ENSOLUM

August 17, 2023

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

Re: Closure Request
Red Raider BKS State 001
Incident Number NAPP2315734307
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities performed at the Red Raider BKS State 001 (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to address impacts to soil following a crude oil release and flare fire at the Site. Based on field observations, excavation activities, and soil sample laboratory analytical results, COG is submitting this *Closure Request,* describing remediation that has occurred and requesting closure for Incident Number NAPP2315734307.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit J, Section 25, Township 24 South, Range 33 East, in Lea County, New Mexico (32.1865°, -103.5246°) and is associated with oil and gas exploration and production operations on State Land managed by the New Mexico State Land Office (NMSLO).

On June 1, 2023, an equipment malfunction caused approximately 1.284 barrels (bbls) of crude oil to be sent to the flare. The crude oil ignited and extinguished itself after reaching the ground. The release affected the well pad beneath the flare and the pasture area immediately adjacent to the well pad. COG reported the release immediately to the New Mexico Oil Conservation Division (NMOCD) via email and submitted a Release Notification Form C-141 (Form C-141) on June 6, 2023. The release was assigned Incident Number NAPP2315734307.

Since the release remained on and immediately adjacent to the active well pad, an assessment of cultural properties had already been completed prior to the construction of the well pad and as such, the Cultural Properties Protection Rule (CPP) has been followed. No additional cultural resource surveys were completed in connection with this release.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be between 51 and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) C-03602, located approximately 0.2 miles northwest of the Site. The groundwater well was drilled during January 2013 to a total depth of 75 feet bgs, and no groundwater was encountered. All wells used for depth to groundwater determination are presented on Figure 1. The associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a riverine, located approximately 777 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

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

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On June 7, 2023, Ensolum personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. The stained soil from the fire had been scraped up prior to Ensolum personnel visiting the Site. Four assessment soil samples (SS01 through SS04) were collected around the release area at a depth of 0.5 feet bgs to confirm the lateral extent of the release. Five assessment soil samples (SS05 through SS09) were collected within the release area at an approximate depth of 0.5 feet bgs to assess for the presence or absence of impacted soil resulting from the crude oil flare fire. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Photographic documentation was completed during the Site visit and a photographic log is included as Appendix B.

On July 6, 2023, Ensolum personnel returned to the Site to complete additional assessment activities to further confirm the absence of impacted soil. Boreholes were advanced via hand auger at the locations of assessment samples SS05, SS07, and SS08, and an additional borehole (SS10) was advanced within the release extent. Soil from the boreholes was field screened for VOCs and chloride. One discrete soil sample was collected from boreholes SS05, SS07, and SS08 at a depth of 1-foot bgs. Two discrete soil samples were collected from borehole SS10 at depths of 0.5 feet and 1-foot bgs. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The soil samples were placed into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and placed on ice. The soil samples were transported under chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for assessment soil samples SS01 through SS04, collected around the release extent, indicated all COC concentrations were compliant with the most stringent Table I Site Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for assessment soil samples SS05/SS05A, SS07/SS07A, SS08/SS08A, and SS10/SS10A, collected within the release extent, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results for assessment soil samples SS06 and SS09, collected within the release extent at an approximate depth of 0.5 feet bgs, indicated TPH concentrations exceeded the most stringent Table I Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On July 6, 2023, Ensolum personnel were on Site to oversee excavation activities based on visible staining in the release area around soil samples SS06 and SS09. Excavation activities were performed using a backhoe and transport vehicles. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed to a depth of 1-foot bgs. 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 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 FS10 were collected from the floor of the excavation at a depth of 1-foot bgs. Due to the shallow depth of the excavation, the sidewalls were incorporated into the floor samples. The soil samples were handled and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

Laboratory analytical results for excavation soil samples FS01 through FS10 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix C.

The excavation area measured approximately 2,050 square feet. A total of 76 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the June 1, 2023, crude oil flare fire. Laboratory analytical results for the excavation soil samples indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Additionally, the release was laterally and vertically delineated to the most stringent Table I Closure Criteria. Based on soil sample analytical results, no further remediation is required.

Depth to groundwater has been estimated to be between 51 and 100 feet bgs and no other sensitive receptors were identified near the release extent. COG believes the remedial actions completed are protective of human health, the environment, and groundwater. As such, COG respectfully requests

closure for Incident Number NAPP2315734307. The NMOCD notifications are included in Appendix D and the Form C-141 is included in Appendix E. A Reclamation Plan for the disturbed pasture area is included in Appendix F for NMSLO review.

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

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist

Aimee Cole
Senior Managing Scientist

cc: Jacob Laird, COG Operating, LLC
New Mexico State Land Office

Appendices:

Figure 1	Site Receptor Map
Figure 2	Assessment Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	NMOCD Notifications
Appendix E	Final C-141
Appendix F	Reclamation Plan

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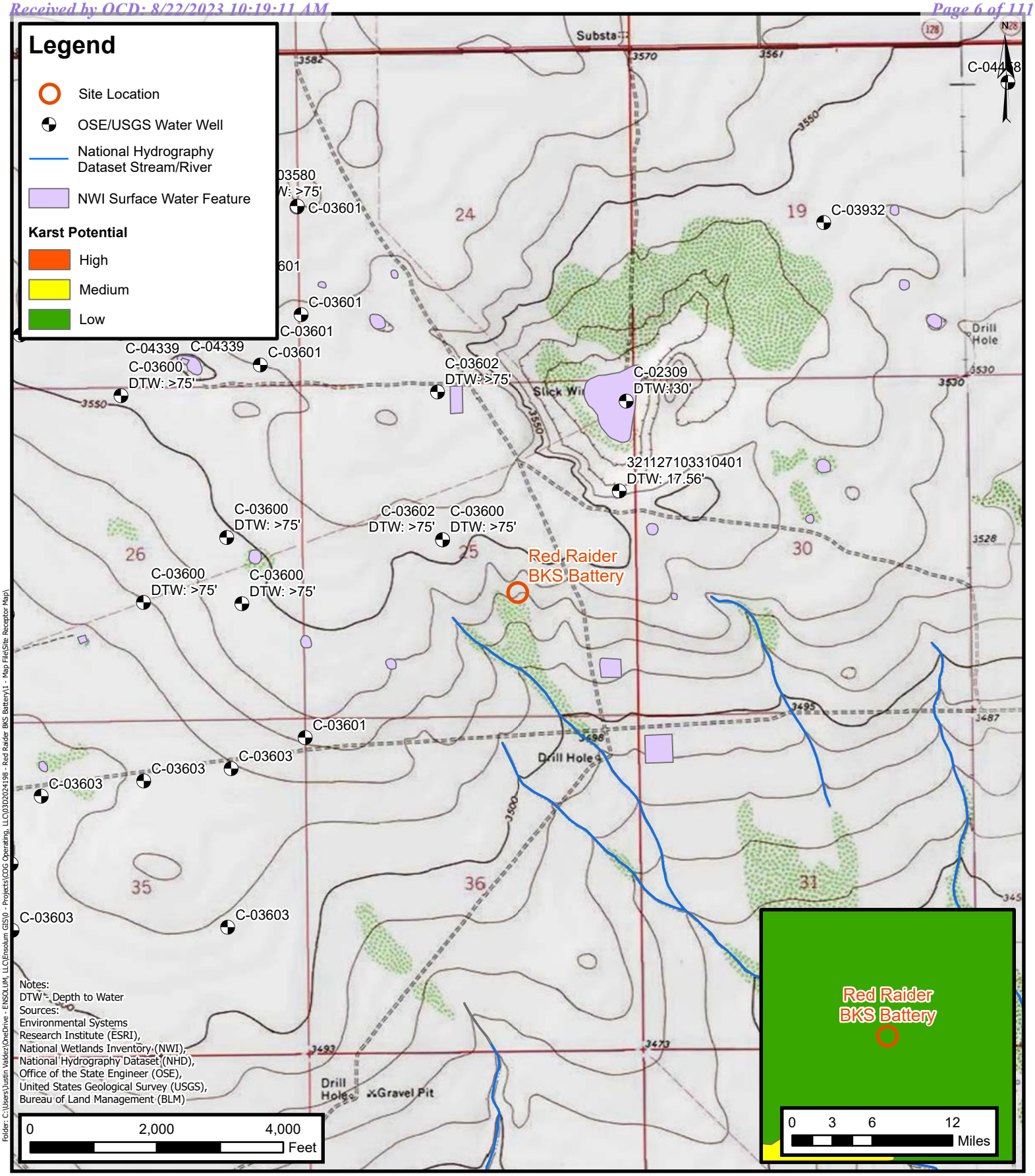
FIGURES



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024198 - Red Raider BKS Battery\1 - Map File\Site Receptor Map\

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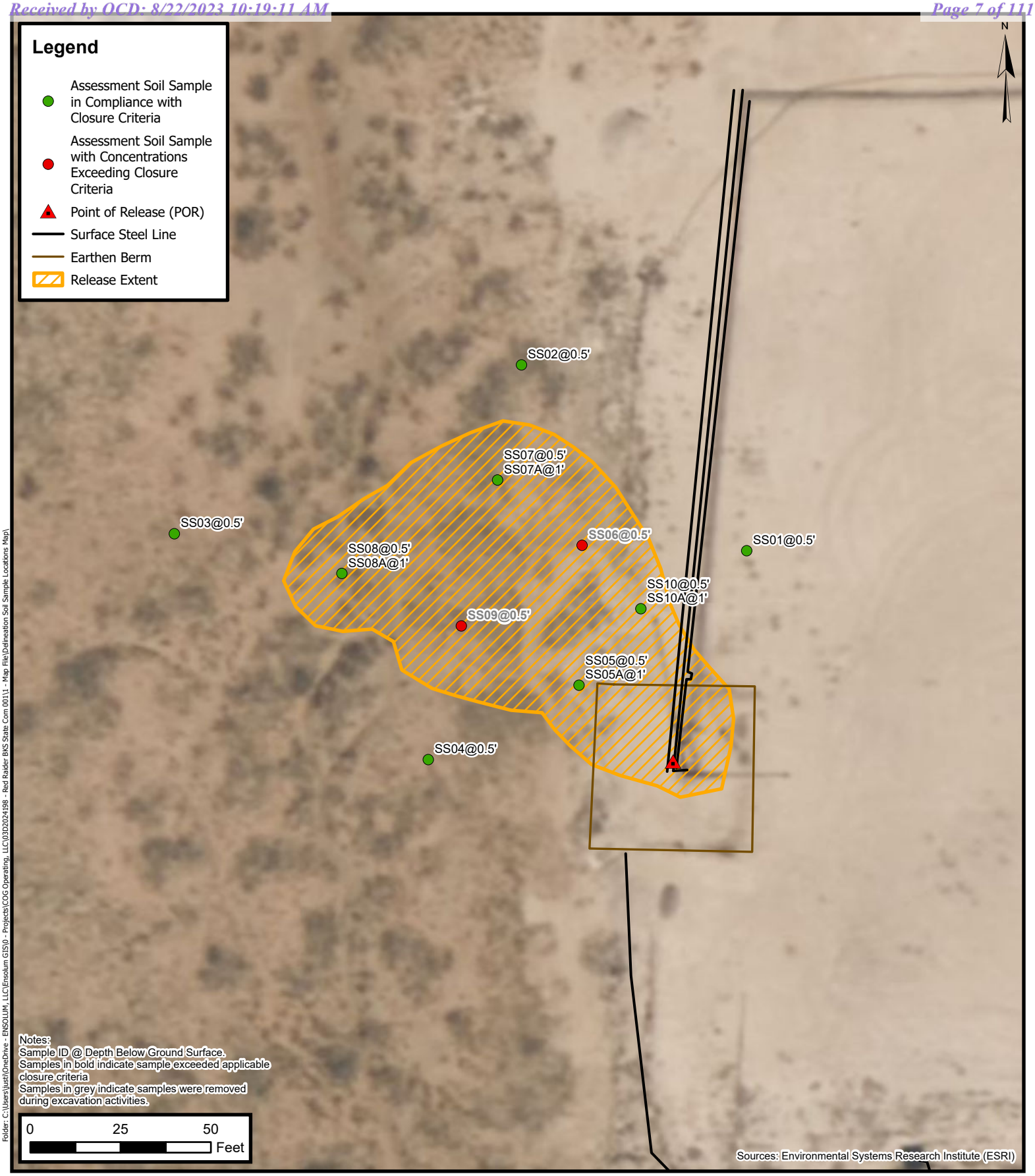
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

COG Operating, LLC
Red Raider BKS Battery
Incident Number: NAPP2315734307
Unit J, Sec 25, T25S, R33E
Lea County, New Mexico

FIGURE 1



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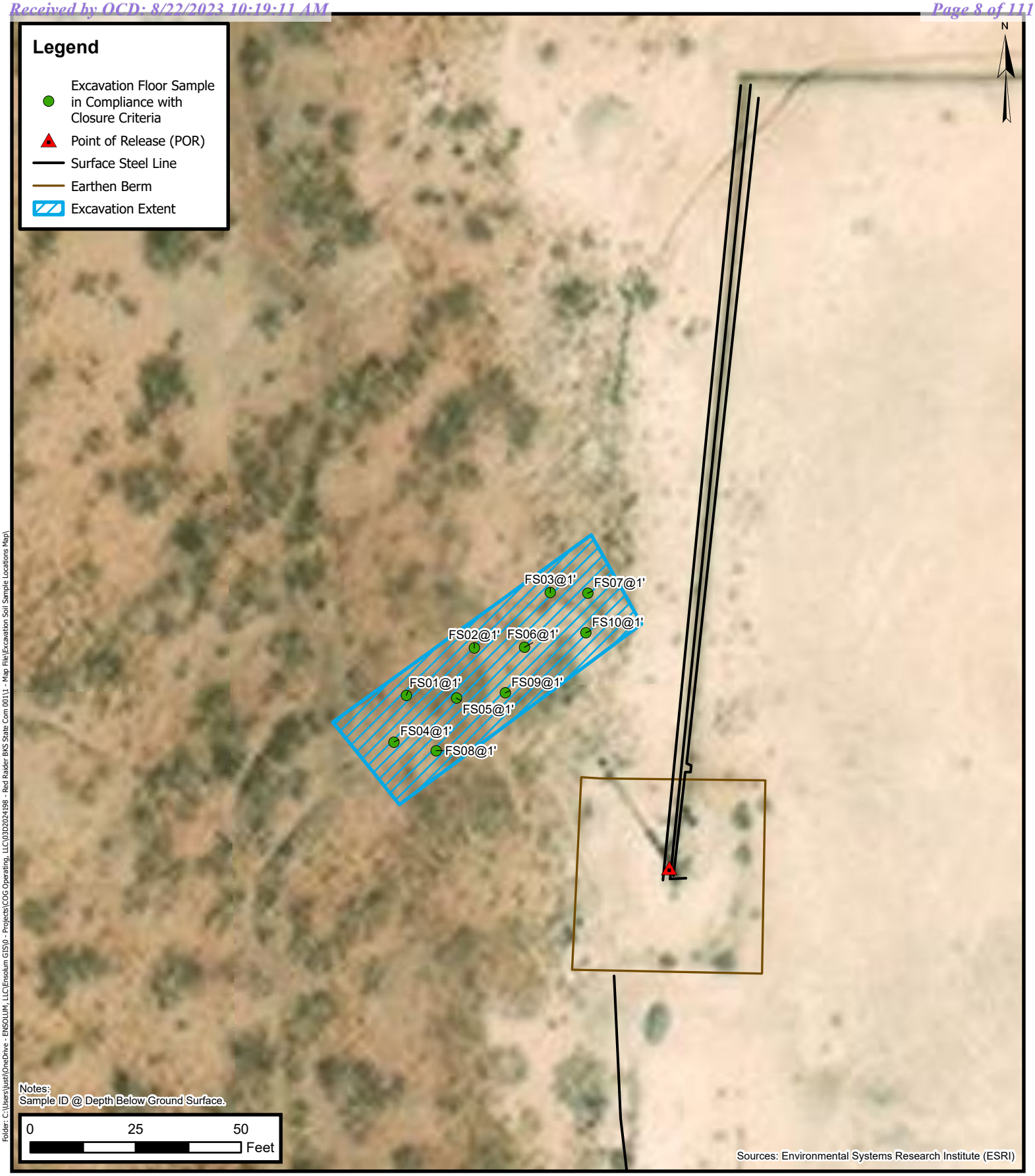
Assessment Soil Sample Locations

COG Operating, LLC
Red Raider BKS State Com 001
Incident Number: NAPP2315734307
Unit J, Sec 25, T24S, R33E
Lea County, New Mexico

FIGURE 2



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Excavation Soil Sample Locations

COG Operating, LLC
Red Raider BKS State Com 001
Incident Number: NAPP2315734307
Unit J, Sec 25, T24S, R33E
Lea County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
RED RAIDER BKS STATE COM 001
COG Operating, LLC
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**10,000**
Assessment Soil Samples										
SS01	06/07/2023	0.5	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	91.9
SS02*	06/07/2023	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	44.1
SS03*	06/07/2023	0.5	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	65.7
SS04*	06/07/2023	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	37.6
SS05	06/07/2023	0.5	<0.00200	<0.00400	<49.9	55.5	<49.9	55.5	55.5	235
SS05A	07/06/2023	1	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	157
SS06*	06/07/2023	0.5	<0.00199	<0.00398	<49.9	501	<49.9	501	**501**	95.8
SS07*	06/07/2023	0.5	<0.00201	<0.00402	<50.0	89.9	<50.0	89.9	89.9	69.3
SS07A*	07/06/2023	1	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	77.4
SS08*	06/07/2023	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	51.6
SS08A*	07/06/2023	1	<0.00200	<0.00399	<50.0	19.1	<50.1	19.1	19.1	72.1
SS09*	06/07/2023	0.5	<0.00199	<0.00398	<49.9	375	<49.9	375	**375**	216
SS10	07/06/2023	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	138
SS10A	07/06/2023	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	83.2

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
RED RAIDER BKS STATE COM 001
COG Operating, LLC
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**10,000**
Excavation Soil Samples										
FS01*	07/06/2023	1	<0.00200	<0.00399	<49.7	<49.7	<49.7	<49.7	<49.7	62.4
FS02*	07/06/2023	1	<0.00198	<0.00397	<49.5	<49.5	<49.5	<49.5	<49.5	131
FS03*	07/06/2023	1	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	68.2
FS04*	07/06/2023	1	<0.00198	<0.00396	<50.5	<50.5	<50.5	<50.5	<50.5	69.9
FS05*	07/06/2023	1	<0.00200	<0.00400	<50.3	<50.3	<50.3	<50.3	<50.3	68.2
FS06*	07/06/2023	1	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	138
FS07*	07/06/2023	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	131
FS08*	07/06/2023	1	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	45.0
FS09*	07/06/2023	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	83.8
FS10*	07/06/2023	1	<0.00200	<0.00401	<49.9	65.4	<49.9	65.4	65.4	79.0

Notes:

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

*Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.*
Grey text represents samples that have been excavated
** indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard in the top 4 feet is 600 mg/kg for chloride and 100 mg/kg for TPH.*

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APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER)	OSE FILE NUMBER(S)
BH 18	C3682; 518347
WELL OWNER NAME(S): INTERCONTINENTAL POTASH CORP	PHONE (OPTIONAL):
WELL OWNER MAILING ADDRESS: 600 W. BENDER BLVD.	CITY: HOBBS STATE: NM ZIP: 88240

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	11	20.2	N
LONGITUDE	103	31	38.3	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

T24S; R 33E; SECTION 25

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1186	RODNEY HAMMER	ENVIRO-DRILL, INC.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
01-15-13	01-15-13		75'	N/A

COMPLETED WELL IS: ( ) ARTESIAN (•) DRY HOLE ( ) SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT):

DRILLING FLUID: ( ) AIR ( ) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ( ) ROTARY ( ) HAMMER ( ) CABLE TOOL (•) OTHER – SPECIFY: AUGER

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	75	8"	N/A	N/A	N/A	N/A	N/A

STATE ENGINEER OFFICE ROSWELL, NM 2013 JAN 30 P 1:00

3. ANNULAR MATERIAL

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

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	C-3602	POD NUMBER	POD 2	TRN NUMBER	518397
LOCATION	T24S - R33E - Sec 25.144				PAGE 1 OF 2

aka C-3600 POD 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	1	1	BROWN SILTY SAND, LOOSE	○ Y ◉ N	N/A
1	21	20	CALICHE WHITE SILTY SAND, VERY DENSE	○ Y ◉ N	N/A
21	47	76	SHALE GREEN SILTY SAND, VERY DENSE	○ Y ◉ N	N/A
47	53	6	SHALE RED SILTY SAND, VERY DENSE	○ Y ◉ N	N/A
53	75	22	SHALE GREEN SILTY SAND, VERY DENSE	○ Y ◉ N	N/A
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
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				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ○ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

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

MISCELLANEOUS INFORMATION:

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

STATE ENGINEER OFFICE ROSWELL, N.M. 2013 JAN 30 P 1:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Rodney Hammer — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

1-23-13 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	C-3602	POD NUMBER	2	TRN NUMBER	
LOCATION	T24S-R33E-Sec 25.144				PAGE 2 OF 2

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER)	OSE FILE NUMBER(S)
BH 16	C3600; 518382
WELL OWNER NAME(S)	PHONE (OPTIONAL)
INTERCONTINENTAL POTASH CORP	
WELL OWNER MAILING ADDRESS	CITY / STATE / ZIP
600 W..BENDER BLVD.	HOBBS / NM / 88240

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	11	43.4	N
LONGITUDE	103	32	37.1	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

T24S; R 33E; SECTION 26

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1186	RODNEY HAMMER	ENVIRO-DRILL, INC.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
01-07-13	01-07-13		75'	N/A

COMPLETED WELL IS: ( ) ARTESIAN (•) DRY HOLE ( ) SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT):

DRILLING FLUID: ( ) AIR ( ) MUD — ADDITIVES – SPECIFY:

DRILLING METHOD: ( ) ROTARY ( ) HAMMER ( ) CABLE TOOL (•) OTHER – SPECIFY: AUGER

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	75	8"	N/A	N/A	N/A	N/A	N/A

STATE ENGINEER OFFICE ROSWELL, NM 2013 JAN 30 P 1:00

3. ANNULAR MATERIAL

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

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	C-3600	POD NUMBER	1	TRN NUMBER	518382
LOCATION	T24S-R33E-Sec 26.122				PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	3	3	BROWN SILTY SAND, LOOSE	○ Y ◉ N	N/A
3	18	15	CALICHE WHITE SILTY SAND, VERY DENSE	○ Y ◉ N	N/A
18	37	19	RED SILTY SAND, VERY DENSE	○ Y ◉ N	N/A
37	75	38	SHALE GREEN SILTY SAND, VERY DENSE	○ Y ◉ N	N/A
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ○ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

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

MISCELLANEOUS INFORMATION:

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

STATE ENGINEER OFFICE ROSWELL, NM 2013 JAN 30 P 1:00

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Rodney Hammer — 1-23-13

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	C-3600	POD NUMBER	1	TRN NUMBER	
LOCATION	T24S – R33E – Sec 26.122				PAGE 2 OF 2

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321127103310401

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

USGS 321127103310401 24S.33E.24.44444

Lea County, New Mexico
Latitude 32°11'27", Longitude 103°31'04" NAD27
Land-surface elevation 3,538 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1953-11-27		D	62610		3518.95	NGVD29	1	Z		
1953-11-27		D	62611		3520.60	NAVD88	1	Z		
1953-11-27		D	72019	17.40			1	Z		
1976-01-21		D	62610		3522.78	NGVD29	1	Z		
1976-01-21		D	62611		3524.43	NAVD88	1	Z		
1976-01-21		D	72019	13.57			1	Z		
1981-03-19		D	62610		3520.32	NGVD29	1	Z		
1981-03-19		D	62611		3521.97	NAVD88	1	Z		
1981-03-19		D	72019	16.03			1	Z		
1986-03-06		D	62610		3521.55	NGVD29	1	Z		
1986-03-06		D	62611		3523.20	NAVD88	1	Z		
1986-03-06		D	72019	14.80			1	Z		
1991-05-29		D	62610		3518.79	NGVD29	1	Z		
1991-05-29		D	62611		3520.44	NAVD88	1	Z		
1991-05-29		D	72019	17.56			1	Z		

Explanation

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

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U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2023-06-21 09:25:45 EDT
0.27 0.24 nadww02

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
COG Operating, LLC
Red Raider BKS State 001
Incident Number NAPP2315734307

Photograph: 1 Date: 6/7/2023
Description: Initial assessment activities
View: South

Photograph: 2 Date: 6/7/2023
Description: Scraped area prior to assessment
View: Northwest

Photograph: 3 Date: 7/6/2023
Description: Delineation activities
View: West

Photograph: 4 Date: 7/6/2023
Description: Excavation activities
View: North

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/16/2023 3:18:06 PM

JOB DESCRIPTION

Red Raider BKS (part 2)
SDG NUMBER 03D2024198

JOB NUMBER

890-4794-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

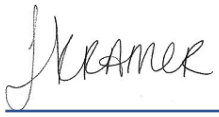
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
6/16/2023 3:18:06 PM

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

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Laboratory Job ID: 890-4794-1
SDG: 03D2024198

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4794-1
Project/Site: Red Raider BKS (part 2) SDG: 03D2024198

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

GC Semi VOA

Qualifier	Qualifier Description
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
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: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Job ID: 890-4794-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4794-1

Receipt
The samples were received on 6/8/2023 8:28 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

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4794-1), SS02 (890-4794-2), SS03 (890-4794-3), SS04 (890-4794-4), SS05 (890-4794-5), SS06 (890-4794-6), SS07 (890-4794-7), SS08 (890-4794-8) and SS09 (890-4794-9).

GC VOA
Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-55146 and analytical batch 880-55553 recovered outside control limits for the following analytes: Benzene and Toluene. These analytes were acceptable in the LCS, therefore, the data was qualified and reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-55146 and analytical batch 880-55553 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS) 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: Surrogate recovery for the following sample was outside control limits: (MB 880-55159/1-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS05 (890-4794-5), SS06 (890-4794-6), SS07 (890-4794-7), SS09 (890-4794-9), (890-4794-A-5-D MS) and (890-4794-A-5-E MSD). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-55158/2-A) and (LCSD 880-55158/3-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.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-55047 and analytical batch 880-55167 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Client Sample ID: SS01

Lab Sample ID: 890-4794-1
Matrix: Solid
Date Collected: 06/07/23 09:40
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *+ F1	0.00202		mg/Kg		06/09/23 13:04	06/15/23 13:53	1
Toluene	<0.00202	U *+ F1	0.00202		mg/Kg		06/09/23 13:04	06/15/23 13:53	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/09/23 13:04	06/15/23 13:53	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		06/09/23 13:04	06/15/23 13:53	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/09/23 13:04	06/15/23 13:53	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		06/09/23 13:04	06/15/23 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*06/09/23 13:04*	*06/15/23 13:53*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*06/09/23 13:04*	*06/15/23 13:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			06/16/23 12:59	1

Method: SW846 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			06/13/23 12:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		06/09/23 14:01	06/13/23 05:52	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/09/23 14:01	06/13/23 05:52	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/09/23 14:01	06/13/23 05:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*06/09/23 14:01*	*06/13/23 05:52*	*1*
o-Terphenyl	*107*		*70 - 130*	*06/09/23 14:01*	*06/13/23 05:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**91.9**	**F1**	4.97		mg/Kg			06/09/23 14:32	1

Client Sample ID: SS02

Lab Sample ID: 890-4794-2
Matrix: Solid
Date Collected: 06/07/23 09:45
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200		mg/Kg		06/09/23 13:04	06/15/23 14:13	1
Toluene	<0.00200	U *+	0.00200		mg/Kg		06/09/23 13:04	06/15/23 14:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 14:13	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		06/09/23 13:04	06/15/23 14:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 14:13	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		06/09/23 13:04	06/15/23 14:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*06/09/23 13:04*	*06/15/23 14:13*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Client Sample ID: SS02

Lab Sample ID: 890-4794-2
Matrix: Solid
Date Collected: 06/07/23 09:45
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*06/09/23 13:04*	*06/15/23 14:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			06/16/23 12:59	1

Method: SW846 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			06/13/23 12:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		06/09/23 14:01	06/13/23 06:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/09/23 14:01	06/13/23 06:12	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/09/23 14:01	06/13/23 06:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*06/09/23 14:01*	*06/13/23 06:12*	*1*
o-Terphenyl	*130*		*70 - 130*	*06/09/23 14:01*	*06/13/23 06:12*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**44.1**		5.03	mg/Kg			06/09/23 14:48	1

Client Sample ID: SS03

Lab Sample ID: 890-4794-3
Matrix: Solid
Date Collected: 06/07/23 09:50
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *+	0.00202	mg/Kg		06/09/23 13:04	06/15/23 14:34	1
Toluene	<0.00202	U *+	0.00202	mg/Kg		06/09/23 13:04	06/15/23 14:34	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		06/09/23 13:04	06/15/23 14:34	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		06/09/23 13:04	06/15/23 14:34	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		06/09/23 13:04	06/15/23 14:34	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		06/09/23 13:04	06/15/23 14:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*06/09/23 13:04*	*06/15/23 14:34*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*06/09/23 13:04*	*06/15/23 14:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			06/16/23 12:59	1

Method: SW846 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			06/13/23 12:05	1

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Client Sample ID: SS03

Lab Sample ID: 890-4794-3
Matrix: Solid
Date Collected: 06/07/23 09:50
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		06/09/23 14:01	06/13/23 06:34	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/09/23 14:01	06/13/23 06:34	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/09/23 14:01	06/13/23 06:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*06/09/23 14:01*	*06/13/23 06:34*	*1*
o-Terphenyl	*109*		*70 - 130*	*06/09/23 14:01*	*06/13/23 06:34*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**65.7**		5.02		mg/Kg			06/09/23 14:53	1

Client Sample ID: SS04

Lab Sample ID: 890-4794-4
Matrix: Solid
Date Collected: 06/07/23 09:55
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198		mg/Kg		06/09/23 13:04	06/15/23 14:54	1
Toluene	<0.00198	U *+	0.00198		mg/Kg		06/09/23 13:04	06/15/23 14:54	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		06/09/23 13:04	06/15/23 14:54	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		06/09/23 13:04	06/15/23 14:54	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		06/09/23 13:04	06/15/23 14:54	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		06/09/23 13:04	06/15/23 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*06/09/23 13:04*	*06/15/23 14:54*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/09/23 13:04*	*06/15/23 14:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			06/16/23 12:59	1

Method: SW846 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			06/13/23 12:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/09/23 14:01	06/13/23 06:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/09/23 14:01	06/13/23 06:57	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/09/23 14:01	06/13/23 06:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*06/09/23 14:01*	*06/13/23 06:57*	*1*
o-Terphenyl	*92*		*70 - 130*	*06/09/23 14:01*	*06/13/23 06:57*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Client Sample ID: SS04

Lab Sample ID: 890-4794-4
Matrix: Solid
Date Collected: 06/07/23 09:55
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**37.6**		4.97		mg/Kg			06/09/23 14:59	1

Client Sample ID: SS05

Lab Sample ID: 890-4794-5
Matrix: Solid
Date Collected: 06/07/23 10:00
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200		mg/Kg		06/09/23 13:04	06/15/23 15:15	1
Toluene	<0.00200	U *+	0.00200		mg/Kg		06/09/23 13:04	06/15/23 15:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 15:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/09/23 13:04	06/15/23 15:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 15:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/09/23 13:04	06/15/23 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*06/09/23 13:04*	*06/15/23 15:15*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/09/23 13:04*	*06/15/23 15:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			06/16/23 12:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**55.5**		49.9		mg/Kg			06/12/23 14:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/09/23 14:05	06/10/23 21:55	1
Diesel Range Organics (Over C10-C28)	**55.5**		49.9		mg/Kg		06/09/23 14:05	06/10/23 21:55	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/09/23 14:05	06/10/23 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*136*	*S1+*	*70 - 130*	*06/09/23 14:05*	*06/10/23 21:55*	*1*
o-Terphenyl	*105*		*70 - 130*	*06/09/23 14:05*	*06/10/23 21:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**235**		5.01		mg/Kg			06/09/23 15:04	1

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Client Sample ID: SS06

Lab Sample ID: 890-4794-6
Matrix: Solid
Date Collected: 06/07/23 10:05
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		06/09/23 13:04	06/15/23 15:35	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		06/09/23 13:04	06/15/23 15:35	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/09/23 13:04	06/15/23 15:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/09/23 13:04	06/15/23 15:35	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/09/23 13:04	06/15/23 15:35	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/09/23 13:04	06/15/23 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/09/23 13:04*	*06/15/23 15:35*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*06/09/23 13:04*	*06/15/23 15:35*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/16/23 12:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**501**		49.9		mg/Kg			06/12/23 14:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/09/23 14:05	06/10/23 23:00	1
Diesel Range Organics (Over C10-C28)	**501**		49.9		mg/Kg		06/09/23 14:05	06/10/23 23:00	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/09/23 14:05	06/10/23 23:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*137*	*S1+*	*70 - 130*	*06/09/23 14:05*	*06/10/23 23:00*	*1*
o-Terphenyl	*109*		*70 - 130*	*06/09/23 14:05*	*06/10/23 23:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**95.8**		4.95		mg/Kg			06/09/23 15:20	1

Client Sample ID: SS07

Lab Sample ID: 890-4794-7
Matrix: Solid
Date Collected: 06/07/23 10:10
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+	0.00201		mg/Kg		06/09/23 13:04	06/15/23 15:56	1
Toluene	<0.00201	U *+	0.00201		mg/Kg		06/09/23 13:04	06/15/23 15:56	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		06/09/23 13:04	06/15/23 15:56	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		06/09/23 13:04	06/15/23 15:56	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		06/09/23 13:04	06/15/23 15:56	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		06/09/23 13:04	06/15/23 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*06/09/23 13:04*	*06/15/23 15:56*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Client Sample ID: SS07

Lab Sample ID: 890-4794-7
Matrix: Solid
Date Collected: 06/07/23 10:10
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/09/23 13:04*	*06/15/23 15:56*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			06/16/23 12:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**89.9**		50.0	mg/Kg			06/12/23 14:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/09/23 14:05	06/10/23 23:21	1
Diesel Range Organics (Over C10-C28)	**89.9**		50.0	mg/Kg		06/09/23 14:05	06/10/23 23:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/09/23 14:05	06/10/23 23:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*139*	*S1+*	*70 - 130*	*06/09/23 14:05*	*06/10/23 23:21*	*1*
o-Terphenyl	*110*		*70 - 130*	*06/09/23 14:05*	*06/10/23 23:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**69.3**		4.96	mg/Kg			06/09/23 15:25	1

Client Sample ID: SS08

Lab Sample ID: 890-4794-8
Matrix: Solid
Date Collected: 06/07/23 10:15
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200	mg/Kg		06/09/23 13:04	06/15/23 16:17	1
Toluene	<0.00200	U *+	0.00200	mg/Kg		06/09/23 13:04	06/15/23 16:17	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/09/23 13:04	06/15/23 16:17	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		06/09/23 13:04	06/15/23 16:17	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/09/23 13:04	06/15/23 16:17	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		06/09/23 13:04	06/15/23 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*06/09/23 13:04*	*06/15/23 16:17*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*06/09/23 13:04*	*06/15/23 16:17*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			06/16/23 12:59	1

Method: SW846 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			06/12/23 14:35	1

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Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Client Sample ID: SS08

Lab Sample ID: 890-4794-8
Matrix: Solid
Date Collected: 06/07/23 10:15
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/09/23 14:05	06/10/23 23:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/09/23 14:05	06/10/23 23:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/23 14:05	06/10/23 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*06/09/23 14:05*	*06/10/23 23:44*	*1*
o-Terphenyl	*98*		*70 - 130*	*06/09/23 14:05*	*06/10/23 23:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**51.6**		5.05		mg/Kg			06/09/23 15:31	1

Client Sample ID: SS09

Lab Sample ID: 890-4794-9
Matrix: Solid
Date Collected: 06/07/23 10:20
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		06/09/23 13:04	06/15/23 16:37	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		06/09/23 13:04	06/15/23 16:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/09/23 13:04	06/15/23 16:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/09/23 13:04	06/15/23 16:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/09/23 13:04	06/15/23 16:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/09/23 13:04	06/15/23 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*06/09/23 13:04*	*06/15/23 16:37*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*06/09/23 13:04*	*06/15/23 16:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/16/23 12:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**375**		49.9		mg/Kg			06/12/23 14:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/09/23 14:05	06/11/23 00:05	1
Diesel Range Organics (Over C10-C28)	**375**		49.9		mg/Kg		06/09/23 14:05	06/11/23 00:05	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/09/23 14:05	06/11/23 00:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*135*	*S1+*	*70 - 130*	*06/09/23 14:05*	*06/11/23 00:05*	*1*
o-Terphenyl	*106*		*70 - 130*	*06/09/23 14:05*	*06/11/23 00:05*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Client Sample ID: SS09

Date Collected: 06/07/23 10:20
Date Received: 06/08/23 08:28
Sample Depth: 0.5'

Lab Sample ID: 890-4794-9

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	216		5.05		mg/Kg			06/09/23 15:36	1

Surrogate Summary

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

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)
890-4794-1	SS01	96	101
890-4794-1 MS	SS01	113	92
890-4794-1 MSD	SS01	112	101
890-4794-2	SS02	87	95
890-4794-3	SS03	90	94
890-4794-4	SS04	101	96
890-4794-5	SS05	89	96
890-4794-6	SS06	102	97
890-4794-7	SS07	85	96
890-4794-8	SS08	98	95
890-4794-9	SS09	100	114
LCS 880-55146/1-A	Lab Control Sample	98	104
LCSD 880-55146/2-A	Lab Control Sample Dup	114	99
MB 880-55146/5-A	Method Blank	94	111

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)
880-29311-A-121-C MS	Matrix Spike	99	94
880-29311-A-121-D MSD	Matrix Spike Duplicate	101	95
890-4794-1	SS01	94	107
890-4794-2	SS02	118	130
890-4794-3	SS03	100	109
890-4794-4	SS04	85	92
890-4794-5	SS05	136 S1+	105
890-4794-5 MS	SS05	139 S1+	100
890-4794-5 MSD	SS05	132 S1+	92
890-4794-6	SS06	137 S1+	109
890-4794-7	SS07	139 S1+	110
890-4794-8	SS08	125	98
890-4794-9	SS09	135 S1+	106
LCS 880-55158/2-A	Lab Control Sample	24 S1-	20 S1-
LCS 880-55159/2-A	Lab Control Sample	126	98
LCSD 880-55158/3-A	Lab Control Sample Dup	24 S1-	19 S1-
LCSD 880-55159/3-A	Lab Control Sample Dup	119	91
MB 880-55158/1-A	Method Blank	97	118
MB 880-55159/1-A	Method Blank	0.02 S1-	0.009 S1-

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-55146/5-A
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55146

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 13:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 13:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 13:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/09/23 13:04	06/15/23 13:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/09/23 13:04	06/15/23 13:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/09/23 13:04	06/15/23 13:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*06/09/23 13:04*	*06/15/23 13:24*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*06/09/23 13:04*	*06/15/23 13:24*	*1*

Lab Sample ID: LCS 880-55146/1-A
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55146

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1292		mg/Kg		129	70 - 130		
Toluene			0.100	0.1280		mg/Kg		128	70 - 130		
Ethylbenzene			0.100	0.1102		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.1975		mg/Kg		99	70 - 130		
o-Xylene			0.100	0.08973		mg/Kg		90	70 - 130		

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

Lab Sample ID: LCSD 880-55146/2-A
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55146

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1364	*+	mg/Kg		136	70 - 130	5	35
Toluene			0.100	0.1345	*+	mg/Kg		134	70 - 130	5	35
Ethylbenzene			0.100	0.1238		mg/Kg		124	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.2274		mg/Kg		114	70 - 130	14	35
o-Xylene			0.100	0.1049		mg/Kg		105	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4794-1 MS
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 55146

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U *+ F1	0.0994	0.1241		mg/Kg		125	70 - 130		
Toluene	<0.00202	U *+ F1	0.0994	0.1210		mg/Kg		122	70 - 130		

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QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

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

Lab Sample ID: 890-4794-1 MS
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 55146

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0994	0.1127		mg/Kg		113	70 - 130
m-Xylene & p-Xylene	<0.00404	U	0.199	0.2099		mg/Kg		106	70 - 130
o-Xylene	<0.00202	U	0.0994	0.09963		mg/Kg		100	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-4794-1 MSD
Matrix: Solid
Analysis Batch: 55553

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 55146

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U *+ F1	0.0996	0.1514	F1	mg/Kg		152	70 - 130	20	35
Toluene	<0.00202	U *+ F1	0.0996	0.1439	F1	mg/Kg		145	70 - 130	17	35
Ethylbenzene	<0.00202	U	0.0996	0.1176		mg/Kg		118	70 - 130	4	35
m-Xylene & p-Xylene	<0.00404	U	0.199	0.2115		mg/Kg		106	70 - 130	1	35
o-Xylene	<0.00202	U	0.0996	0.1117		mg/Kg		112	70 - 130	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

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

Lab Sample ID: MB 880-55158/1-A
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55158

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		06/09/23 14:01	06/12/23 23:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/12/23 23:24	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/12/23 23:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*06/09/23 14:01*	*06/12/23 23:24*	*1*
o-Terphenyl	*118*		*70 - 130*	*06/09/23 14:01*	*06/12/23 23:24*	*1*

Lab Sample ID: LCS 880-55158/2-A
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55158

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	905.0		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)			1000	982.0		mg/Kg		98	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

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

Lab Sample ID: LCS 880-55158/2-A
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55158

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	24	S1-	70 - 130
o-Terphenyl	20	S1-	70 - 130

Lab Sample ID: LCSD 880-55158/3-A
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55158

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	890.2		mg/Kg		89	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	970.1		mg/Kg		97	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	24	S1-	70 - 130
o-Terphenyl	19	S1-	70 - 130

Lab Sample ID: 880-29311-A-121-C MS
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55158

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	1017		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1088		mg/Kg		107	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 880-29311-A-121-D MSD
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 55158

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	1035		mg/Kg		100	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1101		mg/Kg		108	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	95		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

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

Lab Sample ID: MB 880-55159/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55207 — **Prep Batch: 55159**

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		06/09/23 14:05	06/10/23 20:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/09/23 14:05	06/10/23 20:02	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/23 14:05	06/10/23 20:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*0.02*	*S1-*	*70 - 130*	*06/09/23 14:05*	*06/10/23 20:02*	*1*
o-Terphenyl	*0.009*	*S1-*	*70 - 130*	*06/09/23 14:05*	*06/10/23 20:02*	*1*

Lab Sample ID: LCS 880-55159/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55207 — **Prep Batch: 55159**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	928.0		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	877.0		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*126*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: LCSD 880-55159/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55207 — **Prep Batch: 55159**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	915.1		mg/Kg		92	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	906.0		mg/Kg		91	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Lab Sample ID: 890-4794-5 MS — **Client Sample ID: SS05**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55207 — **Prep Batch: 55159**

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	998	1241		mg/Kg		121	70 - 130		
Diesel Range Organics (Over C10-C28)	55.5		998	957.0		mg/Kg		90	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

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

Lab Sample ID: 890-4794-5 MS
Matrix: Solid
Analysis Batch: 55207

Client Sample ID: SS05
Prep Type: Total/NA
Prep Batch: 55159

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	139	S1+	70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: 890-4794-5 MSD
Matrix: Solid
Analysis Batch: 55207

Client Sample ID: SS05
Prep Type: Total/NA
Prep Batch: 55159

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	1148		mg/Kg		112	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	55.5		999	900.3		mg/Kg		85	70 - 130	6	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	132	S1+	70 - 130
o-Terphenyl	92		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-55047/1-A
Matrix: Solid
Analysis Batch: 55167

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			06/09/23 14:16	1

Lab Sample ID: LCS 880-55047/2-A
Matrix: Solid
Analysis Batch: 55167

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 880-55047/3-A
Matrix: Solid
Analysis Batch: 55167

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	260.5		mg/Kg		104	90 - 110	2	20

Lab Sample ID: 890-4794-1 MS
Matrix: Solid
Analysis Batch: 55167

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	91.9	F1	249	285.8	F1	mg/Kg		78	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4794-1 MSD
Matrix: Solid
Analysis Batch: 55167

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	91.9	F1	249	292.7	F1	mg/Kg		81	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

GC VOA

Prep Batch: 55146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-1	SS01	Total/NA	Solid	5035	
890-4794-2	SS02	Total/NA	Solid	5035	
890-4794-3	SS03	Total/NA	Solid	5035	
890-4794-4	SS04	Total/NA	Solid	5035	
890-4794-5	SS05	Total/NA	Solid	5035	
890-4794-6	SS06	Total/NA	Solid	5035	
890-4794-7	SS07	Total/NA	Solid	5035	
890-4794-8	SS08	Total/NA	Solid	5035	
890-4794-9	SS09	Total/NA	Solid	5035	
MB 880-55146/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55146/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55146/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4794-1 MS	SS01	Total/NA	Solid	5035	
890-4794-1 MSD	SS01	Total/NA	Solid	5035	

Analysis Batch: 55553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-1	SS01	Total/NA	Solid	8021B	55146
890-4794-2	SS02	Total/NA	Solid	8021B	55146
890-4794-3	SS03	Total/NA	Solid	8021B	55146
890-4794-4	SS04	Total/NA	Solid	8021B	55146
890-4794-5	SS05	Total/NA	Solid	8021B	55146
890-4794-6	SS06	Total/NA	Solid	8021B	55146
890-4794-7	SS07	Total/NA	Solid	8021B	55146
890-4794-8	SS08	Total/NA	Solid	8021B	55146
890-4794-9	SS09	Total/NA	Solid	8021B	55146
MB 880-55146/5-A	Method Blank	Total/NA	Solid	8021B	55146
LCS 880-55146/1-A	Lab Control Sample	Total/NA	Solid	8021B	55146
LCSD 880-55146/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55146
890-4794-1 MS	SS01	Total/NA	Solid	8021B	55146
890-4794-1 MSD	SS01	Total/NA	Solid	8021B	55146

Analysis Batch: 55688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-1	SS01	Total/NA	Solid	Total BTEX	
890-4794-2	SS02	Total/NA	Solid	Total BTEX	
890-4794-3	SS03	Total/NA	Solid	Total BTEX	
890-4794-4	SS04	Total/NA	Solid	Total BTEX	
890-4794-5	SS05	Total/NA	Solid	Total BTEX	
890-4794-6	SS06	Total/NA	Solid	Total BTEX	
890-4794-7	SS07	Total/NA	Solid	Total BTEX	
890-4794-8	SS08	Total/NA	Solid	Total BTEX	
890-4794-9	SS09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 55158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-1	SS01	Total/NA	Solid	8015NM Prep	
890-4794-2	SS02	Total/NA	Solid	8015NM Prep	
890-4794-3	SS03	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

GC Semi VOA (Continued)

Prep Batch: 55158 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-55158/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-55158/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-55158/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-29311-A-121-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-29311-A-121-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 55159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-5	SS05	Total/NA	Solid	8015NM Prep	
890-4794-6	SS06	Total/NA	Solid	8015NM Prep	
890-4794-7	SS07	Total/NA	Solid	8015NM Prep	
890-4794-8	SS08	Total/NA	Solid	8015NM Prep	
890-4794-9	SS09	Total/NA	Solid	8015NM Prep	
MB 880-55159/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-55159/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-55159/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4794-5 MS	SS05	Total/NA	Solid	8015NM Prep	
890-4794-5 MSD	SS05	Total/NA	Solid	8015NM Prep	

Analysis Batch: 55207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-5	SS05	Total/NA	Solid	8015B NM	55159
890-4794-6	SS06	Total/NA	Solid	8015B NM	55159
890-4794-7	SS07	Total/NA	Solid	8015B NM	55159
890-4794-8	SS08	Total/NA	Solid	8015B NM	55159
890-4794-9	SS09	Total/NA	Solid	8015B NM	55159
MB 880-55159/1-A	Method Blank	Total/NA	Solid	8015B NM	55159
LCS 880-55159/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	55159
LCSD 880-55159/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	55159
890-4794-5 MS	SS05	Total/NA	Solid	8015B NM	55159
890-4794-5 MSD	SS05	Total/NA	Solid	8015B NM	55159

Analysis Batch: 55236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-1	SS01	Total/NA	Solid	8015B NM	55158
890-4794-2	SS02	Total/NA	Solid	8015B NM	55158
890-4794-3	SS03	Total/NA	Solid	8015B NM	55158
890-4794-4	SS04	Total/NA	Solid	8015B NM	55158
MB 880-55158/1-A	Method Blank	Total/NA	Solid	8015B NM	55158
LCS 880-55158/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	55158
LCSD 880-55158/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	55158
880-29311-A-121-C MS	Matrix Spike	Total/NA	Solid	8015B NM	55158
880-29311-A-121-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	55158

Analysis Batch: 55334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-1	SS01	Total/NA	Solid	8015 NM	
890-4794-2	SS02	Total/NA	Solid	8015 NM	
890-4794-3	SS03	Total/NA	Solid	8015 NM	
890-4794-4	SS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

GC Semi VOA (Continued)

Analysis Batch: 55334 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-5	SS05	Total/NA	Solid	8015 NM	
890-4794-6	SS06	Total/NA	Solid	8015 NM	
890-4794-7	SS07	Total/NA	Solid	8015 NM	
890-4794-8	SS08	Total/NA	Solid	8015 NM	
890-4794-9	SS09	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 55047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-1	SS01	Soluble	Solid	DI Leach	
890-4794-2	SS02	Soluble	Solid	DI Leach	
890-4794-3	SS03	Soluble	Solid	DI Leach	
890-4794-4	SS04	Soluble	Solid	DI Leach	
890-4794-5	SS05	Soluble	Solid	DI Leach	
890-4794-6	SS06	Soluble	Solid	DI Leach	
890-4794-7	SS07	Soluble	Solid	DI Leach	
890-4794-8	SS08	Soluble	Solid	DI Leach	
890-4794-9	SS09	Soluble	Solid	DI Leach	
MB 880-55047/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-55047/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-55047/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4794-1 MS	SS01	Soluble	Solid	DI Leach	
890-4794-1 MSD	SS01	Soluble	Solid	DI Leach	

Analysis Batch: 55167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4794-1	SS01	Soluble	Solid	300.0	55047
890-4794-2	SS02	Soluble	Solid	300.0	55047
890-4794-3	SS03	Soluble	Solid	300.0	55047
890-4794-4	SS04	Soluble	Solid	300.0	55047
890-4794-5	SS05	Soluble	Solid	300.0	55047
890-4794-6	SS06	Soluble	Solid	300.0	55047
890-4794-7	SS07	Soluble	Solid	300.0	55047
890-4794-8	SS08	Soluble	Solid	300.0	55047
890-4794-9	SS09	Soluble	Solid	300.0	55047
MB 880-55047/1-A	Method Blank	Soluble	Solid	300.0	55047
LCS 880-55047/2-A	Lab Control Sample	Soluble	Solid	300.0	55047
LCSD 880-55047/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	55047
890-4794-1 MS	SS01	Soluble	Solid	300.0	55047
890-4794-1 MSD	SS01	Soluble	Solid	300.0	55047

Lab Chronicle

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Client Sample ID: SS01

Lab Sample ID: 890-4794-1
Matrix: Solid
Date Collected: 06/07/23 09:40
Date Received: 06/08/23 08:28

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	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 13:53	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55688	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55334	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 05:52	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 14:32	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-4794-2
Matrix: Solid
Date Collected: 06/07/23 09:45
Date Received: 06/08/23 08:28

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	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 14:13	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55688	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55334	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 06:12	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 14:48	CH	EET MID

Client Sample ID: SS03

Lab Sample ID: 890-4794-3
Matrix: Solid
Date Collected: 06/07/23 09:50
Date Received: 06/08/23 08:28

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	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 14:34	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55688	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55334	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 06:34	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 14:53	CH	EET MID

Client Sample ID: SS04

Lab Sample ID: 890-4794-4
Matrix: Solid
Date Collected: 06/07/23 09:55
Date Received: 06/08/23 08:28

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	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 14:54	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55688	06/16/23 12:59	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Client Sample ID: SS04

Date Collected: 06/07/23 09:55
Date Received: 06/08/23 08:28

Lab Sample ID: 890-4794-4
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			55334	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 06:57	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 14:59	CH	EET MID

Client Sample ID: SS05

Date Collected: 06/07/23 10:00
Date Received: 06/08/23 08:28

Lab Sample ID: 890-4794-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 15:15	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55688	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55334	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/10/23 21:55	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 15:04	CH	EET MID

Client Sample ID: SS06

Date Collected: 06/07/23 10:05
Date Received: 06/08/23 08:28

Lab Sample ID: 890-4794-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 15:35	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55688	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55334	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/10/23 23:00	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 15:20	CH	EET MID

Client Sample ID: SS07

Date Collected: 06/07/23 10:10
Date Received: 06/08/23 08:28

Lab Sample ID: 890-4794-7
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			4.97 g	5 mL	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 15:56	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55688	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55334	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/10/23 23:21	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Client Sample ID: SS07

Date Collected: 06/07/23 10:10
Date Received: 06/08/23 08:28

Lab Sample ID: 890-4794-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 15:25	CH	EET MID

Client Sample ID: SS08

Date Collected: 06/07/23 10:15
Date Received: 06/08/23 08:28

Lab Sample ID: 890-4794-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 16:17	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55688	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55334	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/10/23 23:44	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 15:31	CH	EET MID

Client Sample ID: SS09

Date Collected: 06/07/23 10:20
Date Received: 06/08/23 08:28

Lab Sample ID: 890-4794-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	55146	06/09/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55553	06/15/23 16:37	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55688	06/16/23 12:59	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55334	06/12/23 14:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55159	06/09/23 14:05	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55207	06/11/23 00:05	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	55047	06/08/23 14:20	KS	EET MID
Soluble	Analysis	300.0		1			55167	06/09/23 15:36	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: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

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	T104704400-22-25	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

Method Summary

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Red Raider BKS (part 2)

Job ID: 890-4794-1
SDG: 03D2024198

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4794-1	SS01	Solid	06/07/23 09:40	06/08/23 08:28	0.5'
890-4794-2	SS02	Solid	06/07/23 09:45	06/08/23 08:28	0.5'
890-4794-3	SS03	Solid	06/07/23 09:50	06/08/23 08:28	0.5'
890-4794-4	SS04	Solid	06/07/23 09:55	06/08/23 08:28	0.5'
890-4794-5	SS05	Solid	06/07/23 10:00	06/08/23 08:28	0.5'
890-4794-6	SS06	Solid	06/07/23 10:05	06/08/23 08:28	0.5'
890-4794-7	SS07	Solid	06/07/23 10:10	06/08/23 08:28	0.5'
890-4794-8	SS08	Solid	06/07/23 10:15	06/08/23 08:28	0.5'
890-4794-9	SS09	Solid	06/07/23 10:20	06/08/23 08:28	0.5'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of _____

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

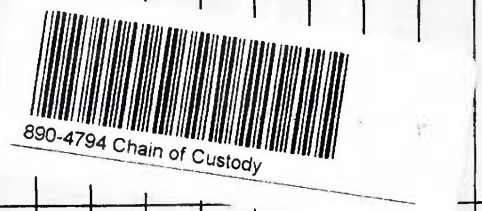
Project Name:	Red Raider BKS (Part 2)	Turn Around	
Project Number:	03D2024198	☑ Routine ☐ Rush	
Project Location:	32.1866, -103.5235	Due Date:	5 Day
Sampler's Name:	Ronni Hayes	TAT starts the day received by the lab, if received by 4:30pm	
Cost Center #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TRM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.6
Total Containers:		Corrected Temperature:	2.4

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: CHLORIDES (EPA: 300.0)	Parameters: TPH	Parameters: BTEX	Sample Comments
SS01	S	6/7/2023	940	0.5	Grab	1		X	X	X	
SS02	S	6/7/2023	945	0.5	Grab	1		X	X	X	
SS03	S	6/7/2023	950	0.5	Grab	1		X	X	X	
SS04	S	6/7/2023	955	0.5	Grab	1		X	X	X	
SS05	S	6/7/2023	1000	0.5	Grab	1		X	X	X	
SS06	S	6/7/2023	1005	0.5	Grab	1		X	X	X	
SS07	S	6/7/2023	1010	0.5	Grab	1		X	X	X	
~~SS08~~	~~S~~	~~6/7/2023~~	~~1015~~	~~0.5~~	~~Grab~~	~~1~~		~~X~~	~~X~~	~~X~~	
SS09	S	6/7/2023	1020	0.5	Grab	1		X	X	X	



ANALYSIS REQUEST

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		Amanda Stutz	6/8/23 0835			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4794-1
SDG Number: 03D2024198

Login Number: 4794
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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4794-1
SDG Number: 03D2024198

Login Number: 4794
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/09/23 10:21 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 7/14/2023 11:39:33 AM

JOB DESCRIPTION

Red Raider BKS State Com 001
SDG NUMBER 03D2024198

JOB NUMBER

890-4903-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

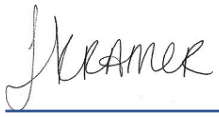
Eurofins Carlsbad

Job Notes

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

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

Authorization



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7/14/2023 11:39:33 AM

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

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Laboratory Job ID: 890-4903-1
SDG: 03D2024198

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4903-1
Project/Site: Red Raider BKS State Com 001 SDG: 03D2024198

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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.

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: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Job ID: 890-4903-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4903-1

Receipt
The samples were received on 7/6/2023 1:51 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 3.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-4903-1), FS02 (890-4903-2), FS03 (890-4903-3), FS04 (890-4903-4), FS05 (890-4903-5), FS06 (890-4903-6), FS07 (890-4903-7), FS08 (890-4903-8), FS09 (890-4903-9), FS10 (890-4903-10), SS05A (890-4903-11), SS07A (890-4903-12), SS08A (890-4903-13), SS10 (890-4903-14) and SS10A (890-4903-15).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-30536-A-1-D). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-57380 recovered above the upper control limit for Toluene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-57380/20).

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-57313 and analytical batch 880-57440 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-57440/20) and (CCV 880-57440/5). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-4911-A-21-D) and (890-4911-A-21-E MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS01 (890-4903-1), FS02 (890-4903-2), FS03 (890-4903-3), FS04 (890-4903-4) and FS05 (890-4903-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-57313 and analytical batch 880-57440 contained OII Range Organics (Over C28-C36) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-4903-A-6-F MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS08 (890-4903-8), FS09 (890-4903-9), FS10 (890-4903-10), SS05A (890-4903-11), SS07A (890-4903-12), SS08A (890-4903-13) and SS10 (890-4903-14). 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) precision for preparation batch 880-57559 and analytical batch 880-57551 was outside control limits. Sample non-homogeneity is suspected.

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

Case Narrative

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Job ID: 890-4903-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-57291 and analytical batch 880-57417 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.The associated samples are: FS07 (890-4903-7), FS08 (890-4903-8), FS09 (890-4903-9), FS10 (890-4903-10), SS05A (890-4903-11), SS07A (890-4903-12), SS08A (890-4903-13), SS10 (890-4903-14), SS10A (890-4903-15), (890-4903-A-7-B MS) and (890-4903-A-7-C MSD).

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: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS01

Lab Sample ID: 890-4903-1
Matrix: Solid
Date Collected: 07/06/23 09:40
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 01:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 01:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 01:43	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/11/23 10:06	07/12/23 01:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 01:43	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/11/23 10:06	07/12/23 01:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*07/11/23 10:06*	*07/12/23 01:43*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*07/11/23 10:06*	*07/12/23 01:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/12/23 10:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			07/13/23 13:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		07/10/23 13:23	07/12/23 17:27	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/10/23 13:23	07/12/23 17:27	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/10/23 13:23	07/12/23 17:27	1
Total TPH	<49.7	U	49.7		mg/Kg		07/10/23 13:23	07/12/23 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*07/10/23 13:23*	*07/12/23 17:27*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*07/10/23 13:23*	*07/12/23 17:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**62.4**		4.99		mg/Kg			07/11/23 13:09	1

Client Sample ID: FS02

Lab Sample ID: 890-4903-2
Matrix: Solid
Date Collected: 07/06/23 09:45
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 02:03	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 02:03	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 02:03	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		07/11/23 10:06	07/12/23 02:03	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 02:03	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/11/23 10:06	07/12/23 02:03	1

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS02

Lab Sample ID: 890-4903-2
Matrix: Solid
Date Collected: 07/06/23 09:45
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*07/11/23 10:06*	*07/12/23 02:03*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*07/11/23 10:06*	*07/12/23 02:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			07/12/23 10:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.5	U	49.5	mg/Kg			07/13/23 13:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.5	U	49.5	mg/Kg		07/10/23 13:23	07/12/23 17:50	1
Diesel Range Organics (Over C10-C28)	<49.5	U	49.5	mg/Kg		07/10/23 13:23	07/12/23 17:50	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5	mg/Kg		07/10/23 13:23	07/12/23 17:50	1
Total TPH	<49.5	U	49.5	mg/Kg		07/10/23 13:23	07/12/23 17:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*114*		*70 - 130*	*07/10/23 13:23*	*07/12/23 17:50*	*1*
o-Terphenyl	*137*	*S1+*	*70 - 130*	*07/10/23 13:23*	*07/12/23 17:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**131**		4.95	mg/Kg			07/11/23 13:24	1

Client Sample ID: FS03

Lab Sample ID: 890-4903-3
Matrix: Solid
Date Collected: 07/06/23 09:50
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:06	07/12/23 02:24	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:06	07/12/23 02:24	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:06	07/12/23 02:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/11/23 10:06	07/12/23 02:24	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:06	07/12/23 02:24	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/11/23 10:06	07/12/23 02:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*07/11/23 10:06*	*07/12/23 02:24*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*07/11/23 10:06*	*07/12/23 02:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/12/23 10:21	1

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS03

Lab Sample ID: 890-4903-3
Matrix: Solid
Date Collected: 07/06/23 09:50
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			07/13/23 13:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		07/10/23 13:23	07/12/23 18:13	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		07/10/23 13:23	07/12/23 18:13	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/10/23 13:23	07/12/23 18:13	1
Total TPH	<50.5	U	50.5		mg/Kg		07/10/23 13:23	07/12/23 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*07/10/23 13:23*	*07/12/23 18:13*	*1*
o-Terphenyl	*138*	*S1+*	*70 - 130*	*07/10/23 13:23*	*07/12/23 18:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**68.2**		4.97		mg/Kg			07/11/23 13:29	1

Client Sample ID: FS04

Lab Sample ID: 890-4903-4
Matrix: Solid
Date Collected: 07/06/23 09:55
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 02:45	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 02:45	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 02:45	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/11/23 10:06	07/12/23 02:45	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 02:45	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/11/23 10:06	07/12/23 02:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*07/11/23 10:06*	*07/12/23 02:45*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*07/11/23 10:06*	*07/12/23 02:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/12/23 10:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			07/13/23 13:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		07/10/23 13:23	07/12/23 18:35	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		07/10/23 13:23	07/12/23 18:35	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/10/23 13:23	07/12/23 18:35	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS04

Lab Sample ID: 890-4903-4
Matrix: Solid
Date Collected: 07/06/23 09:55
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg		07/10/23 13:23	07/12/23 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*07/10/23 13:23*	*07/12/23 18:35*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*07/10/23 13:23*	*07/12/23 18:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**69.9**		5.00		mg/Kg			07/11/23 13:34	1

Client Sample ID: FS05

Lab Sample ID: 890-4903-5
Matrix: Solid
Date Collected: 07/06/23 10:00
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 04:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 04:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 04:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/11/23 10:06	07/12/23 04:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 04:07	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/11/23 10:06	07/12/23 04:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*07/11/23 10:06*	*07/12/23 04:07*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*07/11/23 10:06*	*07/12/23 04:07*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			07/12/23 10:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			07/13/23 13:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		07/10/23 13:23	07/12/23 18:58	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		07/10/23 13:23	07/12/23 18:58	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/10/23 13:23	07/12/23 18:58	1
Total TPH	<50.3	U	50.3		mg/Kg		07/10/23 13:23	07/12/23 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*07/10/23 13:23*	*07/12/23 18:58*	*1*
o-Terphenyl	*142*	*S1+*	*70 - 130*	*07/10/23 13:23*	*07/12/23 18:58*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS05

Lab Sample ID: 890-4903-5
Matrix: Solid
Date Collected: 07/06/23 10:00
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	68.2		4.96		mg/Kg			07/11/23 13:39	1

Client Sample ID: FS06

Lab Sample ID: 890-4903-6
Matrix: Solid
Date Collected: 07/06/23 10:05
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 04:28	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 04:28	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 04:28	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/11/23 10:06	07/12/23 04:28	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 04:28	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/11/23 10:06	07/12/23 04:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*07/11/23 10:06*	*07/12/23 04:28*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*07/11/23 10:06*	*07/12/23 04:28*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/12/23 10:21	1

Method: SW846 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			07/14/23 12:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F2	49.9		mg/Kg		07/13/23 08:00	07/13/23 10:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 10:49	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 10:49	1
Total TPH	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 10:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*126*		*70 - 130*	*07/13/23 08:00*	*07/13/23 10:49*	*1*
o-Terphenyl	*112*		*70 - 130*	*07/13/23 08:00*	*07/13/23 10:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	138		5.04		mg/Kg			07/11/23 13:45	1

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS07

Date Collected: 07/06/23 10:10
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

Lab Sample ID: 890-4903-7

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/11/23 10:06	07/12/23 04:49	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/11/23 10:06	07/12/23 04:49	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/11/23 10:06	07/12/23 04:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/11/23 10:06	07/12/23 04:49	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/11/23 10:06	07/12/23 04:49	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/11/23 10:06	07/12/23 04:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*07/11/23 10:06*	*07/12/23 04:49*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*07/11/23 10:06*	*07/12/23 04:49*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/12/23 10:21	1

Method: SW846 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			07/14/23 12:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/13/23 08:00	07/13/23 11:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/13/23 08:00	07/13/23 11:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/13/23 08:00	07/13/23 11:54	1
Total TPH	<50.0	U	50.0		mg/Kg		07/13/23 08:00	07/13/23 11:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*07/13/23 08:00*	*07/13/23 11:54*	*1*
o-Terphenyl	*106*		*70 - 130*	*07/13/23 08:00*	*07/13/23 11:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**131**	**F1**	4.99		mg/Kg			07/11/23 13:50	1

Client Sample ID: FS08

Date Collected: 07/06/23 10:15
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

Lab Sample ID: 890-4903-8

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 05:09	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 05:09	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 05:09	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/11/23 10:06	07/12/23 05:09	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 05:09	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/11/23 10:06	07/12/23 05:09	1

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS08

Lab Sample ID: 890-4903-8
Matrix: Solid
Date Collected: 07/06/23 10:15
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	07/11/23 10:06	07/12/23 05:09	1
1,4-Difluorobenzene (Surr)	106		70 - 130	07/11/23 10:06	07/12/23 05:09	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			07/12/23 10:21	1

Method: SW846 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			07/14/23 12:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/13/23 08:00	07/13/23 12:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/13/23 08:00	07/13/23 12:17	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/13/23 08:00	07/13/23 12:17	1
Total TPH	<49.9	U	49.9	mg/Kg		07/13/23 08:00	07/13/23 12:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	132	S1+	70 - 130	07/13/23 08:00	07/13/23 12:17	1
o-Terphenyl	115		70 - 130	07/13/23 08:00	07/13/23 12:17	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**45.0**		4.95	mg/Kg			07/11/23 14:05	1

Client Sample ID: FS09

Lab Sample ID: 890-4903-9
Matrix: Solid
Date Collected: 07/06/23 10:20
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:06	07/12/23 05:30	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:06	07/12/23 05:30	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:06	07/12/23 05:30	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/11/23 10:06	07/12/23 05:30	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:06	07/12/23 05:30	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/11/23 10:06	07/12/23 05:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	07/11/23 10:06	07/12/23 05:30	1
1,4-Difluorobenzene (Surr)	108		70 - 130	07/11/23 10:06	07/12/23 05:30	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/12/23 10:21	1

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS09

Lab Sample ID: 890-4903-9
Matrix: Solid
Date Collected: 07/06/23 10:20
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

Method: SW846 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			07/14/23 12:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/13/23 08:00	07/13/23 12:39	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/13/23 08:00	07/13/23 12:39	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/13/23 08:00	07/13/23 12:39	1
Total TPH	<49.8	U	49.8		mg/Kg		07/13/23 08:00	07/13/23 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*135*	*S1+*	*70 - 130*	*07/13/23 08:00*	*07/13/23 12:39*	*1*
o-Terphenyl	*117*		*70 - 130*	*07/13/23 08:00*	*07/13/23 12:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**83.8**		5.01		mg/Kg			07/11/23 14:10	1

Client Sample ID: FS10

Lab Sample ID: 890-4903-10
Matrix: Solid
Date Collected: 07/06/23 10:25
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 05:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 05:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 05:51	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/11/23 10:06	07/12/23 05:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 05:51	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/11/23 10:06	07/12/23 05:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*07/11/23 10:06*	*07/12/23 05:51*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*07/11/23 10:06*	*07/12/23 05:51*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			07/12/23 10:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**65.4**		49.9		mg/Kg			07/14/23 12:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 13:01	1
Diesel Range Organics (Over C10-C28)	**65.4**		49.9		mg/Kg		07/13/23 08:00	07/13/23 13:01	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 13:01	1

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Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS10

Lab Sample ID: 890-4903-10
Matrix: Solid
Date Collected: 07/06/23 10:25
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	65.4		49.9		mg/Kg		07/13/23 08:00	07/13/23 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*136*	*S1+*	*70 - 130*	*07/13/23 08:00*	*07/13/23 13:01*	*1*
o-Terphenyl	*117*		*70 - 130*	*07/13/23 08:00*	*07/13/23 13:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	79.0		4.97		mg/Kg			07/11/23 14:26	1

Client Sample ID: SS05A

Lab Sample ID: 890-4903-11
Matrix: Solid
Date Collected: 07/06/23 10:30
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/11/23 10:06	07/12/23 06:11	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/11/23 10:06	07/12/23 06:11	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/11/23 10:06	07/12/23 06:11	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/11/23 10:06	07/12/23 06:11	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/11/23 10:06	07/12/23 06:11	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/11/23 10:06	07/12/23 06:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*07/11/23 10:06*	*07/12/23 06:11*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*07/11/23 10:06*	*07/12/23 06:11*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/12/23 10:21	1

Method: SW846 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			07/14/23 12:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/13/23 08:00	07/13/23 13:23	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/13/23 08:00	07/13/23 13:23	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/13/23 08:00	07/13/23 13:23	1
Total TPH	<49.8	U	49.8		mg/Kg		07/13/23 08:00	07/13/23 13:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*137*	*S1+*	*70 - 130*	*07/13/23 08:00*	*07/13/23 13:23*	*1*
o-Terphenyl	*119*		*70 - 130*	*07/13/23 08:00*	*07/13/23 13:23*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: SS05A
Lab Sample ID: 890-4903-11
Date Collected: 07/06/23 10:30
Matrix: Solid
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	157		4.95		mg/Kg			07/11/23 14:31	1

Client Sample ID: SS07A
Lab Sample ID: 890-4903-12
Date Collected: 07/06/23 10:35
Matrix: Solid
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 06:32	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 06:32	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 06:32	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/11/23 10:06	07/12/23 06:32	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/11/23 10:06	07/12/23 06:32	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/11/23 10:06	07/12/23 06:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*07/11/23 10:06*	*07/12/23 06:32*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*07/11/23 10:06*	*07/12/23 06:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/12/23 10:21	1

Method: SW846 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			07/14/23 12:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 13:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 13:45	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 13:45	1
Total TPH	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*136*	*S1+*	*70 - 130*	*07/13/23 08:00*	*07/13/23 13:45*	*1*
o-Terphenyl	*116*		*70 - 130*	*07/13/23 08:00*	*07/13/23 13:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	77.4		4.95		mg/Kg			07/11/23 14:36	1

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: SS08A

Lab Sample ID: 890-4903-13
Matrix: Solid
Date Collected: 07/06/23 10:40
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 06:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 06:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 06:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/11/23 10:06	07/12/23 06:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/12/23 06:53	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/11/23 10:06	07/12/23 06:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/11/23 10:06*	*07/12/23 06:53*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*07/11/23 10:06*	*07/12/23 06:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/12/23 10:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**19.1**		50.0		mg/Kg			07/14/23 12:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/13/23 08:00	07/13/23 14:06	1
Diesel Range Organics (Over C10-C28)	**19.1**		50.0		mg/Kg		07/13/23 08:00	07/13/23 14:06	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/13/23 08:00	07/13/23 14:06	1
Total TPH	**19.1**		50.0		mg/Kg		07/13/23 08:00	07/13/23 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*138*	*S1+*	*70 - 130*	*07/13/23 08:00*	*07/13/23 14:06*	*1*
o-Terphenyl	*115*		*70 - 130*	*07/13/23 08:00*	*07/13/23 14:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**72.1**		5.01		mg/Kg			07/11/23 14:41	1

Client Sample ID: SS10

Lab Sample ID: 890-4903-14
Matrix: Solid
Date Collected: 07/06/23 10:45
Date Received: 07/06/23 13:51
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 07:13	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 07:13	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 07:13	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/11/23 10:06	07/12/23 07:13	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/11/23 10:06	07/12/23 07:13	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/11/23 10:06	07/12/23 07:13	1

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: SS10

Lab Sample ID: 890-4903-14
Matrix: Solid
Date Collected: 07/06/23 10:45
Date Received: 07/06/23 13:51
Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	07/11/23 10:06	07/12/23 07:13	1
1,4-Difluorobenzene (Surr)	110		70 - 130	07/11/23 10:06	07/12/23 07:13	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			07/12/23 10:21	1

Method: SW846 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			07/14/23 12:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		07/13/23 08:00	07/13/23 14:29	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		07/13/23 08:00	07/13/23 14:29	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		07/13/23 08:00	07/13/23 14:29	1
Total TPH	<49.9	U	49.9	mg/Kg		07/13/23 08:00	07/13/23 14:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	134	S1+	70 - 130	07/13/23 08:00	07/13/23 14:29	1
o-Terphenyl	116		70 - 130	07/13/23 08:00	07/13/23 14:29	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	138		5.05	mg/Kg			07/11/23 14:46	1

Client Sample ID: SS10A

Lab Sample ID: 890-4903-15
Matrix: Solid
Date Collected: 07/06/23 10:50
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:19	07/11/23 19:32	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:19	07/11/23 19:32	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:19	07/11/23 19:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/11/23 10:19	07/11/23 19:32	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/11/23 10:19	07/11/23 19:32	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/11/23 10:19	07/11/23 19:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	07/11/23 10:19	07/11/23 19:32	1
1,4-Difluorobenzene (Surr)	113		70 - 130	07/11/23 10:19	07/11/23 19:32	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/12/23 10:21	1

Client Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: SS10A

Date Collected: 07/06/23 10:50
Date Received: 07/06/23 13:51
Sample Depth: 1.0'

Lab Sample ID: 890-4903-15

Matrix: Solid

Method: SW846 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			07/14/23 12:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 14:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 14:51	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 14:51	1
Total TPH	<49.9	U	49.9		mg/Kg		07/13/23 08:00	07/13/23 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*07/13/23 08:00*	*07/13/23 14:51*	*1*
o-Terphenyl	*112*		*70 - 130*	*07/13/23 08:00*	*07/13/23 14:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**83.2**		4.98		mg/Kg			07/11/23 14:51	1

Surrogate Summary

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

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)
880-30536-A-1-B MS	Matrix Spike	113	107
880-30536-A-1-C MSD	Matrix Spike Duplicate	105	103
880-30539-A-2-A MS	Matrix Spike	110	106
880-30539-A-2-B MSD	Matrix Spike Duplicate	114	100
890-4903-1	FS01	114	110
890-4903-2	FS02	105	106
890-4903-3	FS03	111	107
890-4903-4	FS04	111	113
890-4903-5	FS05	104	98
890-4903-6	FS06	107	111
890-4903-7	FS07	104	104
890-4903-8	FS08	111	106
890-4903-9	FS09	108	108
890-4903-10	FS10	113	107
890-4903-11	SS05A	121	101
890-4903-12	SS07A	123	102
890-4903-13	SS08A	96	109
890-4903-14	SS10	98	110
890-4903-15	SS10A	104	113
LCS 880-57294/1-B	Lab Control Sample	103	105
LCS 880-57389/1-A	Lab Control Sample	109	100
LCSD 880-57294/2-B	Lab Control Sample Dup	103	106
LCSD 880-57389/2-A	Lab Control Sample Dup	116	105
MB 880-57294/5-B	Method Blank	90	96
MB 880-57389/5-A	Method Blank	87	98

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)
890-4903-1	FS01	111	136 S1+
890-4903-2	FS02	114	137 S1+
890-4903-3	FS03	115	138 S1+
890-4903-4	FS04	111	136 S1+
890-4903-5	FS05	117	142 S1+
890-4903-6	FS06	126	112
890-4903-6 MS	FS06	131 S1+	105
890-4903-6 MSD	FS06	121	92
890-4903-7	FS07	122	106
890-4903-8	FS08	132 S1+	115
890-4903-9	FS09	135 S1+	117
890-4903-10	FS10	136 S1+	117
890-4903-11	SS05A	137 S1+	119
890-4903-12	SS07A	136 S1+	116

Surrogate Summary

Client: Ensolum Job ID: 890-4903-1
Project/Site: Red Raider BKS State Com 001 SDG: 03D2024198

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)								
890-4903-13	SS08A	138 S1+	115								
890-4903-14	SS10	134 S1+	116								
890-4903-15	SS10A	129	112								
890-4911-A-21-E MS	Matrix Spike	130	139 S1+								
890-4911-A-21-F MSD	Matrix Spike Duplicate	119	128								
LCS 880-57313/2-A	Lab Control Sample	99	122								
LCS 880-57559/2-A	Lab Control Sample	90	82								
LCSD 880-57313/3-A	Lab Control Sample Dup	103	124								
LCSD 880-57559/3-A	Lab Control Sample Dup	99	89								
MB 880-57313/1-A	Method Blank	117	143 S1+								
MB 880-57559/1-A	Method Blank	127	110								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-57294/5-B
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57294

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/11/23 23:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/11/23 23:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/11/23 23:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/11/23 10:06	07/11/23 23:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:06	07/11/23 23:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/11/23 10:06	07/11/23 23:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*07/11/23 10:06*	*07/11/23 23:17*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*07/11/23 10:06*	*07/11/23 23:17*	*1*

Lab Sample ID: LCS 880-57294/1-B
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57294

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1041		mg/Kg		104	70 - 130		
Toluene			0.100	0.1128		mg/Kg		113	70 - 130		
Ethylbenzene			0.100	0.1035		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2140		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1046		mg/Kg		105	70 - 130		

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

Lab Sample ID: LCSD 880-57294/2-B
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57294

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1137		mg/Kg		114	70 - 130	9	35
Toluene			0.100	0.1186		mg/Kg		119	70 - 130	5	35
Ethylbenzene			0.100	0.1061		mg/Kg		106	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2166		mg/Kg		108	70 - 130	1	35
o-Xylene			0.100	0.1060		mg/Kg		106	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-30536-A-1-B MS
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57294

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0994	0.1055		mg/Kg		106	70 - 130		
Toluene	<0.00202	U	0.0994	0.1209		mg/Kg		120	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

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

Lab Sample ID: 880-30536-A-1-B MS
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57294

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0994	0.1135		mg/Kg		114	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.2382		mg/Kg		118	70 - 130
o-Xylene	<0.00202	U	0.0994	0.1174		mg/Kg		117	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 880-30536-A-1-C MSD
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57294

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.09539		mg/Kg		95	70 - 130	10	35
Toluene	<0.00202	U	0.0996	0.1062		mg/Kg		105	70 - 130	13	35
Ethylbenzene	<0.00202	U	0.0996	0.09878		mg/Kg		99	70 - 130	14	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.2056		mg/Kg		102	70 - 130	15	35
o-Xylene	<0.00202	U	0.0996	0.1017		mg/Kg		101	70 - 130	14	35

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

Lab Sample ID: MB 880-57389/5-A
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57389

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:19	07/11/23 12:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:19	07/11/23 12:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:19	07/11/23 12:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/11/23 10:19	07/11/23 12:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 10:19	07/11/23 12:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/11/23 10:19	07/11/23 12:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*07/11/23 10:19*	*07/11/23 12:15*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*07/11/23 10:19*	*07/11/23 12:15*	*1*

Lab Sample ID: LCS 880-57389/1-A
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57389

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09334		mg/Kg		93	70 - 130
Toluene	0.100	0.1078		mg/Kg		108	70 - 130
Ethylbenzene	0.100	0.1045		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	0.200	0.2219		mg/Kg		111	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

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

Lab Sample ID: LCS 880-57389/1-A
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57389

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1072		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-57389/2-A
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57389

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1076		mg/Kg		108	70 - 130	14	35
Toluene			0.100	0.1238		mg/Kg		124	70 - 130	14	35
Ethylbenzene			0.100	0.1170		mg/Kg		117	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.2441		mg/Kg		122	70 - 130	9	35
o-Xylene			0.100	0.1164		mg/Kg		116	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-30539-A-2-A MS
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57389

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0994	0.1140		mg/Kg		115	70 - 130		
Toluene	<0.00198	U	0.0994	0.1190		mg/Kg		120	70 - 130		
Ethylbenzene	<0.00198	U	0.0994	0.1065		mg/Kg		107	70 - 130		
m-Xylene & p-Xylene	<0.00396	U	0.199	0.2164		mg/Kg		109	70 - 130		
o-Xylene	<0.00198	U	0.0994	0.1033		mg/Kg		104	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-30539-A-2-B MSD
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57389

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0998	0.09141		mg/Kg		92	70 - 130	22	35
Toluene	<0.00198	U	0.0998	0.1078		mg/Kg		108	70 - 130	10	35
Ethylbenzene	<0.00198	U	0.0998	0.1040		mg/Kg		104	70 - 130	2	35
m-Xylene & p-Xylene	<0.00396	U	0.200	0.2208		mg/Kg		111	70 - 130	2	35
o-Xylene	<0.00198	U	0.0998	0.1070		mg/Kg		107	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

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

Lab Sample ID: 880-30539-A-2-B MSD
Matrix: Solid
Analysis Batch: 57380

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57389

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

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

Lab Sample ID: MB 880-57313/1-A
Matrix: Solid
Analysis Batch: 57440

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57313

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		07/10/23 13:22	07/12/23 11:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/10/23 13:22	07/12/23 11:30	1
OIl Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/10/23 13:22	07/12/23 11:30	1
Total TPH	<50.0	U	50.0		mg/Kg		07/10/23 13:22	07/12/23 11:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130	07/10/23 13:22	07/12/23 11:30	1
o-Terphenyl	143	S1+	70 - 130	07/10/23 13:22	07/12/23 11:30	1

Lab Sample ID: LCS 880-57313/2-A
Matrix: Solid
Analysis Batch: 57440

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57313

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1025		mg/Kg		103	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1033		mg/Kg		103	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	122		70 - 130

Lab Sample ID: LCSD 880-57313/3-A
Matrix: Solid
Analysis Batch: 57440

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57313

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	970.7		mg/Kg		97	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	902.9		mg/Kg		90	70 - 130	13	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	124		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

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

Lab Sample ID: 890-4911-A-21-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 57440 — **Prep Batch: 57313**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1000	1106		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	<50.1	U	1000	1270		mg/Kg		127	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*130*		*70 - 130*
o-Terphenyl	*139*	*S1+*	*70 - 130*

Lab Sample ID: 890-4911-A-21-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 57440 — **Prep Batch: 57313**

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	<50.1	U	1000	1028		mg/Kg		100	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	<50.1	U	1000	1169		mg/Kg		117	70 - 130	8	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*128*		*70 - 130*

Lab Sample ID: MB 880-57559/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 57551 — **Prep Batch: 57559**

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		07/13/23 07:30	07/13/23 07:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/13/23 07:30	07/13/23 07:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/13/23 07:30	07/13/23 07:44	1
Total TPH	<50.0	U	50.0		mg/Kg		07/13/23 07:30	07/13/23 07:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*07/13/23 07:30*	*07/13/23 07:44*	*1*
o-Terphenyl	*110*		*70 - 130*	*07/13/23 07:30*	*07/13/23 07:44*	*1*

Lab Sample ID: LCS 880-57559/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 57551 — **Prep Batch: 57559**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	899.4		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	1000	866.4		mg/Kg		87	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

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

Lab Sample ID: LCS 880-57559/2-A
Matrix: Solid
Analysis Batch: 57551

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57559

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	82		70 - 130

Lab Sample ID: LCSD 880-57559/3-A
Matrix: Solid
Analysis Batch: 57551

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57559

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	846.8		mg/Kg		85	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	802.8		mg/Kg		80	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	89		70 - 130

Lab Sample ID: 890-4903-6 MS
Matrix: Solid
Analysis Batch: 57551

Client Sample ID: FS06
Prep Type: Total/NA
Prep Batch: 57559

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 F2	998	1114		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1178		mg/Kg		118	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	131	S1+	70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: 890-4903-6 MSD
Matrix: Solid
Analysis Batch: 57551

Client Sample ID: FS06
Prep Type: Total/NA
Prep Batch: 57559

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 F2	997	882.1	F2	mg/Kg		84	70 - 130	23	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1075		mg/Kg		108	70 - 130	9	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	92		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-57291/1-A
Matrix: Solid
Analysis Batch: 57417

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			07/11/23 12:22	1

Lab Sample ID: LCS 880-57291/2-A
Matrix: Solid
Analysis Batch: 57417

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	246.0		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-57291/3-A
Matrix: Solid
Analysis Batch: 57417

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	247.4		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-4903-7 MS
Matrix: Solid
Analysis Batch: 57417

Client Sample ID: FS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	131	F1	250	349.0	F1	mg/Kg		87	90 - 110		

Lab Sample ID: 890-4903-7 MSD
Matrix: Solid
Analysis Batch: 57417

Client Sample ID: FS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	131	F1	250	347.0	F1	mg/Kg		87	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

GC VOA

Prep Batch: 57294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4903-1	FS01	Total/NA	Solid	5035	
890-4903-2	FS02	Total/NA	Solid	5035	
890-4903-3	FS03	Total/NA	Solid	5035	
890-4903-4	FS04	Total/NA	Solid	5035	
890-4903-5	FS05	Total/NA	Solid	5035	
890-4903-6	FS06	Total/NA	Solid	5035	
890-4903-7	FS07	Total/NA	Solid	5035	
890-4903-8	FS08	Total/NA	Solid	5035	
890-4903-9	FS09	Total/NA	Solid	5035	
890-4903-10	FS10	Total/NA	Solid	5035	
890-4903-11	SS05A	Total/NA	Solid	5035	
890-4903-12	SS07A	Total/NA	Solid	5035	
890-4903-13	SS08A	Total/NA	Solid	5035	
890-4903-14	SS10	Total/NA	Solid	5035	
MB 880-57294/5-B	Method Blank	Total/NA	Solid	5035	
LCS 880-57294/1-B	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57294/2-B	Lab Control Sample Dup	Total/NA	Solid	5035	
880-30536-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-30536-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 57380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4903-1	FS01	Total/NA	Solid	8021B	57294
890-4903-2	FS02	Total/NA	Solid	8021B	57294
890-4903-3	FS03	Total/NA	Solid	8021B	57294
890-4903-4	FS04	Total/NA	Solid	8021B	57294
890-4903-5	FS05	Total/NA	Solid	8021B	57294
890-4903-6	FS06	Total/NA	Solid	8021B	57294
890-4903-7	FS07	Total/NA	Solid	8021B	57294
890-4903-8	FS08	Total/NA	Solid	8021B	57294
890-4903-9	FS09	Total/NA	Solid	8021B	57294
890-4903-10	FS10	Total/NA	Solid	8021B	57294
890-4903-11	SS05A	Total/NA	Solid	8021B	57294
890-4903-12	SS07A	Total/NA	Solid	8021B	57294
890-4903-13	SS08A	Total/NA	Solid	8021B	57294
890-4903-14	SS10	Total/NA	Solid	8021B	57294
890-4903-15	SS10A	Total/NA	Solid	8021B	57389
MB 880-57294/5-B	Method Blank	Total/NA	Solid	8021B	57294
MB 880-57389/5-A	Method Blank	Total/NA	Solid	8021B	57389
LCS 880-57294/1-B	Lab Control Sample	Total/NA	Solid	8021B	57294
LCS 880-57389/1-A	Lab Control Sample	Total/NA	Solid	8021B	57389
LCSD 880-57294/2-B	Lab Control Sample Dup	Total/NA	Solid	8021B	57294
LCSD 880-57389/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	57389
880-30536-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	57294
880-30536-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	57294
880-30539-A-2-A MS	Matrix Spike	Total/NA	Solid	8021B	57389
880-30539-A-2-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	57389

Prep Batch: 57389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4903-15	SS10A	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

GC VOA (Continued)

Prep Batch: 57389 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-57389/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-57389/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57389/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-30539-A-2-A MS	Matrix Spike	Total/NA	Solid	5035	
880-30539-A-2-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 57483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4903-1	FS01	Total/NA	Solid	Total BTEX	
890-4903-2	FS02	Total/NA	Solid	Total BTEX	
890-4903-3	FS03	Total/NA	Solid	Total BTEX	
890-4903-4	FS04	Total/NA	Solid	Total BTEX	
890-4903-5	FS05	Total/NA	Solid	Total BTEX	
890-4903-6	FS06	Total/NA	Solid	Total BTEX	
890-4903-7	FS07	Total/NA	Solid	Total BTEX	
890-4903-8	FS08	Total/NA	Solid	Total BTEX	
890-4903-9	FS09	Total/NA	Solid	Total BTEX	
890-4903-10	FS10	Total/NA	Solid	Total BTEX	
890-4903-11	SS05A	Total/NA	Solid	Total BTEX	
890-4903-12	SS07A	Total/NA	Solid	Total BTEX	
890-4903-13	SS08A	Total/NA	Solid	Total BTEX	
890-4903-14	SS10	Total/NA	Solid	Total BTEX	
890-4903-15	SS10A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 57313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4903-1	FS01	Total/NA	Solid	8015NM Prep	
890-4903-2	FS02	Total/NA	Solid	8015NM Prep	
890-4903-3	FS03	Total/NA	Solid	8015NM Prep	
890-4903-4	FS04	Total/NA	Solid	8015NM Prep	
890-4903-5	FS05	Total/NA	Solid	8015NM Prep	
MB 880-57313/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-57313/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-57313/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4911-A-21-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4911-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 57440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4903-1	FS01	Total/NA	Solid	8015B NM	57313
890-4903-2	FS02	Total/NA	Solid	8015B NM	57313
890-4903-3	FS03	Total/NA	Solid	8015B NM	57313
890-4903-4	FS04	Total/NA	Solid	8015B NM	57313
890-4903-5	FS05	Total/NA	Solid	8015B NM	57313
MB 880-57313/1-A	Method Blank	Total/NA	Solid	8015B NM	57313
LCS 880-57313/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	57313
LCSD 880-57313/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	57313
890-4911-A-21-E MS	Matrix Spike	Total/NA	Solid	8015B NM	57313
890-4911-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	57313

QC Association Summary

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

GC Semi VOA

Analysis Batch: 57551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4903-6	FS06	Total/NA	Solid	8015B NM	57559
890-4903-7	FS07	Total/NA	Solid	8015B NM	57559
890-4903-8	FS08	Total/NA	Solid	8015B NM	57559
890-4903-9	FS09	Total/NA	Solid	8015B NM	57559
890-4903-10	FS10	Total/NA	Solid	8015B NM	57559
890-4903-11	SS05A	Total/NA	Solid	8015B NM	57559
890-4903-12	SS07A	Total/NA	Solid	8015B NM	57559
890-4903-13	SS08A	Total/NA	Solid	8015B NM	57559
890-4903-14	SS10	Total/NA	Solid	8015B NM	57559
890-4903-15	SS10A	Total/NA	Solid	8015B NM	57559
MB 880-57559/1-A	Method Blank	Total/NA	Solid	8015B NM	57559
LCS 880-57559/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	57559
LCSD 880-57559/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	57559
890-4903-6 MS	FS06	Total/NA	Solid	8015B NM	57559
890-4903-6 MSD	FS06	Total/NA	Solid	8015B NM	57559

Prep Batch: 57559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4903-6	FS06	Total/NA	Solid	8015NM Prep	
890-4903-7	FS07	Total/NA	Solid	8015NM Prep	
890-4903-8	FS08	Total/NA	Solid	8015NM Prep	
890-4903-9	FS09	Total/NA	Solid	8015NM Prep	
890-4903-10	FS10	Total/NA	Solid	8015NM Prep	
890-4903-11	SS05A	Total/NA	Solid	8015NM Prep	
890-4903-12	SS07A	Total/NA	Solid	8015NM Prep	
890-4903-13	SS08A	Total/NA	Solid	8015NM Prep	
890-4903-14	SS10	Total/NA	Solid	8015NM Prep	
890-4903-15	SS10A	Total/NA	Solid	8015NM Prep	
MB 880-57559/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-57559/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-57559/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4903-6 MS	FS06	Total/NA	Solid	8015NM Prep	
890-4903-6 MSD	FS06	Total/NA	Solid	8015NM Prep	

Analysis Batch: 57609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4903-1	FS01	Total/NA	Solid	8015 NM	
890-4903-2	FS02	Total/NA	Solid	8015 NM	
890-4903-3	FS03	Total/NA	Solid	8015 NM	
890-4903-4	FS04	Total/NA	Solid	8015 NM	
890-4903-5	FS05	Total/NA	Solid	8015 NM	
890-4903-6	FS06	Total/NA	Solid	8015 NM	
890-4903-7	FS07	Total/NA	Solid	8015 NM	
890-4903-8	FS08	Total/NA	Solid	8015 NM	
890-4903-9	FS09	Total/NA	Solid	8015 NM	
890-4903-10	FS10	Total/NA	Solid	8015 NM	
890-4903-11	SS05A	Total/NA	Solid	8015 NM	
890-4903-12	SS07A	Total/NA	Solid	8015 NM	
890-4903-13	SS08A	Total/NA	Solid	8015 NM	
890-4903-14	SS10	Total/NA	Solid	8015 NM	
890-4903-15	SS10A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

HPLC/IC

Leach Batch: 57291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4903-1	FS01	Soluble	Solid	DI Leach	
890-4903-2	FS02	Soluble	Solid	DI Leach	
890-4903-3	FS03	Soluble	Solid	DI Leach	
890-4903-4	FS04	Soluble	Solid	DI Leach	
890-4903-5	FS05	Soluble	Solid	DI Leach	
890-4903-6	FS06	Soluble	Solid	DI Leach	
890-4903-7	FS07	Soluble	Solid	DI Leach	
890-4903-8	FS08	Soluble	Solid	DI Leach	
890-4903-9	FS09	Soluble	Solid	DI Leach	
890-4903-10	FS10	Soluble	Solid	DI Leach	
890-4903-11	SS05A	Soluble	Solid	DI Leach	
890-4903-12	SS07A	Soluble	Solid	DI Leach	
890-4903-13	SS08A	Soluble	Solid	DI Leach	
890-4903-14	SS10	Soluble	Solid	DI Leach	
890-4903-15	SS10A	Soluble	Solid	DI Leach	
MB 880-57291/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-57291/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57291/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4903-7 MS	FS07	Soluble	Solid	DI Leach	
890-4903-7 MSD	FS07	Soluble	Solid	DI Leach	

Analysis Batch: 57417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4903-1	FS01	Soluble	Solid	300.0	57291
890-4903-2	FS02	Soluble	Solid	300.0	57291
890-4903-3	FS03	Soluble	Solid	300.0	57291
890-4903-4	FS04	Soluble	Solid	300.0	57291
890-4903-5	FS05	Soluble	Solid	300.0	57291
890-4903-6	FS06	Soluble	Solid	300.0	57291
890-4903-7	FS07	Soluble	Solid	300.0	57291
890-4903-8	FS08	Soluble	Solid	300.0	57291
890-4903-9	FS09	Soluble	Solid	300.0	57291
890-4903-10	FS10	Soluble	Solid	300.0	57291
890-4903-11	SS05A	Soluble	Solid	300.0	57291
890-4903-12	SS07A	Soluble	Solid	300.0	57291
890-4903-13	SS08A	Soluble	Solid	300.0	57291
890-4903-14	SS10	Soluble	Solid	300.0	57291
890-4903-15	SS10A	Soluble	Solid	300.0	57291
MB 880-57291/1-A	Method Blank	Soluble	Solid	300.0	57291
LCS 880-57291/2-A	Lab Control Sample	Soluble	Solid	300.0	57291
LCSD 880-57291/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57291
890-4903-7 MS	FS07	Soluble	Solid	300.0	57291
890-4903-7 MSD	FS07	Soluble	Solid	300.0	57291

Lab Chronicle

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS01
Date Collected: 07/06/23 09:40
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-1
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			5.01 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 01:43	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/13/23 13:02	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	57313	07/10/23 13:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57440	07/12/23 17:27	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 13:09	SMC	EET MID

Client Sample ID: FS02
Date Collected: 07/06/23 09:45
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 02:03	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/13/23 13:02	SM	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	57313	07/10/23 13:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57440	07/12/23 17:50	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 13:24	SMC	EET MID

Client Sample ID: FS03
Date Collected: 07/06/23 09:50
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 02:24	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/13/23 13:02	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	57313	07/10/23 13:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57440	07/12/23 18:13	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 13:29	SMC	EET MID

Client Sample ID: FS04
Date Collected: 07/06/23 09:55
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 02:45	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS04

Date Collected: 07/06/23 09:55
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-4

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			57609	07/13/23 13:02	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	57313	07/10/23 13:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57440	07/12/23 18:35	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 13:34	SMC	EET MID

Client Sample ID: FS05

Date Collected: 07/06/23 10:00
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 04:07	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/13/23 13:02	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	57313	07/10/23 13:23	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57440	07/12/23 18:58	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 13:39	SMC	EET MID

Client Sample ID: FS06

Date Collected: 07/06/23 10:05
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 04:28	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/14/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	57559	07/13/23 08:00	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57551	07/13/23 10:49	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 13:45	SMC	EET MID

Client Sample ID: FS07

Date Collected: 07/06/23 10:10
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 04:49	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/14/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	57559	07/13/23 08:00	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57551	07/13/23 11:54	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: FS07
Date Collected: 07/06/23 10:10
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 13:50	SMC	EET MID

Client Sample ID: FS08
Date Collected: 07/06/23 10:15
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-8
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			4.95 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 05:09	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/14/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	57559	07/13/23 08:00	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57551	07/13/23 12:17	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 14:05	SMC	EET MID

Client Sample ID: FS09
Date Collected: 07/06/23 10:20
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 05:30	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/14/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	57559	07/13/23 08:00	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57551	07/13/23 12:39	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 14:10	SMC	EET MID

Client Sample ID: FS10
Date Collected: 07/06/23 10:25
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 05:51	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/14/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	57559	07/13/23 08:00	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57551	07/13/23 13:01	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 14:26	SMC	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: SS05A
Date Collected: 07/06/23 10:30
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-11
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			4.97 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 06:11	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/14/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	57559	07/13/23 08:00	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57551	07/13/23 13:23	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 14:31	SMC	EET MID

Client Sample ID: SS07A
Date Collected: 07/06/23 10:35
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 06:32	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/14/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	57559	07/13/23 08:00	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57551	07/13/23 13:45	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 14:36	SMC	EET MID

Client Sample ID: SS08A
Date Collected: 07/06/23 10:40
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 06:53	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/14/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	57559	07/13/23 08:00	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57551	07/13/23 14:06	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 14:41	SMC	EET MID

Client Sample ID: SS10
Date Collected: 07/06/23 10:45
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	57294	07/11/23 10:06	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/12/23 07:13	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Client Sample ID: SS10

Date Collected: 07/06/23 10:45
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-14

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			57609	07/14/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	57559	07/13/23 08:00	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57551	07/13/23 14:29	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 14:46	SMC	EET MID

Client Sample ID: SS10A

Date Collected: 07/06/23 10:50
Date Received: 07/06/23 13:51

Lab Sample ID: 890-4903-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	57389	07/11/23 10:19	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57380	07/11/23 19:32	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57483	07/12/23 10:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			57609	07/14/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	57559	07/13/23 08:00	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57551	07/13/23 14:51	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57291	07/10/23 09:53	KS	EET MID
Soluble	Analysis	300.0		1			57417	07/11/23 14:51	SMC	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: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Red Raider BKS State Com 001

Job ID: 890-4903-1
SDG: 03D2024198

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4903-1	FS01	Solid	07/06/23 09:40	07/06/23 13:51	1.0'
890-4903-2	FS02	Solid	07/06/23 09:45	07/06/23 13:51	1.0'
890-4903-3	FS03	Solid	07/06/23 09:50	07/06/23 13:51	1.0'
890-4903-4	FS04	Solid	07/06/23 09:55	07/06/23 13:51	1.0'
890-4903-5	FS05	Solid	07/06/23 10:00	07/06/23 13:51	1.0'
890-4903-6	FS06	Solid	07/06/23 10:05	07/06/23 13:51	1.0'
890-4903-7	FS07	Solid	07/06/23 10:10	07/06/23 13:51	1.0'
890-4903-8	FS08	Solid	07/06/23 10:15	07/06/23 13:51	1.0'
890-4903-9	FS09	Solid	07/06/23 10:20	07/06/23 13:51	1.0'
890-4903-10	FS10	Solid	07/06/23 10:25	07/06/23 13:51	1.0'
890-4903-11	SS05A	Solid	07/06/23 10:30	07/06/23 13:51	1.0'
890-4903-12	SS07A	Solid	07/06/23 10:35	07/06/23 13:51	1.0'
890-4903-13	SS08A	Solid	07/06/23 10:40	07/06/23 13:51	1.0'
890-4903-14	SS10	Solid	07/06/23 10:45	07/06/23 13:51	0.5
890-4903-15	SS10A	Solid	07/06/23 10:50	07/06/23 13:51	1.0'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-557-8895	Email:	hgreen@ensolum.com, 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:	Red Raider BKS State Com 001	Turn Around	
Project Number:	03D2024198	☑ Routine ☐ Rush	
Project Location:	32.1866,-103.5235	Due Date:	
Sampler's Name:	Peter Van Patten	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.6
Total Containers:		Corrected Temperature:	3.4

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2SO_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
FS01	Soil	7/6/2023	940	1.0'	Comp	1		x	x	x	
FS02	Soil	7/6/2023	945	1.0'	Comp	1		x	x	x	
FS03	Soil	7/6/2023	950	1.0'	Comp	1		x	x	x	
FS04	Soil	7/6/2023	955	1.0'	Comp	1		x	x	x	
FS05	Soil	7/6/2023	1000	1.0'	Comp	1		x	x	x	
FS06	Soil	7/6/2023	1005	1.0'	Comp	1		x	x	x	
FS07	Soil	7/6/2023	1010	1.0'	Comp	1		x	x	x	
~~FS08~~	~~Soil~~	~~7/6/2023~~	~~1015~~	~~1.0'~~	~~Comp~~	~~1~~		x	x	x	
FS09	Soil	7/6/2023	1020	1.0'	Comp	1		x	x	x	
FS10	Soil	7/6/2023	1025	1.0'	Comp	1		x	x	x	

890-4903 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Peter Van Patten		7.6.23 1359			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-557-8895	Email:	hgreen@ensolum.com, 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:	Red Raider BKS State Com 001	**Turn Around**	
Project Number:	03D2024198	☑ Routine ☐ Rush	
Project Location:	32.1866,-103.5235	Due Date:	
Sampler's Name:	Peter Van Patten	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

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

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
SS05A	Soil	7/6/2023	1030	1.0'	Comp	1		x	x	x	
SS07A	Soil	7/6/2023	1035	1.0'	Comp	1		x	x	x	
SS08A	Soil	7/6/2023	1040	1.0'	Comp	1		x	x	x	
SS10	Soil	7/6/2023	1045	0.5'	Comp	1		x	x	x	
SS10A	Soil	7/6/2023	1050	1.0'	Comp	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 Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Peter Van Patten		7.6.23 1350	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4903-1
SDG Number: 03D2024198

Login Number: 4903
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4903-1
SDG Number: 03D2024198

Login Number: 4903
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/10/23 08:30 AM

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

ENSOLUM

APPENDIX D

NMOCD Notifications

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 7/3/2023)
Date: Thursday, June 29, 2023 3:47:18 PM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, June 29, 2023 8:15 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>; Peter Van Patten <pvanpatten@ensolum.com>
Subject: [EXTERNAL] COP - Sampling Notification (Week of 7/3/2023)

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

All,

ConocoPhillips Company (COP) plans to complete sampling activities at the following site the week of July 3, 2023.

- Red Raider BKS Battery / NAPP2315734307
  - Sampling Date: 7/6/2023 @ 10:00 AM MST
- Brinninstool Unit 3H / NAPP2313138369

- Sampling Date: 7/7/2023 @ 10:00 AM MST

Thank you,

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

ENSOLUM

APPENDIX E

Final C-141

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NAPP2315734307
District RP	
Facility ID	fAPP2203856832
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Jacob Laird	Contact Telephone	(575) 703-5482
Contact email	Jacon.Laird@ConocoPhillips.com	Incident # *(assigned by OCD)*	NAPP2315734307
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.1865 Longitude -103.5246
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Red Raider BKS State 001	Site Type	Tank Battery
Date Release Discovered	June 1, 2023	API# *(if applicable)*	30-025-29141

Unit Letter	Section	Township	Range	County
J	25	24S	33E	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) 1.284	Volume Recovered (bbls) 0
☐ 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

The release was caused by fluid being sent out of the flare due to equipment malfunction resulting in a flare fire on and off the pad.
No fluid was recovered due to the fire burning off any standing fluid.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2315734307
District RP	
Facility ID	fAPP2203856832
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? The release involved a fire.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Immediate notice was given by Jacob Laird via e-mail June 1, 2023 at 4:08 PM to spills@slo.state.nm.us and ocd.enviro@emnrd.nm.gov.

Initial Response

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

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

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Brittany N. Esparza Title: Environmental Technician

Signature: Brittany Esparza Date: 6/6/2023

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

OCD Only

Received by: Jocelyn Harimon Date: 06/06/2023

L48 Spill Volume Estimate Form - Fill In Gray Cells

Facility Name & Well Number(s):	RED RAIDER BKS BATTERY			Release Discovery Date & Time:	6/1/23 @ 8AM		
Provide any known details about the event:	LOSS OF POWER OCCURRED TO THE FACILITY CAUSING AIR COMPRESSOR TO LOOSE PRESURE AND NOT PROVIDING AIR TO DUMPS RESULTING #4 KNOCK OUT TO SEND FLUID TO FLARE.			Primary Cause (dropdown):		Secondary Cause (dropdown):	

	Recovered Volume (bbl.) (if available, not included in volume calculations)	Method of Determination (dropdown)	Release Type (dropdown):	> 1/2" of Rain in Last 24 Hours (dropdown):	% Rainwater Recovered (not included in volume calculations, informational):
BU: Permian / Asset Area: DBE - Asset Avg.		Field Measurement	Oil	Yes	
Known Volume (dropdown):	No				
Known Area (dropdown):	No				

Spill Calculation - Subsurface Spill - Rectangle								Remediation Recommendation	
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Average Depth (in.)	On/Off Pad (dropdown)	Soil Spilled-Fluid Saturation (%.)	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Total Estimated Contaminated Soil, uncompacted, 25% (yd^3.)	Current Rule of Thumb - RMR Handover Volume, (yd^3.)
Rectangle A	18.0	18.0	0.3	Off-Pad	11.45%	1.20	0.14	0.31	
Rectangle B	45.0	60.0	0.3	Off-Pad	11.45%	10.01	1.15	2.60	
Rectangle C						0.00		0.00	
Rectangle D						0.00		0.00	
Rectangle E						0.00		0.00	750
Rectangle F						0.00		0.00	
Rectangle G						0.00		0.00	
Rectangle H						0.00		0.00	
Rectangle I						0.00		0.00	
Rectangle J						0.00		0.00	
Total Subsurface Volume Released:							1.2840	2.92	BU

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2315734307
District RP	
Facility ID	fAPP2203856832
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?	51-100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2315734307
District RP	
Facility ID	fAPP2203856832
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: __Jacob Laird_____ Title: __Environmental Engineer_____

Signature: Jacob Laird Date: _____8/17/2023_____

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

OCD Only

Received by: Shelly Wells Date: 8/22/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2315734307
District RP	
Facility ID	fAPP2203856832
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jacob Laird Title: Environmental Engineer

Signature: Jacob Laird Date: 8/17/2023

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

OCD Only

Received by: Shelly Wells Date: 8/22/2023

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

Closure Approved by: Nelson Velez Date: 08/30/2023

Printed Name: Nelson Velez Title: Environmental Specialist - Adv

ENSOLUM

APPENDIX F

Reclamation Plan

Reclamation Plan

The release affected a pasture area and as such, reclamation requirements set forth in 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation were applied.

The following Reclamation Plan addresses reclamation of the off-pad excavation area and has been developed through review and application of the *Revegetation Guidelines Handbook for Southeastern New Mexico* – Version 1-1, authored by NMSLO and dated 2018, and 19.2.100.67 NMAC – *Surface Reclamation on State Oil and Gas Leases*:

- The excavation will be backfilled with locally sourced caliche and topsoil to match surrounding grade. A minimum of 1-foot of topsoil will be placed on top of the caliche to support vegetative growth within the disturbed area;
- Soil in the vicinity of the release in the pasture will be assessed for the proper application of *Table 3 - Revegetation Plans, Codes, and Soil Types for Southeastern New Mexico*;
- The backfilled areas will be seeded utilizing a weed-free seed mix designed listed in the table below;

Common Name and Preferred Variety	Scientific Name	PLS Per Acre
Annual Quick-cover Grass		
Oats	*Avena sativa*	1.00
Cool Season Grass		
Western Wheatgrass	*Agropyron smithii*	2.50
Warm-Season Grass		
Black or Blue Grama	*Boutela gracilis var. Alma*	1.50
Little Bluestem	*Schizachyrium scoparium*	0.50
Sand Dropseed	*Sporobolus cryptandrus*	0.50
Sand Bluestem	*Andropogon hallii*	1.00
Indiangrass	*Sorghastrum nutans*	0.50
Sideoats Grama	*Bouteloua curtipendula var. Vaughn*	2.00
Wildflowers/ Forbs		
White prairie clover	*Dalea candida*	0.10
Scarlet globemallow	*Sphaeralcea coccinea*	0.10
Chia Sage	*Salvia columbariae*	0.10
Annual sunflower	*Helianthus annuus*	0.10
Annual buckwheat	*Eriogonum annuum*	0.10

- The seed mixture will be distributed with one or more of the following methods: push broadcaster seed spreader, tractor operated broadcast seed spreader, and/or drill seeding based on Site conditions and contractor availability;
- Application of the seed mixture will be at a coverage of 10 pounds of seeds per acre of reclaimed pasture with distribution by a drilling method or 20 pounds of seeds per acre of reclaimed pasture with distribution by a broadcast method;

- Erosion control management is not anticipated since the proposed excavation area is relatively flat; however, in the event erosion control management is necessary to support vegetation growth and minimize erosion until the root structures take hold, the application of the following best management practices (BMPs) could potentially include:
    - Prompt revegetation with mulching and contouring the ground surface to limit surface water flow;
    - The placement of waddles in areas with a propensity for high run off rates;
    - Straw cover if high winds are anticipated to support moisture retention and limit wind from blowing seeds away before they have had time to germinate; and/or
    - Other erosional control best management practices (BMP) as necessary to support timely and healthy regrowth of vegetation in disturbed areas;
- Backfilling of the excavation will be scheduled and communicated with NMSLO prior to initiation;
- Seeding is anticipated to be completed in the Fall when temperatures and precipitation are most conducive for vegetation growth. In general, seeding should occur approximately one month after the last frost in the Spring up until approximately one month prior to the first fall frost. NMSLO has recognized the optimal time to seed is between July and early September, which will be the preferred timeframe for this Site;
- If seeding occurs outside of the 180 days approved in the current fully executed ROE Permit, a new ROE Permit will be executed prior to entering the pasture for reclamation activities;
- Annual inspections (at a minimum) will take place on the location until revegetation is consistent with local natural vegetation density. The Site will be inspected the following Fall to assess the success of regrowth. If necessary, an additional application of the NMSLO-approved pure live seed mixture will be applied as well as any needed BMPs will be installed to support growth and limit erosion; and
- Upon completion of revegetation, a copy of the C-103 submitted to NMOCD will also be submitted to NMSLO for final inspection and release.

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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
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CONDITIONS

Action 255413

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 255413
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	8/30/2023