soluble	Solid	300.0	31444
LCS 880-31444/2-A	Lab Control Sample	Soluble	Solid	300.0	31444
LCSD 880-31444/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31444
890-2690-1 MS	FS01	Soluble	Solid	300.0	31444
890-2690-1 MSD	FS01	Soluble	Solid	300.0	31444
890-2695-A-4-C MS	Matrix Spike	Soluble	Solid	300.0	31444
890-2695-A-4-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31444

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Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS01

Lab Sample ID: 890-2690-1

Date Collected: 07/26/22 14:05

Matrix: Solid

Date Received: 08/01/22 08:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	31680	08/08/22 08:17	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31685	08/08/22 15:09	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 14:46	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	31444	08/03/22 17:00	SMC	EET MID
Soluble	Analysis	300.0		1			31665	08/09/22 14:38	CH	EET MID

Client Sample ID: FS02

Lab Sample ID: 890-2690-2

Date Collected: 07/28/22 13:00

Matrix: Solid

Date Received: 08/01/22 08:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/05/22 21:51	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 15:07	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	31444	08/03/22 17:00	SMC	EET MID
Soluble	Analysis	300.0		1			31665	08/09/22 15:02	CH	EET MID

Client Sample ID: FS03

Lab Sample ID: 890-2690-3

Date Collected: 07/28/22 13:05

Matrix: Solid

Date Received: 08/01/22 08:23

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	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/05/22 22:12	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 15:55	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	31444	08/03/22 17:00	SMC	EET MID
Soluble	Analysis	300.0		1			31665	08/09/22 15:10	CH	EET MID

Client Sample ID: FS04

Lab Sample ID: 890-2690-4

Date Collected: 07/28/22 13:10

Matrix: Solid

Date Received: 08/01/22 08:23

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	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/05/22 23:37	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS04

Lab Sample ID: 890-2690-4

Date Collected: 07/28/22 13:10

Matrix: Solid

Date Received: 08/01/22 08:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 16:16	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		5			31662	08/11/22 19:45	CH	EET MID

Client Sample ID: FS05

Lab Sample ID: 890-2690-5

Date Collected: 07/28/22 13:15

Matrix: Solid

Date Received: 08/01/22 08:23

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	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/05/22 23:57	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 16:38	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 20:09	CH	EET MID

Client Sample ID: FS06

Lab Sample ID: 890-2690-6

Date Collected: 07/28/22 13:20

Matrix: Solid

Date Received: 08/01/22 08:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/06/22 00:18	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 16:59	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 20:17	CH	EET MID

Client Sample ID: FS07

Lab Sample ID: 890-2690-7

Date Collected: 07/28/22 13:25

Matrix: Solid

Date Received: 08/01/22 08:23

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	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/06/22 00:39	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 17:21	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS07

Lab Sample ID: 890-2690-7

Date Collected: 07/28/22 13:25

Matrix: Solid

Date Received: 08/01/22 08:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		5			31662	08/11/22 20:25	CH	EET MID

Client Sample ID: FS08

Lab Sample ID: 890-2690-8

Date Collected: 07/28/22 13:15

Matrix: Solid

Date Received: 08/01/22 08:23

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	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/06/22 01:00	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 17:43	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 20:33	CH	EET MID

Client Sample ID: FS09

Lab Sample ID: 890-2690-9

Date Collected: 07/28/22 13:30

Matrix: Solid

Date Received: 08/01/22 08:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/06/22 01:21	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 18:05	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		5			31662	08/11/22 21:20	CH	EET MID

Client Sample ID: FS10

Lab Sample ID: 890-2690-10

Date Collected: 07/28/22 13:35

Matrix: Solid

Date Received: 08/01/22 08:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/06/22 01:41	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 18:26	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 22:12	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Client Sample ID: FS11

Lab Sample ID: 890-2690-11

Date Collected: 07/29/22 13:20

Matrix: Solid

Date Received: 08/01/22 08:23

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	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/06/22 02:02	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31439	08/03/22 15:56	DM	EET MID
Total/NA	Analysis	8015B NM		1			31457	08/04/22 13:40	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 22:20	CH	EET MID

Client Sample ID: FS12

Lab Sample ID: 890-2690-12

Date Collected: 07/29/22 13:25

Matrix: Solid

Date Received: 08/01/22 08:23

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	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/06/22 02:23	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31439	08/03/22 15:56	DM	EET MID
Total/NA	Analysis	8015B NM		1			31457	08/04/22 14:02	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		5			31662	08/11/22 22:28	CH	EET MID

Client Sample ID: FS13

Lab Sample ID: 890-2690-13

Date Collected: 07/29/22 13:30

Matrix: Solid

Date Received: 08/01/22 08:23

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	31574	08/05/22 11:28	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31617	08/06/22 02:44	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31800	08/08/22 15:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			31548	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31439	08/03/22 15:56	DM	EET MID
Total/NA	Analysis	8015B NM		1			31457	08/04/22 14:24	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 22:36	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

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	T104704400-22-24	06-30-23

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2690-1
SDG: 03D2024010

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2690-1	FS01	Solid	07/26/22 14:05	08/01/22 08:23	4'
890-2690-2	FS02	Solid	07/28/22 13:00	08/01/22 08:23	4'
890-2690-3	FS03	Solid	07/28/22 13:05	08/01/22 08:23	4'
890-2690-4	FS04	Solid	07/28/22 13:10	08/01/22 08:23	4'
890-2690-5	FS05	Solid	07/28/22 13:15	08/01/22 08:23	4'
890-2690-6	FS06	Solid	07/28/22 13:20	08/01/22 08:23	4'
890-2690-7	FS07	Solid	07/28/22 13:25	08/01/22 08:23	4'
890-2690-8	FS08	Solid	07/28/22 13:15	08/01/22 08:23	4'
890-2690-9	FS09	Solid	07/28/22 13:30	08/01/22 08:23	4'
890-2690-10	FS10	Solid	07/28/22 13:35	08/01/22 08:23	4'
890-2690-11	FS11	Solid	07/29/22 13:20	08/01/22 08:23	4'
890-2690-12	FS12	Solid	07/29/22 13:25	08/01/22 08:23	4'
890-2690-13	FS13	Solid	07/29/22 13:30	08/01/22 08:23	4'



Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

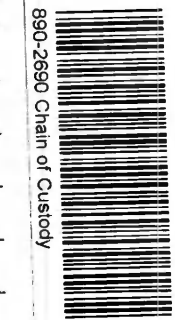
www.xenco.com Page 1 of 2

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

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

ANALYSIS REQUEST

Preservative Codes



890-2690 Chain of Custody

None: NO DI Water: H₂O
Cool: Cool MeOH: Me
HCL: HC HNO₃: HN
H₂SO₄: H₂ NaOH: Na
H₃PO₄: HP
NaHSO₄: NABIS
Na₂SO₃: NaSO₃
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters															
							CHLORIDES (EPA: 300.0)															
FS01	S	07.26.22	1405	4'	C	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FS02	S	07.28.22	1300	4'	C	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FS03	S	07.28.22	1305	4'	C	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FS04	S	07.28.22	1310	4'	C	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FS05	S	07.28.22	1315	4'	C	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FS06	S	07.28.22	1320	4'	C	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FS07	S	07.28.22	1325	4'	C	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FS08	S	07.29.22	1315	4'	C	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FS09	S	07.28.22	1330	4'	C	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FS10	S	07.28.22	1335	4'	C	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti 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 Ti U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$35.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8-1-2020 8:13			



Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Kate Jennings	Bill to: (if different)	Kate Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marientfield St Suite 400	Address:	601 N Marientfield St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817-683-2503	Email:	kjennings@ensolum.com

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

Project Name:	King Tut Federal Com 001H	Turn Around	☒ Routine ☐ Rush	Pres. Code	ANALYSIS REQUEST										Preservative Codes				
Project Number:	03D2024010	Due Date:														None: NO	DI Water: H ₂ O		
Project Location:																Cool: Cool	MeOH: Me		
Sampler's Name:	Conner Shore	TAT starts the day received by the lab, if received by 4:30pm														HCL: HC	HNO ₃ : HN		
PO #:																H ₂ SO ₄ : H ₂	NaOH: Na		
SAMPLE RECEIPT				Temp Blank:	Yes No	Wet Ice:	Yes No											H ₃ PO ₄ : HP	
Samples Received In tact:	Yes No	Thermometer ID:																NaHSO ₄ : NABIS	
Cooler Custody Seals:	Yes No	Correction Factor:																Na ₂ S ₂ O ₃ : NaSO ₃	
Sample Custody Seals:	Yes No	Temperature Reading:																Zn Acetate+NaOH: Zn	
Total Containers:		Corrected Temperature:																NaOH+Ascorbic Acid: SACP	
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont											Sample Comments		
FS11	S	07.29.22	1320	4'	C	1	CHLORIDES (EPA: 300.0)										NAPP2127234076		
FS12	S	07.29.22	1325	4'	C	1	TPH (8015)												
FS13	S	07.29.22	1330	4'	C	1	BTEX (8021)												

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 Ti 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 Ti U		Hg: 1631 / 245.1 / 7470 / 7471	
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.					
Relinquished by: (Signature)		Received by: (Signature)		Date/Time	
				8-1-22 817	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2690-1

SDG Number: 03D2024010

Login Number: 2690

List Number: 1

Creator: Stutzman, Amanda

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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2690-1

SDG Number: 03D2024010

Login Number: 2690

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 08/02/22 10:44 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	



Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2691-1

Laboratory Sample Delivery Group: 03D2024010

Client Project/Site: King Tut Federal Com 001H

For:

Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

Authorized for release by:

8/12/2022 7:53:07 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Laboratory Job ID: 890-2691-1
SDG: 03D2024010

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Definitions/Glossary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

Qualifiers

GC 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.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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 Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

Job ID: 890-2691-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2691-1

Receipt

The sample was received on 8/1/2022 8:17 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C

GC VOA

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-31767 and analytical batch 880-31850 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SW01 (890-2691-1), (CCV 880-31850/20), (CCV 880-31850/33), (LCS 880-31767/1-A) and (890-2704-A-1-I MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCSD 880-31767/2-A). Evidence of matrix interferences is not obvious.

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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31417 and analytical batch 880-31455 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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 for preparation batch 880-31429 and analytical batch 880-31662 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery 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 Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

Client Sample ID: SW01

Lab Sample ID: 890-2691-1

Date Collected: 07/28/22 13:40

Matrix: Solid

Date Received: 08/01/22 08:17

Sample Depth: 0-4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg	-	08/08/22 13:00	08/10/22 07:32	1
Toluene	<0.00201	U	0.00201	mg/Kg	-	08/08/22 13:00	08/10/22 07:32	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg	-	08/08/22 13:00	08/10/22 07:32	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg	-	08/08/22 13:00	08/10/22 07:32	1
o-Xylene	<0.00201	U	0.00201	mg/Kg	-	08/08/22 13:00	08/10/22 07:32	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg	-	08/08/22 13:00	08/10/22 07:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130	08/08/22 13:00	08/10/22 07:32	1
1,4-Difluorobenzene (Surr)	81		70 - 130	08/08/22 13:00	08/10/22 07:32	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg	-		08/10/22 09:55	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg	-		08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg	-	08/03/22 13:28	08/04/22 14:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg	-	08/03/22 13:28	08/04/22 14:24	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg	-	08/03/22 13:28	08/04/22 14:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	08/03/22 13:28	08/04/22 14:24	1
o-Terphenyl	115		70 - 130	08/03/22 13:28	08/04/22 14:24	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	563	F1	5.01	mg/Kg	-		08/11/22 22:43	1

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Surrogate Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-17597-A-2-F MS	Matrix Spike	96	103
880-17597-A-2-G MSD	Matrix Spike Duplicate	112	95
890-2691-1	SW01	135 S1+	81
890-2704-A-1-H MS	Matrix Spike	130	85
890-2704-A-1-I MSD	Matrix Spike Duplicate	140 S1+	84
LCS 880-31767/1-A	Lab Control Sample	136 S1+	81
LCS 880-31834/1-A	Lab Control Sample	99	108
LCSD 880-31767/2-A	Lab Control Sample Dup	131 S1+	84
LCSD 880-31834/2-A	Lab Control Sample Dup	114	102
MB 880-31717/5-A	Method Blank	96	95
MB 880-31767/5-A	Method Blank	103	75
MB 880-31834/5-A	Method Blank	98	93
MB 880-31850/8	Method Blank	99	77
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-17530-A-1-E MS	Matrix Spike	79	79
880-17530-A-1-F MSD	Matrix Spike Duplicate	81	90
890-2691-1	SW01	105	115
LCS 880-31417/2-A	Lab Control Sample	124	130
LCSD 880-31417/3-A	Lab Control Sample Dup	123	127
MB 880-31417/1-A	Method Blank	82	98
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31717/5-A

Matrix: Solid

Analysis Batch: 31851

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31717

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/22 10:13	08/09/22 16:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/22 10:13	08/09/22 16:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/22 10:13	08/09/22 16:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/08/22 10:13	08/09/22 16:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/08/22 10:13	08/09/22 16:06	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/08/22 10:13	08/09/22 16:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	08/08/22 10:13	08/09/22 16:06	1
1,4-Difluorobenzene (Surr)	95		70 - 130	08/08/22 10:13	08/09/22 16:06	1

Lab Sample ID: MB 880-31767/5-A

Matrix: Solid

Analysis Batch: 31850

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31767

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/08/22 13:00	08/10/22 06:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/08/22 13:00	08/10/22 06:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/08/22 13:00	08/10/22 06:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/08/22 13:00	08/10/22 06:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/08/22 13:00	08/10/22 06:38	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/08/22 13:00	08/10/22 06:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	08/08/22 13:00	08/10/22 06:38	1
1,4-Difluorobenzene (Surr)	75		70 - 130	08/08/22 13:00	08/10/22 06:38	1

Lab Sample ID: LCS 880-31767/1-A

Matrix: Solid

Analysis Batch: 31850

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31767

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08434		mg/Kg		84	70 - 130
Toluene	0.100	0.08825		mg/Kg		88	70 - 130
Ethylbenzene	0.100	0.08741		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	0.200	0.1767		mg/Kg		88	70 - 130
o-Xylene	0.100	0.09757		mg/Kg		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130
1,4-Difluorobenzene (Surr)	81		70 - 130

Lab Sample ID: LCSD 880-31767/2-A

Matrix: Solid

Analysis Batch: 31850

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31767

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08734		mg/Kg		87	70 - 130	3	35

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

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

Lab Sample ID: LCSD 880-31767/2-A

Matrix: Solid

Analysis Batch: 31850

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31767

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.08876		mg/Kg		89	70 - 130	1	35
Ethylbenzene	0.100	0.08917		mg/Kg		89	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1831		mg/Kg		92	70 - 130	4	35
o-Xylene	0.100	0.09964		mg/Kg		100	70 - 130	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130
1,4-Difluorobenzene (Surr)	84		70 - 130

Lab Sample ID: 890-2704-A-1-H MS

Matrix: Solid

Analysis Batch: 31850

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31767

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1	0.100	0.09552		mg/Kg		95	70 - 130
Toluene	<0.00199	U	0.100	0.09509		mg/Kg		95	70 - 130
Ethylbenzene	<0.00199	U	0.100	0.09336		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1888		mg/Kg		94	70 - 130
o-Xylene	<0.00199	U	0.100	0.1014		mg/Kg		101	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	130		70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

Lab Sample ID: 890-2704-A-1-I MSD

Matrix: Solid

Analysis Batch: 31850

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31767

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.0998	0.06812	F1	mg/Kg		68	70 - 130	33	35
Toluene	<0.00199	U	0.0998	0.07008		mg/Kg		70	70 - 130	30	35
Ethylbenzene	<0.00199	U	0.0998	0.07097		mg/Kg		71	70 - 130	27	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1453		mg/Kg		73	70 - 130	26	35
o-Xylene	<0.00199	U	0.0998	0.08021		mg/Kg		80	70 - 130	23	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	140	S1+	70 - 130
1,4-Difluorobenzene (Surr)	84		70 - 130

Lab Sample ID: MB 880-31834/5-A

Matrix: Solid

Analysis Batch: 31851

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31834

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/09/22 08:41	08/10/22 02:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/09/22 08:41	08/10/22 02:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/09/22 08:41	08/10/22 02:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/09/22 08:41	08/10/22 02:52	1

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

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

Lab Sample ID: MB 880-31834/5-A

Matrix: Solid

Analysis Batch: 31851

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31834

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/09/22 08:41	08/10/22 02:52	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/09/22 08:41	08/10/22 02:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	08/09/22 08:41	08/10/22 02:52	1
1,4-Difluorobenzene (Surr)	93		70 - 130	08/09/22 08:41	08/10/22 02:52	1

Lab Sample ID: LCS 880-31834/1-A

Matrix: Solid

Analysis Batch: 31851

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31834

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1002		mg/Kg		100	70 - 130
Toluene	0.100	0.09582		mg/Kg		96	70 - 130
Ethylbenzene	0.100	0.07829		mg/Kg		78	70 - 130
m-Xylene & p-Xylene	0.200	0.1630		mg/Kg		82	70 - 130
o-Xylene	0.100	0.08318		mg/Kg		83	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: LCSD 880-31834/2-A

Matrix: Solid

Analysis Batch: 31851

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31834

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08862		mg/Kg		89	70 - 130	12	35
Toluene	0.100	0.1079		mg/Kg		108	70 - 130	12	35
Ethylbenzene	0.100	0.09720		mg/Kg		97	70 - 130	22	35
m-Xylene & p-Xylene	0.200	0.2134		mg/Kg		107	70 - 130	27	35
o-Xylene	0.100	0.1062		mg/Kg		106	70 - 130	24	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: 880-17597-A-2-F MS

Matrix: Solid

Analysis Batch: 31851

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31834

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0998	0.1058		mg/Kg		105	70 - 130
Toluene	<0.00200	U	0.0998	0.1035		mg/Kg		104	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.08434		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1748		mg/Kg		88	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08766		mg/Kg		87	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

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

Lab Sample ID: 880-17597-A-2-F MS

Matrix: Solid

Analysis Batch: 31851

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31834

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 880-17597-A-2-G MSD

Matrix: Solid

Analysis Batch: 31851

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31834

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.08278		mg/Kg		82	70 - 130	24	35
Toluene	<0.00200	U	0.100	0.1051		mg/Kg		105	70 - 130	2	35
Ethylbenzene	<0.00200	U	0.100	0.09458		mg/Kg		94	70 - 130	11	35
m-Xylene & p-Xylene	<0.00399	U	0.201	0.2062		mg/Kg		103	70 - 130	16	35
o-Xylene	<0.00200	U	0.100	0.1025		mg/Kg		101	70 - 130	16	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: MB 880-31850/8

Matrix: Solid

Analysis Batch: 31850

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
Toluene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg			08/09/22 16:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			08/09/22 16:48	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
4-Bromofluorobenzene (Surr)	99		70 - 130		08/09/22 16:48	1		
1,4-Difluorobenzene (Surr)	77		70 - 130		08/09/22 16:48	1		

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

Lab Sample ID: MB 880-31417/1-A

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31417

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		08/03/22 13:28	08/04/22 10:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 10:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 10:03	1

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

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

Lab Sample ID: MB 880-31417/1-A

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31417

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130	08/03/22 13:28	08/04/22 10:03	1
o-Terphenyl	98		70 - 130	08/03/22 13:28	08/04/22 10:03	1

Lab Sample ID: LCS 880-31417/2-A

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31417

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1021		mg/Kg		102	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1000		mg/Kg		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	124		70 - 130
o-Terphenyl	130		70 - 130

Lab Sample ID: LCSD 880-31417/3-A

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31417

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	955.6		mg/Kg		96	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	1000	958.9		mg/Kg		96	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	127		70 - 130

Lab Sample ID: 880-17530-A-1-E MS

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31417

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1036		mg/Kg		104	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	624.2	F1	mg/Kg		62	70 - 130

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

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

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

Lab Sample ID: 880-17530-A-1-F MSD

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31417

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	<49.9	U	999	1002		mg/Kg		100	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	720.1		mg/Kg		72	70 - 130	14	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	81		70 - 130								
o-Terphenyl	90		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31429/1-A

Matrix: Solid

Analysis Batch: 31662

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			08/11/22 19:22	1

Lab Sample ID: LCS 880-31429/2-A

Matrix: Solid

Analysis Batch: 31662

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	241.3		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-31429/3-A

Matrix: Solid

Analysis Batch: 31662

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	242.5		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-2690-A-4-E MS

Matrix: Solid

Analysis Batch: 31662

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	1470	F1	1250	3453	F1	mg/Kg		159	90 - 110

Lab Sample ID: 890-2690-A-4-F MSD

Matrix: Solid

Analysis Batch: 31662

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	1470	F1	1250	3454	F1	mg/Kg		159	90 - 110	0	20

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2691-1 MS

Client Sample ID: SW01

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 31662

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	663	F1	251	876.5	F1	mg/Kg		85	90 - 110		

Lab Sample ID: 890-2691-1 MSD

Client Sample ID: SW01

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 31662

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	663	F1	251	884.5	F1	mg/Kg		89	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

GC VOA

Prep Batch: 31717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31717/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2691-1	SW01	Total/NA	Solid	5035	
MB 880-31767/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31767/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31767/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2704-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
890-2704-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 31834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31834/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31834/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31834/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17597-A-2-F MS	Matrix Spike	Total/NA	Solid	5035	
880-17597-A-2-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2691-1	SW01	Total/NA	Solid	8021B	31767
MB 880-31767/5-A	Method Blank	Total/NA	Solid	8021B	31767
MB 880-31850/8	Method Blank	Total/NA	Solid	8021B	
LCS 880-31767/1-A	Lab Control Sample	Total/NA	Solid	8021B	31767
LCSD 880-31767/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31767
890-2704-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	31767
890-2704-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31767

Analysis Batch: 31851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31717/5-A	Method Blank	Total/NA	Solid	8021B	31717
MB 880-31834/5-A	Method Blank	Total/NA	Solid	8021B	31834
LCS 880-31834/1-A	Lab Control Sample	Total/NA	Solid	8021B	31834
LCSD 880-31834/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31834
880-17597-A-2-F MS	Matrix Spike	Total/NA	Solid	8021B	31834
880-17597-A-2-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31834

Analysis Batch: 31898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2691-1	SW01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 31417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2691-1	SW01	Total/NA	Solid	8015NM Prep	
MB 880-31417/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31417/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17530-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

GC Semi VOA (Continued)

Prep Batch: 31417 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17530-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2691-1	SW01	Total/NA	Solid	8015B NM	31417
MB 880-31417/1-A	Method Blank	Total/NA	Solid	8015B NM	31417
LCS 880-31417/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31417
LCSD 880-31417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31417
880-17530-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	31417
880-17530-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31417

Analysis Batch: 31547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2691-1	SW01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2691-1	SW01	Soluble	Solid	DI Leach	
MB 880-31429/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31429/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31429/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2690-A-4-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2690-A-4-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2691-1 MS	SW01	Soluble	Solid	DI Leach	
890-2691-1 MSD	SW01	Soluble	Solid	DI Leach	

Analysis Batch: 31662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2691-1	SW01	Soluble	Solid	300.0	31429
MB 880-31429/1-A	Method Blank	Soluble	Solid	300.0	31429
LCS 880-31429/2-A	Lab Control Sample	Soluble	Solid	300.0	31429
LCSD 880-31429/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31429
890-2690-A-4-E MS	Matrix Spike	Soluble	Solid	300.0	31429
890-2690-A-4-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31429
890-2691-1 MS	SW01	Soluble	Solid	300.0	31429
890-2691-1 MSD	SW01	Soluble	Solid	300.0	31429

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

Client Sample ID: SW01
Date Collected: 07/28/22 13:40
Date Received: 08/01/22 08:17

Lab Sample ID: 890-2691-1
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			4.98 g	5 mL	31767	08/08/22 13:00	MR	EET MID
Total/NA	Analysis	8021B		1			31850	08/10/22 07:32	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31898	08/10/22 09:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			31547	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 14:24	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 22:43	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 Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

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	T104704400-22-24	06-30-23

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2691-1
SDG: 03D2024010

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2691-1	SW01	Solid	07/28/22 13:40	08/01/22 08:17	0-4'

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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

Environment Testing
Xenco



Work Order No:

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Work Order Comments

Program: ☐ US/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project: ☐ Level I ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Reporting: ☐ Deliverables: EDD ☐ ADAPT ☐ Other:

Project Manager: Kalei Jennings
Company Name: Ensolum, LLC
Address: 601 N Marientfeld St Suite 400
City, State ZIP: Midland, TX 79701
Phone: 817-683-2503
Email: kjennings@ensolum.com

Bill to: (if different) Kalei Jennings
Company Name: Ensolum, LLC
Address: 601 N Marientfeld St Suite 400
City, State ZIP: Midland, TX 79701

ANALYSIS REQUEST				Preservative Codes	
Project Name:	Project Number:	Project Location:	Project Date:	Pres. Code	Preservative Codes
King Tut Federal Com 001H	03D2024010	Conner Shore	07.28.22		None: NO Cool: Cool HCL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₃ : NaSO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC
SAMPLE RECEIPT Samples Received Intact: ☒ Yes ☐ No Cooler Custody Seals: Yes ☐ No ☒ N/A Sample Custody Seals: Yes ☐ No ☒ N/A Total Containers: 5					
Turn Around ☒ Routine ☐ Rush Due Date: TAT starts the day received by the lab. if received by 4:30pm Wet Ice: ☒ Yes ☐ No Thermometer ID: Correction Factor: Temperature Reading: Corrected Temperature: Parameters: CHLORIDES (EPA: 300.0) TPH (8015) BTEX (8021)					
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	# of Grabs/Comp
SW01	S	07.28.22	1340	0-4'	C 1
Sample Comments: NAPP2127234076					

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti 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 Ti U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time

Revised Date 08/25/2020 Rev 2020 2

Work Order No: _____

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Page

1 of 2

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: _____

QUEST

Preservative Codes

None: NO
DI Water: H₂O
Cool: Cool
MeOH: Me
HCL: HC
HNO₃: HN
H₂SO₄: H₂
NaOH: Na
H₃PO₄: HP
NaHSO₄: NABIS
Na₂S₂O₃: NaSO₃
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

NAPP2127234076

Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

It assigns standard terms and conditions
are due to circumstances beyond the control
as will be enforced unless previously negotiated.

Signature

Received by: (Signature)

Date/Time

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2691-1

SDG Number: 03D2024010

Login Number: 2691

List Number: 1

Creator: Stutzman, Amanda

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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2691-1

SDG Number: 03D2024010

Login Number: 2691

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 08/02/22 10:44 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	



Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2692-1

Laboratory Sample Delivery Group: 03D2024010

Client Project/Site: King Tut Federal Com 001H

For:

Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:

8/12/2022 7:53:37 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Laboratory Job ID: 890-2692-1
SDG: 03D2024010

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Definitions/Glossary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

Qualifiers

GC VOA

Qualifier	Qualifier Description
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, low 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.
α	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 Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

Job ID: 890-2692-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2692-1

Receipt

The samples were received on 8/1/2022 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 5.2°C

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31417 and analytical batch 880-31455 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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 for preparation batch 880-31429 and analytical batch 880-31662 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery 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 Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

Client Sample ID: SW02

Lab Sample ID: 890-2692-1

Date Collected: 07/28/22 13:45

Matrix: Solid

Date Received: 08/01/22 08:17

Sample Depth: 0 - 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:52	08/07/22 15:05	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:52	08/07/22 15:05	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:52	08/07/22 15:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/05/22 11:52	08/07/22 15:05	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/05/22 11:52	08/07/22 15:05	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/05/22 11:52	08/07/22 15:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			08/05/22 11:52	08/07/22 15:05	1
1,4-Difluorobenzene (Surr)	113		70 - 130			08/05/22 11:52	08/07/22 15:05	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/09/22 16:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 18:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 18:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 18:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			08/03/22 13:28	08/04/22 18:48	1
o-Terphenyl	113		70 - 130			08/03/22 13:28	08/04/22 18:48	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	381		4.97	mg/Kg			08/11/22 23:07	1

Client Sample ID: SW03

Lab Sample ID: 890-2692-2

Date Collected: 07/29/22 14:15

Matrix: Solid

Date Received: 08/01/22 08:17

Sample Depth: 0 - 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 15:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 15:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 15:25	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		08/05/22 11:52	08/07/22 15:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 15:25	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		08/05/22 11:52	08/07/22 15:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130			08/05/22 11:52	08/07/22 15:25	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

Client Sample ID: SW03

Lab Sample ID: 890-2692-2

Date Collected: 07/29/22 14:15

Matrix: Solid

Date Received: 08/01/22 08:17

Sample Depth: 0 - 4'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	109		70 - 130	08/05/22 11:52	08/07/22 15:25	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			08/09/22 16:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 14:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 14:46	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 14:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	76		70 - 130			08/03/22 15:56	08/04/22 14:46	1
o-Terphenyl	94		70 - 130			08/03/22 15:56	08/04/22 14:46	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	165		4.99	mg/Kg			08/11/22 23:15	1

Client Sample ID: SW04

Lab Sample ID: 890-2692-3

Date Collected: 07/29/22 13:55

Matrix: Solid

Date Received: 08/01/22 08:17

Sample Depth: 0 - 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:52	08/07/22 15:46	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:52	08/07/22 15:46	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:52	08/07/22 15:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/05/22 11:52	08/07/22 15:46	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:52	08/07/22 15:46	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/05/22 11:52	08/07/22 15:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	08/05/22 11:52	08/07/22 15:46	1
1,4-Difluorobenzene (Surr)	117		70 - 130	08/05/22 11:52	08/07/22 15:46	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/09/22 16:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

Client Sample ID: SW04

Lab Sample ID: 890-2692-3

Date Collected: 07/29/22 13:55

Matrix: Solid

Date Received: 08/01/22 08:17

Sample Depth: 0 - 4'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 15:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 15:07	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 15:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130			08/03/22 15:56	08/04/22 15:07	1
o-Terphenyl	86		70 - 130			08/03/22 15:56	08/04/22 15:07	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.9		4.99	mg/Kg			08/11/22 23:39	1

Client Sample ID: SW05

Lab Sample ID: 890-2692-4

Date Collected: 07/29/22 13:45

Matrix: Solid

Date Received: 08/01/22 08:17

Sample Depth: 0 - 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:52	08/07/22 16:07	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:52	08/07/22 16:07	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:52	08/07/22 16:07	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/05/22 11:52	08/07/22 16:07	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		08/05/22 11:52	08/07/22 16:07	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/05/22 11:52	08/07/22 16:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130			08/05/22 11:52	08/07/22 16:07	1
1,4-Difluorobenzene (Surr)	107		70 - 130			08/05/22 11:52	08/07/22 16:07	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/09/22 16:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 15:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 15:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 15:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130			08/03/22 15:56	08/04/22 15:55	1
o-Terphenyl	99		70 - 130			08/03/22 15:56	08/04/22 15:55	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

Client Sample ID: SW05

Lab Sample ID: 890-2692-4

Date Collected: 07/29/22 13:45

Matrix: Solid

Date Received: 08/01/22 08:17

Sample Depth: 0 - 4'

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	100		5.04	mg/Kg			08/11/22 23:46	1

Client Sample ID: SW06

Lab Sample ID: 890-2692-5

Date Collected: 07/29/22 14:00

Matrix: Solid

Date Received: 08/01/22 08:17

Sample Depth: 0 - 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 16:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 16:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 16:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/05/22 11:52	08/07/22 16:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 16:28	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/05/22 11:52	08/07/22 16:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		70 - 130			08/05/22 11:52	08/07/22 16:28	1
1,4-Difluorobenzene (Surr)	86		70 - 130			08/05/22 11:52	08/07/22 16:28	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			08/09/22 16:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			08/05/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		08/03/22 15:56	08/04/22 16:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/03/22 15:56	08/04/22 16:16	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/03/22 15:56	08/04/22 16:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130			08/03/22 15:56	08/04/22 16:16	1
o-Terphenyl	115		70 - 130			08/03/22 15:56	08/04/22 16:16	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	148		5.05	mg/Kg			08/11/22 23:54	1

Eurofins Carlsbad

Surrogate Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

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)
890-2692-1	SW02	104	113
890-2692-1 MS	SW02	98	104
890-2692-1 MSD	SW02	96	102
890-2692-2	SW03	111	109
890-2692-3	SW04	113	117
890-2692-4	SW05	114	107
890-2692-5	SW06	77	86
LCS 880-31576/1-A	Lab Control Sample	96	106
LCSD 880-31576/2-A	Lab Control Sample Dup	92	103
MB 880-31576/5-A	Method Blank	98	95
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-17530-A-1-E MS	Matrix Spike	79	79
880-17530-A-1-F MSD	Matrix Spike Duplicate	81	90
880-17544-A-1-D MS	Matrix Spike	69 S1-	73
880-17544-A-1-E MSD	Matrix Spike Duplicate	79	81
890-2692-1	SW02	105	113
890-2692-2	SW03	76	94
890-2692-3	SW04	71	86
890-2692-4	SW05	80	99
890-2692-5	SW06	96	115
LCS 880-31417/2-A	Lab Control Sample	124	130
LCS 880-31439/2-A	Lab Control Sample	86	97
LCSD 880-31417/3-A	Lab Control Sample Dup	123	127
LCSD 880-31439/3-A	Lab Control Sample Dup	88	101
MB 880-31417/1-A	Method Blank	82	98
MB 880-31439/1-A	Method Blank	96	118
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31576/5-A

Matrix: Solid

Analysis Batch: 31656

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31576

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 14:43	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 14:43	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 14:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/05/22 11:52	08/07/22 14:43	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:52	08/07/22 14:43	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/05/22 11:52	08/07/22 14:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	08/05/22 11:52	08/07/22 14:43	1
1,4-Difluorobenzene (Surr)	95		70 - 130	08/05/22 11:52	08/07/22 14:43	1

Lab Sample ID: LCS 880-31576/1-A

Matrix: Solid

Analysis Batch: 31656

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31576

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09840		mg/Kg		98	70 - 130
Toluene	0.100	0.1101		mg/Kg		110	70 - 130
Ethylbenzene	0.100	0.09388		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	0.200	0.2024		mg/Kg		101	70 - 130
o-Xylene	0.100	0.09923		mg/Kg		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: LCSD 880-31576/2-A

Matrix: Solid

Analysis Batch: 31656

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31576

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1124		mg/Kg		112	70 - 130	13	35
Toluene	0.100	0.1077		mg/Kg		108	70 - 130	2	35
Ethylbenzene	0.100	0.08729		mg/Kg		87	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.1826		mg/Kg		91	70 - 130	10	35
o-Xylene	0.100	0.08974		mg/Kg		90	70 - 130	10	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 890-2692-1 MS

Matrix: Solid

Analysis Batch: 31656

Client Sample ID: SW02

Prep Type: Total/NA

Prep Batch: 31576

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.101	0.1015		mg/Kg		101	70 - 130
Toluene	<0.00201	U	0.101	0.09221		mg/Kg		92	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

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

Lab Sample ID: 890-2692-1 MS

Matrix: Solid

Analysis Batch: 31656

Client Sample ID: SW02

Prep Type: Total/NA

Prep Batch: 31576

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.101	0.07243		mg/Kg		72	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.201	0.1505		mg/Kg		75	70 - 130
o-Xylene	<0.00201	U	0.101	0.07369		mg/Kg		73	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 890-2692-1 MSD

Matrix: Solid

Analysis Batch: 31656

Client Sample ID: SW02

Prep Type: Total/NA

Prep Batch: 31576

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0998	0.1015		mg/Kg		102	70 - 130	0	35
Toluene	<0.00201	U	0.0998	0.09175		mg/Kg		92	70 - 130	1	35
Ethylbenzene	<0.00201	U	0.0998	0.07057		mg/Kg		71	70 - 130	3	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1460		mg/Kg		73	70 - 130	3	35
o-Xylene	<0.00201	U	0.0998	0.07205		mg/Kg		72	70 - 130	2	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

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

Lab Sample ID: MB 880-31417/1-A

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31417

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		08/03/22 13:28	08/04/22 10:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 10:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 13:28	08/04/22 10:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130	08/03/22 13:28	08/04/22 10:03	1
o-Terphenyl	98		70 - 130	08/03/22 13:28	08/04/22 10:03	1

Lab Sample ID: LCS 880-31417/2-A

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31417

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1021		mg/Kg		102	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1000		mg/Kg		100	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

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

Lab Sample ID: LCS 880-31417/2-A

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31417

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	124		70 - 130
o-Terphenyl	130		70 - 130

Lab Sample ID: LCSD 880-31417/3-A

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31417

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	955.6		mg/Kg		96	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	1000	958.9		mg/Kg		96	70 - 130	4	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	127		70 - 130

Lab Sample ID: 880-17530-A-1-E MS

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31417

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1036		mg/Kg		104	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	624.2	F1	mg/Kg		62	70 - 130

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

Lab Sample ID: 880-17530-A-1-F MSD

Matrix: Solid

Analysis Batch: 31455

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31417

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	<49.9	U	999	1002		mg/Kg		100	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	720.1		mg/Kg		72	70 - 130	14	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	90		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

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

Lab Sample ID: MB 880-31439/1-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31439

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		08/03/22 15:56	08/04/22 10:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 10:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:56	08/04/22 10:03	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130			08/03/22 15:56	08/04/22 10:03	1
o-Terphenyl	118		70 - 130			08/03/22 15:56	08/04/22 10:03	1

Lab Sample ID: LCS 880-31439/2-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31439

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	974.8		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	1000	955.3		mg/Kg		96	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	86		70 - 130				
o-Terphenyl	97		70 - 130				

Lab Sample ID: LCSD 880-31439/3-A

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31439

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1034		mg/Kg		103	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	985.7		mg/Kg		99	70 - 130	3	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	88		70 - 130						
o-Terphenyl	101		70 - 130						

Lab Sample ID: 880-17544-A-1-D MS

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31439

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	936.9		mg/Kg		91	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	766.8		mg/Kg		77	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

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

Lab Sample ID: 880-17544-A-1-D MS

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31439

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	69	S1-	70 - 130
o-Terphenyl	73		70 - 130

Lab Sample ID: 880-17544-A-1-E MSD

Matrix: Solid

Analysis Batch: 31457

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31439

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	908.2		mg/Kg		88	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	866.8		mg/Kg		87	70 - 130	12	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	79		70 - 130								
o-Terphenyl	81		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31429/1-A

Matrix: Solid

Analysis Batch: 31662

Client Sample ID: Method Blank

Prep Type: Soluble

	MB	MB								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	<5.00	U	5.00	mg/Kg			08/11/22 19:22	1		

Lab Sample ID: LCS 880-31429/2-A

Matrix: Solid

Analysis Batch: 31662

Client Sample ID: Lab Control Sample

Prep Type: Soluble

	Spike	LCS	LCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	250	241.3		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-31429/3-A

Matrix: Solid

Analysis Batch: 31662

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	242.5		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-2691-A-1-E MS

Matrix: Solid

Analysis Batch: 31662

Client Sample ID: Matrix Spike

Prep Type: Soluble

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	663	F1	251	876.5	F1	mg/Kg		85	90 - 110	

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2691-A-1-F MSD					Client Sample ID: Matrix Spike Duplicate							
Matrix: Solid					Prep Type: Soluble							
Analysis Batch: 31662												
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit	
Chloride	663	F1	251	884.5	F1	mg/Kg		89	90 - 110	1	20	

QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

GC VOA

Prep Batch: 31576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2692-1	SW02	Total/NA	Solid	5035	
890-2692-2	SW03	Total/NA	Solid	5035	
890-2692-3	SW04	Total/NA	Solid	5035	
890-2692-4	SW05	Total/NA	Solid	5035	
890-2692-5	SW06	Total/NA	Solid	5035	
MB 880-31576/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31576/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31576/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2692-1 MS	SW02	Total/NA	Solid	5035	
890-2692-1 MSD	SW02	Total/NA	Solid	5035	

Analysis Batch: 31656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2692-1	SW02	Total/NA	Solid	8021B	31576
890-2692-2	SW03	Total/NA	Solid	8021B	31576
890-2692-3	SW04	Total/NA	Solid	8021B	31576
890-2692-4	SW05	Total/NA	Solid	8021B	31576
890-2692-5	SW06	Total/NA	Solid	8021B	31576
MB 880-31576/5-A	Method Blank	Total/NA	Solid	8021B	31576
LCS 880-31576/1-A	Lab Control Sample	Total/NA	Solid	8021B	31576
LCSD 880-31576/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31576
890-2692-1 MS	SW02	Total/NA	Solid	8021B	31576
890-2692-1 MSD	SW02	Total/NA	Solid	8021B	31576

Analysis Batch: 31864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2692-1	SW02	Total/NA	Solid	Total BTEX	
890-2692-2	SW03	Total/NA	Solid	Total BTEX	
890-2692-3	SW04	Total/NA	Solid	Total BTEX	
890-2692-4	SW05	Total/NA	Solid	Total BTEX	
890-2692-5	SW06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 31417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2692-1	SW02	Total/NA	Solid	8015NM Prep	
MB 880-31417/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31417/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17530-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17530-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 31439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2692-2	SW03	Total/NA	Solid	8015NM Prep	
890-2692-3	SW04	Total/NA	Solid	8015NM Prep	
890-2692-4	SW05	Total/NA	Solid	8015NM Prep	
890-2692-5	SW06	Total/NA	Solid	8015NM Prep	
MB 880-31439/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31439/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

GC Semi VOA (Continued)

Prep Batch: 31439 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-31439/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17544-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17544-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2692-1	SW02	Total/NA	Solid	8015B NM	31417
MB 880-31417/1-A	Method Blank	Total/NA	Solid	8015B NM	31417
LCS 880-31417/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31417
LCSD 880-31417/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31417
880-17530-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	31417
880-17530-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31417

Analysis Batch: 31457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2692-2	SW03	Total/NA	Solid	8015B NM	31439
890-2692-3	SW04	Total/NA	Solid	8015B NM	31439
890-2692-4	SW05	Total/NA	Solid	8015B NM	31439
890-2692-5	SW06	Total/NA	Solid	8015B NM	31439
MB 880-31439/1-A	Method Blank	Total/NA	Solid	8015B NM	31439
LCS 880-31439/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31439
LCSD 880-31439/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31439
880-17544-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	31439
880-17544-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31439

Analysis Batch: 31549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2692-1	SW02	Total/NA	Solid	8015 NM	
890-2692-2	SW03	Total/NA	Solid	8015 NM	
890-2692-3	SW04	Total/NA	Solid	8015 NM	
890-2692-4	SW05	Total/NA	Solid	8015 NM	
890-2692-5	SW06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2692-1	SW02	Soluble	Solid	DI Leach	
890-2692-2	SW03	Soluble	Solid	DI Leach	
890-2692-3	SW04	Soluble	Solid	DI Leach	
890-2692-4	SW05	Soluble	Solid	DI Leach	
890-2692-5	SW06	Soluble	Solid	DI Leach	
MB 880-31429/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31429/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31429/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2691-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2691-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2692-1	SW02	Soluble	Solid	300.0	31429

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

HPLC/IC (Continued)

Analysis Batch: 31662 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2692-2	SW03	Soluble	Solid	300.0	31429
890-2692-3	SW04	Soluble	Solid	300.0	31429
890-2692-4	SW05	Soluble	Solid	300.0	31429
890-2692-5	SW06	Soluble	Solid	300.0	31429
MB 880-31429/1-A	Method Blank	Soluble	Solid	300.0	31429
LCS 880-31429/2-A	Lab Control Sample	Soluble	Solid	300.0	31429
LCSD 880-31429/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31429
890-2691-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	31429
890-2691-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31429

Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

Client Sample ID: SW02

Lab Sample ID: 890-2692-1

Date Collected: 07/28/22 13:45

Matrix: Solid

Date Received: 08/01/22 08:17

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	31576	08/05/22 11:52	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31656	08/07/22 15:05	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31864	08/09/22 16:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			31549	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31417	08/03/22 13:28	DM	EET MID
Total/NA	Analysis	8015B NM		1			31455	08/04/22 18:48	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 23:07	CH	EET MID

Client Sample ID: SW03

Lab Sample ID: 890-2692-2

Date Collected: 07/29/22 14:15

Matrix: Solid

Date Received: 08/01/22 08:17

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	31576	08/05/22 11:52	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31656	08/07/22 15:25	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31864	08/09/22 16:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			31549	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31439	08/03/22 15:56	DM	EET MID
Total/NA	Analysis	8015B NM		1			31457	08/04/22 14:46	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 23:15	CH	EET MID

Client Sample ID: SW04

Lab Sample ID: 890-2692-3

Date Collected: 07/29/22 13:55

Matrix: Solid

Date Received: 08/01/22 08:17

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	31576	08/05/22 11:52	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31656	08/07/22 15:46	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31864	08/09/22 16:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			31549	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31439	08/03/22 15:56	DM	EET MID
Total/NA	Analysis	8015B NM		1			31457	08/04/22 15:07	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 23:39	CH	EET MID

Client Sample ID: SW05

Lab Sample ID: 890-2692-4

Date Collected: 07/29/22 13:45

Matrix: Solid

Date Received: 08/01/22 08:17

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	31576	08/05/22 11:52	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31656	08/07/22 16:07	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31864	08/09/22 16:25	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

Client Sample ID: SW05

Lab Sample ID: 890-2692-4

Date Collected: 07/29/22 13:45

Matrix: Solid

Date Received: 08/01/22 08:17

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			31549	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31439	08/03/22 15:56	DM	EET MID
Total/NA	Analysis	8015B NM		1			31457	08/04/22 15:55	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 23:46	CH	EET MID

Client Sample ID: SW06

Lab Sample ID: 890-2692-5

Date Collected: 07/29/22 14:00

Matrix: Solid

Date Received: 08/01/22 08:17

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	31576	08/05/22 11:52	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31656	08/07/22 16:28	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31864	08/09/22 16:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			31549	08/05/22 08:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	31439	08/03/22 15:56	DM	EET MID
Total/NA	Analysis	8015B NM		1			31457	08/04/22 16:16	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	31429	08/03/22 13:59	SMC	EET MID
Soluble	Analysis	300.0		1			31662	08/11/22 23:54	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 Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

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	T104704400-22-24	06-30-23

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: King Tut Federal Com 001H

Job ID: 890-2692-1
SDG: 03D2024010

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2692-1	SW02	Solid	07/28/22 13:45	08/01/22 08:17	0 - 4'
890-2692-2	SW03	Solid	07/29/22 14:15	08/01/22 08:17	0 - 4'
890-2692-3	SW04	Solid	07/29/22 13:55	08/01/22 08:17	0 - 4'
890-2692-4	SW05	Solid	07/29/22 13:45	08/01/22 08:17	0 - 4'
890-2692-5	SW06	Solid	07/29/22 14:00	08/01/22 08:17	0 - 4'

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



Environment Testing
Xenco

Work Order No: _____

www.xenco.com Page 1 of 1

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

Project Name:	King Tut Federal Com 001H	Turn Around	Pres. Code
Project Number:	03D2024010	☒ Routine ☐ Rush	
Project Location:	Conner Shore	Due Date:	
Sampler's Name:		TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SW02	S	07.28.22	1345	0-4'	C	1		X	X	X
SW03	S	07.29.22	1415	0-4'	C	1		X	X	X
SW04	S	07.28.22	1355	0-4'	C	1		X	X	X
SW05	S	07.29.22	1345	0-4'	C	1		X	X	X
SW06	S	07.29.22	1400	0-4'	C	1		X	X	X

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 Ti 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 Ti U Hg: 1631 / 245.1 / 7470 / 7471		

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8-1-22 8:17			
3		4			
5		6			

Revised Date 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2692-1

SDG Number: 03D2024010

Login Number: 2692

List Number: 1

Creator: Stutzman, Amanda

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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2692-1

SDG Number: 03D2024010

Login Number: 2692

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 08/02/22 10:44 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	



Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2738-1

Laboratory Sample Delivery Group: 03D2024082

Client Project/Site: King Tut Fed Com 1H

For:

Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:

8/22/2022 2:18:55 PM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Laboratory Job ID: 890-2738-1
SDG: 03D2024082

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Definitions/Glossary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
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.
α	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 Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

Job ID: 890-2738-1

Laboratory: Eurofins Carlsbad**Narrative****Job Narrative
890-2738-1****Receipt**

The samples were received on 8/10/2022 2:06 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

GC VOA

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-32003 and analytical batch 880-31940 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) sample: (890-2732-A-1-B MS). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31853 and analytical batch 880-31943 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-31966/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-31966 and analytical batch 880-32042 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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 Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

Client Sample ID: SS01

Lab Sample ID: 890-2738-1

Date Collected: 08/10/22 11:00

Matrix: Solid

Date Received: 08/10/22 14:06

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/11/22 11:30	08/12/22 01:37	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/11/22 11:30	08/12/22 01:37	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/11/22 11:30	08/12/22 01:37	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/11/22 11:30	08/12/22 01:37	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/11/22 11:30	08/12/22 01:37	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/11/22 11:30	08/12/22 01:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	08/11/22 11:30	08/12/22 01:37	1
1,4-Difluorobenzene (Surr)	78		70 - 130	08/11/22 11:30	08/12/22 01:37	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/12/22 10:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			08/12/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		08/11/22 15:10	08/11/22 19:20	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		08/11/22 15:10	08/11/22 19:20	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		08/11/22 15:10	08/11/22 19:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130	08/11/22 15:10	08/11/22 19:20	1
o-Terphenyl	93		70 - 130	08/11/22 15:10	08/11/22 19:20	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6050		49.9	mg/Kg			08/12/22 02:05	10

Client Sample ID: SS02

Lab Sample ID: 890-2738-2

Date Collected: 08/10/22 11:05

Matrix: Solid

Date Received: 08/10/22 14:06

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/11/22 11:30	08/12/22 01:58	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/11/22 11:30	08/12/22 01:58	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/11/22 11:30	08/12/22 01:58	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/11/22 11:30	08/12/22 01:58	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/11/22 11:30	08/12/22 01:58	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/11/22 11:30	08/12/22 01:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	08/11/22 11:30	08/12/22 01:58	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

Client Sample ID: SS02

Lab Sample ID: 890-2738-2

Date Collected: 08/10/22 11:05

Matrix: Solid

Date Received: 08/10/22 14:06

Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	88		70 - 130	08/11/22 11:30	08/12/22 01:58	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/12/22 10:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	53.9		49.9	mg/Kg			08/12/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		08/11/22 09:22	08/12/22 19:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/11/22 09:22	08/12/22 19:43	1
Oil Range Organics (Over C28-C36)	53.9		49.9	mg/Kg		08/11/22 09:22	08/12/22 19:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	08/11/22 09:22	08/12/22 19:43	1
o-Terphenyl	126		70 - 130	08/11/22 09:22	08/12/22 19:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6940		50.0	mg/Kg			08/12/22 02:14	10

Client Sample ID: SS03

Lab Sample ID: 890-2738-3

Date Collected: 08/10/22 11:10

Matrix: Solid

Date Received: 08/10/22 14:06

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/12/22 02:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/12/22 02:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/12/22 02:18	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		08/11/22 11:30	08/12/22 02:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/12/22 02:18	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		08/11/22 11:30	08/12/22 02:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	08/11/22 11:30	08/12/22 02:18	1
1,4-Difluorobenzene (Surr)	78		70 - 130	08/11/22 11:30	08/12/22 02:18	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			08/12/22 10:35	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

Client Sample ID: SS03

Lab Sample ID: 890-2738-3

Date Collected: 08/10/22 11:10

Matrix: Solid

Date Received: 08/10/22 14:06

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/12/22 09:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0	mg/Kg		08/11/22 17:00	08/12/22 20:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/11/22 17:00	08/12/22 20:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/11/22 17:00	08/12/22 20:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130			08/11/22 17:00	08/12/22 20:04	1
o-Terphenyl	118		70 - 130			08/11/22 17:00	08/12/22 20:04	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	406		5.00	mg/Kg			08/12/22 02:23	1

Surrogate Summary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

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)
890-2736-A-1-B MS	Matrix Spike	128	97
890-2736-A-1-C MSD	Matrix Spike Duplicate	120	86
890-2738-1	SS01	104	78
890-2738-2	SS02	113	88
890-2738-3	SS03	105	78
LCS 880-32003/1-A	Lab Control Sample	107	100
LCSD 880-32003/2-A	Lab Control Sample Dup	121	100
MB 880-31863/5-A	Method Blank	97	81
MB 880-32003/5-A	Method Blank	98	84
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-17971-A-1-E MS	Matrix Spike	96	110
880-17971-A-1-F MSD	Matrix Spike Duplicate	86	106
890-2732-A-1-B MS	Matrix Spike	71	67 S1-
890-2732-A-1-C MSD	Matrix Spike Duplicate	73	71
890-2738-1	SS01	84	93
890-2738-2	SS02	101	126
890-2738-3	SS03	96	118
LCS 880-31853/2-A	Lab Control Sample	103	103
LCS 880-31966/2-A	Lab Control Sample	116	137 S1+
LCSD 880-31853/3-A	Lab Control Sample Dup	119	122
LCSD 880-31966/3-A	Lab Control Sample Dup	100	123
MB 880-31853/1-A	Method Blank	93	112
MB 880-31966/1-A	Method Blank	84	115
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31863/5-A

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31863

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/09/22 16:02	08/11/22 12:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/09/22 16:02	08/11/22 12:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/09/22 16:02	08/11/22 12:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/09/22 16:02	08/11/22 12:35	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/09/22 16:02	08/11/22 12:35	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/09/22 16:02	08/11/22 12:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	08/09/22 16:02	08/11/22 12:35	1
1,4-Difluorobenzene (Surr)	81		70 - 130	08/09/22 16:02	08/11/22 12:35	1

Lab Sample ID: MB 880-32003/5-A

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 32003

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/11/22 23:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/11/22 23:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/11/22 23:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/11/22 11:30	08/11/22 23:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/11/22 23:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/11/22 11:30	08/11/22 23:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	08/11/22 11:30	08/11/22 23:12	1
1,4-Difluorobenzene (Surr)	84		70 - 130	08/11/22 11:30	08/11/22 23:12	1

Lab Sample ID: LCS 880-32003/1-A

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 32003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.07932		mg/Kg		79	70 - 130
Toluene	0.100	0.09050		mg/Kg		91	70 - 130
Ethylbenzene	0.100	0.09368		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	0.200	0.1953		mg/Kg		98	70 - 130
o-Xylene	0.100	0.1082		mg/Kg		108	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-32003/2-A

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 32003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1007		mg/Kg		101	70 - 130	24	35

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

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

Lab Sample ID: LCSD 880-32003/2-A

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 32003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.09974		mg/Kg		100	70 - 130	10	35
Ethylbenzene	0.100	0.1108		mg/Kg		111	70 - 130	17	35
m-Xylene & p-Xylene	0.200	0.2294		mg/Kg		115	70 - 130	16	35
o-Xylene	0.100	0.1269		mg/Kg		127	70 - 130	16	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 890-2736-A-1-B MS

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 32003

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1	0.101	0.08521		mg/Kg		85	70 - 130
Toluene	<0.00199	U	0.101	0.09050		mg/Kg		90	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.1006		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.201	0.2138		mg/Kg		106	70 - 130
o-Xylene	<0.00199	U	0.101	0.1176		mg/Kg		117	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 890-2736-A-1-C MSD

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 32003

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.101	0.06978	F1	mg/Kg		69	70 - 130	20	35
Toluene	<0.00199	U	0.101	0.09112		mg/Kg		90	70 - 130	1	35
Ethylbenzene	<0.00199	U	0.101	0.09830		mg/Kg		98	70 - 130	2	35
m-Xylene & p-Xylene	<0.00398	U	0.202	0.2031		mg/Kg		101	70 - 130	5	35
o-Xylene	<0.00199	U	0.101	0.1115		mg/Kg		111	70 - 130	5	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	120		70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

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

Lab Sample ID: MB 880-31853/1-A

Matrix: Solid

Analysis Batch: 31943

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31853

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		08/09/22 15:10	08/11/22 10:17	1

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

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

Lab Sample ID: MB 880-31853/1-A

Matrix: Solid

Analysis Batch: 31943

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31853

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/09/22 15:10	08/11/22 10:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/09/22 15:10	08/11/22 10:17	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			08/09/22 15:10	08/11/22 10:17	1
o-Terphenyl	112		70 - 130			08/09/22 15:10	08/11/22 10:17	1

Lab Sample ID: LCS 880-31853/2-A

Matrix: Solid

Analysis Batch: 31943

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31853

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	925.9		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	1000	926.0		mg/Kg		93	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	103		70 - 130				
o-Terphenyl	103		70 - 130				

Lab Sample ID: LCSD 880-31853/3-A

Matrix: Solid

Analysis Batch: 31943

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31853

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1030		mg/Kg		103	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	1000	1070		mg/Kg		107	70 - 130	14	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	119		70 - 130						
o-Terphenyl	122		70 - 130						

Lab Sample ID: 890-2732-A-1-B MS

Matrix: Solid

Analysis Batch: 31943

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31853

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	974.0		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	623.0	F1	mg/Kg		62	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	71		70 - 130						
o-Terphenyl	67	S1-	70 - 130						

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

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

Lab Sample ID: 890-2732-A-1-C MSD

Matrix: Solid

Analysis Batch: 31943

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31853

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	<49.9	U	999	929.9		mg/Kg		91	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	668.7	F1	mg/Kg		67	70 - 130	7	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	73		70 - 130								
o-Terphenyl	71		70 - 130								

Lab Sample ID: MB 880-31966/1-A

Matrix: Solid

Analysis Batch: 32042

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31966

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		08/11/22 09:22	08/12/22 10:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/11/22 09:22	08/12/22 10:39	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/11/22 09:22	08/12/22 10:39	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130			08/11/22 09:22	08/12/22 10:39	1
o-Terphenyl	115		70 - 130			08/11/22 09:22	08/12/22 10:39	1

Lab Sample ID: LCS 880-31966/2-A

Matrix: Solid

Analysis Batch: 32042

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31966

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	1194		mg/Kg		119	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	1180		mg/Kg		118	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
1-Chlorooctane	116		70 - 130					
o-Terphenyl	137	S1+	70 - 130					

Lab Sample ID: LCSD 880-31966/3-A

Matrix: Solid

Analysis Batch: 32042

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31966

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	895.6	*1	mg/Kg		90	70 - 130	29	20
Diesel Range Organics (Over C10-C28)	1000	1034		mg/Kg		103	70 - 130	13	20

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

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

Lab Sample ID: LCSD 880-31966/3-A

Matrix: Solid

Analysis Batch: 32042

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31966

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	123		70 - 130

Lab Sample ID: 880-17971-A-1-E MS

Matrix: Solid

Analysis Batch: 32042

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31966

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	999	1123		mg/Kg		110	70 - 130	
Diesel Range Organics (Over C10-C28)	150		999	1035		mg/Kg		89	70 - 130	
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	96		70 - 130							
o-Terphenyl	110		70 - 130							

Lab Sample ID: 880-17971-A-1-F MSD

Matrix: Solid

Analysis Batch: 32042

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31966

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	999	1108		mg/Kg		109	70 - 130	1	20	
Diesel Range Organics (Over C10-C28)	150		999	949.1		mg/Kg		80	70 - 130	9	20	
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	86		70 - 130									
o-Terphenyl	106		70 - 130									

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31949/1-A

Matrix: Solid

Analysis Batch: 32041

Client Sample ID: Method Blank

Prep Type: Soluble

	MB	MB								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	<5.00	U	5.00	mg/Kg			08/11/22 22:24	1		

Lab Sample ID: LCS 880-31949/2-A

Matrix: Solid

Analysis Batch: 32041

Client Sample ID: Lab Control Sample

Prep Type: Soluble

	Spike	LCS	LCS						%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits			
Chloride	250	236.9		mg/Kg		95	90 - 110			

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-31949/3-A
Matrix: Solid
Analysis Batch: 32041

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			251	238.3		mg/Kg		95	90 - 110	1	20

Lab Sample ID: 890-2736-A-4-B MS
Matrix: Solid
Analysis Batch: 32041

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	20.8		250	278.2		mg/Kg		103	90 - 110		

Lab Sample ID: 890-2736-A-4-C MSD
Matrix: Solid
Analysis Batch: 32041

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	20.8		251	277.0		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

GC VOA

Prep Batch: 31863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31863/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 31940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2738-1	SS01	Total/NA	Solid	8021B	32003
890-2738-2	SS02	Total/NA	Solid	8021B	32003
890-2738-3	SS03	Total/NA	Solid	8021B	32003
MB 880-31863/5-A	Method Blank	Total/NA	Solid	8021B	31863
MB 880-32003/5-A	Method Blank	Total/NA	Solid	8021B	32003
LCS 880-32003/1-A	Lab Control Sample	Total/NA	Solid	8021B	32003
LCSD 880-32003/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32003
890-2736-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	32003
890-2736-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	32003

Prep Batch: 32003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2738-1	SS01	Total/NA	Solid	5035	
890-2738-2	SS02	Total/NA	Solid	5035	
890-2738-3	SS03	Total/NA	Solid	5035	
MB 880-32003/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32003/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32003/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2736-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-2736-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 32089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2738-1	SS01	Total/NA	Solid	Total BTEX	
890-2738-2	SS02	Total/NA	Solid	Total BTEX	
890-2738-3	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 31853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2738-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-31853/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31853/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31853/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2732-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2732-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2738-1	SS01	Total/NA	Solid	8015B NM	31853
MB 880-31853/1-A	Method Blank	Total/NA	Solid	8015B NM	31853
LCS 880-31853/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31853
LCSD 880-31853/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31853
890-2732-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	31853
890-2732-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31853

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

GC Semi VOA

Prep Batch: 31966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2738-2	SS02	Total/NA	Solid	8015NM Prep	
890-2738-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-31966/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31966/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17971-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17971-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 32042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2738-2	SS02	Total/NA	Solid	8015B NM	31966
890-2738-3	SS03	Total/NA	Solid	8015B NM	31966
MB 880-31966/1-A	Method Blank	Total/NA	Solid	8015B NM	31966
LCS 880-31966/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31966
LCSD 880-31966/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31966
880-17971-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	31966
880-17971-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31966

Analysis Batch: 32061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2738-1	SS01	Total/NA	Solid	8015 NM	
890-2738-2	SS02	Total/NA	Solid	8015 NM	
890-2738-3	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2738-1	SS01	Soluble	Solid	DI Leach	
890-2738-2	SS02	Soluble	Solid	DI Leach	
890-2738-3	SS03	Soluble	Solid	DI Leach	
MB 880-31949/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31949/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31949/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2736-A-4-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2736-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 32041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2738-1	SS01	Soluble	Solid	300.0	31949
890-2738-2	SS02	Soluble	Solid	300.0	31949
890-2738-3	SS03	Soluble	Solid	300.0	31949
MB 880-31949/1-A	Method Blank	Soluble	Solid	300.0	31949
LCS 880-31949/2-A	Lab Control Sample	Soluble	Solid	300.0	31949
LCSD 880-31949/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31949
890-2736-A-4-B MS	Matrix Spike	Soluble	Solid	300.0	31949
890-2736-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31949

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Lab Chronicle

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

Client Sample ID: SS01

Lab Sample ID: 890-2738-1

Date Collected: 08/10/22 11:00

Matrix: Solid

Date Received: 08/10/22 14:06

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	32003	08/11/22 11:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31940	08/12/22 01:37	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32089	08/12/22 10:35	SM	EET MID
Total/NA	Analysis	8015 NM		1			32061	08/12/22 09:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	31853	08/11/22 15:10	DM	EET MID
Total/NA	Analysis	8015B NM		1			31943	08/11/22 19:20	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	31949	08/11/22 09:02	AJ	EET MID
Soluble	Analysis	300.0		10			32041	08/12/22 02:05	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-2738-2

Date Collected: 08/10/22 11:05

Matrix: Solid

Date Received: 08/10/22 14:06

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	32003	08/11/22 11:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31940	08/12/22 01:58	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32089	08/12/22 10:35	SM	EET MID
Total/NA	Analysis	8015 NM		1			32061	08/12/22 09:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	31966	08/11/22 09:22	DM	EET MID
Total/NA	Analysis	8015B NM		1			32042	08/12/22 19:43	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	31949	08/11/22 09:02	AJ	EET MID
Soluble	Analysis	300.0		10			32041	08/12/22 02:14	CH	EET MID

Client Sample ID: SS03

Lab Sample ID: 890-2738-3

Date Collected: 08/10/22 11:10

Matrix: Solid

Date Received: 08/10/22 14:06

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	32003	08/11/22 11:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31940	08/12/22 02:18	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32089	08/12/22 10:35	SM	EET MID
Total/NA	Analysis	8015 NM		1			32061	08/12/22 09:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31966	08/11/22 17:00	DM	EET MID
Total/NA	Analysis	8015B NM		1			32042	08/12/22 20:04	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	31949	08/11/22 09:02	AJ	EET MID
Soluble	Analysis	300.0		1			32041	08/12/22 02:23	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

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	T104704400-22-24	06-30-23

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2738-1
SDG: 03D2024082

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2738-1	SS01	Solid	08/10/22 11:00	08/10/22 14:06	1
890-2738-2	SS02	Solid	08/10/22 11:05	08/10/22 14:06	1
890-2738-3	SS03	Solid	08/10/22 11:10	08/10/22 14:06	1

- 1
- 2
- 3
- 4
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- 11
- 12
- 13
- 14



Environment Testing
Xenco

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

Chain of Custody

Work Order No:

www.xenco.com Page 1 of 2

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

Work Order Comments	
Program: UST/PST	☐ PRP ☐ Brownfields ☐ RCC ☐ Superfund ☐
State of Project:	
Reporting: Level II	☒ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD	☐ ADAPT ☐ Other:

Project Name:		King Tut Fed Com 1H		Turn Around		Pres. Code		ANALYSIS REQUEST										Preservative Codes			
Project Number:		03D2024082		☐ Routine ☒ Rush														None: NO			
Project Location:				Due Date:		3 day												Cool: Cool			
Sampler's Name:		Conner Shore		TAT starts the day received by the lab, if received by 4:30pm														HCL: HC			
PO #:				Wet Ice:		☒ Yes ☐ No												H ₂ SO ₄ : H ₂			
SAMPLE RECEIPT		Temp Blank:		☒ Yes ☐ No		Thermometer ID: <u>TM-007</u>												H ₃ PO ₄ : HP			
Samples Received Intact:		☒ Yes ☐ No		Correction Factor:		-0.2												NaHSO ₄ : NABIS			
Cooler Custody Seals:		☒ Yes ☐ No		Temperature Reading:		5.2												Na ₂ S ₂ O ₃ : NaSO ₃			
Sample Custody Seals:		☒ Yes ☐ No		Corrected Temperature:		5.0												Zn Acetate+NaOH: Zn			
Total Containers:																		NaOH+Ascorbic Acid: SASC			

[illegible]

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 Ti Sn U V Zr
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 Ti U	
		Hg: 1631 / 245.1 / 7470 / 7471	

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xeno, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xeno will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xeno. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xeno, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 		8.10.22 1406			
2					
3					
4					
5					
6					

Revised Date: 08/25/2020 Raw 2020

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2738-1

SDG Number: 03D2024082

Login Number: 2738

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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2738-1

SDG Number: 03D2024082

Login Number: 2738

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 08/11/22 12:13 PM

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	



Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2739-1

Laboratory Sample Delivery Group: 03D2024082

Client Project/Site: King Tut Fed Com 1H

For:

Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

Authorized for release by:

8/22/2022 2:19:32 PM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

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

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

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Laboratory Job ID: 890-2739-1
SDG: 03D2024082

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Definitions/Glossary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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
SQL	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 Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

Job ID: 890-2739-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2739-1

Receipt

The samples were received on 8/10/2022 2:06 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

GC VOA

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-32003 and analytical batch 880-31940 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA

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 Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

Client Sample ID: SS04

Lab Sample ID: 890-2739-1

Date Collected: 08/10/22 11:20

Matrix: Solid

Date Received: 08/10/22 14:06

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/12/22 02:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/12/22 02:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/12/22 02:39	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		08/11/22 11:30	08/12/22 02:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/12/22 02:39	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		08/11/22 11:30	08/12/22 02:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	08/11/22 11:30	08/12/22 02:39	1
1,4-Difluorobenzene (Surr)	84		70 - 130	08/11/22 11:30	08/12/22 02:39	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			08/12/22 10:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			08/15/22 10:31	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		08/12/22 08:52	08/12/22 16:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/12/22 08:52	08/12/22 16:50	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/12/22 08:52	08/12/22 16:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	129		70 - 130	08/12/22 08:52	08/12/22 16:50	1
o-Terphenyl	108		70 - 130	08/12/22 08:52	08/12/22 16:50	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	474		5.01	mg/Kg			08/12/22 02:33	1

Client Sample ID: SS05

Lab Sample ID: 890-2739-2

Date Collected: 08/10/22 11:35

Matrix: Solid

Date Received: 08/10/22 14:06

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		08/11/22 11:30	08/12/22 04:02	1
Toluene	<0.00198	U	0.00198	mg/Kg		08/11/22 11:30	08/12/22 04:02	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		08/11/22 11:30	08/12/22 04:02	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		08/11/22 11:30	08/12/22 04:02	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		08/11/22 11:30	08/12/22 04:02	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		08/11/22 11:30	08/12/22 04:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	08/11/22 11:30	08/12/22 04:02	1

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Client Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

Client Sample ID: SS05

Lab Sample ID: 890-2739-2

Date Collected: 08/10/22 11:35

Matrix: Solid

Date Received: 08/10/22 14:06

Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	87		70 - 130	08/11/22 11:30	08/12/22 04:02	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			08/12/22 10:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/15/22 10:31	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/12/22 08:52	08/12/22 17:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/12/22 08:52	08/12/22 17:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/12/22 08:52	08/12/22 17:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130			08/12/22 08:52	08/12/22 17:12	1
o-Terphenyl	106		70 - 130			08/12/22 08:52	08/12/22 17:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	335		5.02	mg/Kg			08/12/22 02:42	1

Surrogate Summary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

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)
890-2736-A-1-B MS	Matrix Spike	128	97
890-2736-A-1-C MSD	Matrix Spike Duplicate	120	86
890-2739-1	SS04	111	84
890-2739-2	SS05	111	87
LCS 880-32003/1-A	Lab Control Sample	107	100
LCSD 880-32003/2-A	Lab Control Sample Dup	121	100
MB 880-31863/5-A	Method Blank	97	81
MB 880-32003/5-A	Method Blank	98	84
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-17973-A-1-E MS	Matrix Spike	112	94
880-17973-A-1-F MSD	Matrix Spike Duplicate	115	93
890-2739-1	SS04	129	108
890-2739-2	SS05	124	106
LCS 880-32054/2-A	Lab Control Sample	105	100
LCSD 880-32054/3-A	Lab Control Sample Dup	117	89
MB 880-32054/1-A	Method Blank	114	109
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31863/5-A

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31863

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/09/22 16:02	08/11/22 12:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/09/22 16:02	08/11/22 12:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/09/22 16:02	08/11/22 12:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/09/22 16:02	08/11/22 12:35	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/09/22 16:02	08/11/22 12:35	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/09/22 16:02	08/11/22 12:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	08/09/22 16:02	08/11/22 12:35	1
1,4-Difluorobenzene (Surr)	81		70 - 130	08/09/22 16:02	08/11/22 12:35	1

Lab Sample ID: MB 880-32003/5-A

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 32003

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/11/22 23:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/11/22 23:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/11/22 23:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/11/22 11:30	08/11/22 23:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/11/22 11:30	08/11/22 23:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/11/22 11:30	08/11/22 23:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	08/11/22 11:30	08/11/22 23:12	1
1,4-Difluorobenzene (Surr)	84		70 - 130	08/11/22 11:30	08/11/22 23:12	1

Lab Sample ID: LCS 880-32003/1-A

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 32003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.07932		mg/Kg		79	70 - 130
Toluene	0.100	0.09050		mg/Kg		91	70 - 130
Ethylbenzene	0.100	0.09368		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	0.200	0.1953		mg/Kg		98	70 - 130
o-Xylene	0.100	0.1082		mg/Kg		108	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-32003/2-A

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 32003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1007		mg/Kg		101	70 - 130	24	35

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

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

Lab Sample ID: LCSD 880-32003/2-A

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 32003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.09974		mg/Kg		100	70 - 130	10	35
Ethylbenzene	0.100	0.1108		mg/Kg		111	70 - 130	17	35
m-Xylene & p-Xylene	0.200	0.2294		mg/Kg		115	70 - 130	16	35
o-Xylene	0.100	0.1269		mg/Kg		127	70 - 130	16	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 890-2736-A-1-B MS

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 32003

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1	0.101	0.08521		mg/Kg		85	70 - 130
Toluene	<0.00199	U	0.101	0.09050		mg/Kg		90	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.1006		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.201	0.2138		mg/Kg		106	70 - 130
o-Xylene	<0.00199	U	0.101	0.1176		mg/Kg		117	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 890-2736-A-1-C MSD

Matrix: Solid

Analysis Batch: 31940

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 32003

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.101	0.06978	F1	mg/Kg		69	70 - 130	20	35
Toluene	<0.00199	U	0.101	0.09112		mg/Kg		90	70 - 130	1	35
Ethylbenzene	<0.00199	U	0.101	0.09830		mg/Kg		98	70 - 130	2	35
m-Xylene & p-Xylene	<0.00398	U	0.202	0.2031		mg/Kg		101	70 - 130	5	35
o-Xylene	<0.00199	U	0.101	0.1115		mg/Kg		111	70 - 130	5	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	120		70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

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

Lab Sample ID: MB 880-32054/1-A

Matrix: Solid

Analysis Batch: 32049

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 32054

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		08/12/22 08:52	08/12/22 10:43	1

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

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

Lab Sample ID: MB 880-32054/1-A

Matrix: Solid

Analysis Batch: 32049

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 32054

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/12/22 08:52	08/12/22 10:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/12/22 08:52	08/12/22 10:43	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130			08/12/22 08:52	08/12/22 10:43	1
o-Terphenyl	109		70 - 130			08/12/22 08:52	08/12/22 10:43	1

Lab Sample ID: LCS 880-32054/2-A

Matrix: Solid

Analysis Batch: 32049

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 32054

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	991.2		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1150		mg/Kg		115	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	105		70 - 130				
o-Terphenyl	100		70 - 130				

Lab Sample ID: LCSD 880-32054/3-A

Matrix: Solid

Analysis Batch: 32049

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 32054

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	947.1		mg/Kg		95	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	1045		mg/Kg		105	70 - 130	10	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	117		70 - 130						
o-Terphenyl	89		70 - 130						

Lab Sample ID: 880-17973-A-1-E MS

Matrix: Solid

Analysis Batch: 32049

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 32054

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	982.6		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	153		999	1216		mg/Kg		106	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	112		70 - 130						
o-Terphenyl	94		70 - 130						

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QC Sample Results

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

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

Lab Sample ID: 880-17973-A-1-F MSD

Matrix: Solid

Analysis Batch: 32049

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 32054

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	<49.9	U	999	1018		mg/Kg		102	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	153		999	1187		mg/Kg		104	70 - 130	2	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	115		70 - 130								
o-Terphenyl	93		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31949/1-A

Matrix: Solid

Analysis Batch: 32041

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			08/11/22 22:24	1

Lab Sample ID: LCS 880-31949/2-A

Matrix: Solid

Analysis Batch: 32041

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	236.9		mg/Kg		95	90 - 110

Lab Sample ID: LCSD 880-31949/3-A

Matrix: Solid

Analysis Batch: 32041

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	251	238.3		mg/Kg		95	90 - 110	1	20

Lab Sample ID: 890-2736-A-4-B MS

Matrix: Solid

Analysis Batch: 32041

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	20.8		250	278.2		mg/Kg		103	90 - 110

Lab Sample ID: 890-2736-A-4-C MSD

Matrix: Solid

Analysis Batch: 32041

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	20.8		251	277.0		mg/Kg		102	90 - 110	0	20

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QC Association Summary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

GC VOA

Prep Batch: 31863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31863/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 31940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2739-1	SS04	Total/NA	Solid	8021B	32003
890-2739-2	SS05	Total/NA	Solid	8021B	32003
MB 880-31863/5-A	Method Blank	Total/NA	Solid	8021B	31863
MB 880-32003/5-A	Method Blank	Total/NA	Solid	8021B	32003
LCS 880-32003/1-A	Lab Control Sample	Total/NA	Solid	8021B	32003
LCSD 880-32003/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32003
890-2736-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	32003
890-2736-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	32003

Prep Batch: 32003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2739-1	SS04	Total/NA	Solid	5035	
890-2739-2	SS05	Total/NA	Solid	5035	
MB 880-32003/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32003/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32003/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2736-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-2736-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 32090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2739-1	SS04	Total/NA	Solid	Total BTEX	
890-2739-2	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 32049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2739-1	SS04	Total/NA	Solid	8015B NM	32054
890-2739-2	SS05	Total/NA	Solid	8015B NM	32054
MB 880-32054/1-A	Method Blank	Total/NA	Solid	8015B NM	32054
LCS 880-32054/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	32054
LCSD 880-32054/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	32054
880-17973-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	32054
880-17973-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	32054

Prep Batch: 32054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2739-1	SS04	Total/NA	Solid	8015NM Prep	
890-2739-2	SS05	Total/NA	Solid	8015NM Prep	
MB 880-32054/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-32054/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-32054/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-17973-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-17973-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

GC Semi VOA

Analysis Batch: 32153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2739-1	SS04	Total/NA	Solid	8015 NM	
890-2739-2	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2739-1	SS04	Soluble	Solid	DI Leach	
890-2739-2	SS05	Soluble	Solid	DI Leach	
MB 880-31949/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31949/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31949/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2736-A-4-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2736-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 32041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2739-1	SS04	Soluble	Solid	300.0	31949
890-2739-2	SS05	Soluble	Solid	300.0	31949
MB 880-31949/1-A	Method Blank	Soluble	Solid	300.0	31949
LCS 880-31949/2-A	Lab Control Sample	Soluble	Solid	300.0	31949
LCSD 880-31949/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31949
890-2736-A-4-B MS	Matrix Spike	Soluble	Solid	300.0	31949
890-2736-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31949

Lab Chronicle

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

Client Sample ID: SS04

Lab Sample ID: 890-2739-1

Date Collected: 08/10/22 11:20

Matrix: Solid

Date Received: 08/10/22 14:06

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	32003	08/11/22 11:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31940	08/12/22 02:39	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32090	08/12/22 10:35	SM	EET MID
Total/NA	Analysis	8015 NM		1			32153	08/15/22 10:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	32054	08/12/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1			32049	08/12/22 16:50	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	31949	08/11/22 09:02	AJ	EET MID
Soluble	Analysis	300.0		1			32041	08/12/22 02:33	CH	EET MID

Client Sample ID: SS05

Lab Sample ID: 890-2739-2

Date Collected: 08/10/22 11:35

Matrix: Solid

Date Received: 08/10/22 14:06

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	32003	08/11/22 11:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31940	08/12/22 04:02	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32090	08/12/22 10:35	SM	EET MID
Total/NA	Analysis	8015 NM		1			32153	08/15/22 10:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	32054	08/12/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1			32049	08/12/22 17:12	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	31949	08/11/22 09:02	AJ	EET MID
Soluble	Analysis	300.0		1			32041	08/12/22 02:42	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 Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

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	T104704400-22-24	06-30-23

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

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	MCAWW	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

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: King Tut Fed Com 1H

Job ID: 890-2739-1
SDG: 03D2024082

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2739-1	SS04	Solid	08/10/22 11:20	08/10/22 14:06	1
890-2739-2	SS05	Solid	08/10/22 11:35	08/10/22 14:06	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



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

Chain of Custody

Work Order No.:

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marlenfield St Suite 400	Address:	601 N Marlenfield St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817-683-2503	Email:	kjennings@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 Fed Com 1H	Turn Around		Pres. Code	ANALYSIS REQUEST										Preservative Codes				
Project Number:	03D2024082	☐ Routine	☒ Rush													None: NO	DI Water: H ₂ O		
Project Location:		Due Date:		3 day												Cool: Cool	MeOH: Me		
Sampler's Name:	Conner Shore	TAT starts the day received by the lab, if received by 4:30pm														HCL: HC	HNO ₃ : HN		
PO #:																H ₂ SO ₄ : H ₂	NaOH: Na		
SAMPLE RECEIPT		Temp Blank:		(Yes) No	Wet Ice:		(Yes) No											H ₃ PO ₄ : HP	
Samples Received Intact:	Yes	No	Thermometer ID:	10110304											NaHSO ₄ : NABIS				
Cooler Custody Seals:	Yes	No	Correction Factor:	-0.2											Na ₂ S ₂ O ₃ : NaSO ₃				
Sample Custody Seals:	Yes	No	Temperature Reading:	5.2											Zn Acetate+NaOH: Zn				
Total Containers:		Corrected Temperature:		5.2											NaOH+Ascorbic Acid: SAPC				

[illegible]

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 Ti Sn U V Zn	
TCLP / SPLP 6010: 8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$35.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 		5.10.22 1400			
2					
3					
4					
5					
6					

Report Date: 08/25/2020 Row 2020

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2739-1

SDG Number: 03D2024082

Login Number: 2739

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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2739-1

SDG Number: 03D2024082

Login Number: 2739

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 08/11/22 12:13 PM

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	



APPENDIX D

NMOCD Notifications

From: [Beauvais, Charles R](#)
To: [Kalei Jennings](#)
Cc: [Fejervary Morena, Gustavo A](#); [Esparza, Brittany](#)
Subject: FW: [EXTERNAL] COP- Extension Request- King Tut Federal 001H (Incident Number NAPP2216436957)
Date: Thursday, September 1, 2022 3:53:13 PM
Attachments: [image001.png](#)

[**EXTERNAL EMAIL**]

FYI

From: Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>
Sent: Thursday, September 1, 2022 2:28 PM
To: Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>
Subject: FW: [EXTERNAL] COP- Extension Request- King Tut Federal 001H (Incident Number NAPP2216436957)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Charles

OCD approves your request for a 30-day extension to October 4, 2022 to submit a closure report. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks
Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Thursday, September 1, 2022 2:05 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Subject: Fw: [EXTERNAL] COP- Extension Request- King Tut Federal 001H (Incident Number NAPP2216436957)

From: Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>
Sent: Thursday, September 1, 2022 2:00 PM

To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; EMNRD-OCD-District1spills <EMNRD-OCD-District1spills@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; CFO_Spill, BLM_NM <BLM_NM_CFO_Spill@blm.gov>
Cc: Fejervary Morena, Gustavo A <G.Fejervary@conocophillips.com>; Esparza, Brittany <Brittany.Esparza@conocophillips.com>
Subject: [EXTERNAL] COP- Extension Request- King Tut Federal 001H (Incident Number NAPP2216436957)

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

To Whom It May Concern,

COP is requesting an extension for the current deadline of September 4, 2022 for submitting a closure report required in 19.15.29.12.B.(1) NMAC at King Tut Federal 001H (Incident Number NAPP2216436957). The release was discovered on June 6, 2022. COP had an additional release event at the Site that occurred on September 10, 2021 (Incident Number NAPP2127234076), which overlapped portions of the June 2022 release. The remediation work plan for Incident Number NAPP2127234076 was approved by the NMOCD on May 31, 2022 to complete delineation, excavation, and drill a depth to water boring to confirm the Closure Criteria at the Site. The releases were addressed concurrently, and delineation and excavation activities are complete. Bureau of Land Management (BLM) approved access to advance a soil boring to determine depth to groundwater on August 15, 2022; however, New Mexico Office of the State Engineer (NMOSE) permits were received September 1, 2022. COP intends to drill the soil boring within 2 weeks of NMOSE permit approval and provide a closure request within 1 week of completing drilling activities. In order to complete drilling activities and submit a closure report, COP requests a 30-day extension of this deadline until October 4, 2022.

Respectfully,

Charles R. Beauvais II

Senior Environmental Engineer | Environmental Operations | **ConocoPhillips**

(M) 575-988-2043

Charles.R.Beauvais@conocophillips.com

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



From: [Nobui, Jennifer, EMNRD](#)
To: [Kalei Jennings](#)
Cc: [Bratcher, Mike, EMNRD](#); [Harimon, Jocelyn, EMNRD](#); [Hamlet, Robert, EMNRD](#)
Subject: FW: [EXTERNAL] COP- Sampling Notification (Week of 07/18/22-07/22/22)
Date: Thursday, July 14, 2022 12:04:58 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

[**EXTERNAL EMAIL**]

Kalei

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

Thanks,
Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Thursday, July 14, 2022 10:39 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Subject: Fw: [EXTERNAL] COP- Sampling Notification (Week of 07/18/22-07/22/22)

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, July 14, 2022 10:35 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Subject: [EXTERNAL] COP- Sampling Notification (Week of 07/18/22-07/22/22)

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

All,

COP plans to complete final sampling activities at the following sites the week of July 18, 2022.

Monday:

- Zia Hills 19-1 / NAPP2215827276

Tuesday:

- King Tut Federal Com 001H / NAPP2127234076

Wednesday:

- King Tut Federal Com 001H / NAPP2127234076

Thursday:

Friday:

Thank you,



Kalei Jennings

Senior Scientist

817-683-2503

Ensolum, LLC



From: [Beauvais, Charles R](#)
To: [Kalei Jennings](#)
Subject: Fwd: [EXTERNAL](Final Extension) COP-King Tut Federal 001H (Incident Number NAPP2127234076)
Date: Friday, August 26, 2022 12:00:10 PM
Attachments: [image002.jpg](#)
[image003.png](#)

[**EXTERNAL EMAIL**]

Fyi

Get [Outlook for iOS](#)

From: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Sent: Friday, August 26, 2022 8:04:34 AM
To: Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>
Cc: Fejervary Morena, Gustavo A <G.Fejervary@conocophillips.com>; Esparza, Brittany <Brittany.Esparza@conocophillips.com>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>
Subject: [EXTERNAL](Final Extension) COP-King Tut Federal 001H (Incident Number NAPP2127234076)

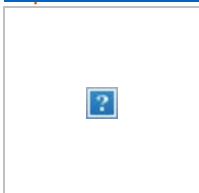
CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

RE: Incident #**NAPP2127234076**

Charles,

Your request for an extension to **September 28th, 2022** is approved. This will be the **final extension** for this release. Please include this e-mail correspondence in the remediation and/or closure report.

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



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

Sent: Thursday, August 25, 2022 12:29 PM

To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; EMNRD-OCD-District1spills <EMNRD-OCD-District1spills@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; CFO_Spill, BLM_NM <BLM_NM_CFO_Spill@blm.gov>

Cc: Fejervary Morena, Gustavo A <G.Fejervary@conocophillips.com>; Esparza, Brittany <Brittany.Esparza@conocophillips.com>

Subject: [EXTERNAL] COP-Extension Request- King Tut Federal 001H (Incident Number NAPP2127234076)

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

To Whom It May Concern,

COP is requesting an extension for the current deadline of August 29, 2022 for submitting a closure report required in 19.15.29.12.B.(1) NMAC at King Tut Federal 001H (Incident Number NAPP2127234076). The release was discovered on September 10, 2021 and the remediation work plan was approved by the NMOCD on May 31, 2022 to complete delineation, excavation, and drill a depth to water boring to confirm the Closure Criteria at the Site. COP had an additional release event at the Site that occurred on June 6, 2022 (Incident Number NAPP2216436957), which overlapped portions of the September 2021 release. The releases were addressed concurrently, and delineation and excavation activities are complete. Bureau of Land Management (BLM) approved access to advance a soil boring to determine depth to groundwater on August 15, 2022; however, New Mexico Office of the State Engineer (NMOSE) permits are still pending. COP intends to drill the soil boring within 2 weeks of NMOSE permit approval and provide a closure request within 1 week of completing drilling activities. In order to complete drilling activities and submit a closure report, COP requests a 30-day extension of this deadline until September 28, 2022.

Respectfully,

Charles R. Beauvais II

Senior Environmental Engineer | Environmental Operations | **ConocoPhillips**

(M) 575-988-2043

Charles.R.Beauvais@conocophillips.com

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



From: OCDOnline@state.nm.us
To: [Kalei Jennings](#)
Subject: The Oil Conservation Division (OCD) has approved the application, Application ID: 107590
Date: Tuesday, May 31, 2022 11:19:32 AM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Kalei Jennings for COG OPERATING LLC),

The OCD has approved the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2127234076, with the following conditions:

- **Remediation Plan Approved with Conditions. The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.**

The signed C-141 can be found in the OCD Online: Imaging under the incident ID (n#).

If you have any questions regarding this application, please contact me.

Thank you,
Jennifer Nobui
Environmental Specialist-Advanced
505-476-3441
Jennifer.Nobui@state.nm.us

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



APPENDIX E

Final C-141

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

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

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

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

☐ The source of the release has been stopped.	
☐ The impacted area has been secured to protect human health and the environment.	
☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
☐ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name _____	Title: _____
Signature: <u></u>	Date: _____
email: _____	Telephone: _____
<u>OCD Only</u>	
Received by: <u>Ramona Marcus</u>	Date: <u>10/01/2021</u>

L48 Spill Volume Estimate Form

NAPP2127234076

*Received by OCD: 9/28/2022 1:39:51 PM**Page 247 of 258*

Facility Name & Number:	King tut
Asset Area:	DBE
Release Discovery Date & Time:	9/10/2021, 11:30
Release Type:	Produced Water
Provide any known details about the event:	Busted swd flex line

Spill Calculation - Subsurface Spill - Rectangle

Was the release on pad or off-pad?		See reference table below							
Has it rained at least a half inch in the last 24 hours?		See reference table below							
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	20.0	87.0	0.25	10.00%	6.453	0.645			
Rectangle B	31.0	35.0	0.50	10.00%	8.047	0.805			
Rectangle C					0.000	0.000			
Rectangle D					0.000	0.000			
Rectangle E					0.000	0.000			
Rectangle F					0.000	0.000			
Rectangle G					0.000	0.000			
Rectangle H					0.000	0.000			
Rectangle I					0.000	0.000			
Rectangle J					0.000	0.000			
Total Volume Release:						14.500			

Released to Imaging: 10/3/2022 11:14:25 AM

Incident ID	NAPP2127234076
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>100</u> (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.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	NAPP2127234076
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Charles Beauvais Title: Senior Environmental Engineer

Signature: Charles R. Beauvais ?? Date: 09/27/2022

email: Charles.R.Beauvais@ConocoPhillips.com Telephone: (575) 988-2043

OCD Only

Received by: _____ Date: _____

Incident ID	NAPP2127234076
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Charles Beauvais Title: Senior Environmental Engineer

Signature: Charles R. Beauvais Date: 09/27/2022

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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	NAPP2216436957
District RP	
Facility ID	fAPP2203843099
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Charles Beauvais	Contact Telephone	(575) 988-2043
Contact email	Charles.R.Beauvais@ConocoPhillips.com	Incident # (assigned by OCD)	NAPP2216436957
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.195 Longitude -103.7196
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	King Tut Federal 001H	Site Type	Flow Line
Date Release Discovered	June 6, 2022	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) 14.89	Volume Recovered (bbls) 0
	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 ruptured transfer line.
The release was on and off the pad. A vacuum truck was dispatched to remove all freestanding fluids. Evaluation will made the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

Incident ID	NAPP2216436957
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 <u>not</u> 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: 	Date: 6/13/2022
email: Brittany.Esparza@ConocoPhillips.com	Telephone: (432) 221-0398
<u>OCD Only</u>	
Received by: Jocelyn Harimon	Date: 06/13/2022

L48 Spill Volume Estimate Form

Page 3 of 3

Received by OCD: 6/13/2022 10:18:45 AM

Facility Name & Number:	King Tut Federal 1H CTB	
Asset Area:	DBE NORTH	NAPP2216436957
Release Discovery Date & Time:	6:30AM 6/6/2022	
Release Type:	Produced Water	
Provide any known details about the event:	PINHOLE IN FLOWLINE	

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated Pool Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	100.0	10.0	4.00	4	1000.000	0.083	14.833	0.004	14.895
Rectangle B					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle C					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle J					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total Volume Release:									14.895

Released to Imaging: 6/13/2022 10:28:20 AM

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 116221

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 116221
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	6/13/2022

Incident ID	NAPP2216436957
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>100</u> (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.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	NAPP2216436957
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Charles Beauvais Title: Senior Environmental EngineerSignature: Charles R. Beauvais II Date: 09/27/2022email: Charles.R.Beauvais@ConocoPhillips.com Telephone: (575) 988-2043**OCD Only**Received by: Jocelyn Harimon Date: 09/28/2022

Incident ID	NAPP2216436957
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Charles Beauvais Title: Senior Environmental Engineer

Signature: Charles R. Beauvais Date: 09/27/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 09/28/2022

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

Closure Approved by: Jennifer Nobui Date: 10/03/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

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

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

CONDITIONS

Action 147004

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 147004
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Please implement 19.15.29.13 NMAC when completing P&A.	10/3/2022