

September 27, 2022

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

Re: Remediation Work Plan

James E Upper Tank Battery
Incident Numbers NAPP2129846676, NAPP2200639375, and NAPP2202446534

Lea County. New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of ConocoPhillips Company (COP), has prepared the following Remediation Work Plan to document site assessment and soil sampling activities completed to date and propose a work plan to address impacted soil identified at the James E Upper Tank Battery (Site). The purpose of the site assessment and soil sampling activities was to delineate and vertical and lateral extent of impacted soil resulting from three overlapping release events at the Site. Assessment began following the initial release, but this work plan proposes addressing the three releases concurrently by excavation of the impacted soil at the Site.

#### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit E, Section 12, Township 22 South, Range 30 East, in Lea County, New Mexico (32.408333° N, 103.840278°W) and is associated with oil and gas exploration and production operations on Bureau of Land Management (BLM) Federal Land.

#### NAPP2129846676

On October 12, 2021, a water dump valve malfunctioned causing the release of approximately 15.8 barrels (bbls) of produced water and 2.2 bbls of crude oil onto the surface of the well pad and overspray into the adjacent pasture. No released fluids were recovered. COP reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on October 25, 2021. The release was assigned Incident Number NAPP2129846676.

#### NAPP2200639375

On December 20, 2021, a pressure relief valve on the separator failed causing a release of approximately 21 bbls of produced water and 3 bbls of crude oil onto the surface of the well pad and overspray into the adjacent pasture. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; approximately 2 bbls of crude oil were recovered. COP reported the release to the NMOCD on a Release Notification Form C-141 on January 6, 2022. The release was assigned Incident Number NAPP2200639375.

#### NAPP2202446534

On January 1, 2022, a valve failure caused a release of approximately 61 bbls of crude oil onto the surface of the well pad and into the adjacent pasture. No released fluids were recovered. COP reported the release to the NMOCD via email on January 3, 2022 and submitted a Release Notification Form C-141 on January 24, 2022. The release was assigned Incident Number NAPP2202446534.

#### SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. On May 13, 2021, borehole C-4528 (New Mexico Office of the State Engineer (NMOSE) file number C-4528) was advanced to a depth of 104 feet bgs via hollow stem auger rig. The borehole was located approximately 0.4 miles southwest of the Site and is depicted on Figure 1. A field geologist logged and described soils continuously. The Well Record and Log is included in Appendix A. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period, groundwater was not observed and it was confirmed that groundwater in the area is greater than 104 feet bgs. The borehole was properly abandoned using hydrated bentonite chips. All wells used for depth to groundwater determination are depicted on Figure 1.

The closest continuously flowing or significant watercourse to the Site is a drainage off Livingston Ridge, located approximately 1,246 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 (medium potential karst designation area). Site receptors are identified on Figure 1.

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

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

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



James E Upper

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**INITIAL SITE ASSESSMENT ACTIVITIES** 

# Between October 26, 2021 and November 23, 2021, site assessment activities were conducted to evaluate the October 12, 2021 (NAPP2129846676) release extent based on information provided on the Form C-141 and visual observations. Fourteen preliminary assessment soil samples (SS01 through SS14) were collected within the release extent from a depth of 0.5 feet bgs. The preliminary soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The October 12, 2021 release extent, overspray extent, and preliminary soil sample locations were mapped utilizing a handheld global positioning system (GPS) unit and are depicted on Figure 2.

On December 29, 2021, personnel visited the Site to evaluate the December 20, 2021 (NAPP2200639375) release extent. Ten preliminary assessment soil samples (SS01 through SS10) were collected from a depth of 0.5 feet bgs. The preliminary samples were field screened as described above. The December 20, 2021 release extent, overspray extent, and preliminary soil sample locations are depicted on Figure 2.

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

Laboratory analytical results for preliminary soil samples collected from the release extents on pad and one preliminary soil sample collected off pad indicated TPH-GRO/TPH-DRO, TPH, and/or chloride concentrations exceeded the Site Closure Criteria. One soil sample collected on pad (SS06 for NAPP2200639375) and the remaining off-pad samples collected from overspray areas indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and reclamation requirement. Based on visible staining in the release area, timing of the releases, and the unrecovered volume of released fluids, additional delineation was warranted.

#### **RESPONSE AND DELINEATION ACTIVITIES**

Following the initial release (NAPP2129846676), the Bureau of Land Management (BLM) requested an archaeological survey in the undeveloped pasture prior to additional investigation and remediation efforts. The survey was conducted on November 11, 2021 and the BLM cleared the Site for remediation activities after subsequent review. By that time, two additional release events occurred at the Site on December 20, 2021 (Incident Number NAPP2200639375) and January 1, 2022 (Incident Number NAPP2202446534). Those releases prompted BLM to request another archeological survey, which was conducted February 2, 2022. The BLM cleared the undeveloped portion of the Site for all investigation and remediation activities in April 2022.

COP conducted an initial scrape of saturated soil on pad immediately after the third release event. On May 9, 2022 and May 10, 2022, Ensolum personnel were at the Site to oversee comprehensive delineation activities of all three releases. Nineteen boreholes (TP1 through TP19) were advanced via hand-auger within and around the release extents for incident numbers NAPP2129846676, NAPP2200639375, and the eastern extent of NAPP2202446534, which all overlapped. The boreholes were advanced to a depth of 3 feet bgs. Delineation soil samples were collected from each borehole from depths ranging from ground surface to 3 feet bgs. Soil from the boreholes was field screened for VOCs and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the boreholes



James E Upper

were logged on lithologic soil sampling logs, which are included in Appendix B. The delineation soil sample locations are depicted on Figure 3. Photographic documentation is included in Appendix C.

Laboratory analytical results for delineation soil samples indicate samples collected from the area of overlapping releases contain concentrations of benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations that exceeded the Site Closure Criteria. Soil samples collected from the overspray areas, the eastern portion of the release footprint of NAPP2202446534, and samples collected outside the release and overspray footprints were compliant with site Closure Criteria. All of those samples were also compliant with the reclamation standard, except for TP10. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

#### **PROPOSED WORK PLAN**

Impacted soil has been identified in areas of TP1, TP2, TP3, TP7, and TP11 within the overlapping release footprint to a depth of approximately 3 feet bgs. As a result, COP proposes excavation of impacted soil at the Site.

COP requests approval to complete the following remediation activities:

- Excavation of impacted soil in on-pad areas of TP1, TP2, TP7, and TP11. Excavation will proceed laterally until sidewall samples confirm chloride and TPH concentrations are compliant with the Site Closure Criteria.
- Excavation of chloride and TPH impacted soil in the top 4 feet of the off-pad area in the vicinity of TP3. Excavation will proceed laterally until sidewall samples confirm chloride and TPH concentrations are compliant with the reclamation requirement in the top 4 feet.
- An estimated 1,200 cubic yards of impacted soil will be excavated and disposed of at a licensed disposal facility.
- The excavation is estimated to be 10,000 square feet in size, and COP requests a variance for frequency of excavation confirmation samples. COP proposes the frequency of confirmation sampling for the excavation floor to be decreased from every 200 square feet (approximately 50 samples) to every 400 square feet (approximately 25 samples). Each 5-point composite floor sample will represent a 400 square foot area. Sidewall samples will be collected at a frequency of every 200 square feet. The 5-point composite samples will be collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The excavation samples will be analyzed for TPH and chloride only since BTEX was not detected above site Closure Criteria in any delineation sample.
- The excavation will be backfilled and recontoured to match pre-existing conditions. The disturbed pasture will be re-seeded with an approved Bureau of Land Management (BLM) seed mixture.

COP will complete the excavation activities within 90 days of the date of approval of this RWP by the NMOCD. A report detailing remedial actions will be submitted within 30 days of receipt of laboratory analytical results.

COP believes the scope of work described above will meet requirements set forth in 19.15.29.13 NMAC and are protective of human health, the environment, and groundwater. As such, COP respectfully requests approval of this RWP from NMOCD.



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

Sincerely, **Ensolum**, **LLC** 

Kalei Jennings Senior Scientist Daniel, R. Moir, PG Senior Managing Geologist

cc: Charles Beauvais, ConocoPhillips Company

**Bureau of Land Management** 

#### Attachments:

Figure 1 Site Receptor Map
Figure 2 Preliminary Soil Sample Locations
Figure 3 Delineation Soil Sample Locations

Figure 3 Delineation Soil Sample Locations
Table 1 Soil Sample Analytical Results

Appendix A Well Record and Log

Appendix B Lithologic / Soil Sampling Log

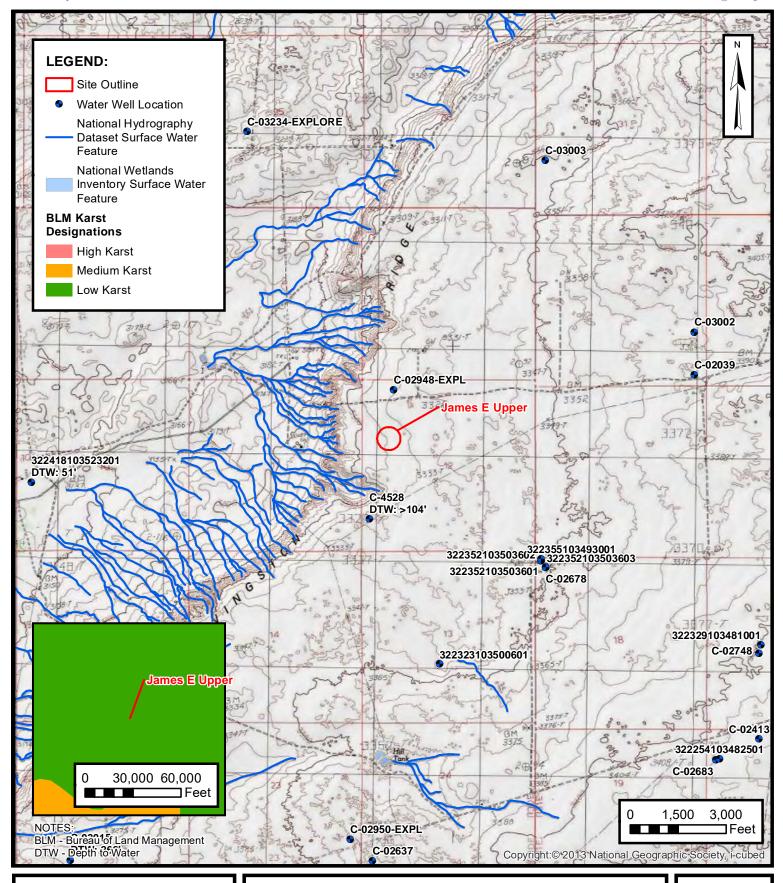
Appendix C Photographic Log

Appendix D Laboratory Analytical Reports

Appendix E Final C-141



**FIGURES** 





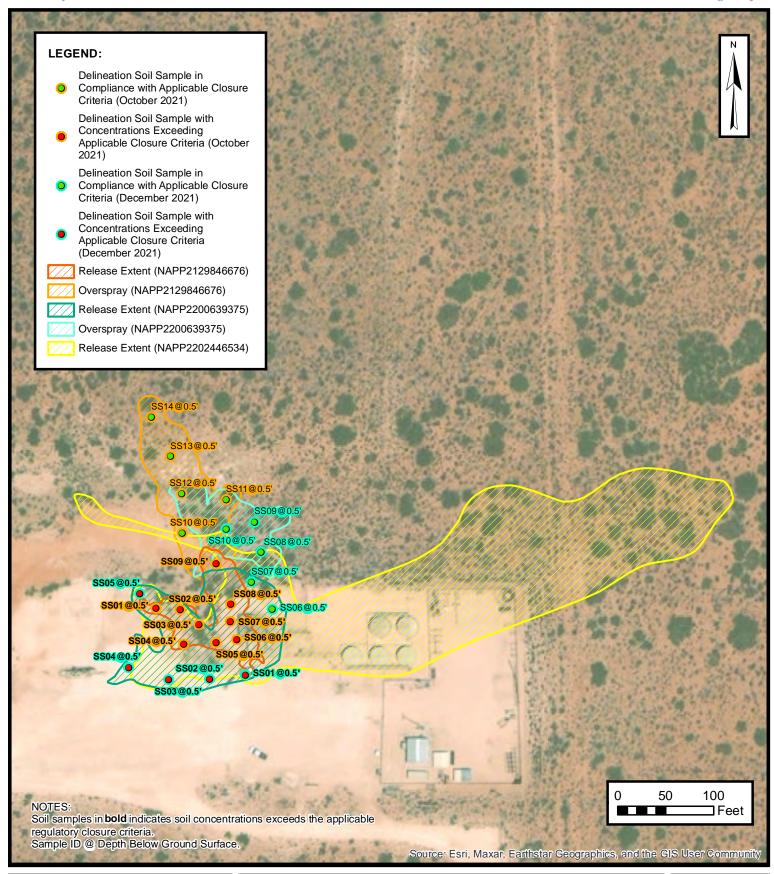
#### SITE RECEPTOR MAP

CONOCOPHILLIPS COMPANY
JAMES E UPPER
2129846676, NAPP2200639375, NAPP2202

NAPP2129846676, NAPP2200639375, NAPP2202446534 Unit E, Sec 12, T22S, R30 E Lea County, New Mexico 1

**FIGURE** 

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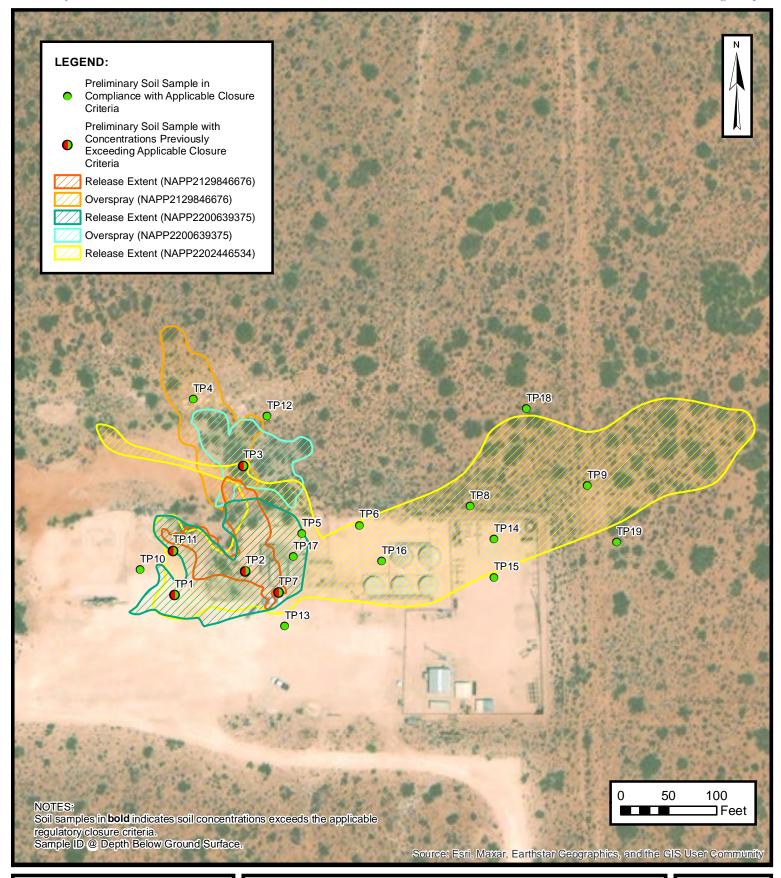




#### PRELIMINARY SOIL SAMPLE LOCATIONS

CONOCOPHILLIPS COMPANY JAMES E UPPER

NAPP2129846676, NAPP2200639375, NAPP2202446534 Unit E, Sec 12, T22S, R30 E Lea County, New Mexico FIGURE 2





#### **DELINEATION SOIL SAMPLE LOCATIONS**

CONOCOPHILLIPS COMPANY JAMES E UPPER

NAPP2129846676, NAPP2200639375, NAPP2202446534 Unit E, Sec 12, T22S, R30 E Lea County, New Mexico FIGURE

3



**TABLES** 



## TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS

James E Upper ConocoPhillips Company Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)	
NMOCD Table 1 C	losure Criteria (	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000	
			Р	reliminary Assessr	nent Soil Sample	es (NAPP2129846	676)	1	1		
SS01	10/26/2021	0.5	0.0262	0.123	<249	5,270	927	5,270	6,200	23,200	
SS02	10/26/2021	0.5	0.00417	0.0354	<250	2,450	554	2,450	3,000	15,600	
SS03	10/26/2021	0.5	0.00341	0.0639	<250	7,430	1,210	7,430	8,640	29,800	
SS04	10/26/2021	0.5	0.0194	0.044	<250	6,820	1,370	6,820	8,190	25,500	
SS05	10/26/2021	0.5	0.012	0.0192	<249	10,000	1,780	10,000	11,800	24,800	
SS06	10/26/2021	0.5	<0.00200	<0.00399	<250	8,260	1,420	8,260	9,680	16,700	
SS07	10/26/2021	0.5	<0.00199	<0.00398	<249	7,910	1,400	7,910	9,310	22,700	
SS08	10/26/2021	0.5	<0.00198	0.0106	<250	7,390	1,420	7,390	8,810	14,300	
SS09	10/26/2021	0.5	<0.00198	0.0108	<250	2,190	600	2,190	2,790	3,230	
SS10	11/23/2021	0.5	<0.00199	0.0269	<49.9	61.9	<49.9	61.9	61.9	112*	
SS11	11/23/2021	0.5	<0.00200	0.00873	<50.0	<50.0	<50.0	<50.0	<50.0	103*	
SS12	11/23/2021	0.5	<0.00200	<0.00401	<49.9	75.3	<49.9	75.3	75.3	105*	
SS13	11/23/2021	0.5	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	48.9*	
SS14	11/23/2021	0.5	<0.00200	0.00703	<49.8	<49.8	<49.8	<49.8	<49.8	11.6*	
			P	reliminary Assessr	ment Soil Sample	es (NAPP2200639	375)				
SS01	12/29/2021	0.5	0.135	12.4	774	6,280	<500	7,050	7,050	7,510	
SS02	12/29/2021	0.5	<0.0400	8.40	672	4,980	<250	5,650	5,650	427	
SS03	12/29/2021	0.5	0.0712	20.9	1,390	7,590	<499	8,980	8,980	2,980	
SS04	12/29/2021	0.5	0.265	22.4	1,930	8,560	<499	10,500	10,500	993	
SS05	12/29/2021	0.5	0.342	31.9	1,820	10,300	<500	12,100	12,100	866	
SS06	12/29/2021	0.5	<0.0398	1.53	<50.0	97.6	<50.0	97.6	97.6	11,000	
SS07	12/29/2021	0.5	<0.0402	0.398	<50.0	594	<50.0	594	594	44.7	
SS08	12/29/2021	0.5	0.00857	0.0589	<49.9	55.8	<49.9	55.8	55.8	8.66*	
SS09	12/29/2021	0.5	0.00497	0.0424	<50.0	<50.0	<50.0	<50.0	<50.0	19.1*	
SS10	12/29/2021	0.5	0.0169	0.0835	<49.9	<49.9	<49.9	<49.9	<49.9	14.0*	
				Deli	ineation Soil San	ples					
TP1-0-1	05/09/2022	0 - 1	<0.00201	0.165	368	8,570	2,700	8,938	11,600	292	
TP1-2-3	05/09/2022	2 - 3	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	648	
TP2-0-1	05/09/2022	0 - 1	<0.00202	<0.00403	<50.0	3,450	846	3,450	4,300	744	
TP2-1-2	05/09/2022	1 - 2	<0.00200	0.178	<49.9	<49.9	<49.9	<49.9	<49.9	323	
TP3-0-1	05/09/2022	0 - 1	<0.000397	0.0714	<250	5,860	1,440	5,860	7,300	1,020*	
TP3-2-3	05/09/2022	2 - 3	<0.00200	0.0561	<49.9	<49.9	<49.9	<49.9	<49.9	41.2*	
TP4-0-1	05/09/2022	0 - 1	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	30.6*	
TP4-1-2	05/09/2022	1 - 2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	594*	

Ensolum

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### TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS

James E Upper ConocoPhillips Company Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 C	losure Criteria (	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
TP5-0-1	05/09/2022	0 - 1	<0.00200	<0.00400	<49.9	787	312	787	1,100	714
TP5-2-3	05/09/2022	2 - 3	< 0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	226
TP6-0-1	05/09/2022	0 - 1	<0.00201	0.0454	<49.9	<49.9	<49.9	<49.9	<49.9	55.9
TP6-2-3	05/09/2022	2 - 3	< 0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	69.8
TP7-0-1	05/09/2022	0 - 1	<0.00200	< 0.00399	<249	14,000	3,740	14,000	17,700	3,860
TP7-2-3	05/09/2022	2 - 3	< 0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	797
TP8-0-1	05/09/2022	0 - 1	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	26.5*
TP8-1-2	05/09/2022	1 - 2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	10.6*
TP9-0-1	05/09/2022	0 - 1	<0.00200	< 0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	5.83*
TP9-1-2	05/09/2022	1 - 2	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	<4.99*
TP10-0-1	05/10/2022	0 - 1	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	1,650
TP10-2-3	05/10/2022	2 - 3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	1,300
TP11-0-1	05/10/2022	0 - 1	<0.199	16.4	1,780	11,700	2,980	13,480	16,500	3,220
TP11-2-3	05/10/2022	2 - 3	< 0.00200	< 0.00399	<49.9	52.3	92.3	52.3	145	1,160
TP12-0-1	05/10/2022	0 - 1	<0.00201	<0.00402	<50.0	<50.0	56.9	<50.0	56.9	8.68*
TP12-1-2	05/10/2022	1 - 2	< 0.00199	<0.00398	<49.9	<49.9	72.5	<49.9	72.5	10.3*
TP13-0-1	05/10/2022	0 - 1	<0.00200	<0.00400	<50.0	<50.0	211	<50.0	211	54.6
TP13-2-3	05/10/2022	2 - 3	< 0.00202	< 0.00403	<49.9	<49.9	63.3	<49.9	63.3	54.5
TP14-0-1	05/10/2022	0 - 1	<0.00199	<0.00398	<49.9	166	157	166	323	15.8
TP14-2-3	05/10/2022	2 - 3	< 0.00201	<0.00402	<50.0	<50.0	57.4	<50.0	57.4	11.4
TP15-1-2	05/10/2022	1 - 2	<0.00200	<0.00401	<50.0	<50.0	50.2	<50.0	50.2	8.17
TP15-2-3	05/10/2022	2 - 3	< 0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	8.55
TP16-0-1	05/10/2022	0 - 1	<0.00200	<0.00400	<50.0	165	124	165	289	129
TP16-2-3	05/10/2022	2 - 3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	15.1
TP17-0-1	05/10/2022	0 - 1	<0.00198	<0.00396	<49.8	776	225	776	1,000	195
TP17-2-3	05/10/2022	2 - 3	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	14.1
TP18-0-1	05/10/2022	0 - 1	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	<5.01*
TP18-1-2	05/10/2022	1 - 2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	<4.98*
TP19-0-1	05/10/2022	0 - 1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	<5.04*
TP19-1-2	05/10/2022	1 - 2	<0.00198	< 0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	<4.97*

#### Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or

reclamation standard where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

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

Grey text represents samples that have been excavated



**APPENDIX A** 

Well Record and Log



2904 W 2nd St. Roswell, NM 88201 voice: 575.624.2420 fax: 575.624.2421 www.afkinseng.com

06/07/2021

DII-NMOSE 1900 W 2<sup>nd</sup> Street Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4528 Pod1

To whom it may concern:

Attached please find a well record and a plugging record, in duplicate, for a one (1) soil borings, C-4528 Pod1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

Lucas Middleton

Enclosures: as noted above

Gran Maddin



## PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

State	Engineer Well Number	G-4526-POD1		400 000 0070			
	owner: XTO ENERGY		Phone No.: 432.682.8873				
Maili	ng address: 6401 Holid	ay Hill Dr.					
City:	Midland	State:	Texas	Zip code:			
11 W	ELL PLUGGING IN	FODMATION.					
1)		g company that plugged well:	e D. Atkins ( Atkins Engine	ering Associates Inc.)			
2)		oriller License No.: 1249		xpiration Date: 04/30/23			
3)		ties were supervised by the following melo Trevino, Cameron Pruitt	g well driller(s)/rig supervi	sor(s):			
4)	Date well plugging l	pegan: 05/24/2021	Date well plugging conclu	ded: 05/24/2021			
5)	GPS Well Location:	Latitude: 32 deg Longitude: 103 deg	,,	49 sec .81 sec, WGS 84			
6)	Depth of well confir by the following ma	med at initiation of plugging as: nner: weighted tape	111 ft below ground le	vel (bgl),			
7)	Static water level me	easured at initiation of plugging:	n/a ft bgl				
8)	Date well plugging p	plan of operations was approved by the	ne State Engineer: 04/22/	2021			
9)	Were all plugging addifferences between	ctivities consistent with an approved p the approved plugging plan and the v	olugging plan? Yes well as it was plugged (atta	If not, please describe ch additional pages as needed):			
				To the state of th			
			i	20 E DIT DIN 16 2021 *#2115			
l .							

Version: September 8, 2009

Page 1 of 2

Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

#### For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging <u>Material Used</u> (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement  Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
-	0-20' Hydrated Bentonite	Approx. 31.2 gallons	31 gallons	Augers	
=	20'-110' Drill Cuttings	Approx. 143 gallons	143 gallons	Boring	
2 <del>-</del>					
_					
-					
-					
; ;				15000	D14 10 2021 # 2/18
-	•	MULTIPLY I cubic feet x 7.4 cubic yards x 201.9	9Y AND OBTAIN 4805 = gallons 97 = gallons		

#### III. SIGNATURE:

III. SIGNATURE:	
	miliar with the rules of the Office of the State
Engineer pertaining to the plugging of wells and that each and all of the st	atements in this Plugging Record and attachments
are true to the best of my knowledge and belief.	
Jack Atkins	
<i></i>	06/09/2021
Signature of	Well Driller Date

Version: September 8, 2009 Page 2 of 2

# 2021-06-07\_C-4528\_POD1\_OSE\_Well Record and Log\_jru48-forsign

Final Audit Report 2021-06-09

Created: 2021-06-09

By: Lucas Middleton (lucas@atkinseng.com)

Status: Signed

Transaction ID: CBJCHBCAABAA\_6yJIJ952KoX8InHTASSi3jWs4Irji07

# "2021-06-07\_C-4528\_POD1\_OSE\_Well Record and Log\_jru48-f orsign" History

- Document created by Lucas Middleton (lucas@atkinseng.com) 2021-06-09 - 5:45:18 PM GMT- IP address: 69.21.248.123
- Document emailed to Jack Atkins (jack@atkinseng.com) for signature 2021-06-09 5:45:46 PM GMT
- Email viewed by Jack Atkins (jack@atkinseng.com) 2021-06-09 6:45:58 PM GMT- IP address: 64.90.153,232
- Document e-signed by Jack Atkins (jack@atkinseng.com)

  Signature Date: 2021-06-09 6:46:21 PM GMT Time Source: server- IP address: 64.90.153.232
- Agreement completed. 2021-06-09 - 6:46:21 PM GMT

CSU ST JUN 10 202 1 MOLES



PAGE 1 OF 2

WELL TAG ID NO.



	OSE POD NO. (W	ELL NO.	`	т.	VELL TAG ID NO.			OSE FILE NO(	2)				
NO	POD1 (MW-		,		/a /a	•		C-4528	-7.				
OCATI		WELL OWNER NAME(S) XTO Energy (Kyle Littrell)							PHONE (OPTIONAL)				
VELL L		well owner mailing address 6401 Holiday Hill Dr.						CITY Midland		STATE TX	79707	ZIP	
GENERAL AND WELL LOCATION	(FROM GPS)		TTUDE	GREES 32° 103°	MINUTES 24' 50'	SECOND 8.49' 31.81	' N " W	* DATUM REC	REQUIRED: ONE TEN				
1.6	SW SW Sec. 1			STREET ADDRES	SS AND COMMO	A LANDIVIAN	KS-FL	S (SECTION, 10	WNSIBIE, KANGE) WI	ILICO A VAI	LABLE		
	LICENSE NO. 1249		NAME OF LICENSED		ckie D. Atkins				NAME OF WELL DR Atkins En		MPANY Associates, I	nc.	
	DRILLING STAR 05/13/202		DRILLING ENDED 05/13/2021		PLETED WELL (F ry well materia	.,	BORE HO	LE DEPTH (FT) 104	DEPTH WATER FIR	ST ENCOU n/a	NTERED (FT)		
z	COMPLETED WI	ELL IS:	ARTESIAN	✓ DRY HOLE	SHALLO	W (UNCON	FINED)		STATIC WATER LE	vel in coi n/a	MPLETED WE	LL (FT)	
(TIO	DRILLING FLUII	):	✓ AIR	MUD	ADDITIV	/ES – SPECII	Y:						
RM.	DRILLING METH	CABLE 1	CABLE TOOL OTHER - SPECIFY:			Hollow Stem Auger							
CASING INFORMATION	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)		, and	CON	ASING NECTION TYPE ling diameter)	CASING INSIDE DIAM. (inches)	THI	NG WALL CKNESS nches)	SLOT SIZE (inches	
NG & CA	0	104	±6.5	Boring- HSA			(				-	-	
2. DRILLING &													
	DEPTH (fee	t bgl)	BORE HOLE		ANNULAR SI				AMOUNT	T	метно		
VTERIAL	FROM	ТО	DIAM. (inches)	GRAV	EL PACK SIZE	-RANGE I	BY INTI	ERVAL	(cubic feet)		PLACEM	ient	
ANNULAR MATERIAL													
3. ANI									the state of the same	V _0 Z	W1 7827.	Ž.	
	OSE INTERNA	L USE			POD NO			WR-2	WELL RECORD	& LOG (	Version 06/3	0/17)	

LOCATION

DEPTH (f	eet bgl)	WATER BEARING?	ESTIMATED YIELD FOR				
FROM	то	(YES/NO)	WATER- BEARING ZONES (gpm				
0	9	24	SAND, poorly graded, very- fine grained, caliche gravel, light-brown	Y ✓N			
9	14	5	SAND, well graded, very- fine grained, caliche gravel, tan	Y ✓N			
14	14 19 5 SAND, well graded, very- fine grained, caliche gravel, Tan-Reddish brown, dry						
19	29	10	SAND, poorly graded, very- fine grained, caliche gravel, Tan- Reddish brow	n, d Y ✓N			
29	34	Y ✓N					
34	44	10	CLAYEY SAND, low plasticity, very- fine grained, Reddish brown, dry	Y /N			
44	49	5	SAND, poorly graded, very- fine grained, some silt, Reddish brown,	Y √N			
49	54	5	SILTY SAND, poorly graded, very- fine grained, some silt, Light-brown	, Y <b>√</b> N			
54	59	5	CLAYEY SAND, low plasticity, very- fine grained, Dark brown, dry	Y ✓N			
59	64	5	CLAY, low plasticity, very- fine grained, Reddish brown, dry	Y ✓N			
34 44 49 54 59 64 69	69	5	CLAY, High plasticity, very- fine grained, Reddish brown, dry	Y ✓N			
69	104	35	CLAY, High plasticity, very- fine grained, Dark Brown, dry	Y √N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
	-			Y N			
				Y N			
METHOD U	SED TO E	STIMATE YIELI	OF WATER-BEARING STRATA:	OTAL ESTIMATED			
PUMI	P []A	AIR LIFT	BAILER OTHER - SPECIFY:	WELL YIELD (gpm):	0.00		
WELL TES	TEST STAR	RESULTS - ATT	ACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCL ME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER	UDING DISCHARGE I	METHOD, DD.		
MISCELLAI PRINT NAM	NEOUS IN	fe	emporary well materials removed and the soil boring backfilled using et below ground surface, then hydrated bentonite chips from ten feet logs adapted from WSP on-site geologist.	drill cuttings from to below ground surface	tal depth to ter to surface.		
PRINTNAN	Œ(S) OF T	RILL RIG SUPE	RVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONST	RUCTION OTHER TH	IAN LICENSE		
2		elo Trevino, Car					
CORRECT I	RECORD (	OF THE ABOVE	FIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RE 30 DAYS AFTER COMPLETION OF WELL DRILLING:	F, THE FOREGOING CORD WITH THE ST	IS A TRUE AN ATE ENGINEE		
Oack At	kins		Jackie D. Atkins	06/09/2021			
5							

POD NO.

TRN NO.

WELL TAG ID NO.

PAGE 2 OF 2

FILE NO.

LOCATION



USGS Home Contact USGS Search USGS

#### **National Water Information System: Web Interface**

USGS Water Resources	(Cooperator Access)	Data Category:	Geographic Area:	
Vater Resources	(Cooperator Access)	Site Information	✓ United States	<b>∨</b> GO

#### Click to hideNews Bulletins

- Explore the NEW <u>USGS National Water Dashboard</u> interactive map to access realtime water <u>data</u> from over 13,500 stations nationwide.
- Full News

#### USGS 322557103502401 21S.30E.36.31321

Available data for this site SUMMARY OF ALL AVAILABLE DATA → GO

#### **Well Site**

#### **DESCRIPTION:**

Latitude 32°25'57", Longitude 103°50'24" NAD27 Eddy County, New Mexico , Hydrologic Unit 13060011

Well depth: not determined.

Land surface altitude: 3,231 feet above NAVD88.

Well completed in "Other aquifers" (N9999OTHER) national aquifer.

Well completed in "Rustler Formation" (312RSLR) local aquifer

#### AVAILABLE DATA:

Data Type	<b>Begin Date</b>	End Date	Count
Field groundwater-level measurements	1976-12-09	1998-02-19	6
Revisions	Unavailable (	site:0) (timese	eries:0)

#### **OPERATION:**

Record for this site is maintained by the USGS New Mexico Water Science Center Email questions about this site to <a href="New Mexico Water Science Center Water-Data">New Mexico Water Science Center Water-Data</a> <a href="Inquiries">Inquiries</a>

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

Released to Imaging: 12/6/2022 4:11:46 PM

Accessibility FOIA Privacy Policies and Notices

<u>U.S. Department of the Interior</u> | <u>U.S. Geological Survey</u>

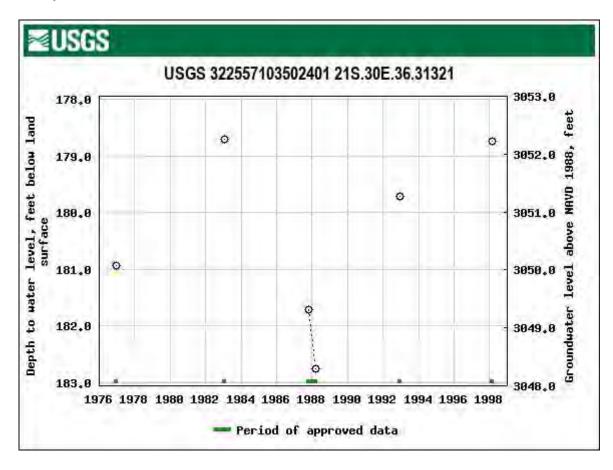
Title: NWIS Site Information for USA: Site Inventory URL: https://waterdata.usgs.gov/nwis/inventory?agency\_code=USGS&site\_no=322557103502401

Page Contact Information: New Mexico Water Data Support Team

Page Last Modified: 2021-10-27 13:44:46 EDT

0.33 0.31 sdww01

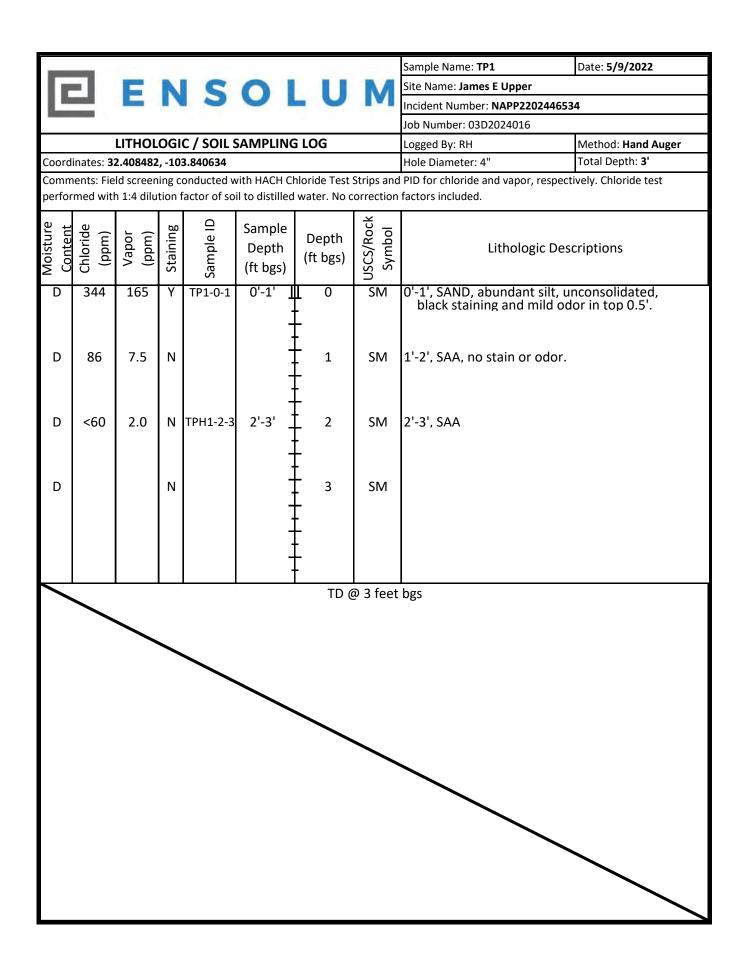


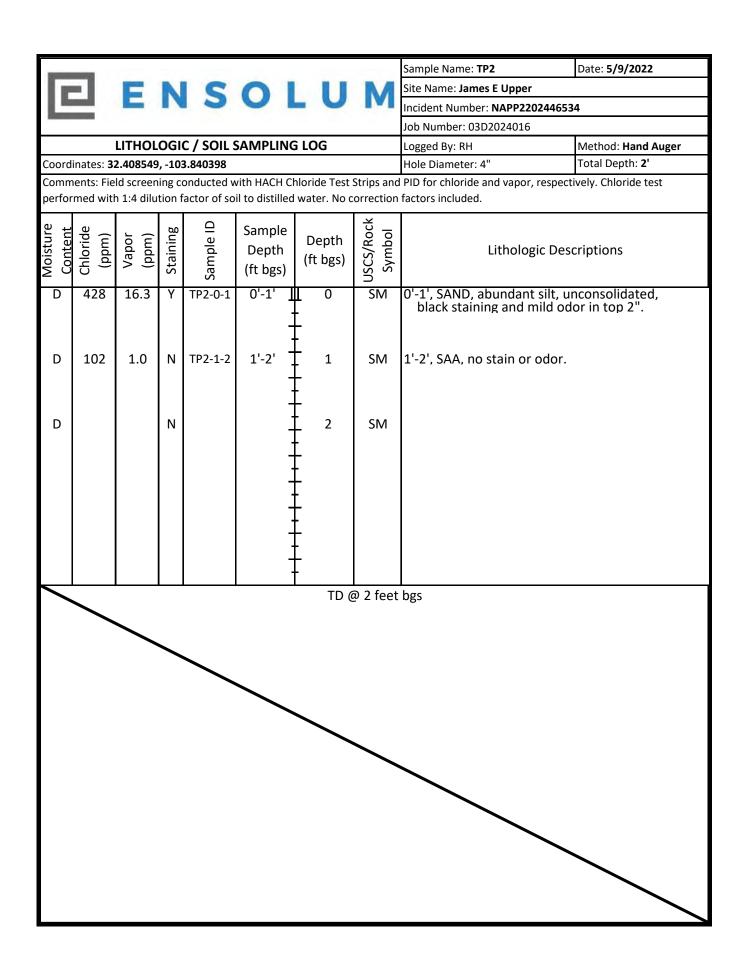


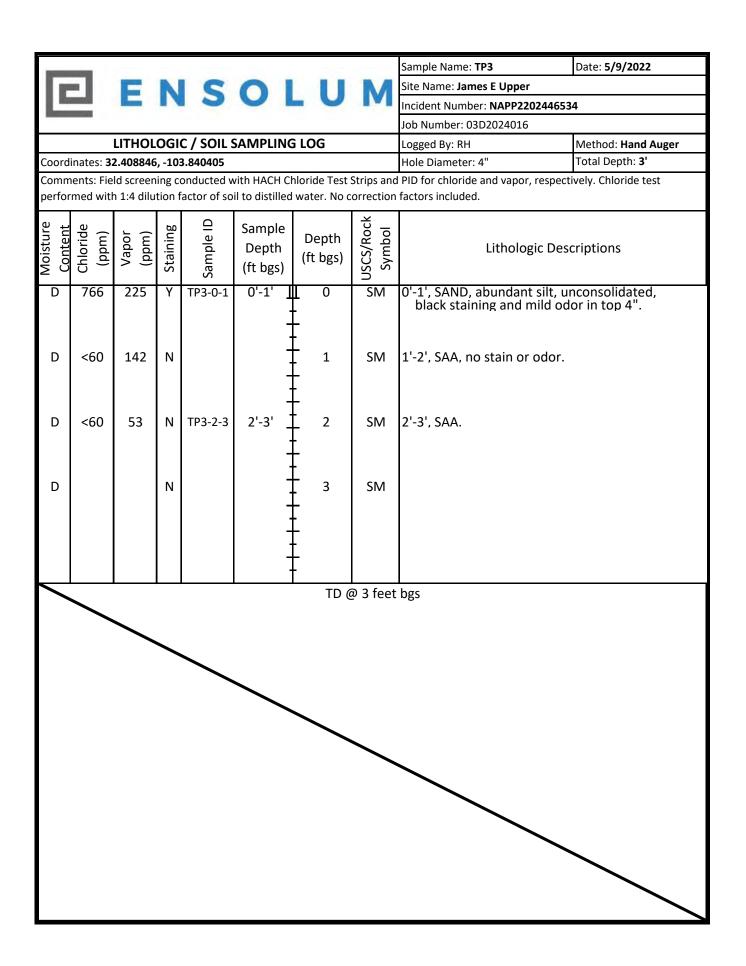


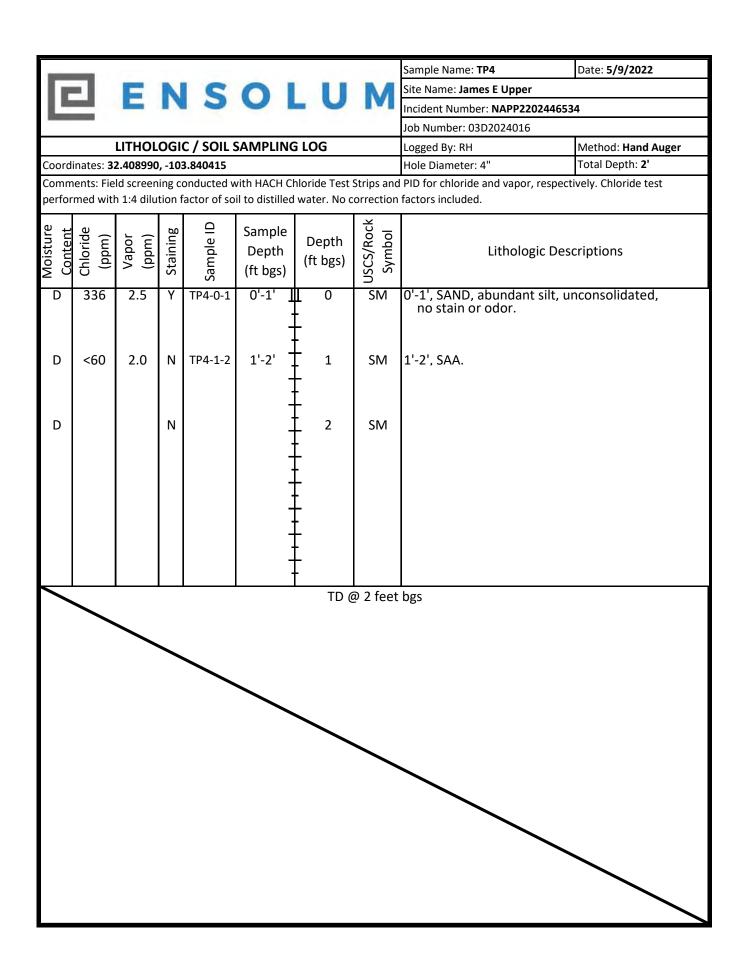
**APPENDIX B** 

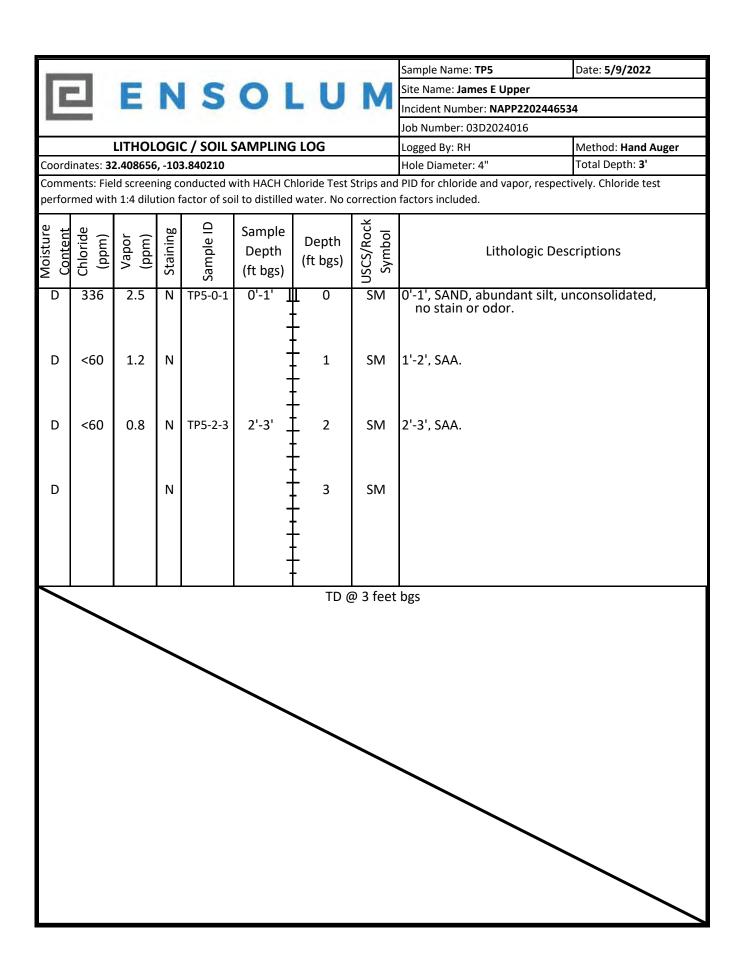
Lithologic Soil Sampling Logs

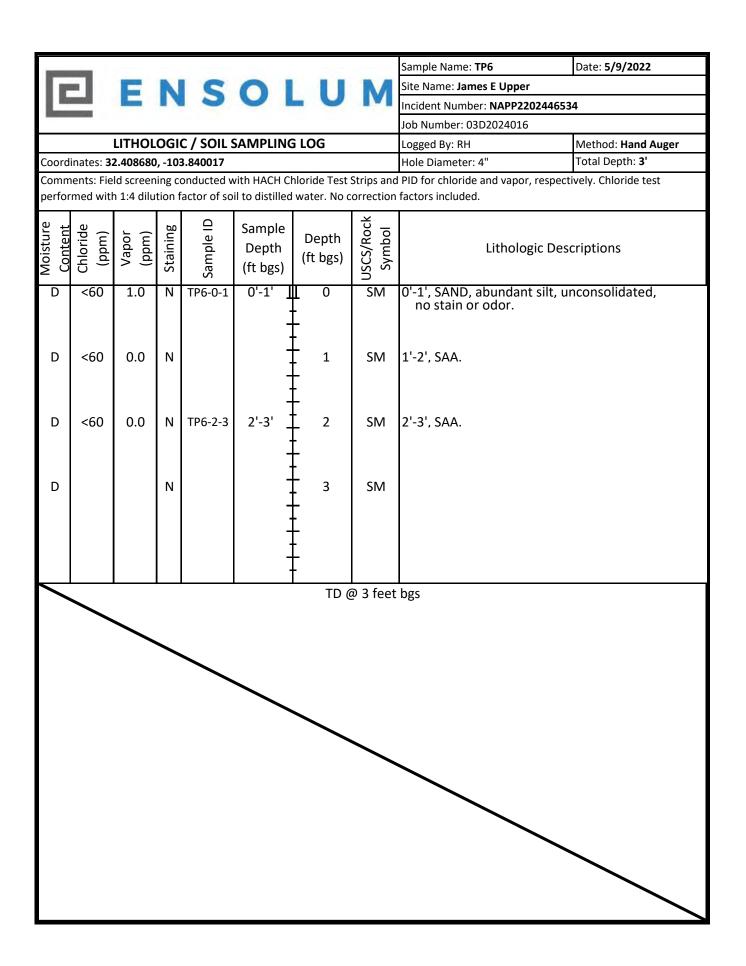


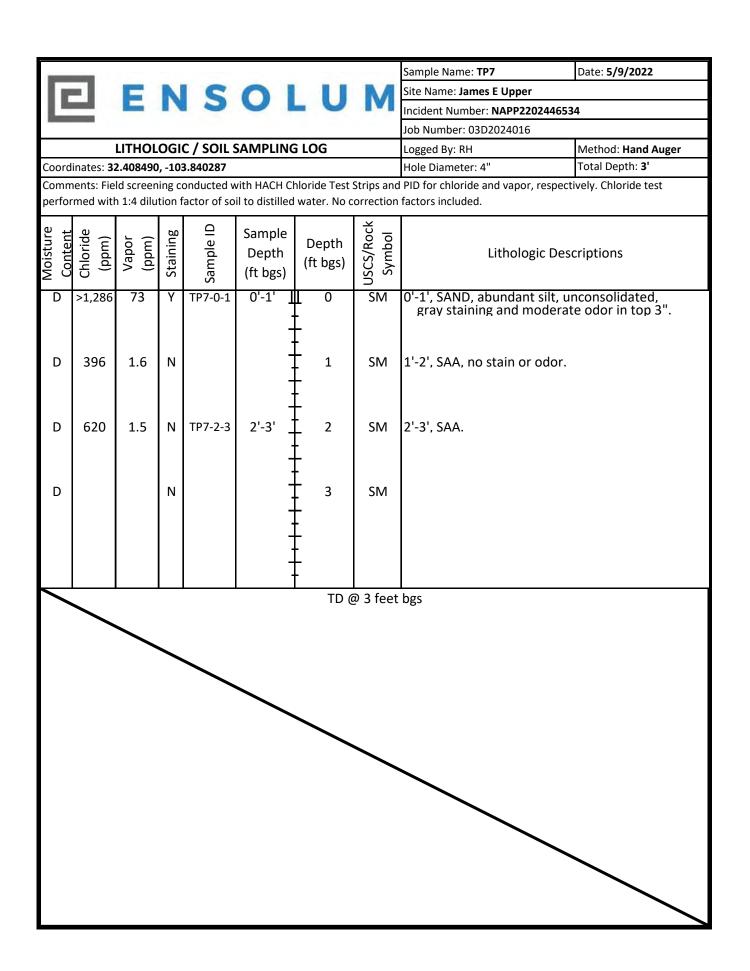


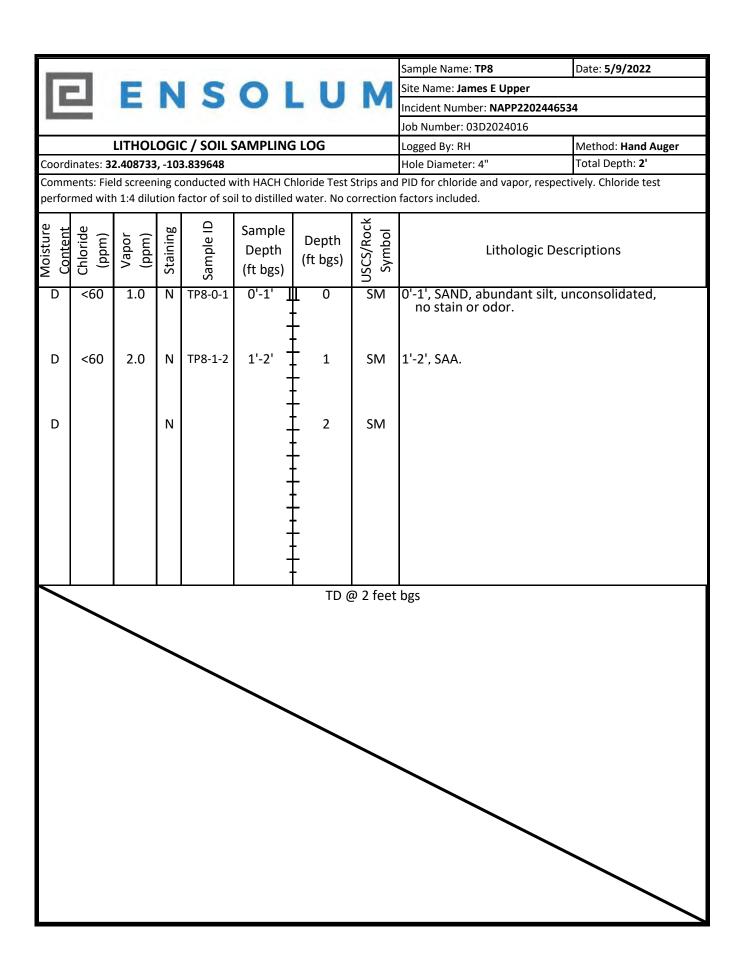


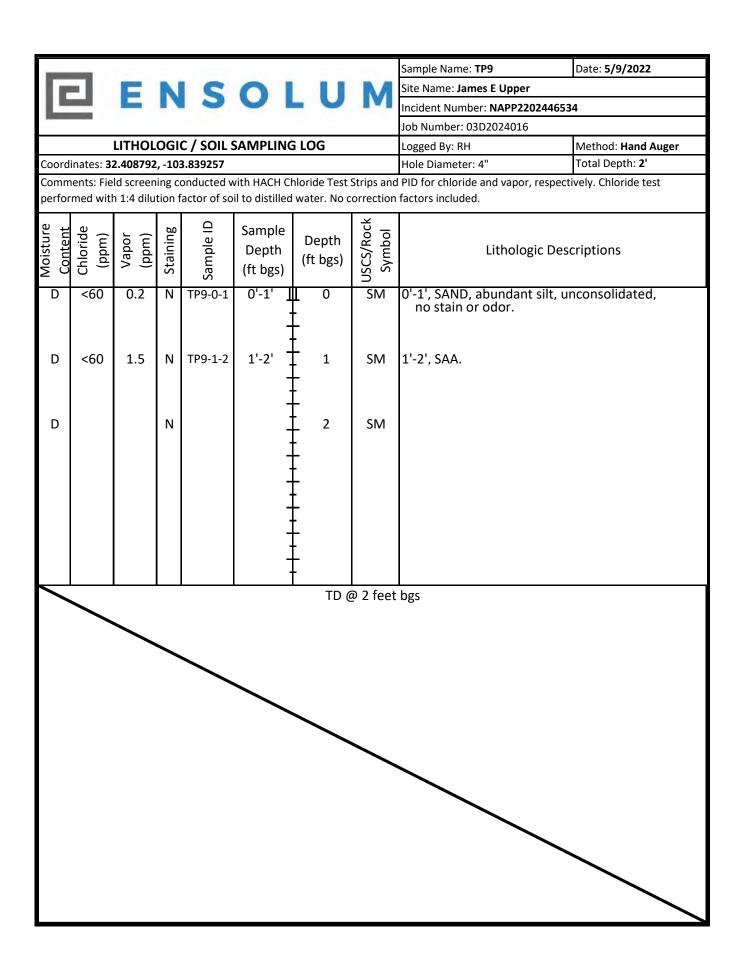


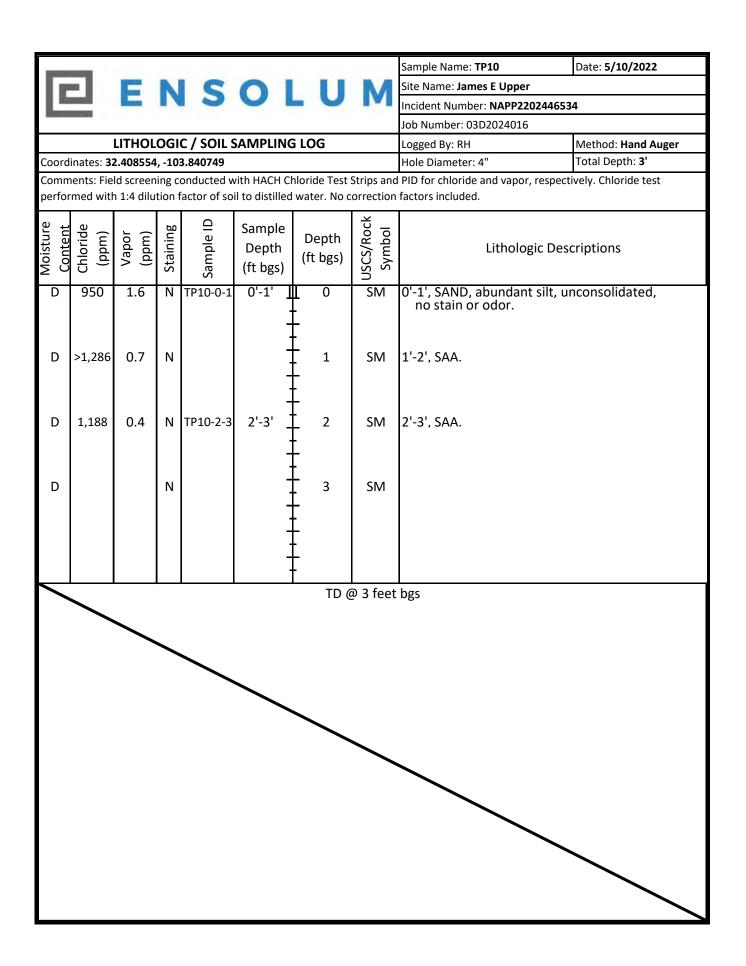


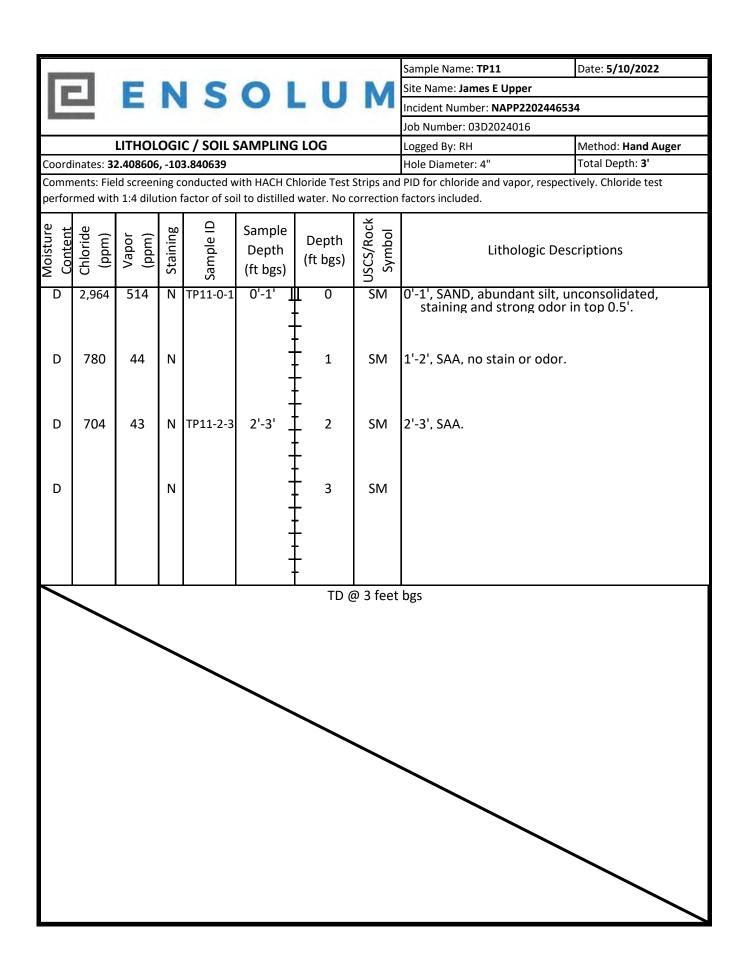


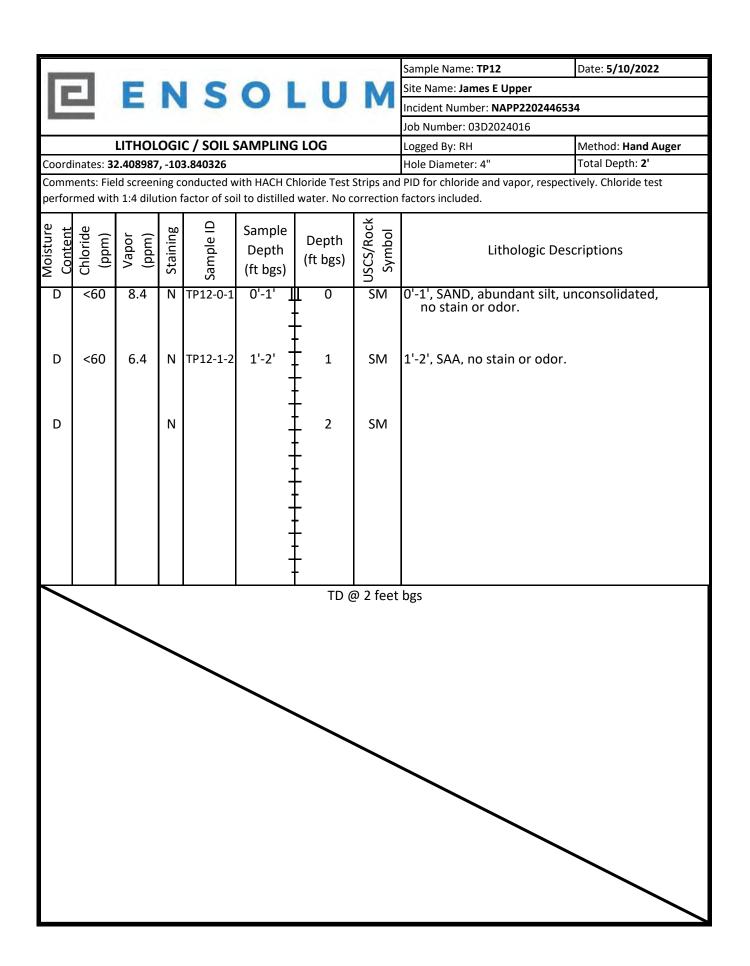


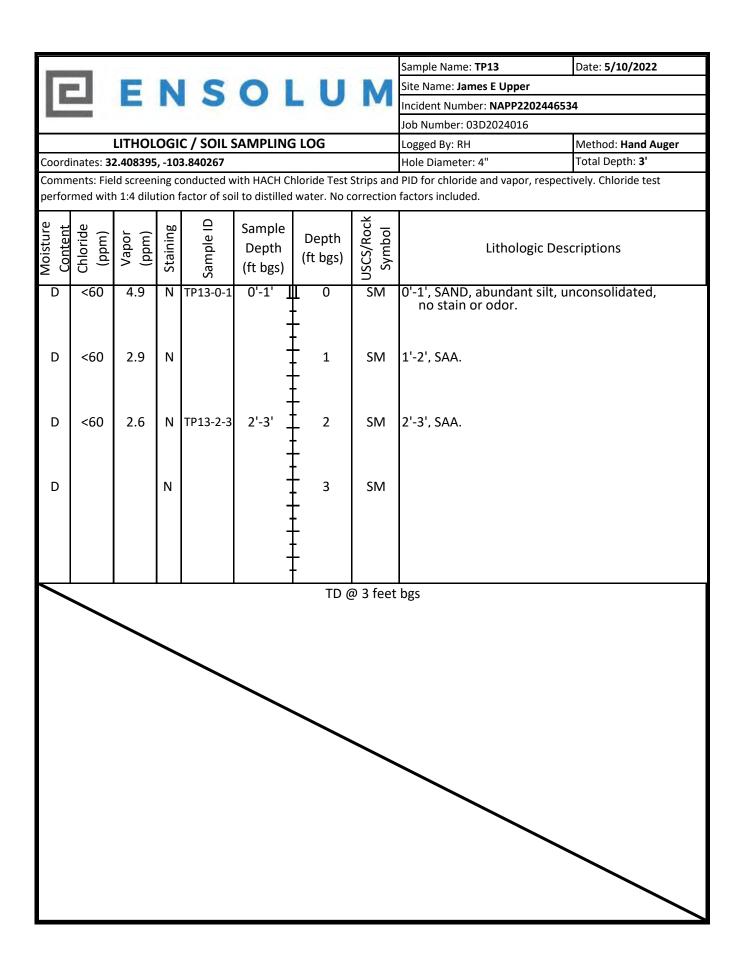


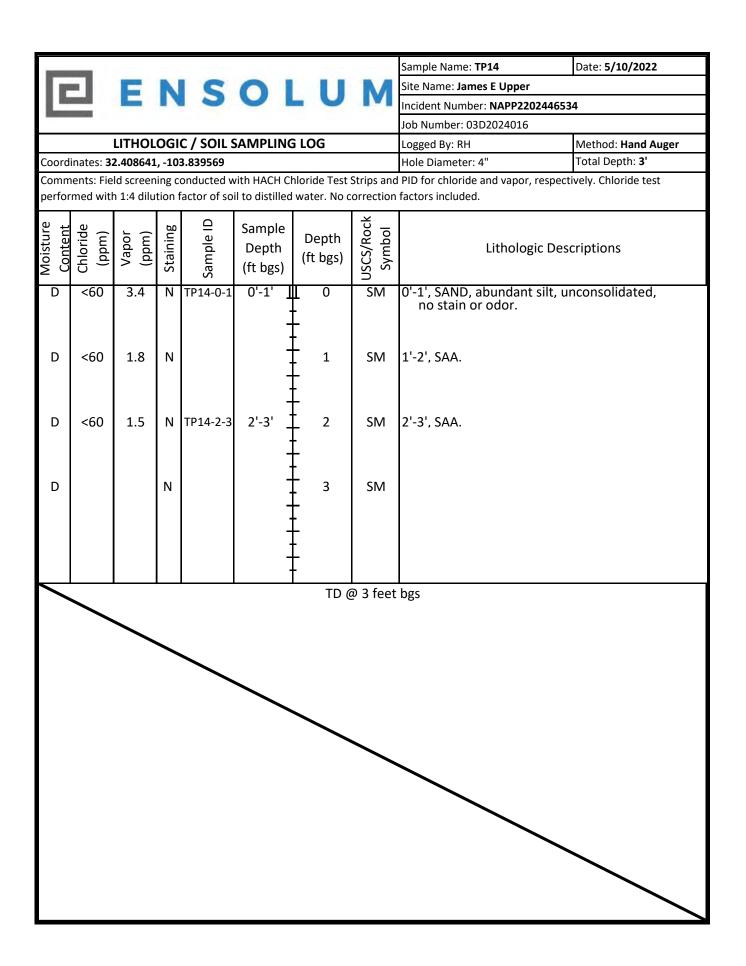


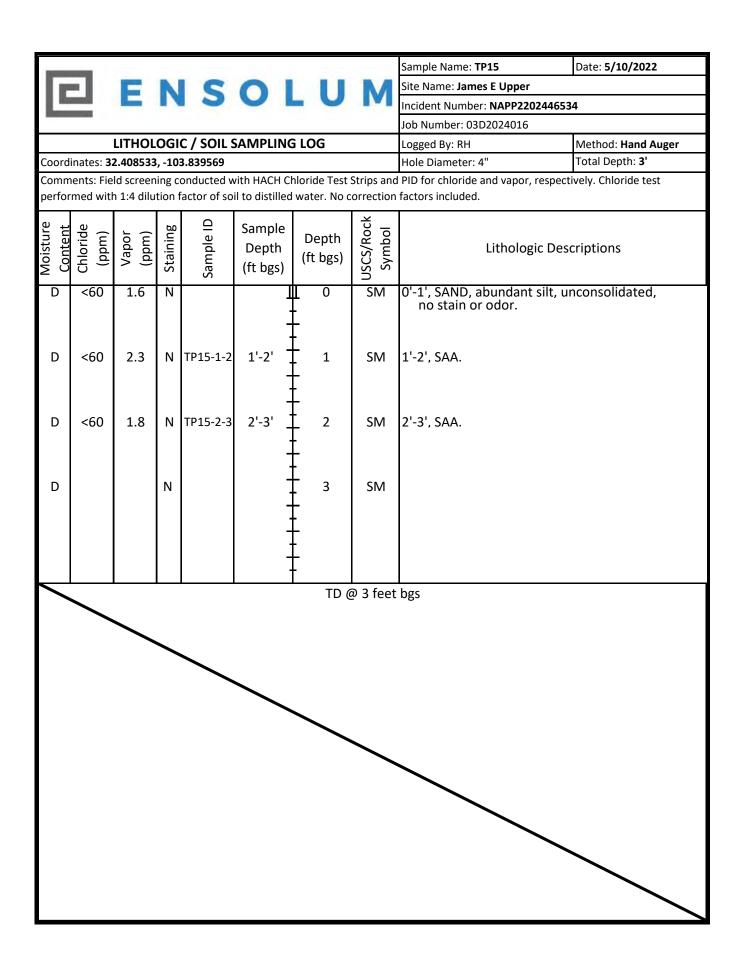


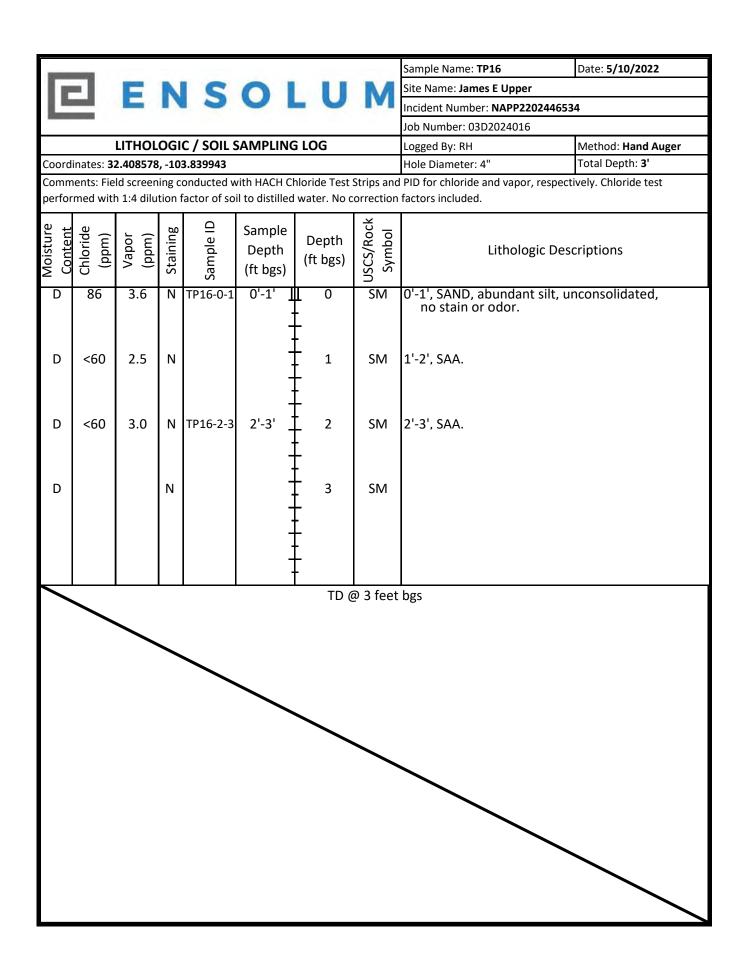


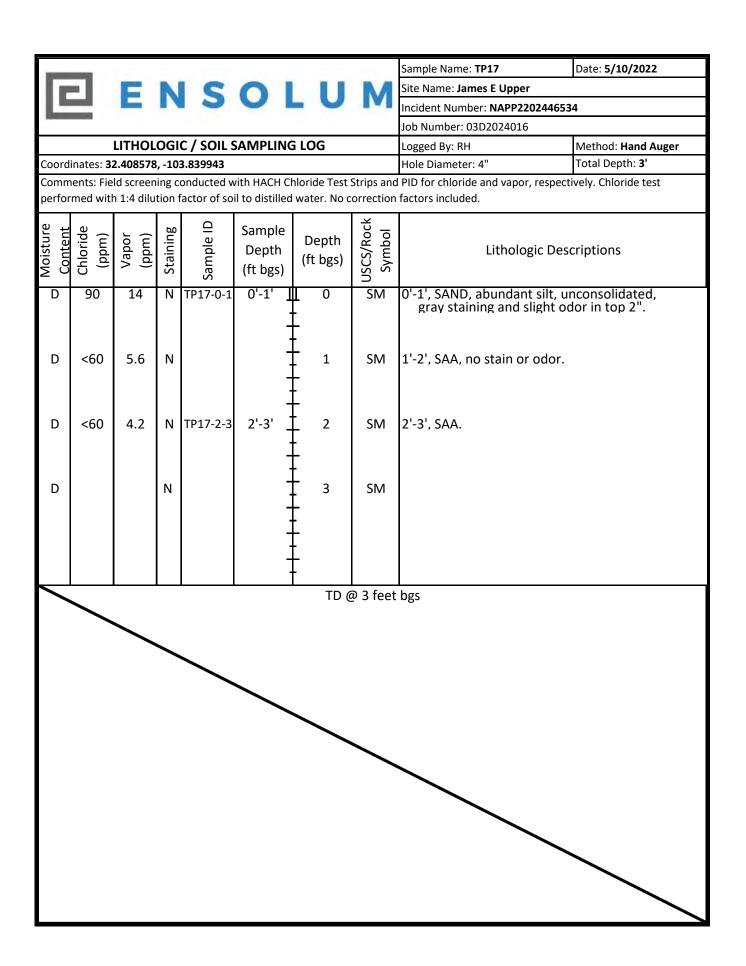


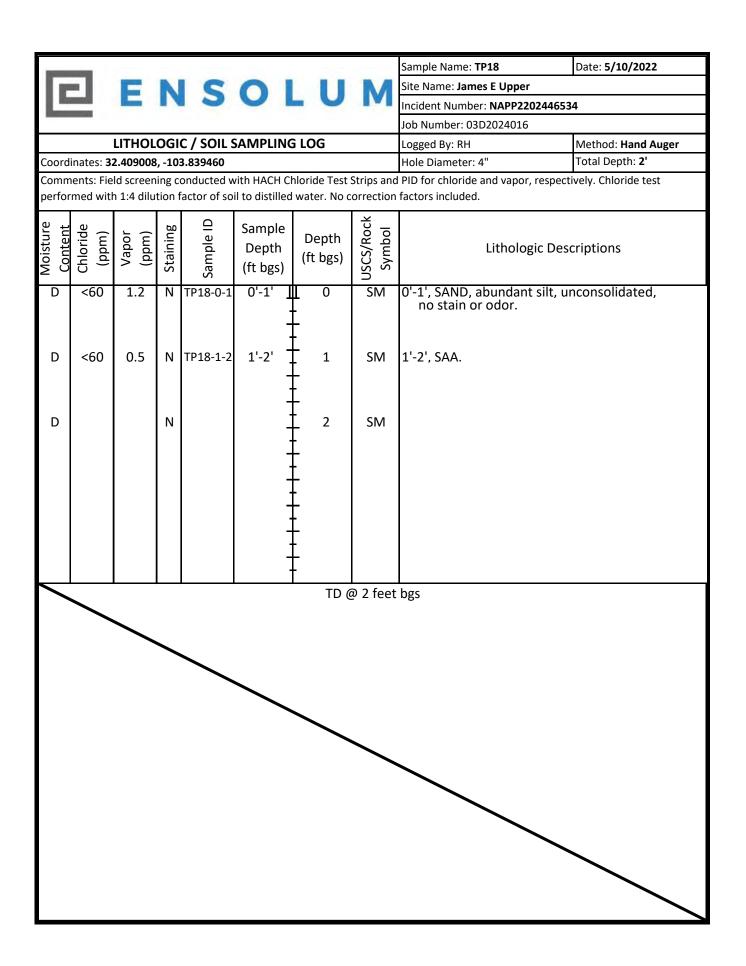


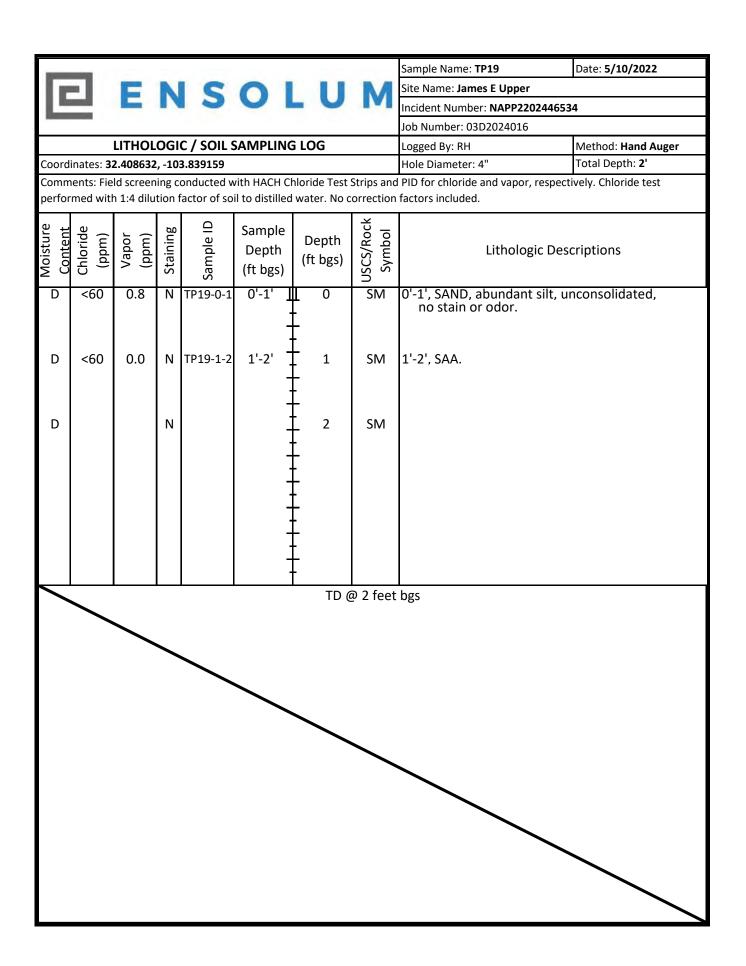














**APPENDIX C** 

Photographic Log

# **ENSOLUM**

Photographic Log
ConocoPhillips Company
James E Upper

NAPP2129846676, NAPP2200639375, & NAPP2202446534





Photograph 1 Date: 10/26/2021 Description: View of visible staining from release event NAPP2129846676.

Photograph 2 Date: 10/26/2021 Description: View of visible staining from release event NAPP2129846676.





Photograph 3 Date: 10/26/2021
Description: View of visible staining from release event
NAPP2129846676.

Photograph 4 Date: 10/26/2021

Description: View of visible staining from release event NAPP2129846676.

# **ENSOLUM**

Photographic Log
ConocoPhillips Company
James E Upper

NAPP2129846676, NAPP2200639375, & NAPP2202446534



Photograph 1 Date: 12/29/2021

Description: View of visible staining from release event NAPP2200639375.



Photograph 2 Date: 12/29/2021 Description: View of visible staining from release event NAPP2200639375.



Photograph 3 Date: 12/29/2021 Description: View of visible staining from release event NAPP2200639375.

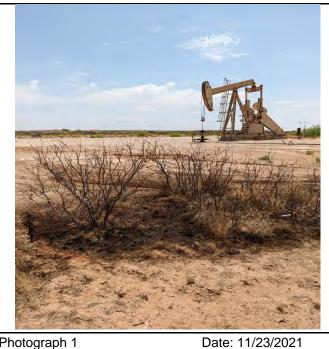


Photograph 4 Date: 12/29/2021 Description: View of visible staining from release event NAPP2200639375.

# **E**NSOLUM

Photographic Log
ConocoPhillips Company
James E Upper

NAPP2129846676, NAPP2200639375, & NAPP2202446534





Photograph 1 Date: 11/2

Description: View of area during delineation.

Photograph 2 Date: 11/23/2021

Description: View of area during delineation.



Description: View of area during delineation.



Photograph 4 Date: 05/09/2022

Description: View of area during delineation.



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-1510-1

Laboratory Sample Delivery Group: 31403720.000

Client Project/Site: James E Upper Battery

For:

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

Attn: Kalei Jennings

JURAMER

Authorized for release by: 11/8/2021 4:28:32 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS

Review your project results through

Have a Question?



Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 12/6/2022 4:11:46 PM

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

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

1

2

3

4

\_

7

0

10

12

13

Client: WSP USA Inc.

Laboratory Job ID: 890-1510-1

Project/Site: James E Upper Battery

SDG: 31403720.000

# **Table of Contents**

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	13
QC Sample Results	14
QC Association Summary	22
Lab Chronicle	26
Certification Summary	29
Method Summary	30
Sample Summary	31
Chain of Custody	32
Receipt Checklists	34

2

3

4

7

0

10

12

13

14

# **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-1510-1 Project/Site: James E Upper Battery

SDG: 31403720.000

#### **Qualifiers**

**GC VOA** Qualifier

F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

**Qualifier Description** 

Surrogate recovery exceeds control limits, high biased. Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

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

HPLC/IC

Qualifier	Qualifier Description
*_	LCS and/or LCSD is outside acceptance limits, low biased.
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

Decision Level Concentration (Radiochemistry) DLC

EDL Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) Limit of Quantitation (DoD/DOE) LOQ

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit 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 **Quality Control** QC

Relative Error Ratio (Radiochemistry) **RER** 

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) Toxicity Equivalent Quotient (Dioxin) TEQ

**TNTC** Too Numerous To Count

#### Case Narrative

Client: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1510-1

SDG: 31403720.000

Job ID: 890-1510-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-1510-1

#### Receipt

The samples were received on 11/1/2021 10:37 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C

#### GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS01 (890-1510-1), SS03 (890-1510-3), SS04 (890-1510-4), SS05 (890-1510-5) and SS08 (890-1510-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-11372 and analytical batch 880-11347 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-11357 and analytical batch 880-11412 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The laboratory control sample (LCS) associated with preparation batch 880-11235 and analytical batch 880-11380 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-11461 and 880-11461 and analytical batch 880-11506 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.

Matrix: Solid

Lab Sample ID: 890-1510-1

Client: WSP USA Inc. Job ID: 890-1510-1 Project/Site: James E Upper Battery SDG: 31403720.000

**Client Sample ID: SS01** 

Date Collected: 10/26/21 12:42 Date Received: 11/01/21 10:37

Sample Denth: 0 - 0 5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0262	F1 F2	0.00199	mg/Kg		11/03/21 12:29	11/04/21 00:03	1
Toluene	0.0320	F1	0.00199	mg/Kg		11/03/21 12:29	11/04/21 00:03	1
Ethylbenzene	0.0185	F1	0.00199	mg/Kg		11/03/21 12:29	11/04/21 00:03	1
m-Xylene & p-Xylene	0.0285	F1	0.00398	mg/Kg		11/03/21 12:29	11/04/21 00:03	1
o-Xylene	0.0174	F1 F2	0.00199	mg/Kg		11/03/21 12:29	11/04/21 00:03	1
Xylenes, Total	0.0459	F1	0.00398	mg/Kg		11/03/21 12:29	11/04/21 00:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	208	S1+	70 - 130			11/03/21 12:29	11/04/21 00:03	1
1,4-Difluorobenzene (Surr)	129		70 - 130			11/03/21 12:29	11/04/21 00:03	1

Method: Total BTEX - Total BTEX C	alculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.123		0.00398	mg/Kg			11/08/21 17:06	1

Method: 8015 NM - Diesel Range O	rganics (DRO) (GC)						
Analyte	Result Qualifier	r RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	6200	249	mg/Kg			11/08/21 15:54	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<249	U	249	mg/Kg		11/03/21 10:59	11/04/21 22:28	5
Diesel Range Organics (Over C10-C28)	5270		249	mg/Kg		11/03/21 10:59	11/04/21 22:28	5
Oll Range Organics (Over C28-C36)	927		249	mg/Kg		11/03/21 10:59	11/04/21 22:28	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130			11/03/21 10:59	11/04/21 22:28	- 5

Method: 300.0 - Anions, Ion Chron	natography - Soluble							
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	23200	249	ma/Ka			11/06/21 15:45	50	

70 - 130

102

Lab Sample ID: 890-1510-2 **Client Sample ID: SS02** Matrix: Solid

Date Collected: 10/26/21 12:45 Date Received: 11/01/21 10:37

Sample Depth: 0 - 0.5

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00417		0.00200	mg/Kg		11/03/21 12:29	11/04/21 00:23	1
Toluene	0.00883		0.00200	mg/Kg		11/03/21 12:29	11/04/21 00:23	1
Ethylbenzene	0.00475		0.00200	mg/Kg		11/03/21 12:29	11/04/21 00:23	1
m-Xylene & p-Xylene	0.0119		0.00401	mg/Kg		11/03/21 12:29	11/04/21 00:23	1
o-Xylene	0.00572		0.00200	mg/Kg		11/03/21 12:29	11/04/21 00:23	1
Xylenes, Total	0.0176		0.00401	mg/Kg		11/03/21 12:29	11/04/21 00:23	1

Eurofins Xenco, Carlsbad

5

11/03/21 10:59

11/04/21 22:28

Job ID: 890-1510-1 Project/Site: James E Upper Battery SDG: 31403720.000

**Client Sample ID: SS02** Lab Sample ID: 890-1510-2 Matrix: Solid

Date Collected: 10/26/21 12:45 Date Received: 11/01/21 10:37

Sample Depth: 0 - 0.5

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	DII Fac
4-Bromofluorobenzene (Surr)			70 - 130			11/03/21 12:29	11/04/21 00:23	1
1,4-Difluorobenzene (Surr)	88		70 - 130			11/03/21 12:29	11/04/21 00:23	1
Method: Total BTEX - Total BT Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0354		0.00401	mg/Kg			11/08/21 17:06	1
Method: 8015 NM - Diesel Ran	ge Organics (DR	O) (GC)						

moundar of the Brook Hange	rgamos (Bito) (Go)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	3000	250	mg/Kg			11/08/21 15:54	1
Method: 8015B NM - Diesel Range	Organics (DRO) (GC)						

Method: 8015B NM - Diesel Rai	nge Organics (DRO) (GC)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<250 U	250	mg/Kg		11/03/21 10:59	11/04/21 22:48	5
Diesel Range Organics (Over C10-C28)	2450	250	mg/Kg		11/03/21 10:59	11/04/21 22:48	5
Oll Range Organics (Over C28-C36)	554	250	mg/Kg		11/03/21 10:59	11/04/21 22:48	5
Surrogate	%Recovery Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	Minecovery Qualifier	Lillits		rrepared	Allalyzeu	Dii i ac
1-Chlorooctane	82	70 _ 130	-	11/03/21 10:59	11/04/21 22:48	5
o-Terphenyl	90	70 - 130		11/03/21 10:59	11/04/21 22:48	5
Method: 300.0 - Anions, Ion Chror	natography - Soluble					

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15600	99.0	mg/Kg			11/06/21 15:53	20

**Client Sample ID: SS03** Lab Sample ID: 890-1510-3 Date Collected: 10/26/21 12:48 **Matrix: Solid** 

Date Received: 11/01/21 10:37 Sample Depth: 0 - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00341		0.00201	mg/Kg		11/03/21 12:29	11/04/21 00:43	1
Toluene	0.0289		0.00201	mg/Kg		11/03/21 12:29	11/04/21 00:43	1
Ethylbenzene	0.00781		0.00201	mg/Kg		11/03/21 12:29	11/04/21 00:43	1
m-Xylene & p-Xylene	0.0162		0.00402	mg/Kg		11/03/21 12:29	11/04/21 00:43	1
o-Xylene	0.00757		0.00201	mg/Kg		11/03/21 12:29	11/04/21 00:43	1
Xylenes, Total	0.0238		0.00402	mg/Kg		11/03/21 12:29	11/04/21 00:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	180	S1+	70 - 130			11/03/21 12:29	11/04/21 00:43	1
1,4-Difluorobenzene (Surr)	146	S1+	70 - 130			11/03/21 12:29	11/04/21 00:43	1
Method: Total BTEX - Total BT	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0639		0.00402	mg/Kg			11/08/21 17:06	

Project/Site: James E Upper Battery

Job ID: 890-1510-1

SDG: 31403720.000

**Client Sample ID: SS03** 

Date Collected: 10/26/21 12:48 Date Received: 11/01/21 10:37

Sample Depth: 0 - 0.5

Lab Sample ID: 890-1510-3

Matrix: Solid

Method: 8015 NM - Diesel Range C	rganics (DRO) (GC)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	8640	250	mg/Kg			11/08/21 15:54	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<250	U	250	mg/Kg		11/03/21 10:59	11/04/21 23:08	5
Diesel Range Organics (Over C10-C28)	7430		250	mg/Kg		11/03/21 10:59	11/04/21 23:08	5
Oll Range Organics (Over C28-C36)	1210		250	mg/Kg		11/03/21 10:59	11/04/21 23:08	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130			11/03/21 10:59	11/04/21 23:08	5
o-Terphenyl	110		70 - 130			11/03/21 10:59	11/04/21 23:08	5

Method: 300.0 - Anions, Ion Chroma	atography - So	oluble						
Analyte	Result C	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29800		250	mg/Kg			11/06/21 16:25	50

Client Sample ID: SS04 Lab Sample ID: 890-1510-4 **Matrix: Solid** 

Date Collected: 10/26/21 12:50 Date Received: 11/01/21 10:37

Sample Depth: 0 - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	0.0194		0.00200	mg/Kg		11/03/21 12:29	11/04/21 01:04	
Toluene	0.0190		0.00200	mg/Kg		11/03/21 12:29	11/04/21 01:04	•
Ethylbenzene	0.00564		0.00200	mg/Kg		11/03/21 12:29	11/04/21 01:04	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/03/21 12:29	11/04/21 01:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/03/21 12:29	11/04/21 01:04	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/03/21 12:29	11/04/21 01:04	•
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130			11/03/21 12:29	11/04/21 01:04	-
1,4-Difluorobenzene (Surr)  Method: Total BTEX - Total BTEX C	81		70 - 130			11/03/21 12:29	11/04/21 01:04	
Method: Total BTEX - Total BTEX C	alculation Result	Qualifier	RL	Unit ma/Ka	<u>D</u>	11/03/21 12:29 Prepared	Analyzed	Dil Fac
Method: Total BTEX - Total BTEX C Analyte Total BTEX	Result 0.0440			<mark>Unit</mark> mg/Kg	<u>D</u>			Dil Fac
	ralculation Result 0.0440 rganics (DR		RL		<u>D</u>		Analyzed	Dil Fac
Method: Total BTEX - Total BTEX C Analyte Total BTEX  Method: 8015 NM - Diesel Range Of Analyte	ralculation Result 0.0440 rganics (DR	O) (GC)	RL 0.00399	mg/Kg		Prepared	Analyzed 11/08/21 17:06	Dil Fac
Method: Total BTEX - Total BTEX C Analyte Total BTEX  Method: 8015 NM - Diesel Range Of Analyte Total TPH	Result 0.0440 rganics (DRO Result 8190	O) (GC) Qualifier		mg/Kg		Prepared	Analyzed 11/08/21 17:06 Analyzed	Dil Fac
Method: Total BTEX - Total BTEX C Analyte Total BTEX  Method: 8015 NM - Diesel Range Of Analyte Total TPH  Method: 8015B NM - Diesel Range (	Result 0.0440 rganics (DRO Result 8190 Organics (DI	O) (GC) Qualifier		mg/Kg		Prepared	Analyzed 11/08/21 17:06 Analyzed	Dil Fac
Method: Total BTEX - Total BTEX C Analyte Total BTEX  Method: 8015 NM - Diesel Range O	Result 0.0440 rganics (DRO Result 8190 Organics (DI	O) (GC) Qualifier  RO) (GC) Qualifier	RL 0.00399 RL 250	mg/Kg  Unit  mg/Kg	<u>D</u>	Prepared Prepared	Analyzed 11/08/21 17:06  Analyzed 11/08/21 15:54	Dil Fac

Client: WSP USA Inc. Job ID: 890-1510-1 Project/Site: James E Upper Battery SDG: 31403720.000

Client Sample ID: SS04 Lab Sample ID: 890-1510-4 Matrix: Solid

Date Collected: 10/26/21 12:50 Date Received: 11/01/21 10:37

Sample Depth: 0 - 0.5

Method: 8015B NM - Diesel R	ange Organics (D	RO) (GC) (C	continued)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over	1370		250	mg/Kg		11/03/21 10:59	11/04/21 23:28	5
C28-C36)								
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130			11/03/21 10:59	11/04/21 23:28	5
o-Terphenyl	111		70 - 130			11/03/21 10:59	11/04/21 23:28	5

Method: 300.0 - Anions, Ion Chrom	atography - Soluble						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25500	250	mg/Kg			11/07/21 13:47	50

Lab Sample ID: 890-1510-5 **Client Sample ID: SS05** 

Date Collected: 10/26/21 12:53 Date Received: 11/01/21 10:37

Sample Depth: 0 - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0120		0.00199	mg/Kg		11/03/21 12:29	11/04/21 01:24	
Toluene	0.00348		0.00199	mg/Kg		11/03/21 12:29	11/04/21 01:24	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/03/21 12:29	11/04/21 01:24	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/03/21 12:29	11/04/21 01:24	
o-Xylene	0.00372		0.00199	mg/Kg		11/03/21 12:29	11/04/21 01:24	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/03/21 12:29	11/04/21 01:24	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	127		70 - 130			11/03/21 12:29	11/04/21 01:24	
1,4-Difluorobenzene (Surr)	64	S1-	70 - 130			11/03/21 12:29	11/04/21 01:24	
Total BTEX	0.0192		0.00398	mg/Kg			11/08/21 17:06	
Method: 8015 NM - Diesel Ran	ge Organics (DR	O) (GC)						
Method: 8015 NM - Diesel Ran Analyte	• •	O) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
	• •		RL		<u>D</u>	Prepared	Analyzed 11/08/21 15:54	
Analyte	Result 11800	Qualifier			<u>D</u>	Prepared		
Analyte Total TPH	Result 11800 Inge Organics (Di	Qualifier			D	Prepared Prepared		
Analyte Total TPH : Method: 8015B NM - Diesel Ra	Result 11800 Inge Organics (Di	Qualifier  RO) (GC)  Qualifier	249	mg/Kg		<u> </u>	11/08/21 15:54	Dil Fa
Analyte Total TPH Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 11800 Inge Organics (Dige Result	Qualifier  RO) (GC)  Qualifier	249	mg/Kg		Prepared	11/08/21 15:54 Analyzed	Dil Fa
Analyte Total TPH  Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over	Result 11800  Inge Organics (Di Result <249	Qualifier  RO) (GC)  Qualifier	249  RL 249	mg/Kg  Unit  mg/Kg		Prepared 11/03/21 10:59	11/08/21 15:54  Analyzed  11/04/21 23:49	Dil Fa
Analyte Total TPH  Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result     11800	Qualifier  RO) (GC)  Qualifier	249  RL 249 249	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/03/21 10:59 11/03/21 10:59	11/08/21 15:54  Analyzed  11/04/21 23:49  11/04/21 23:49	Dil Fa
Analyte Total TPH  Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over	Result     11800	Qualifier  RO) (GC) Qualifier U	249  RL 249 249	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/03/21 10:59 11/03/21 10:59	11/08/21 15:54  Analyzed  11/04/21 23:49  11/04/21 23:49	Dil Fa
Analyte Total TPH  Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result 11800  Inge Organics (Di Result <249  10000  1780	Qualifier  RO) (GC) Qualifier U	249  RL 249 249 249	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/03/21 10:59 11/03/21 10:59 11/03/21 10:59	Analyzed 11/04/21 23:49 11/04/21 23:49 11/04/21 23:49	Dil Fac

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**Matrix: Solid** 

Client: WSP USA Inc. Job ID: 890-1510-1 Project/Site: James E Upper Battery SDG: 31403720.000

**Client Sample ID: SS05** Lab Sample ID: 890-1510-5

Date Collected: 10/26/21 12:53 Matrix: Solid Date Received: 11/01/21 10:37

Sample Depth: 0 - 0.5

Method: 300.0 - Anions, Ion Chromat	tography - S	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24800	*_	248	mg/Kg			11/07/21 01:42	50

Client Sample ID: SS06 Lab Sample ID: 890-1510-6

Date Collected: 10/26/21 13:12 Date Received: 11/01/21 10:37

Sample Depth: 0 - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/03/21 15:23	11/05/21 12:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/03/21 15:23	11/05/21 12:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/03/21 15:23	11/05/21 12:12	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/03/21 15:23	11/05/21 12:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/03/21 15:23	11/05/21 12:12	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/03/21 15:23	11/05/21 12:12	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	86		70 - 130			11/03/21 15:23	11/05/21 12:12	
1,4-Difluorobenzene (Surr)	81		70 - 130			11/03/21 15:23	11/05/21 12:12	1
Method: Total BTEX - Total BT	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00399	U	0.00399	mg/Kg			11/08/21 17:06	1
Method: 8015 NM - Diesel Ran Analyte	• • •	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	9680		250	mg/Kg			11/08/21 15:54	
- -		RO) (GC)	250		_ =			
: Method: 8015B NM - Diesel Ra	inge Organics (D	RO) (GC) Qualifier	250 RL			Prepared		
Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics	inge Organics (D	Qualifier		mg/Kg			11/08/21 15:54	Dil Fac
Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10	inge Organics (D	Qualifier	RL	mg/Kg		Prepared	11/08/21 15:54  Analyzed	Dil Fac
Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	nge Organics (D Result <250	Qualifier	RL 250	mg/Kg  Unit  mg/Kg		Prepared 11/03/21 10:59	11/08/21 15:54  Analyzed  11/05/21 00:29	Dil Fac
Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over	nge Organics (D Result <250	Qualifier U	RL 250	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/03/21 10:59 11/03/21 10:59	11/08/21 15:54  Analyzed  11/05/21 00:29  11/05/21 00:29	Dil Fac
Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Name	Qualifier U	RL 250 250 250	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/03/21 10:59 11/03/21 10:59 11/03/21 10:59	Analyzed 11/05/21 00:29 11/05/21 00:29	Dil Fac
Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <250 8260 1420 %Recovery	Qualifier U	250 250 250 250	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/03/21 10:59 11/03/21 10:59 11/03/21 10:59 Prepared	Analyzed 11/05/21 00:29 11/05/21 00:29 11/05/21 00:29 Analyzed	Dil Fac
Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Name	Qualifier U	250 250 250 250 Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/03/21 10:59 11/03/21 10:59 11/03/21 10:59 Prepared 11/03/21 10:59	Analyzed 11/05/21 00:29 11/05/21 00:29 11/05/21 00:29 Analyzed 11/05/21 00:29	Dil Fac
Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result 4250 8260 1420 %Recovery 88 105 hromatography -	Qualifier U	250 250 250 250 Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/03/21 10:59 11/03/21 10:59 11/03/21 10:59 Prepared 11/03/21 10:59	Analyzed 11/05/21 00:29 11/05/21 00:29 11/05/21 00:29 Analyzed 11/05/21 00:29	Dil Fac

Matrix: Solid

Job ID: 890-1510-1

Project/Site: James E Upper Battery SDG: 31403720.000

**Client Sample ID: SS07** Lab Sample ID: 890-1510-7 Date Collected: 10/26/21 13:15 Matrix: Solid

Date Received: 11/01/21 10:37 Sample Depth: 0 - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		11/03/21 12:29	11/04/21 01:45	
Toluene	0.00298		0.00199	mg/Kg		11/03/21 12:29	11/04/21 01:45	
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		11/03/21 12:29	11/04/21 01:45	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/03/21 12:29	11/04/21 01:45	
o-Xylene	< 0.00199	U	0.00199	mg/Kg		11/03/21 12:29	11/04/21 01:45	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/03/21 12:29	11/04/21 01:45	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	110		70 - 130			11/03/21 12:29	11/04/21 01:45	
1,4-Difluorobenzene (Surr)	104		70 - 130			11/03/21 12:29	11/04/21 01:45	
Method: Total BTEX - Total BTI	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			11/08/21 17:06	
Method: 8015 NM - Diesel Rang	ge Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	9310		249	mg/Kg			11/08/21 15:54	
Method: 8015B NM - Diesel Ra	nge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<249	U	249	mg/Kg		11/03/21 10:59	11/05/21 00:49	
Diesel Range Organics (Over C10-C28)	7910		249	mg/Kg		11/03/21 10:59	11/05/21 00:49	
Oll Range Organics (Over C28-C36)	1400		249	mg/Kg		11/03/21 10:59	11/05/21 00:49	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	91		70 - 130			11/03/21 10:59	11/05/21 00:49	
o-Terphenyl	109		70 - 130			11/03/21 10:59	11/05/21 00:49	
Method: 300.0 - Anions, Ion Ch	romatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
	22700							

**Client Sample ID: SS08** Lab Sample ID: 890-1510-8 Matrix: Solid

Date Collected: 10/26/21 13:18 Date Received: 11/01/21 10:37

Sample Depth: 0 - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198		0.00198	mg/Kg	— <u> </u>	11/03/21 12:29	11/04/21 02:05	1
Toluene	0.0106		0.00198	mg/Kg		11/03/21 12:29	11/04/21 02:05	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		11/03/21 12:29	11/04/21 02:05	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		11/03/21 12:29	11/04/21 02:05	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		11/03/21 12:29	11/04/21 02:05	1
Xylenes, Total	< 0.00396	U	0.00396	mg/Kg		11/03/21 12:29	11/04/21 02:05	1

Job ID: 890-1510-1 Project/Site: James E Upper Battery SDG: 31403720.000

**Client Sample ID: SS08** Lab Sample ID: 890-1510-8 Matrix: Solid

Date Collected: 10/26/21 13:18 Date Received: 11/01/21 10:37

Sample Depth: 0 - 0.5

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	134	S1+	70 - 130			11/03/21 12:29	11/04/21 02:05	1
1,4-Difluorobenzene (Surr)	89		70 - 130			11/03/21 12:29	11/04/21 02:05	:
Method: Total BTEX - Total BT	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0106		0.00396	mg/Kg			11/08/21 17:06	1
Method: 8015 NM - Diesel Ran	ge Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	8810		250	mg/Kg			11/08/21 15:54	-
	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Gasoline Range Organics	•	Qualifier		Unit mg/Kg	<u>D</u>	Prepared 11/03/21 10:59	Analyzed 11/05/21 01:09	
Analyte Gasoline Range Organics (GRO)-C6-C10	Result	Qualifier			<u>D</u>			
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier	250	mg/Kg	<u>D</u>	11/03/21 10:59	11/05/21 01:09	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over	Result	Qualifier	250	mg/Kg	<u>D</u>	11/03/21 10:59	11/05/21 01:09	5
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <250 7390 1420	Qualifier U	250 250	mg/Kg	<u> </u>	11/03/21 10:59	11/05/21 01:09	5
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <250 7390 1420	Qualifier U	250 250 250	mg/Kg	<u>D</u>	11/03/21 10:59 11/03/21 10:59 11/03/21 10:59	11/05/21 01:09 11/05/21 01:09 11/05/21 01:09	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <250 7390 1420 %Recovery	Qualifier U	250 250 250 <b>Limits</b>	mg/Kg	<u>D</u>	11/03/21 10:59 11/03/21 10:59 11/03/21 10:59 Prepared	11/05/21 01:09 11/05/21 01:09 11/05/21 01:09 Analyzed	Dil Fac
Method: 8015B NM - Diesel Ra Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl  Method: 300.0 - Anions, Ion Ch	Result   <250	Qualifier  U  Qualifier	250 250 250 250  Limits 70 - 130	mg/Kg	<u> </u>	11/03/21 10:59 11/03/21 10:59 11/03/21 10:59 Prepared 11/03/21 10:59	11/05/21 01:09 11/05/21 01:09 11/05/21 01:09 Analyzed 11/05/21 01:09	Dil Fac

Client Sample ID: SS09 Lab Sample ID: 890-1510-9 Date Collected: 10/26/21 13:20 **Matrix: Solid** 

100

mg/Kg

14300

Date Received: 11/01/21 10:37

Chloride

Sample Depth: 0 - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		11/03/21 12:29	11/04/21 02:25	1
Toluene	0.00475		0.00198	mg/Kg		11/03/21 12:29	11/04/21 02:25	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		11/03/21 12:29	11/04/21 02:25	1
m-Xylene & p-Xylene	0.00608		0.00397	mg/Kg		11/03/21 12:29	11/04/21 02:25	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		11/03/21 12:29	11/04/21 02:25	1
Xylenes, Total	0.00608		0.00397	mg/Kg		11/03/21 12:29	11/04/21 02:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130			11/03/21 12:29	11/04/21 02:25	1
1,4-Difluorobenzene (Surr)	80		70 - 130			11/03/21 12:29	11/04/21 02:25	1
- Method: Total BTEX - Total B1	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0108		0.00397	mg/Kg			11/08/21 17:06	1

Eurofins Xenco, Carlsbad

11/07/21 00:56

Sample Depth: 0 - 0.5

Chloride

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-1510-1

Project/Site: James E Upper Battery SDG: 31403720.000

**Client Sample ID: SS09** Lab Sample ID: 890-1510-9 Date Collected: 10/26/21 13:20

3230 \*-

Matrix: Solid Date Received: 11/01/21 10:37

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	2790		250	mg/Kg			11/08/21 15:54	1
Method: 8015B NM - Diesel Ran	nge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<250	U	250	mg/Kg		11/03/21 10:59	11/05/21 01:29	5
Diesel Range Organics (Over C10-C28)	2190		250	mg/Kg		11/03/21 10:59	11/05/21 01:29	5
Oll Range Organics (Over C28-C36)	600		250	mg/Kg		11/03/21 10:59	11/05/21 01:29	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			11/03/21 10:59	11/05/21 01:29	5
o-Terphenyl	98		70 - 130			11/03/21 10:59	11/05/21 01:29	5
Method: 300.0 - Anions, Ion Chi	romatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

24.9

mg/Kg

11/07/21 01:04

# **Surrogate Summary**

Client: WSP USA Inc.

Job ID: 890-1510-1

Project/Site: James E Upper Battery

SDG: 31403720.000

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-7917-A-10-D MS	Matrix Spike	129	109	
880-7917-A-10-E MSD	Matrix Spike Duplicate	129	111	
890-1510-1	SS01	208 S1+	129	
890-1510-1 MS	SS01	135 S1+	101	
890-1510-1 MSD	SS01	98	98	
890-1510-2	SS02	111	88	
890-1510-3	SS03	180 S1+	146 S1+	
890-1510-4	SS04	138 S1+	81	
890-1510-5	SS05	127	64 S1-	
890-1510-6	SS06	86	81	
390-1510-7	SS07	110	104	
890-1510-8	SS08	134 S1+	89	
890-1510-9	SS09	128	80	
LCS 880-11372/1-A	Lab Control Sample	114	100	
LCS 880-11387/1-A	Lab Control Sample	106	97	
LCSD 880-11372/2-A	Lab Control Sample Dup	109	106	
LCSD 880-11387/2-A	Lab Control Sample Dup	106	92	
MB 880-11348/5-A	Method Blank	112	97	
MB 880-11372/5-A	Method Blank	118	99	
MB 880-11386/5-A	Method Blank	124	109	
MB 880-11387/5-A	Method Blank	117	100	

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

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-1510-1	SS01	89	102	
890-1510-2	SS02	82	90	
890-1510-3	SS03	89	110	
890-1510-4	SS04	96	111	
890-1510-5	SS05	85	110	
890-1510-6	SS06	88	105	
890-1510-7	SS07	91	109	
890-1510-8	SS08	87	103	
890-1510-9	SS09	93	98	
890-1511-A-8-C MS	Matrix Spike	102	102	
890-1511-A-8-D MSD	Matrix Spike Duplicate	99	92	
LCS 880-11357/2-A	Lab Control Sample	83	85	
LCSD 880-11357/3-A	Lab Control Sample Dup	86	86	
	Method Blank	93	106	

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OTPH = o-Terphenyl

2

3

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11

13

14

s Xenco, Carisbac

Client: WSP USA Inc. Job ID: 890-1510-1 Project/Site: James E Upper Battery SDG: 31403720.000

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11348/5-A

**Matrix: Solid** Analysis Batch: 11347 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11348

	IND	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/03/21 09:17	11/03/21 12:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/03/21 09:17	11/03/21 12:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/03/21 09:17	11/03/21 12:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/03/21 09:17	11/03/21 12:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/03/21 09:17	11/03/21 12:28	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/03/21 09:17	11/03/21 12:28	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prep	ared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	11/03/2	21 09:17	11/03/21 12:28	1
1,4-Difluorobenzene (Surr)	97		70 - 130	11/03/2	21 09:17	11/03/21 12:28	1

Lab Sample ID: MB 880-11372/5-A

Client Sample ID: Method Blank

Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 11347	Prep Batch: 11372
MB MB	

Analyte	Result Q	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200 U	J	0.00200	mg/Kg		11/03/21 12:29	11/03/21 23:41	1
Toluene	<0.00200 U	J	0.00200	mg/Kg		11/03/21 12:29	11/03/21 23:41	1
Ethylbenzene	<0.00200 U	J	0.00200	mg/Kg		11/03/21 12:29	11/03/21 23:41	1
m-Xylene & p-Xylene	<0.00400 U	J	0.00400	mg/Kg		11/03/21 12:29	11/03/21 23:41	1
o-Xylene	<0.00200 U	J	0.00200	mg/Kg		11/03/21 12:29	11/03/21 23:41	1
Xylenes, Total	<0.00400 U	J	0.00400	mg/Kg		11/03/21 12:29	11/03/21 23:41	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepa	red	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130	11/03/21	12:29	11/03/21 23:41	1
1,4-Difluorobenzene (Surr)	99		70 - 130	11/03/21	12:29	11/03/21 23:41	1

Lab Sample ID: LCS 880-11372/1-A

**Matrix: Solid** 

**Analysis Batch: 11347** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA Prep Batch: 11372

Spike	LCS	LCS				%Rec.	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
0.100	0.09518		mg/Kg		95	70 - 130	
0.100	0.08412		mg/Kg		84	70 - 130	
0.100	0.08327		mg/Kg		83	70 - 130	
0.200	0.1721		mg/Kg		86	70 - 130	
0.100	0.09410		mg/Kg		94	70 - 130	
	0.100 0.100 0.100 0.100 0.200	Added         Result           0.100         0.09518           0.100         0.08412           0.100         0.08327           0.200         0.1721	Added         Result         Qualifier           0.100         0.09518           0.100         0.08412           0.100         0.08327           0.200         0.1721	Added         Result         Qualifier         Unit           0.100         0.09518         mg/Kg           0.100         0.08412         mg/Kg           0.100         0.08327         mg/Kg           0.200         0.1721         mg/Kg	Added         Result         Qualifier         Unit         D           0.100         0.09518         mg/Kg           0.100         0.08412         mg/Kg           0.100         0.08327         mg/Kg           0.200         0.1721         mg/Kg	Added         Result         Qualifier         Unit         D         %Rec           0.100         0.09518         mg/Kg         95           0.100         0.08412         mg/Kg         84           0.100         0.08327         mg/Kg         83           0.200         0.1721         mg/Kg         86	Added         Result         Qualifier         Unit         D         %Rec         Limits           0.100         0.09518         mg/Kg         95         70 - 130           0.100         0.08412         mg/Kg         84         70 - 130           0.100         0.08327         mg/Kg         83         70 - 130           0.200         0.1721         mg/Kg         86         70 - 130

LCS LCS

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

Lab Sample ID: LCSD 880-11372/2-A

Matrix: Solid

**Analysis Batch: 11347** 

Client Sample ID: Lab	Control Sample Dup
	Date of Towns To 4 - 1/N LA

Prep Type: Total/NA

Prep Batch: 11372

	Spike	LCSD LCSD				70Rec.		KPD	
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08659	mg/Kg		87	70 - 130	9	35	

LCCD LCCD

Cnika

# QC Sample Results

Client: WSP USA Inc. Job ID: 890-1510-1 SDG: 31403720.000 Project/Site: James E Upper Battery

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

Lab Sample ID: LCSD 880-11372/2-A

**Matrix: Solid Analysis Batch: 11347**  Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 11372

Spike LCSD LCSD %Rec. RPD Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Toluene 0.100 0.07560 76 70 - 130 35 mg/Kg 11 Ethylbenzene 0.100 0.07731 mg/Kg 77 70 - 130 35 0.200 0.1608 70 - 130 m-Xylene & p-Xylene mg/Kg 80 35 0.100 o-Xylene 0.08457 mg/Kg 85 70 - 130 11 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 890-1510-1 MS

**Matrix: Solid** 

Analysis Batch: 11347

**Client Sample ID: SS01** Prep Type: Total/NA

Prep Batch: 11372

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.0262	F1 F2	0.0994	0.02080	F1	mg/Kg		-5	70 - 130	
Toluene	0.0320	F1	0.0994	0.02300	F1	mg/Kg		-9	70 - 130	
Ethylbenzene	0.0185	F1	0.0994	0.01568	F1	mg/Kg		-3	70 - 130	
m-Xylene & p-Xylene	0.0285	F1	0.199	0.04619	F1	mg/Kg		9	70 - 130	
o-Xylene	0.0174	F1 F2	0.0994	0.04126	F1	mg/Kg		24	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-1510-1 MSD

**Matrix: Solid** 

**Analysis Batch: 11347** 

**Client Sample ID: SS01** Prep Type: Total/NA

Prep Batch: 11372

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0262	F1 F2	0.0998	0.03171	F1 F2	mg/Kg		5	70 - 130	42	35
Toluene	0.0320	F1	0.0998	0.02610	F1	mg/Kg		-6	70 - 130	13	35
Ethylbenzene	0.0185	F1	0.0998	0.02107	F1	mg/Kg		3	70 - 130	29	35
m-Xylene & p-Xylene	0.0285	F1	0.200	0.04208	F1	mg/Kg		7	70 - 130	9	35
o-Xylene	0.0174	F1 F2	0.0998	0.02220	F1 F2	mg/Kg		5	70 - 130	60	35

MSD MSD

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

Lab Sample ID: MB 880-11386/5-A

Matrix: Solid

**Analysis Batch: 11469** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11386

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg	_	11/03/21 15:14	11/04/21 16:56	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/03/21 15:14	11/04/21 16:56	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/03/21 15:14	11/04/21 16:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/03/21 15:14	11/04/21 16:56	1

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Job ID: 890-1510-1 Project/Site: James E Upper Battery SDG: 31403720.000

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

Lab Sample ID: MB 880-11386/5-A

**Matrix: Solid** 

Analysis Batch: 11469

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

Prep Batch: 11386

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/03/21 15:14	11/04/21 16:56	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/03/21 15:14	11/04/21 16:56	1

MD MD

MR MR

	1110	1110				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130	11/03/21 15:14	11/04/21 16:56	1
1,4-Difluorobenzene (Surr)	109		70 - 130	11/03/21 15:14	11/04/21 16:56	1

Lab Sample ID: MB 880-11387/5-A

**Matrix: Solid** 

**Analysis Batch: 11469** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA Prep Batch: 11387

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/03/21 15:23	11/05/21 04:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/03/21 15:23	11/05/21 04:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/03/21 15:23	11/05/21 04:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/03/21 15:23	11/05/21 04:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/03/21 15:23	11/05/21 04:28	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/03/21 15:23	11/05/21 04:28	1

мв мв

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117	70 - 130	11/03/21 15:23	11/05/21 04:28	1
1,4-Difluorobenzene (Surr)	100	70 - 130	11/03/21 15:23	11/05/21 04:28	1

Lab Sample ID: LCS 880-11387/1-A

**Matrix: Solid** 

**Analysis Batch: 11469** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 11387

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07396		mg/Kg		74	70 - 130	
Toluene	0.100	0.07820		mg/Kg		78	70 - 130	
Ethylbenzene	0.100	0.08094		mg/Kg		81	70 - 130	
m-Xylene & p-Xylene	0.200	0.1603		mg/Kg		80	70 - 130	
o-Xylene	0.100	0.08280		mg/Kg		83	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: LCSD 880-11387/2-A

Released to Imaging: 12/6/2022 4:11:46 PM

Matrix: Solid

**Analysis Batch: 11469** 

Prep Type: Total/NA

Prep Batch: 11387

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07937		mg/Kg		79	70 - 130	7	35
Toluene	0.100	0.08601		mg/Kg		86	70 - 130	10	35
Ethylbenzene	0.100	0.09638		mg/Kg		96	70 - 130	17	35
m-Xylene & p-Xylene	0.200	0.1878		mg/Kg		94	70 - 130	16	35
o-Xylene	0.100	0.08890		mg/Kg		89	70 - 130	7	35

Project/Site: James E Upper Battery

Job ID: 890-1510-1 SDG: 31403720.000

Prep Type: Total/NA Prep Batch: 11387

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

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: 880-7917-A-10-D MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

**Analysis Batch: 11469** 

	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00200	U F2 F1	0.0994	0.07460		mg/Kg		74	70 - 130
Toluene	<0.00200	U F1	0.0994	0.07676		mg/Kg		76	70 - 130
Ethylbenzene	<0.00200	U F2 F1	0.0994	0.08239		mg/Kg		83	70 - 130
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.199	0.1574		mg/Kg		79	70 - 130
o-Xylene	<0.00200	U F2 F1	0.0994	0.07701		mg/Kg		77	70 - 130

MS MS Qualifier Limits Surrogate %Recovery 70 - 130 4-Bromofluorobenzene (Surr) 129 1,4-Difluorobenzene (Surr) 109 70 - 130

Lab Sample ID: 880-7917-A-10-E MSD

**Matrix: Solid** 

**Analysis Batch: 11469** 

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 11387

%Rec. Spike MSD MSD RPD Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit Benzene 0.0998 <0.00200 U F2 F1 0.02808 F2 F1 mg/Kg 27 70 - 130 91 35 Toluene <0.00200 UF1 0.0998 0.05450 F1 53 70 - 130 35 mg/Kg 34 Ethylbenzene <0.00200 U F2 F1 0.0998 0.04215 F2 F1 42 70 - 130 65 35 mg/Kg 0.200 m-Xylene & p-Xylene <0.00401 U F2 F1 0.08400 F2 F1 mg/Kg 42 70 - 130 61 35 o-Xylene <0.00200 U F2 F1 0.0998 0.04830 F2 F1 mg/Kg 48 70 - 130 46 35

l		MSD	MSD	
	Surrogate	%Recovery	Qualifier	Limits
	4-Bromofluorobenzene (Surr)	129		70 - 130
l	1,4-Difluorobenzene (Surr)	111		70 - 130

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

Lab Sample ID: MB 880-11357/1-A

**Matrix: Solid** 

**Analysis Batch: 11412** 

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 11357

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		11/03/21 10:59	11/04/21 19:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/03/21 10:59	11/04/21 19:06	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/03/21 10:59	11/04/21 19:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepare	ed Analyz	zed Dil Fac
1-Chlorooctane	93		70 - 130	11/03/21 1	0:59 11/04/21	19:06 1
o-Terphenyl	106		70 - 130	11/03/21 1	0:59 11/04/21	19:06 1

Lab Sample ID: LCS 880-11357/2-A

Lab Sample ID: LCSD 880-11357/3-A

# QC Sample Results

Client: WSP USA Inc. Job ID: 890-1510-1 SDG: 31403720.000 Project/Site: James E Upper Battery

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

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11357

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1098		mg/Kg		110	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	832.0		mg/Kg		83	70 - 130	
C10-C28)								

**Matrix: Solid** 

Analysis Batch: 11412

LCS LCS

ICED ICED

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	85		70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11357

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1089		mg/Kg		109	70 - 130	1	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	802.1		mg/Kg		80	70 - 130	4	20
040 000)									

C10-C28)

Matrix: Solid

**Analysis Batch: 11412** 

	LCSD	LUSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: 890-1511-A-8-C MS Client Sample ID: Matrix Spike **Matrix: Solid** 

Prep Type: Total/NA **Analysis Batch: 11412** Prep Batch: 11357

	Sample	Sample	<b>Spike</b>	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	81.1	F1	997	2294	F1	mg/Kg		222	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	281		997	1461		mg/Kg		118	70 - 130	
C10-C28)										

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 102 70 - 130 102 70 - 130 o-Terphenyl

Lab Sample ID: 890-1511-A-8-D MSD Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

Matrix: Solid **Analysis Batch: 11412** 

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	81.1	F1	1000	1888	F1	mg/Kg		181	70 - 130	19	20
Diesel Range Organics (Over	281		1000	1479		mg/Kg		120	70 - 130	1	20

Dicaci italige Organica (Over	201		1000	 mg/rtg	120	70 = 100
C10-C28)						
0.0 020)						
	MSD	MSD				
Surrogate	%Recovery	Qualifier	Limits			
Juliogate	70Necovery	Qualifici	Lillits			
1-Chlorooctane	99		70 - 130			
1 Chilorocolario	00		70 - 700			

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Prep Batch: 11357

Job ID: 890-1510-1

Client: WSP USA Inc. Project/Site: James E Upper Battery SDG: 31403720.000

RL

5.00

Spike

Added

250

Spike

Added

250

Spike

Added

Spike

Added

248

248

Unit

LCS LCS

LCSD LCSD

MS MS

Qualifier

Qualifier

Result Qualifier

266.7

267.5

Result

445.9

MSD MSD

Result

441.5

Result Qualifier

mg/Kg

Unit

Unit

Unit

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

%Rec

%Rec

%Rec

%Rec

103

105

107

D

107

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

Lab Sample ID: 890-1511-A-8-D MSD **Matrix: Solid** 

**Analysis Batch: 11412** 

Client Sample ID: Matrix Spike Duplicate

Client Sample ID: Method Blank

Analyzed

11/06/21 05:15

Client Sample ID: Lab Control Sample

%Rec.

Limits

Client Sample ID: Lab Control Sample Dup

90 - 110

%Rec.

Limits

90 - 110

%Rec.

Limits

Client Sample ID: Matrix Spike Duplicate

%Rec.

Limits

90 - 110

90 - 110

Client Sample ID: Matrix Spike

Prep Type: Total/NA

**Prep Type: Soluble** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

RPD

**Prep Type: Soluble** 

**Prep Type: Soluble** 

RPD

**Prep Type: Soluble** 

Prep Batch: 11357

MSD MSD

Surrogate %Recovery Qualifier Limits o-Terphenyl 92 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11227/1-A

Matrix: Solid

**Analysis Batch: 11379** 

MB MB

Sample Sample

Result

Sample

Result

186

186

Qualifier

Sample

Qualifier

Analyte Result Qualifier

Chloride

<5.00 U

Lab Sample ID: LCS 880-11227/2-A **Matrix: Solid** 

**Analysis Batch: 11379** 

Analyte

Chloride

Lab Sample ID: LCSD 880-11227/3-A

**Matrix: Solid** 

**Analysis Batch: 11379** 

Analyte Chloride

Lab Sample ID: 890-1504-A-7-G MS

**Matrix: Solid** 

**Analysis Batch: 11379** 

Analyte

Chloride

Lab Sample ID: 890-1504-A-7-H MSD

**Matrix: Solid** 

Analyte

**Analysis Batch: 11379** 

Chloride

Lab Sample ID: MB 880-11235/1-A **Matrix: Solid** 

Analysis Batch: 11380

MB MB

Analyte

Chloride <5.00 U

Result Qualifier RL

5.00

Unit mg/Kg D

Prepared

11/06/21 22:29

Analyzed

Client Sample ID: Method Blank

Dil Fac

RPD

Limit

RPD

Limit

Dil Fac

20

Eurofins Xenco, Carlsbad

11/8/2021

Client: WSP USA Inc. Job ID: 890-1510-1 Project/Site: James E Upper Battery SDG: 31403720.000

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-11235/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 11380

	Sp	ike LCS	LUS				%Rec.	
Analyte	Add	ed Result	Qualifier	Unit	D	%Rec	Limits	
Chloride		50 222.3	· "-	mg/Kg		89	90 - 110	

Lab Sample ID: LCSD 880-11235/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 11380

	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	225.3		mg/Kg		90	90 - 110	1	20	

Lab Sample ID: 890-1507-A-1-F MS Client Sample ID: Matrix Spike Matrix: Solid **Prep Type: Soluble** 

Analysis Batch: 11380

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	3290	*_	2480	5992		mg/Kg	_	109	90 - 110	

Lab Sample ID: 890-1507-A-1-G MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 11380** 

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	3290	*_	2480	5774		mg/Kg		101	90 - 110	4	20

Lab Sample ID: MB 880-11461/1-A Client Sample ID: Method Blank **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 11506

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 11/07/21 14:48

MR MR

Lab Sample ID: LCS 880-11461/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 11506** 

	Spike	LCS	LCS				%Rec.		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	250	225.1		ma/Ka		90	90 - 110		_

Lab Sample ID: LCSD 880-11461/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 11506

LCSD LCSD %Rec. RPD Spike Added Result Qualifier Analyte Unit Limits RPD Limit %Rec 250 Chloride 226.7 mg/Kg 91 90 - 110

Lab Sample ID: 890-1510-6 MS **Client Sample ID: SS06** 

**Matrix: Solid** 

**Analysis Batch: 11506** 

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7 manyono Batomi 11000										
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	16700	F1	12400	33440	F1	mg/Kg		135	90 - 110	

Eurofins Xenco, Carlsbad

**Prep Type: Soluble** 

# **QC Sample Results**

Client: WSP USA Inc.

Job ID: 890-1510-1

Project/Site: James E Upper Battery

SDG: 31403720.000

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-1510-6 MSD

Matrix: Solid

Client Sample ID: SS06

Prep Type: Soluble

Analysis Batch: 11506

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	16700	F1	12400	33600	F1	mg/Kg		136	90 - 110	0	20

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Client: WSP USA Inc. Job ID: 890-1510-1 Project/Site: James E Upper Battery SDG: 31403720.000

**GC VOA** 

Analysis Batch: 11347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-1	SS01	Total/NA	Solid	8021B	11372
890-1510-2	SS02	Total/NA	Solid	8021B	11372
890-1510-3	SS03	Total/NA	Solid	8021B	11372
890-1510-4	SS04	Total/NA	Solid	8021B	11372
890-1510-5	SS05	Total/NA	Solid	8021B	11372
890-1510-7	SS07	Total/NA	Solid	8021B	11372
890-1510-8	SS08	Total/NA	Solid	8021B	11372
890-1510-9	SS09	Total/NA	Solid	8021B	11372
MB 880-11348/5-A	Method Blank	Total/NA	Solid	8021B	11348
MB 880-11372/5-A	Method Blank	Total/NA	Solid	8021B	11372
LCS 880-11372/1-A	Lab Control Sample	Total/NA	Solid	8021B	11372
LCSD 880-11372/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11372
890-1510-1 MS	SS01	Total/NA	Solid	8021B	11372
890-1510-1 MSD	SS01	Total/NA	Solid	8021B	11372

Prep Batch: 11348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-11348/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 11372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-1	SS01	Total/NA	Solid	5035	
890-1510-2	SS02	Total/NA	Solid	5035	
890-1510-3	SS03	Total/NA	Solid	5035	
890-1510-4	SS04	Total/NA	Solid	5035	
890-1510-5	SS05	Total/NA	Solid	5035	
890-1510-7	SS07	Total/NA	Solid	5035	
890-1510-8	SS08	Total/NA	Solid	5035	
890-1510-9	SS09	Total/NA	Solid	5035	
MB 880-11372/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11372/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11372/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1510-1 MS	SS01	Total/NA	Solid	5035	
890-1510-1 MSD	SS01	Total/NA	Solid	5035	

Prep Batch: 11386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-11386/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 11387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-6	SS06	Total/NA	Solid	5035	
MB 880-11387/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11387/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11387/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-7917-A-10-D MS	Matrix Spike	Total/NA	Solid	5035	
880-7917-A-10-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 11469

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-6	SS06	Total/NA	Solid	8021B	11387

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Client: WSP USA Inc.

Job ID: 890-1510-1

Project/Site: James E Upper Battery

SDG: 31403720.000

GC VOA (Continued)

# **Analysis Batch: 11469 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-11386/5-A	Method Blank	Total/NA	Solid	8021B	11386
MB 880-11387/5-A	Method Blank	Total/NA	Solid	8021B	11387
LCS 880-11387/1-A	Lab Control Sample	Total/NA	Solid	8021B	11387
LCSD 880-11387/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11387
880-7917-A-10-D MS	Matrix Spike	Total/NA	Solid	8021B	11387
880-7917-A-10-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11387

# **Analysis Batch: 11768**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-1	SS01	Total/NA	Solid	Total BTEX	
890-1510-2	SS02	Total/NA	Solid	Total BTEX	
890-1510-3	SS03	Total/NA	Solid	Total BTEX	
890-1510-4	SS04	Total/NA	Solid	Total BTEX	
890-1510-5	SS05	Total/NA	Solid	Total BTEX	
890-1510-6	SS06	Total/NA	Solid	Total BTEX	
890-1510-7	SS07	Total/NA	Solid	Total BTEX	
890-1510-8	SS08	Total/NA	Solid	Total BTEX	
890-1510-9	SS09	Total/NA	Solid	Total BTEX	

**GC Semi VOA** 

# Prep Batch: 11357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-1	SS01	Total/NA	Solid	8015NM Prep	
890-1510-2	SS02	Total/NA	Solid	8015NM Prep	
890-1510-3	SS03	Total/NA	Solid	8015NM Prep	
890-1510-4	SS04	Total/NA	Solid	8015NM Prep	
890-1510-5	SS05	Total/NA	Solid	8015NM Prep	
890-1510-6	SS06	Total/NA	Solid	8015NM Prep	
890-1510-7	SS07	Total/NA	Solid	8015NM Prep	
890-1510-8	SS08	Total/NA	Solid	8015NM Prep	
890-1510-9	SS09	Total/NA	Solid	8015NM Prep	
MB 880-11357/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11357/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11357/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1511-A-8-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1511-A-8-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 11412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-1	SS01	Total/NA	Solid	8015B NM	11357
890-1510-2	SS02	Total/NA	Solid	8015B NM	11357
890-1510-3	SS03	Total/NA	Solid	8015B NM	11357
890-1510-4	SS04	Total/NA	Solid	8015B NM	11357
890-1510-5	SS05	Total/NA	Solid	8015B NM	11357
890-1510-6	SS06	Total/NA	Solid	8015B NM	11357
890-1510-7	SS07	Total/NA	Solid	8015B NM	11357
890-1510-8	SS08	Total/NA	Solid	8015B NM	11357
890-1510-9	SS09	Total/NA	Solid	8015B NM	11357
MB 880-11357/1-A	Method Blank	Total/NA	Solid	8015B NM	11357
LCS 880-11357/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11357

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Client: WSP USA Inc.

Job ID: 890-1510-1

Project/Site: James E Upper Battery

SDG: 31403720.000

GC Semi VOA (Continued)

# **Analysis Batch: 11412 (Continued)**

Lab Sample	ID Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-1	1357/3-A Lab Control Sample Dup	Total/NA	Solid	8015B NM	11357
890-1511-A-	8-C MS Matrix Spike	Total/NA	Solid	8015B NM	11357
890-1511-A-	8-D MSD Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11357

# Analysis Batch: 11598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-1	SS01	Total/NA	Solid	8015 NM	
890-1510-2	SS02	Total/NA	Solid	8015 NM	
890-1510-3	SS03	Total/NA	Solid	8015 NM	
890-1510-4	SS04	Total/NA	Solid	8015 NM	
890-1510-5	SS05	Total/NA	Solid	8015 NM	
890-1510-6	SS06	Total/NA	Solid	8015 NM	
890-1510-7	SS07	Total/NA	Solid	8015 NM	
890-1510-8	SS08	Total/NA	Solid	8015 NM	
890-1510-9	SS09	Total/NA	Solid	8015 NM	

HPLC/IC

### Leach Batch: 11227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-1	SS01	Soluble	Solid	DI Leach	
890-1510-2	SS02	Soluble	Solid	DI Leach	
890-1510-3	SS03	Soluble	Solid	DI Leach	
890-1510-4	SS04	Soluble	Solid	DI Leach	
MB 880-11227/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11227/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11227/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1504-A-7-G MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1504-A-7-H MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Leach Batch: 11235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-5	SS05	Soluble	Solid	DI Leach	
890-1510-7	SS07	Soluble	Solid	DI Leach	
890-1510-8	SS08	Soluble	Solid	DI Leach	
890-1510-9	SS09	Soluble	Solid	DI Leach	
MB 880-11235/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11235/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11235/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1507-A-1-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1507-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### **Analysis Batch: 11379**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-1	SS01	Soluble	Solid	300.0	11227
890-1510-2	SS02	Soluble	Solid	300.0	11227
890-1510-3	SS03	Soluble	Solid	300.0	11227
890-1510-4	SS04	Soluble	Solid	300.0	11227
MB 880-11227/1-A	Method Blank	Soluble	Solid	300.0	11227
LCS 880-11227/2-A	Lab Control Sample	Soluble	Solid	300.0	11227
LCSD 880-11227/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11227

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Client: WSP USA Inc.

Project/Site: James E Upper Battery

SDG: 31403720.000

**HPLC/IC** (Continued)

# **Analysis Batch: 11379 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-A-7-G MS	Matrix Spike	Soluble	Solid	300.0	11227
890-1504-A-7-H MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11227

### **Analysis Batch: 11380**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-5	SS05	Soluble	Solid	300.0	11235
890-1510-7	SS07	Soluble	Solid	300.0	11235
890-1510-8	SS08	Soluble	Solid	300.0	11235
890-1510-9	SS09	Soluble	Solid	300.0	11235
MB 880-11235/1-A	Method Blank	Soluble	Solid	300.0	11235
LCS 880-11235/2-A	Lab Control Sample	Soluble	Solid	300.0	11235
LCSD 880-11235/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11235
890-1507-A-1-F MS	Matrix Spike	Soluble	Solid	300.0	11235
890-1507-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11235

### Leach Batch: 11461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-6	SS06	Soluble	Solid	DI Leach	_
MB 880-11461/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11461/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11461/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1510-6 MS	SS06	Soluble	Solid	DI Leach	
890-1510-6 MSD	SS06	Soluble	Solid	DI Leach	

# Analysis Batch: 11506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1510-6	SS06	Soluble	Solid	300.0	11461
MB 880-11461/1-A	Method Blank	Soluble	Solid	300.0	11461
LCS 880-11461/2-A	Lab Control Sample	Soluble	Solid	300.0	11461
LCSD 880-11461/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11461
890-1510-6 MS	SS06	Soluble	Solid	300.0	11461
890-1510-6 MSD	SS06	Soluble	Solid	300.0	11461

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Project/Site: James E Upper Battery

Job ID: 890-1510-1 SDG: 31403720.000

**Client Sample ID: SS01** Lab Sample ID: 890-1510-1 Date Collected: 10/26/21 12:42

**Matrix: Solid** 

Date Received: 11/01/21 10:37

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	11372	11/03/21 12:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/04/21 00:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:06	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11598	11/08/21 15:54	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11357	11/03/21 10:59	DM	XEN MID
Total/NA	Analysis	8015B NM		5			11412	11/04/21 22:28	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	11227	11/02/21 11:52	СН	XEN MID
Soluble	Analysis	300.0		50			11379	11/06/21 15:45	CH	XEN MID

**Client Sample ID: SS02** Lab Sample ID: 890-1510-2

Date Collected: 10/26/21 12:45 Matrix: Solid Date Received: 11/01/21 10:37

Dil Initial Final Batch Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 Total/NA Prep 4.99 g 5 mL 11372 11/03/21 12:29 MR XEN MID Total/NA 8021B 5 mL 11/04/21 00:23 XEN MID Analysis 1 5 mL 11347 MR Total/NA Total BTEX 11768 11/08/21 17:06 XEN MID Analysis A.I 1 Total/NA Analysis 8015 NM 11598 11/08/21 15:54 XEN MID Total/NA XEN MID Prep 8015NM Prep 10.02 g 11357 11/03/21 10:59 DM 10 mL Total/NA Analysis 8015B NM 5 11412 11/04/21 22:48 AJ XEN MID Soluble 11227 XEN MID Leach DI Leach 5.05 g 50 mL 11/02/21 11:52 CH Soluble Analysis 300.0 20 11379 11/06/21 15:53 CH XEN MID

Lab Sample ID: 890-1510-3 **Client Sample ID: SS03** 

Date Collected: 10/26/21 12:48 Date Received: 11/01/21 10:37

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	11372	11/03/21 12:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/04/21 00:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:06	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11598	11/08/21 15:54	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	11357	11/03/21 10:59	DM	XEN MID
Total/NA	Analysis	8015B NM		5			11412	11/04/21 23:08	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	11227	11/02/21 11:52	CH	XEN MID
Soluble	Analysis	300.0		50			11379	11/06/21 16:25	CH	XEN MID

**Client Sample ID: SS04** Lab Sample ID: 890-1510-4 **Matrix: Solid** Date Collected: 10/26/21 12:50

Date Received: 11/01/21 10:37

Г	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	11372	11/03/21 12:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/04/21 01:04	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:06	AJ	XEN MID

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**Matrix: Solid** 

Date Received: 11/01/21 10:37

Project/Site: James E Upper Battery

Job ID: 890-1510-1 SDG: 31403720.000

Client Sample ID: SS04 Lab Sample ID: 890-1510-4 Date Collected: 10/26/21 12:50

**Matrix: Solid** 

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA 8015 NM Analysis 11598 11/08/21 15:54 AJ XEN MID Total/NA Prep 8015NM Prep 10.01 g 10 mL 11357 11/03/21 10:59 DM XEN MID Total/NA Analysis 8015B NM 5 11412 11/04/21 23:28 ΑJ XEN MID 11227 11/02/21 11:52 XEN MID Soluble Leach DI Leach 5 g 50 mL CH 11/07/21 13:47 Soluble Analysis 300.0 50 11379 CH XEN MID

Client Sample ID: SS05 Lab Sample ID: 890-1510-5

Date Collected: 10/26/21 12:53 **Matrix: Solid** 

Date Received: 11/01/21 10:37

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	11372	11/03/21 12:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/04/21 01:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:06	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11598	11/08/21 15:54	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	11357	11/03/21 10:59	DM	XEN MID
Total/NA	Analysis	8015B NM		5			11412	11/04/21 23:49	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	11235	11/02/21 12:18	CH	XEN MID
Soluble	Analysis	300.0		50			11380	11/07/21 01:42	CH	XEN MID

**Client Sample ID: SS06** Lab Sample ID: 890-1510-6

Date Collected: 10/26/21 13:12 Date Received: 11/01/21 10:37

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	11387	11/03/21 15:23	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11469	11/05/21 12:12	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:06	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11598	11/08/21 15:54	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	11357	11/03/21 10:59	DM	XEN MID
Total/NA	Analysis	8015B NM		5			11412	11/05/21 00:29	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	11461	11/04/21 12:58	SC	XEN MID
Soluble	Analysis	300.0		50			11506	11/07/21 15:11	CH	XEN MID

Client Sample ID: SS07 Lab Sample ID: 890-1510-7

Date Collected: 10/26/21 13:15 Date Received: 11/01/21 10:37

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	11372	11/03/21 12:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/04/21 01:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:06	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11598	11/08/21 15:54	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	11357	11/03/21 10:59	DM	XEN MID
Total/NA	Analysis	8015B NM		5			11412	11/05/21 00:49	AJ	XEN MID

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**Matrix: Solid** 

**Matrix: Solid** 

Project/Site: James E Upper Battery

Job ID: 890-1510-1

SDG: 31403720.000

**Client Sample ID: SS07** 

Date Received: 11/01/21 10:37

Date Collected: 10/26/21 13:15

Lab Sample ID: 890-1510-7

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	11235	11/02/21 12:18	CH	XEN MID
Soluble	Analysis	300.0		50			11380	11/07/21 01:49	CH	XEN MID

**Client Sample ID: SS08** Lab Sample ID: 890-1510-8

Date Collected: 10/26/21 13:18 Date Received: 11/01/21 10:37

**Matrix: Solid** 

Analyst	Lab
ИR	XEN MID
ИR	XEN MID
ĄJ	XEN MID
\J	XEN MID
M	XEN MID

Lab Sample ID: 890-1510-9

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	11372	11/03/21 12:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/04/21 02:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:06	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11598	11/08/21 15:54	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	11357	11/03/21 10:59	DM	XEN MID
Total/NA	Analysis	8015B NM		5			11412	11/05/21 01:09	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	11235	11/02/21 12:18	CH	XEN MID
Soluble	Analysis	300.0		20			11380	11/07/21 00:56	CH	XEN MID

Client Sample ID: SS09 Date Collected: 10/26/21 13:20 Date Received: 11/01/21 10:37

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	11372	11/03/21 12:29	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/04/21 02:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:06	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11598	11/08/21 15:54	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	11357	11/03/21 10:59	DM	XEN MID
Total/NA	Analysis	8015B NM		5			11412	11/05/21 01:29	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	11235	11/02/21 12:18	CH	XEN MID
Soluble	Analysis	300.0		5			11380	11/07/21 01:04	CH	XEN MID

Laboratory References:

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

#### **Accreditation/Certification Summary**

Client: WSP USA Inc. Job ID: 890-1510-1 Project/Site: James E Upper Battery SDG: 31403720.000

#### **Laboratory: Eurofins Xenco, Midland**

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

Authority		ogram	Identification Number	Expiration Date	
Texas	NI	ELAP	T104704400-21-22	06-30-22	
The following analytes	are included in this report by	it the leberatory is not cortifi	ad by the gayarning outbority. This list ma		
the agency does not of	. ,	it the laboratory is not certili	ed by the governing authority. This list ma	ay include analytes for	
0 ,	. ,	Matrix	Analyte	ay include analytes for	
the agency does not of	fer certification.	,	, , ,	ay include analytes for	

#### **Method Summary**

Client: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1510-1

SDG: 31403720.000

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
3015NM Prep	Microextraction	SW846	XEN MID
OI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### **Protocol References:**

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

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#### **Sample Summary**

Client: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1510-1

SDG: 31403720.000

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1510-1	SS01	Solid	10/26/21 12:42	11/01/21 10:37	0 - 0.5
890-1510-2	SS02	Solid	10/26/21 12:45	11/01/21 10:37	0 - 0.5
890-1510-3	SS03	Solid	10/26/21 12:48	11/01/21 10:37	0 - 0.5
890-1510-4	SS04	Solid	10/26/21 12:50	11/01/21 10:37	0 - 0.5
890-1510-5	SS05	Solid	10/26/21 12:53	11/01/21 10:37	0 - 0.5
890-1510-6	SS06	Solid	10/26/21 13:12	11/01/21 10:37	0 - 0.5
890-1510-7	SS07	Solid	10/26/21 13:15	11/01/21 10:37	0 - 0.5
890-1510-8	SS08	Solid	10/26/21 13:18	11/01/21 10:37	0 - 0.5
890-1510-9	SS09	Solid	10/26/21 13:20	11/01/21 10:37	0 - 0.5

Xenco

City, State ZIP:

Company Name:

## Chain of Custody

Environment Testing Xenco	Houston, TX Midland, TX (4 EL Paso, TX (1 Hobbs, NM (1	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	, ,
	Hobbs, NM (	575) 392-7550, Carlsbad, NM (575) 988-3199	www.xenco.com Pageof
(Janninas	Bill to: (if different)	Kalei Jennings	Work Order Comments
USA J	Company Name:	WSP USA J	Program: UST/PST PRP Brownfields RRC Superfund
O North A Street Address:	Address:	3300 North A Street	State of Project:
and, TX 79705 City, State ZIP:	City, State ZIP:	Midland, TX 797705	Reporting: Level II   Level III   PST/UST   TRRP   Level IV
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11-1-21 1034	Class (suf	Mi asso	11/01/21; 1000	Û	We like		tak U
ture) Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time		Received by: (Signature		Religquished by: (Signature)
	onditions control usly negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	urofins Xenco, its affiliates and penses incurred by the client if to Eurofins Xenco, but not anal	r from client company to sibility for any losses or ex or each sample submitted	s constitutes a valid purchase orde is and shall not assume any respon each project and a charge of \$5 for	and relinquishment of samples ble only for the cost of sample ge of \$85.00 will be applied to	otice: Signature of this document f service. Eurofins Xenco will be ila f Eurofins Xenco. A minimum char
Hg: 1631/245.1//4/0//4/1		Cr Co Cu Pb Mn Mo Ni Se Ag II U	Sb As Ba Be Cd (	TCLP / SPLP 6010 : 8RCRA	/zed TCLP / SP	Metal(s) to be analy	Circle Method(s) and Metal(s) to be analyzed
Sr Tl Sn ∪ V Zn	≤i K Se	a Cr Co Cu Fe Pb N	Sb As Ba Be B Cd	M Texas 11 Al	8RCRA 13PPM	200.8 / 6020:	Total 200.7 / 6010
					* * * * * * * * * * * * * * * * * * * *	1 7	
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					1318		5508
					1315		LOSS
					1312		SSOLO
			×		1253		5505
					1250		SSOH
					1248		5503
					1245		5502
				0-05	10/26/21 1242	S	5501
Sample Comments			TPH BTE	Depth Grab/ #	Date Time Sampled Sampled	Matrix	Sample Identification
NaOH+Ascorbic Acid: SAPC			ΞX	2.4	Corrected Temperature:		Total Containers:
Zn Acetate+NaOH: Zn			(	2.6	Temperature Reading:	Yes No WA	Sample Custody Seals:
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>	hain of Custody	890-1510 C	PA	7.0-2	Correction Factor:	Yes No No	Cooler Custody Seals:
NaHSO 4: NABIS			4 8 2A	HOO WAN	Thermometer ID:	Ve No	Samples Received Intact:
H <sub>3</sub> PO <sub>4</sub> : HP			0	No No	Yes No Wet Ice:	Temp Blank:	SAMPLE RECEIPT
H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na			15		the lab, if received by 4:30pm		
HCL: HC HNO 3: HN			30	day received by	TAT starts the day received by	Fatima Smit	
Cool: Cool MeOH: Me					Due Date:	ld v county	Project Location: Ec
None: NO DI Water: H <sub>2</sub> O			Pres. Code	□Rush C	DOO KRoutine	72	er:
Preservative Codes		ANALYSIS REQUEST		Turn Around	mer Battery Turn /	ames E Oba	Project Name:

Eurofins Xenco, Carlsbad

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Environment Testing America

**Chain of Custody Record** 

Carlsbad NM 88220  Phone 575-088-3100 Few 575-088-3100	,	Zilaiii C	7 000	arody Necord	ç	2															An	America
Client Information (Sub Contract Lab)	Sampler <sup>-</sup>			Lab PM Kramer , lessica	P 1	sica						_	Carrier Tracking No(s)	racki	ng No	(S)			စ္က ဂ	COC No 890-489 1		
- 1	Phone			E-Mail iessic	E-Mail	ner@	euro Onue	finse		"		2 0	State of Origin	P Origin	] [				ָּטֶ ס	Page Page 1 of 1		
Company Eurofins Xenco					Accreditations Required (See note) NELAP - Louisiana NELAP	tations P - L	Requ	ired (S	NEC 20	0.0	Texas	L			Ì		l	l	ᇙ	Job# 890-1510-1		
Address 1211 W Florida Ave	Due Date Requested 11/5/2021	ă			l				<sub>≥</sub>	Z	/sis R	Requested	este	<u> </u>		I	- 1		-	Preservation Codes		
City Midland	TAT Requested (days):	ys):			diam.ed							-					-		) W >	NaOH		Hexane None
State Zip TX 79701				Protor :	energy to the														m o c		υσQ	Na2O4S Na2SO3
Phone 432-704-5440(TeI)	PO#:				Bernesis.	TPH	le												r o Ti			Na2S2O3 H2SO4
Email	WO#					p Full	Chloric								<del></del>				recoverations.			Acetone MCAA
Project Name James E Upper Battery	Project #: 89000048				. 7 . 250.0	S_Pre	ACH	X										in Prince of	uner	C EDTA	N S	pH 4-5 other (specify)
Site	SSOW#				MINKIN PY	5NM_	OI_LE	с ВТ										de strategi	manus	Other:		
					Variety of the	1/801	_28D/[	_Cal	GCV	lc								andro assisti	er or			
		Sample	Sample Type (C=c <sub>omp,</sub>	Matrix (w=water S=solid O=waste/oil.	ld Filtere form MS	5MOD_NN	_ORGFM_	1B/5035FF	al_BTEX_(	6MOD_Ca								nudit viid vastas Alexa	al Numbe			
	V Dans	X	Preservation Code:	400	7500 400	8	3	8	Т	8		-	-			-100g		1	*	apeciai iii	l is	Special instructions/Note.
SS01 (890-1510-1)	10/26/21	12 42 Mountain		Solid		×	×	×	×	×				_	_				-		ļ	
SS02 (890-1510-2)	10/26/21	12 45 Mountain		Solid		×	×	×	×	×						$\dashv$			**			
SS03 (890-1510-3)	10/26/21	12 48 Mountain		Solid		×	×	×	×	×									- Si			
SS04 (890-1510-4)	10/26/21	12 50 Mountain		Solid		×	×	×	×	×								8	4			1
SS05 (890-1510-5)	10/26/21	12 53 Mountain		Solid		×	×	×	×	×								(	**			
SS07 (890-1510-7)	10/26/21	13 15 Mountain		Solid		×	×	×	×	Х								र ज प	, <b>(8</b>			
SS08 (890-1510-8)	10/26/21	13 18 Mountain		Solid		×	×	×	×	Х									-			
SS09 (890-1510-9)	10/26/21	13 20 Mountain		Solid		×	×	×	×	×			_		_			1000				
Note: Since laboratory accreditations are subject to change. Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.	laces the ownership eing analyzed the sa signed Chain of Cu	of method, ana amples must be stody attesting t	lyte & accredita shipped back t so said complica	tion compliance o the Eurofins >	enco I	out su	bcontr	act lat ry or c	orato ther ir	ries. T	This sa	nple s	hipme rovide	ntisf d An	orward y char	led un	ider cl	hain-c	of-cus	stody If the laborat	tory d	oes not currently to Eurofins Xenco LLC
Possible Hazard Identification Unconfirmed					_sa	Sample Disposal ( A fee	le Disposal ( A f Return To Client	oosa 70	Clen		may be assessed if samples	e as Di	assessed if san Disposal By Lab	ed if	sam	ples	⊓are	□eta A	Ch inec	are retained longer than 1  Archive For		month) Months
Deliverable Requested I II III IV Other (specify)	Primary Deliverable Rank	able Rank 2			Sp	Special Instructions/QC R	Instr	uctio	ns/Q	C Re	equirements	ment	U.									
Empty Kit Relinquished by		Date			Time <sup>.</sup>		A N						7	Method of Shipment:	of Sh	ipmer	Ħ					
Relinquished by Use Cut 11-1-21	Date/Time		0 0	Company		Rec	Received by	* Z	B	X	$\sim$	7			0 0	Date/Time:	a a me	2.6	- [79		S S	Company Company
Relinquished by	Date/Time		0	Company		Rec	Received by	¥							0	Date/Time	me		ŀ		S	Company
Custody Seals Intact: Custody Seal No ∆ Yes ∆ No						C 00	Cooler Temperature(s) °C	nperal	ure(s)		and Othe	Other Remarks.	arks.		$\downarrow$	Ò	0		W	0	ŀ	

Ver. 06/08/2021

#### **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-1510-1 SDG Number: 31403720.000

List Source: Eurofins Xenco, Carlsbad

Login Number: 1510 List Number: 1 Creator: Clifton, Cloe

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

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#### **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-1510-1 SDG Number: 31403720.000

Login Number: 1510 List Source: Eurofins Xenco, Midland List Number: 2

List Creation: 11/02/21 11:25 AM

Creator: Kramer, Jessica

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	3.8/3.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	N/A	

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<6mm (1/4").



### **Environment Testing America**

#### **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-1636-1

Laboratory Sample Delivery Group: 31403720.000 Task 07.02 Client Project/Site: James E Upper Battery

For:

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

Attn: Kalei Jennings

MEAMER

Authorized for release by: 12/2/2021 4:37:19 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS .....

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

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

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Client: WSP USA Inc. Project/Site: James E Upper Battery Laboratory Job ID: 890-1636-1 SDG: 31403720.000 Task 07.02

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#### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-1636-1 Project/Site: James E Upper Battery

SDG: 31403720.000 Task 07.02

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** S1+ Surrogate recovery exceeds control limits, high biased.

U Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

S1-Surrogate recovery exceeds control limits, low biased.

U Indicates the analyte was analyzed for but not detected.

**HPLC/IC** 

Qualifier **Qualifier Description** 

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)

Estimated Detection Limit (Dioxin) **EDL** LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" Minimum Detectable Activity (Radiochemistry) MDA

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit Minimum Level (Dioxin) ML Most Probable Number MPN MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent Positive / Present POS

**PQL Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1636-1

SDG: 31403720.000 Task 07.02

Job ID: 890-1636-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-1636-1

#### Receipt

The samples were received on 11/24/2021 10:43 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 1.2°C

#### **GC VOA**

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-13342/1-A), (LCSD 880-13342/2-A), (880-8647-A-1-E), (880-8647-A-1-C MS) and (880-8647-A-1-D MSD). Evidence of matrix interferences is not obvious.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: SS10 (890-1636-1), SS11 (890-1636-2), SS12 (890-1636-3) and SS14 (890-1636-5). 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

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

Matrix: Solid

Lab Sample ID: 890-1636-1

#### **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-1636-1

Project/Site: James E Upper Battery SDG: 31403720.000 Task 07.02

**Client Sample ID: SS10** 

Date Collected: 11/23/21 14:47 Date Received: 11/24/21 10:43

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		11/30/21 09:00	12/01/21 02:32	
Toluene	0.00610		0.00199	mg/Kg		11/30/21 09:00	12/01/21 02:32	
Ethylbenzene	0.00310		0.00199	mg/Kg		11/30/21 09:00	12/01/21 02:32	
m-Xylene & p-Xylene	0.0177		0.00398	mg/Kg		11/30/21 09:00	12/01/21 02:32	
o-Xylene	< 0.00199	U	0.00199	mg/Kg		11/30/21 09:00	12/01/21 02:32	
Xylenes, Total	0.0177		0.00398	mg/Kg		11/30/21 09:00	12/01/21 02:32	•
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	147	S1+	70 - 130			11/30/21 09:00	12/01/21 02:32	
1,4-Difluorobenzene (Surr)	113		70 - 130			11/30/21 09:00	12/01/21 02:32	
Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	0.0269		0.00398	mg/Kg			12/01/21 19:46	
Total TPH	61.9	Qualifier	49.9	mg/Kg	— <u> </u>	Prepared	12/01/21 20:09	DII Fa
Analyte Total TPH		Qualifier	RL 49.9	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Mothod: 2015P NM Discol Pans	ro Organico (D	BOV (CC)						
Method: 8015B NM - Diesel Rang Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics			49.9	<u></u>		12/01/21 08:20	12/01/21 12:54	Dil Fat
(GRO)-C6-C10	<b>\49.9</b>	U	45.5	mg/kg		12/01/21 00.20	12/01/21 12.54	
Diesel Range Organics (Over	61.9		49.9	mg/Kg		12/01/21 08:20	12/01/21 12:54	
C10-C28) Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/01/21 08:20	12/01/21 12:54	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	67	S1-	70 - 130			12/01/21 08:20	12/01/21 12:54	
o-Terphenyl	69	S1-	70 - 130			12/01/21 08:20	12/01/21 12:54	
		Calubia						
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Method: 300.0 - Anions, Ion Chro Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa

**Client Sample ID: SS11** Lab Sample ID: 890-1636-2 Matrix: Solid

Date Collected: 11/23/21 14:49 Date Received: 11/24/21 10:43

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 02:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 02:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 02:59	1
m-Xylene & p-Xylene	0.00873		0.00401	mg/Kg		11/30/21 09:00	12/01/21 02:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 02:59	1
Xylenes, Total	0.00873		0.00401	mg/Kg		11/30/21 09:00	12/01/21 02:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	150	S1+	70 - 130			11/30/21 09:00	12/01/21 02:59	

Project/Site: James E Upper Battery

Client: WSP USA Inc.

Job ID: 890-1636-1

SDG: 31403720.000 Task 07.02

**Client Sample ID: SS11** Lab Sample ID: 890-1636-2 Date Collected: 11/23/21 14:49

Matrix: Solid

Date Received: 11/24/21 10:43 Sample Depth: 0.5

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

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1.4-Difluorobenzene (Surr)	110	70 - 130	11/30/21 09:00	12/01/21 02:59	1

**Method: Total BTEX - Total BTEX Calculation** 

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00873		0.00401	ma/Ka			12/01/21 19:46	1

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

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	ma/Ka			12/01/21 20:09	1

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

Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/01/21 08:20	12/01/21 13:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/01/21 08:20	12/01/21 13:56	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/01/21 08:20	12/01/21 13:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prep	oared	Analyzed	Dil Fac
1-Chlorooctane	67	S1-	70 - 130	12/01/2	21 08:20	12/01/21 13:56	1
o-Terphenyl	67	S1-	70 - 130	12/01/2	21 08:20	12/01/21 13:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	103	4.99	mg/Kg		_	11/30/21 22:01	1

**Client Sample ID: SS12** Lab Sample ID: 890-1636-3 **Matrix: Solid** 

Date Collected: 11/23/21 14:51 Date Received: 11/24/21 10:43

Sample Depth: 0.5

Method: 8021B -	. Volatila	Organic (	Compounds	(GC)
Methou, ouz ib :	· voiatile	Oruanic C	JUHUUUHIUS	100

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 03:26	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 03:26	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 03:26	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		11/30/21 09:00	12/01/21 03:26	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 03:26	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		11/30/21 09:00	12/01/21 03:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130			11/30/21 09:00	12/01/21 03:26	1
1,4-Difluorobenzene (Surr)	87		70 - 130			11/30/21 09:00	12/01/21 03:26	1

Mothod:	Total RTEY	- Total RTFY	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00401	U	0.00401	ma/Ka			12/01/21 19:46	1

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

Analyte	•	Result	Qualifier	RL	Un	it	D	Prepared	Analyzed	Dil Fac
Total TPH		75.3		49.9	mg				12/01/21 20:09	1

Project/Site: James E Upper Battery

Client: WSP USA Inc.

Job ID: 890-1636-1

SDG: 31403720.000 Task 07.02

**Client Sample ID: SS12** Lab Sample ID: 890-1636-3

Date Collected: 11/23/21 14:51 Matrix: Solid Date Received: 11/24/21 10:43

Sample Depth: 0.5

Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/01/21 08:20	12/01/21 14:18	1
Diesel Range Organics (Over C10-C28)	75.3		49.9	mg/Kg		12/01/21 08:20	12/01/21 14:18	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/01/21 08:20	12/01/21 14:18	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	70		70 - 130			12/01/21 08:20	12/01/21 14:18	1
o-Terphenyl	69	S1-	70 - 130			12/01/21 08:20	12/01/21 14:18	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	105		5.00	mg/Kg			11/30/21 22:12	1

Lab Sample ID: 890-1636-4 **Client Sample ID: SS13 Matrix: Solid** 

Date Collected: 11/23/21 14:55

Date Received: 11/24/21 10:43

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		11/30/21 09:00	12/01/21 03:53	1
Toluene	<0.00202	U	0.00202	mg/Kg		11/30/21 09:00	12/01/21 03:53	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		11/30/21 09:00	12/01/21 03:53	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		11/30/21 09:00	12/01/21 03:53	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		11/30/21 09:00	12/01/21 03:53	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		11/30/21 09:00	12/01/21 03:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130			11/30/21 09:00	12/01/21 03:53	1
1,4-Difluorobenzene (Surr)	114		70 - 130			11/30/21 09:00	12/01/21 03:53	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			12/01/21 19:46	1
Total BTEX  Method: 8015 NM - Diesel Rang			0.00404	mg/Kg			12/01/21 19:46	1
• <sup>***</sup> -	e Organics (DR		0.00404 <b>RL</b>	mg/Kg <b>Unit</b>	D	Prepared	12/01/21 19:46  Analyzed	1 Dil Fac
Method: 8015 NM - Diesel Rang	e Organics (DR	O) (GC) Qualifier			<u>D</u>	Prepared		
Method: 8015 NM - Diesel Range Analyte Total TPH	e Organics (DR) Result <49.9	O) (GC) Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: 8015 NM - Diesel Rang Analyte Total TPH Method: 8015B NM - Diesel Ran	e Organics (DR) Result 49.9 ge Organics (DI)	O) (GC) Qualifier	RL	Unit	<u>D</u>	Prepared Prepared	Analyzed	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics	e Organics (DR) Result 49.9 ge Organics (DI)	Qualifier U RO) (GC) Qualifier	<b>RL</b> 49.9	Unit mg/Kg		<u> </u>	Analyzed 12/01/21 20:09	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10	e Organics (DR) Result 49.9 ge Organics (DI) Result  49.9	Qualifier U  RO) (GC) Qualifier U  Qualifier U	RL 49.9	Unit mg/Kg  Unit mg/Kg		Prepared 12/01/21 08:20	Analyzed  12/01/21 20:09  Analyzed  12/01/21 14:39	Dil Fac  Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	e Organics (DR) Result 49.9 ge Organics (DI) Result	Qualifier U  RO) (GC) Qualifier U  Qualifier U	RL 49.9	Unit mg/Kg		Prepared	Analyzed 12/01/21 20:09 Analyzed	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	e Organics (DR) Result 49.9 ge Organics (DI) Result  49.9	Qualifier U  RO) (GC) Qualifier U  U  U  U  U	RL 49.9	Unit mg/Kg  Unit mg/Kg		Prepared 12/01/21 08:20	Analyzed  12/01/21 20:09  Analyzed  12/01/21 14:39	Dil Fac  Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	e Organics (DR/Result <49.9  ge Organics (DI/Result <49.9 <49.9	Qualifier U  RO) (GC) Qualifier U  U  U  U	RL 49.9  RL 49.9  49.9	Unit mg/Kg  Unit mg/Kg  mg/Kg		Prepared 12/01/21 08:20 12/01/21 08:20	Analyzed 12/01/21 20:09  Analyzed 12/01/21 14:39 12/01/21 14:39	Dil Fac  Dil Fac  1  1  1
Method: 8015 NM - Diesel Rang Analyte	e Organics (DR/Result <49.9  ge Organics (DI/Result <49.9 <49.9 <49.9	Qualifier U  RO) (GC) Qualifier U  U  U  U	RL 49.9  RL 49.9  49.9  49.9	Unit mg/Kg  Unit mg/Kg  mg/Kg		Prepared 12/01/21 08:20 12/01/21 08:20 12/01/21 08:20	Analyzed 12/01/21 20:09  Analyzed 12/01/21 14:39 12/01/21 14:39	Dil Fac  Dil Fac  1

Result Qualifier

48.9

Client: WSP USA Inc. Job ID: 890-1636-1

Project/Site: James E Upper Battery SDG: 31403720.000 Task 07.02

**Client Sample ID: SS13** Date Collected: 11/23/21 14:55

Date Received: 11/24/21 10:43

Sample Depth: 0.5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Lab Sample ID: 890-1636-4

Matrix: Solid

Dil Fac Analyzed 11/30/21 22:23

Client Sample ID: SS14 Lab Sample ID: 890-1636-5

RL

4.96

Unit

mg/Kg

D

Prepared

Date Collected: 11/23/21 14:57 Date Received: 11/24/21 10:43

Sample Depth: 0.5

Analyte

Chloride

**Matrix: Solid** 

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 04:20	
Toluene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 04:20	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 04:20	
m-Xylene & p-Xylene	0.00703		0.00399	mg/Kg		11/30/21 09:00	12/01/21 04:20	
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/30/21 09:00	12/01/21 04:20	
Xylenes, Total	0.00703		0.00399	mg/Kg		11/30/21 09:00	12/01/21 04:20	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	149	S1+	70 - 130			11/30/21 09:00	12/01/21 04:20	
1,4-Difluorobenzene (Surr)	111		70 - 130			11/30/21 09:00	12/01/21 04:20	
Method: Total BTEX - Total BTE	K Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	0.00703		0.00399	mg/Kg			12/01/21 19:46	•
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.8	U	49.8	mg/Kg			12/01/21 20:09	
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		12/01/21 08:20	12/01/21 15:00	,
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		12/01/21 08:20	12/01/21 15:00	
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		12/01/21 08:20	12/01/21 15:00	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
	66	S1-	70 - 130			12/01/21 08:20	12/01/21 15:00	
1-Chlorooctane			70 400			12/01/21 08:20	12/01/21 15:00	
1-Chlorooctane o-Terphenyl	65	S1-	70 - 130					
			70 - 130					
o-Terphenyl	omatography -		70 <u>-</u> 130	Unit	D	Prepared	Analyzed	Dil Fac

#### **Surrogate Summary**

Client: WSP USA Inc.

Job ID: 890-1636-1

Project/Site: James E Upper Battery

SDG: 31403720.000 Task 07.02

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

-				Percent Surrogate Reco	very (Acceptanc
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-1636-1	SS10	147 S1+	113		
390-1636-2	SS11	150 S1+	110		
390-1636-3	SS12	119	87		
890-1636-4	SS13	146 S1+	114		
890-1636-5	SS14	149 S1+	111		
LCS 880-13342/1-A	Lab Control Sample	137 S1+	121		
LCSD 880-13342/2-A	Lab Control Sample Dup	133 S1+	119		
MB 880-13293/70	Method Blank	79	98		
MB 880-13342/5-A	Method Blank	82	108		
Surrogate Legend					
BFB = 4-Bromofluorober	nzene (Surr)				

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

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
b Sample ID	Client Sample ID	(70-130)	(70-130)	
-1636-1	SS10	67 S1-	69 S1-	
1636-1 MS	SS10	73	66 S1-	
-1636-1 MSD	SS10	71	66 S1-	
1636-2	SS11	67 S1-	67 S1-	
-1636-3	SS12	70	69 S1-	
1636-4	SS13	71	71	
1636-5	SS14	66 S1-	65 S1-	
880-13590/2-A	Lab Control Sample	97	96	
D 880-13590/3-A	Lab Control Sample Dup	97	96	
380-13590/1-A	Method Blank	73	76	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: WSP USA Inc. Job ID: 890-1636-1 Project/Site: James E Upper Battery SDG: 31403720.000 Task 07.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-13293/70

**Matrix: Solid** 

Analysis Batch: 13293

Client	Sample	ID:	Method	Blank

Prep Type: Total/NA

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			11/30/21 18:13	1
Toluene	<0.00200	U	0.00200	mg/Kg			11/30/21 18:13	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			11/30/21 18:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg			11/30/21 18:13	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			11/30/21 18:13	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			11/30/21 18:13	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepar	red	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130			11/30/21 18:13	1
1,4-Difluorobenzene (Surr)	98		70 - 130			11/30/21 18:13	1

Lab Sample ID: MB 880-13342/5-A

Client Sample ID: Method Blank

Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 13293	Prep Batch: 13342
MB MB	

Analyte	Result Qu	ualifier	RL Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200 U	0.0	0200 mg/l		11/30/21 09:00	11/30/21 23:52	1
Toluene	<0.00200 U	0.0	0200 mg/l	<b>K</b> g	11/30/21 09:00	11/30/21 23:52	1
Ethylbenzene	<0.00200 U	0.0	0200 mg/l	<b>K</b> g	11/30/21 09:00	11/30/21 23:52	1
m-Xylene & p-Xylene	<0.00400 U	0.0	0400 mg/l	<b>K</b> g	11/30/21 09:00	11/30/21 23:52	1
o-Xylene	<0.00200 U	0.0	0200 mg/l	<b>K</b> g	11/30/21 09:00	11/30/21 23:52	1
Xylenes, Total	<0.00400 U	0.0	0400 mg/l	<b>K</b> g	11/30/21 09:00	11/30/21 23:52	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		70 - 130	11/30/21 09:00	11/30/21 23:52	1
1,4-Difluorobenzene (Surr)	108		70 - 130	11/30/21 09:00	11/30/21 23:52	1

Lab Sample ID: LCS 880-13342/1-A

**Matrix: Solid** 

**Analysis Batch: 13293** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Prep Batch: 13342

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1076		mg/Kg		108	70 - 130	
Toluene	0.100	0.1178		mg/Kg		118	70 - 130	
Ethylbenzene	0.100	0.1084		mg/Kg		108	70 - 130	
m-Xylene & p-Xylene	0.200	0.2447		mg/Kg		122	70 - 130	
o-Xylene	0.100	0.1187		mg/Kg		119	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	137	S1+	70 - 130
1.4-Difluorobenzene (Surr)	121		70 - 130

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ab Sample ID: LCSD 880-13342/2-A			Client Sample ID: Lab Control Sai	mple Dup
latrix: Solid			Prep Type:	: Total/NA
nalysis Batch: 13293			Prep Bate	ch: 13342
	Spike	LCSD LCSD	%Rec.	RPD

Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Benzene 0.100 0.1064 mg/Kg 106 70 - 130

Client: WSP USA Inc. Job ID: 890-1636-1 SDG: 31403720.000 Task 07.02 Project/Site: James E Upper Battery

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

Lab Sample ID: LCSD 880-13342/2-A **Matrix: Solid** 

**Analysis Batch: 13293** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 13342

•	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.1151		mg/Kg		115	70 - 130	2	35
Ethylbenzene	0.100	0.1118		mg/Kg		112	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.2450		mg/Kg		123	70 - 130	0	35
o-Xylene	0.100	0.1186		mg/Kg		119	70 - 130	0	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130
1,4-Difluorobenzene (Surr)	119		70 - 130

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

Lab Sample ID: MB 880-13590/1-A

**Matrix: Solid** 

**Analysis Batch: 13582** MB MB Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 13590

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		12/01/21 08:20	12/01/21 11:53	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		12/01/21 08:20	12/01/21 11:53	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/01/21 08:20	12/01/21 11:53	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	73	70 - 130	12/01/21 08:20	12/01/21 11:53	1
o-Terphenyl	76	70 - 130	12/01/21 08:20	12/01/21 11:53	1

Lab Sample ID: LCS 880-13590/2-A

**Matrix: Solid** 

Analysis Batch: 13582

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 13590

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1092		mg/Kg		109	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1027		mg/Kg		103	70 _ 130	
C10-C28)								

C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: LCSD 880-13590/3-A

**Matrix: Solid Analysis Batch: 13582**  Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 13590

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1063		mg/Kg		106	70 - 130	3	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1052		mg/Kg		105	70 - 130	2	20
C10-C28)									

Client: WSP USA Inc. Job ID: 890-1636-1 Project/Site: James E Upper Battery SDG: 31403720.000 Task 07.02

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

LCSD LCSD

Lab Sample ID: LCSD 880-13590/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 13582 Prep Batch: 13590

	Surrogate	%Recovery	Qualifier	Limits
	1-Chlorooctane	97		70 - 130
	o-Terphenyl	96		70 - 130
F				

Lab Sample ID: 890-1636-1 MS **Client Sample ID: SS10 Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 13582 Prep Batch: 13590

Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits <49.9 Ū 997 1287 129 70 - 130Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 997 110 61.9 1154 mg/Kg 70 - 130C10-C28) MS MS %Recovery Surrogate Qualifier Limits

70 - 130 1-Chlorooctane 73 66 S1-70 - 130 o-Terphenyl Lab Sample ID: 890-1636-1 MSD **Client Sample ID: SS10** 

Matrix: Solid Prep Type: Total/NA **Analysis Batch: 13582** Prep Batch: 13590

Sample Sample Spike MSD MSD %Rec. Analyte Result Qualifier hahhA Result Qualifier Unit %Rec I imits RPD Limit D Gasoline Range Organics <49.9 U 999 1223 mg/Kg 122 70 - 130 5 20 (GRO)-C6-C10 Diesel Range Organics (Over 61.9 999 1151 mg/Kg 109 70 - 130 0 20

C10-C28) MSD MSD Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 71

70 - 130

Method: 300.0 - Anions, Ion Chromatography

o-Terphenyl

Chloride

Lab Sample ID: MB 880-13492/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 13520** 

66 S1-

мв мв Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 11/30/21 19:09

Lab Sample ID: LCS 880-13492/2-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid Prep Type: Soluble** Analysis Batch: 13520

260.7

mg/Kg

104

90 - 110

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit Limits

250

Lab Sample ID: LCSD 880-13492/3-A

#### **QC Sample Results**

Client: WSP USA Inc.

Job ID: 890-1636-1

Project/Site: James E Upper Battery

SDG: 31403720.000 Task 07.02

Method: 300.0 - Anions, Ion Chromatography (Continued)

48.9

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

mg/Kg

100

90 - 110

Matrix: Solid Analysis Batch: 13520

Spike LCSD LCSD %Rec. RPD Result Qualifier Analyte Added Unit %Rec Limits RPD Limit Chloride 250 260.7 mg/Kg 104 90 - 110

Lab Sample ID: 890-1636-4 MS

Matrix: Solid

Client Sample ID: SS13

Prep Type: Soluble

Analysis Batch: 13520

Chloride

Analyte Sample Spike MS MS %Rec.

Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits

248

Lab Sample ID: 890-1636-4 MSD

Matrix: Solid

Client Sample ID: SS13

Prep Type: Soluble

296.3

Analysis Batch: 13520

Sample Sample MSD MSD %Rec. RPD Spike Result Qualifier Analyte Added Result Qualifier Unit Limits **RPD** Limit Chloride 48.9 248 289.6 90 - 110 20 mg/Kg

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#### **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-1636-1

Project/Site: James E Upper Battery

SDG: 31403720.000 Task 07.02

**GC VOA** 

Analysis Batch: 13293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1636-1	SS10	Total/NA	Solid	8021B	13342
890-1636-2	SS11	Total/NA	Solid	8021B	13342
890-1636-3	SS12	Total/NA	Solid	8021B	13342
890-1636-4	SS13	Total/NA	Solid	8021B	13342
890-1636-5	SS14	Total/NA	Solid	8021B	13342
MB 880-13293/70	Method Blank	Total/NA	Solid	8021B	
MB 880-13342/5-A	Method Blank	Total/NA	Solid	8021B	13342
LCS 880-13342/1-A	Lab Control Sample	Total/NA	Solid	8021B	13342
LCSD 880-13342/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	13342

Prep Batch: 13342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1636-1	SS10	Total/NA	Solid	5035	
890-1636-2	SS11	Total/NA	Solid	5035	
890-1636-3	SS12	Total/NA	Solid	5035	
890-1636-4	SS13	Total/NA	Solid	5035	
890-1636-5	SS14	Total/NA	Solid	5035	
MB 880-13342/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-13342/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-13342/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 13709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1636-1	SS10	Total/NA	Solid	Total BTEX	
890-1636-2	SS11	Total/NA	Solid	Total BTEX	
890-1636-3	SS12	Total/NA	Solid	Total BTEX	
890-1636-4	SS13	Total/NA	Solid	Total BTEX	
890-1636-5	SS14	Total/NA	Solid	Total BTEX	

**GC Semi VOA** 

Analysis Batch: 13582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1636-1	SS10	Total/NA	Solid	8015B NM	13590
890-1636-2	SS11	Total/NA	Solid	8015B NM	13590
890-1636-3	SS12	Total/NA	Solid	8015B NM	13590
890-1636-4	SS13	Total/NA	Solid	8015B NM	13590
890-1636-5	SS14	Total/NA	Solid	8015B NM	13590
MB 880-13590/1-A	Method Blank	Total/NA	Solid	8015B NM	13590
LCS 880-13590/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	13590
LCSD 880-13590/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	13590
890-1636-1 MS	SS10	Total/NA	Solid	8015B NM	13590
890-1636-1 MSD	SS10	Total/NA	Solid	8015B NM	13590

Prep Batch: 13590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1636-1	SS10	Total/NA	Solid	8015NM Prep	
890-1636-2	SS11	Total/NA	Solid	8015NM Prep	
890-1636-3	SS12	Total/NA	Solid	8015NM Prep	
890-1636-4	SS13	Total/NA	Solid	8015NM Prep	
890-1636-5	SS14	Total/NA	Solid	8015NM Prep	

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#### **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-1636-1

Project/Site: James E Upper Battery

SDG: 31403720.000 Task 07.02

#### GC Semi VOA (Continued)

#### Prep Batch: 13590 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-13590/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-13590/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-13590/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1636-1 MS	SS10	Total/NA	Solid	8015NM Prep	
890-1636-1 MSD	SS10	Total/NA	Solid	8015NM Prep	

#### **Analysis Batch: 13711**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1636-1	SS10	Total/NA	Solid	8015 NM	
890-1636-2	SS11	Total/NA	Solid	8015 NM	
890-1636-3	SS12	Total/NA	Solid	8015 NM	
890-1636-4	SS13	Total/NA	Solid	8015 NM	
890-1636-5	SS14	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 13492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1636-1	SS10	Soluble	Solid	DI Leach	
890-1636-2	SS11	Soluble	Solid	DI Leach	
890-1636-3	SS12	Soluble	Solid	DI Leach	
890-1636-4	SS13	Soluble	Solid	DI Leach	
890-1636-5	SS14	Soluble	Solid	DI Leach	
MB 880-13492/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-13492/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-13492/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1636-4 MS	SS13	Soluble	Solid	DI Leach	
890-1636-4 MSD	SS13	Soluble	Solid	DI Leach	

#### Analysis Batch: 13520

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1636-1	SS10	Soluble	Solid	300.0	13492
890-1636-2	SS11	Soluble	Solid	300.0	13492
890-1636-3	SS12	Soluble	Solid	300.0	13492
890-1636-4	SS13	Soluble	Solid	300.0	13492
890-1636-5	SS14	Soluble	Solid	300.0	13492
MB 880-13492/1-A	Method Blank	Soluble	Solid	300.0	13492
LCS 880-13492/2-A	Lab Control Sample	Soluble	Solid	300.0	13492
LCSD 880-13492/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	13492
890-1636-4 MS	SS13	Soluble	Solid	300.0	13492
890-1636-4 MSD	SS13	Soluble	Solid	300.0	13492

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Job ID: 890-1636-1 Project/Site: James E Upper Battery SDG: 31403720.000 Task 07.02

**Client Sample ID: SS10** 

Date Collected: 11/23/21 14:47 Date Received: 11/24/21 10:43

Lab Sample ID: 890-1636-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	13342	11/30/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	13293	12/01/21 02:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			13709	12/01/21 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			13711	12/01/21 20:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	13590	12/01/21 08:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			13582	12/01/21 12:54	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	13492	11/30/21 12:44	CA	XEN MID
Soluble	Analysis	300.0		1			13520	11/30/21 21:49	CH	XEN MID

**Client Sample ID: SS11** Lab Sample ID: 890-1636-2

Date Collected: 11/23/21 14:49 Date Received: 11/24/21 10:43

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	13342	11/30/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	13293	12/01/21 02:59	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			13709	12/01/21 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			13711	12/01/21 20:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	13590	12/01/21 08:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			13582	12/01/21 13:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	13492	11/30/21 12:44	CA	XEN MID
Soluble	Analysis	300.0		1			13520	11/30/21 22:01	CH	XEN MID

**Client Sample ID: SS12** Lab Sample ID: 890-1636-3 Date Collected: 11/23/21 14:51 **Matrix: Solid** 

Date Received: 11/24/21 10:43

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	13342	11/30/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	13293	12/01/21 03:26	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			13709	12/01/21 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			13711	12/01/21 20:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	13590	12/01/21 08:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			13582	12/01/21 14:18	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	13492	11/30/21 12:44	CA	XEN MID
Soluble	Analysis	300.0		1			13520	11/30/21 22:12	CH	XEN MID

**Client Sample ID: SS13** Lab Sample ID: 890-1636-4

Date Collected: 11/23/21 14:55 Date Received: 11/24/21 10:43

Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	13342	11/30/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	13293	12/01/21 03:53	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			13709	12/01/21 19:46	AJ	XEN MID

Eurofins Xenco, Carlsbad

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**Matrix: Solid** 

Date Received: 11/24/21 10:43

#### **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-1636-1 SDG: 31403720.000 Task 07.02 Project/Site: James E Upper Battery

**Client Sample ID: SS13** 

Lab Sample ID: 890-1636-4 Date Collected: 11/23/21 14:55

Matrix: Solid

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA 8015 NM Analysis 13711 12/01/21 20:09 AJ XEN MID Total/NA Prep 8015NM Prep 10.03 g 10 mL 13590 12/01/21 08:20 DM XEN MID Total/NA Analysis 8015B NM 13582 12/01/21 14:39 ΑJ XEN MID 1 5.04 g 13492 11/30/21 12:44 XEN MID Soluble Leach DI Leach 50 mL CA 300.0 13520 11/30/21 22:23 Soluble Analysis 1 CH XEN MID

**Client Sample ID: SS14** Lab Sample ID: 890-1636-5

Date Collected: 11/23/21 14:57 **Matrix: Solid** 

Date Received: 11/24/21 10:43

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	13342	11/30/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	13293	12/01/21 04:20	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			13709	12/01/21 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			13711	12/01/21 20:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	13590	12/01/21 08:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			13582	12/01/21 15:00	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	13492	11/30/21 12:44	CA	XEN MID
Soluble	Analysis	300.0		1			13520	11/30/21 22:58	CH	XEN MID

Laboratory References:

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

#### **Accreditation/Certification Summary**

Client: WSP USA Inc. Job ID: 890-1636-1 Project/Site: James E Upper Battery SDG: 31403720.000 Task 07.02

#### Laboratory: Eurofins Xenco, Midland

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

Authority Texas		rogram	Identification Number	Expiration Date 06-30-22	
		ELAP	T104704400-21-22		
The following analytes	are included in this report h	ut the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for	
the agency does not of	' '	at the laboratory is not certifi	ed by the governing additionty. This list me	ay molade analytes for	
0 ,	' '	Matrix	Analyte	ay morade analytes for	
the agency does not of	er certification.	,	, , ,		

#### **Method Summary**

Client: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1636-1

SDG: 31403720.000 Task 07.02

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

#### **Protocol References:**

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Eurofins Xenco, Carlsbad

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#### **Sample Summary**

Client: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1636-1

SDG: 31403720.000 Task 07.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1636-1	SS10	Solid	11/23/21 14:47	11/24/21 10:43	0.5
890-1636-2	SS11	Solid	11/23/21 14:49	11/24/21 10:43	0.5
890-1636-3	SS12	Solid	11/23/21 14:51	11/24/21 10:43	0.5
890-1636-4	SS13	Solid	11/23/21 14:55	11/24/21 10:43	0.5
890-1636-5	SS14	Solid	11/23/21 14:57	11/24/21 10:43	0.5

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Project Manager:

Kalei Jennings

13

Work Order No:

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 Chain of Custody

Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

Bill to: (if different)

Kalei Jennings

Work Order Comments

으

Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296

Revised Date 051418 Rev 2018.1			0							5
			2EFOI12-17-1	2.67.1		\$	LIDE CAD		IN	1 Whell
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Time	Date/Time	ıre)	Received by: (Signature)	> Received		: (Signature)	Relinquished by: (Signature)
	. It assigns standard terms and conditions are due to circumstances beyond the control enforced unless previously negotiated.	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the contro of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	o Xenco, its affil ses incurred by o, but not analy:	ent company t sses or expen mitted to Xenc	rchase order from cli sponsibility for any lo for each sample sub	utes a valid pur assume any res a charge of \$5	samples constites and shall not a each project and	quishment of ost of sampl e applied to	document and relin liable only for the c arge of \$75.00 will t	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$6 for each sample submitted to Xenco, but not analyzed. These terms will be
1631 / 245.1 / 7470 / 7471 : Hg	A Se Ag SIOZ	E Cd Ca Cr Co Cu Fe Pb Mg Min Mo N Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	Ba Be	III —	ICRA 13PPM Texas 11 A	BRCRA 13F		6020: s) to be a	otal 200.7 / 6010 200.8 / 6020:  Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010 Circle Method(s)
	Ma Ma Nii K sa Ag siOa Na sr T	0.0.0.0.5		2∭		- 11			Ш	
Discrete			×	×	0.5	2:57	11/23/21	S	4	SS14
Discrete			×	- ×	0.5'	2:55	11/23/21	S	3	SS13
Discrete			×	1 ×	0.5'	2:51	11/23/21	S	2	SS12
Discrete			×	×	0.5	2:49	11/23/21	S	1	SS11
Discrete			×	-1 ×	0.5'	2:47	11/23/21	S	0	SS10
Sample Comments			BTEX (	Number	Depth	Time Sampled	Date Sampled	Matrix	tification	Sample Identification
lab, if received by 4:30pm						Total Containers:	Tota	No Alla	Yes	Sample Custody Seals:
TAT starts the day recevied by the	TATS		_		7.0	Correction Factor:	Corre	No (N/A)	Yes	Cooler Custody Seals:
			_		7	-00- MAL	MI	No	(Self)	Received Intact:
	STOCK III III III	890-1636 Chain of Custody	)	ners		Thermometer ID	1	1.2	1.4/	Temperature (°C):
					No No	Wet Ice:	(Yes) No	Tęmp Blank:		SAMPLE RECEIPT
					Due Date:	Due			Payton Benner	Sampler's Name:
					Rush: 2 DAY	Rusi				P.O. Number:
					ine	Routine	31403720.000 Task 07.02	720.000	31403	Project Number:
Work Order Notes		ANALYSIS REQUEST			Turn Around	7		er Battery	James E Upper Battery	Project Name:
Other:	Deliverables: EDD ADaPT	kalei.jennings@wsp.com, payton.benner@wsp.com	payton.ben	@wsp.com	kalei.jennings	Email:			817-683-2503	Phone:
LAP LIVELIV	evel		Midland, Texas 79705	Midlan	City, State ZIP:			s 79705	Midland, Texas 79705	City, State ZIP:
]	1 2:	3300 North A Street Bldg 1, Unit 222	orth A Street	3300 N	Address:		lg 1, Unit 222	Street Blo	3300 North A Street Bldg 1, Unit 222	Address:
☐C {Derfund ☐	Program: UST/PST ☐RP ☐rownfields ☐C	Pro	ISA	WSP USA	Company Name:				WSP USA	Company Name:

1089 N Canal St.

**Eurofins Xenco, Carlsbad** 

# Chain of Custody Record

💸 eurofins

Environment Testing America

State Zip: TX, 79701 SS13 (890-1636-4) SS12 (890-1636-3) SS11 (890-1636-2) SS10 (890-1636-1) Sample Identification - Client ID (Lab ID Carlsbad NM 88220 Phone. 575-988-3199 Fax 575-988-3199 Vote: Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently realized in a careditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC at the Eurofins Xenco LLC. SS14 (890-1636-5) Eurofins Xenco 132-704-5440(Tel) ≡mpty Kit Relinquished by Deliverable Requested | II III IV Possible Hazard Identification lames E Upper Battery Midland 1211 W Florida Ave Shipping/Receiving Client Information telinquished by: ient Contact: Custody Seals Intact: Ύes z E (Sub Contract Lab) Custody Seal No Other (specify) Project #: 89000048 12/1 Phone Sampler Date/Time Primary Deliverable Rank 2 ŏ # FAT Requested (days) Date/Tim Sample Date e Date Requested /1/2021 11/23/21 11/23/21 11/23/21 11/23/21 11/23/21 Date Mountain 14 57 Mountain 14 49 Mountain 14 55 Mountain 14 51 Mountain Sample 14 47 (C=comp, G=grab) Sample Preservation Code Type Company Company Company Matrix Solid Solid Solid Solid Solid Lab PM jessica.kramer@eurofinset.com Kramer Jessica Field Filtered Sample (Yes or No) NELAP - Louisiana, NELAP - Texas Time. Perform MS/MSD (Yes or No) Special Instructions/QC Requirements Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lah 8015MOD\_NM/8015NM\_S\_Prep Full TPH × × × × × Received by: Cooler Temperature(s) °C and Other Remarks Return To Client × × × × × 300\_ORGFM\_28D/DI\_LEACH Chloride ed by × × × 8021B/5035FP\_Calc BTEX Total\_BTEX\_GCV × × × × × Analysis Requested 8015MOD\_Calc × × × × State of Origin New Mexico Carrier Tracking No(s) Method of Shipment Dat**é/Ti**me Archive For Total Number of containers 2 416 C Zn Acetate
D Nitric Acid
E NaHSO4
F MeOH
G Amchlor
H Ascorbic Acid
I loe
J DI Water
K EDTA
L EDA COC No: 890-523 1 Page 1 of ' Preservation Codes 390-1636-1 NaOH Special Instructions/Note: M Hexane
N-None
O AsNaO2
P Na2O4S
Q Na2SO3
R Na2S2O3
S H2SO4 Company Company /er 06/08/2021 Acetone MCAA TSP Dodecahydrate other (specify)

#### **Login Sample Receipt Checklist**

 Client: WSP USA Inc.
 Job Number: 890-1636-1

 SDG Number: 31403720.000 Task 07.02

List Source: Eurofins Xenco, Carlsbad

Login Number: 1636 List Number: 1 Creator: Clifton, Cloe

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

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#### **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-1636-1

SDG Number: 31403720.000 Task 07.02

List Source: Eurofins Xenco, Midland

List Creation: 11/29/21 02:35 PM

Creator: Kramer, Jessica

Login Number: 1636

List Number: 2

<6mm (1/4").

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

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#### **Environment Testing America**

#### **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-2297-1

Laboratory Sample Delivery Group: 03d2024016

Client Project/Site: James E Upper

For:

eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Kalei Jennings

RAMER

Authorized for release by: 5/18/2022 8:33:23 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Received by OCD: 9/28/2022 1:57:39 PM

Visit us at:

www.eurofinsus.com/Env Released to Imaging: 12/6/2022 4:11:46 PM

.....LINKS

**Review your project** results through

EOL

**Have a Question?** 

signature is intended to be the legally binding equivalent of a traditionally handwritten

This report has been electronically signed and authorized by the signatory. Electronic

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

Client: Ensolum
Project/Site: James E Upper
Laboratory Job ID: 890-2297-1
SDG: 03d2024016

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#### **Definitions/Glossary**

Job ID: 890-2297-1 Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

#### **Qualifiers**

**GC VOA** 

Qualifier **Qualifier Description** S1+ Surrogate recovery exceeds control limits, high biased. U

Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** F1 MS and/or MSD recovery exceeds control limits. S1-Surrogate recovery exceeds control limits, low biased.

Indicates the analyte was analyzed for but not detected.

**HPLC/IC** 

Qualifier **Qualifier Description** 

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

DFR 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

Decision Level Concentration (Radiochemistry) DLC

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Method Detection Limit MDL 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

Toxicity Equivalent Factor (Dioxin) TEF Toxicity Equivalent Quotient (Dioxin) TEQ

**TNTC** Too Numerous To Count

#### Case Narrative

Client: Ensolum

Project/Site: James E Upper

Job ID: 890-2297-1

SDG: 03d2024016

Job ID: 890-2297-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2297-1

#### Receipt

The samples were received on 5/11/2022 11:24 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C

#### **GC VOA**

Method 8021B: Surrogate recovery for the following sample was outside control limits: TP1-0-1 (890-2297-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: TP13-2-3 (890-2297-26). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: TP3-0-1 (890-2297-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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: TP6-0-1 (890-2297-11). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-25432 and analytical batch 880-25488 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### HPLC/IC

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

Lab Sample ID: 890-2297-1

# **Client Sample Results**

Client: EnsolumJob ID: 890-2297-1Project/Site: James E UpperSDG: 03d2024016

Client Sample ID: TP1-0-1

Date Collected: 05/09/22 10:16 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 15:43	
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 15:43	,
Ethylbenzene	0.0185		0.00201	mg/Kg		05/16/22 09:29	05/16/22 15:43	1
m-Xylene & p-Xylene	0.0814		0.00402	mg/Kg		05/16/22 09:29	05/16/22 15:43	
o-Xylene	0.0652		0.00201	mg/Kg		05/16/22 09:29	05/16/22 15:43	,
Xylenes, Total	0.147		0.00402	mg/Kg		05/16/22 09:29	05/16/22 15:43	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130			05/16/22 09:29	05/16/22 15:43	1
1,4-Difluorobenzene (Surr)	100		70 - 130			05/16/22 09:29	05/16/22 15:43	1
Method: Total BTEX - Total BTI	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.165		0.00402	mg/Kg			05/16/22 17:06	1
Method: 8015 NM - Diesel Rang	ge Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	11600		250	mg/Kg			05/16/22 15:00	1
Method: 8015B NM - Diesel Rai	nge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	368		250	mg/Kg		05/12/22 13:30	05/14/22 05:42	
Diesel Range Organics (Over C10-C28)	8570		250	mg/Kg		05/12/22 13:30	05/14/22 05:42	5
Oll Range Organics (Over C28-C36)	2700		250	mg/Kg		05/12/22 13:30	05/14/22 05:42	Ę
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130			05/12/22 13:30	05/14/22 05:42	
o-Terphenyl	99		70 - 130			05/12/22 13:30	05/14/22 05:42	
Method: 300.0 - Anions, Ion Ch	romatography -	Soluble						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	292		4.99	mg/Kg			05/16/22 15:49	

Client Sample ID: TP1-2-3

Date Collected: 05/09/22 10:20 Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 16:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 16:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 16:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/16/22 09:29	05/16/22 16:09	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 16:09	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		05/16/22 09:29	05/16/22 16:09	1

**Eurofins Carlsbad** 

Lab Sample ID: 890-2297-2

-

3

4

6

8

10

12

13

Matrix: Solid

mg/Kg

Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

**Client Sample ID: TP1-2-3** Lab Sample ID: 890-2297-2

<0.00400 U

88

4300

Date Collected: 05/09/22 10:20 Matrix: Solid Date Received: 05/11/22 11:24 Sample Depth: 2 - 3

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130		•	05/16/22 09:29	05/16/22 16:09	1
1,4-Difluorobenzene (Surr)	87		70 - 130			05/16/22 09:29	05/16/22 16:09	1
Method: Total BTEX - Total BTEX Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Method: 8015 NM - Diesel Range C	rganics (DRO) (GC)							
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.9 U	49.9	ma/Ka			05/16/22 15:00	1	

0.00400

Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/13/22 22:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/13/22 22:56	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/13/22 22:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130			05/12/22 13:30	05/13/22 22:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble							
Analyte	Result Qual	lifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	648	4.98	mg/Kg			05/16/22 15:59	1

70 - 130

**Client Sample ID: TP2-0-1** Lab Sample ID: 890-2297-3 Date Collected: 05/09/22 11:22 **Matrix: Solid** 

Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

**Total TPH** 

o-Terphenyl

Total BTEX

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/16/22 16:35	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/16/22 16:35	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/16/22 16:35	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		05/16/22 09:29	05/16/22 16:35	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/16/22 16:35	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/16/22 09:29	05/16/22 16:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130			05/16/22 09:29	05/16/22 16:35	1
1,4-Difluorobenzene (Surr)	91		70 - 130			05/16/22 09:29	05/16/22 16:35	1
Method: Total BTEX - Total B	ΓEX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			05/16/22 17:06	1
- Method: 8015 NM - Diesel Rai	nge Organics (DR	O) (GC)						
Method, of 15 MM - Diesel Ital	igo oi gainoo (bit							

**Eurofins Carlsbad** 

05/16/22 15:00

50.0

mg/Kg

05/16/22 17:06

05/13/22 22:56

05/12/22 13:30

Lab Sample ID: 890-2297-3

Job ID: 890-2297-1 SDG: 03d2024016

Project/Site: James E Upper Client Sample ID: TP2-0-1

Date Collected: 05/09/22 11:22 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Client: Ensolum

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 08:38	1
Diesel Range Organics (Over C10-C28)	3450		50.0	mg/Kg		05/12/22 13:30	05/14/22 08:38	1
Oll Range Organics (Over C28-C36)	846		50.0	mg/Kg		05/12/22 13:30	05/14/22 08:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	74		70 - 130			05/12/22 13:30	05/14/22 08:38	1
o-Terphenyl	78		70 - 130			05/12/22 13:30	05/14/22 08:38	1
Method: 300.0 - Anions, Ion Ch	romatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	744		4.96	mg/Kg			05/16/22 16:08	

Client Sample ID: TP2-1-2 Lab Sample ID: 890-2297-4 Date Collected: 05/09/22 11:25 Matrix: Solid

Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 17:01	
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 17:01	1
Ethylbenzene	0.00495		0.00200	mg/Kg		05/16/22 09:29	05/16/22 17:01	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/16/22 09:29	05/16/22 17:01	1
o-Xylene	0.173		0.00200	mg/Kg		05/16/22 09:29	05/16/22 17:01	1
Xylenes, Total	0.173		0.00401	mg/Kg		05/16/22 09:29	05/16/22 17:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130			05/16/22 09:29	05/16/22 17:01	1
1,4-Difluorobenzene (Surr)	90		70 - 130			05/16/22 09:29	05/16/22 17:01	1
· Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.178		0.00401	mg/Kg			05/16/22 17:06	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
A It A	Desuit	Qualifier	<b>5</b> 1					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9		49.9	mg/Kg	<u>D</u>	Prepared	Analyzed 05/16/22 15:00	Dil Fac
	<49.9	U			<u>D</u>	Prepared		
Total TPH	<49.9	U			<u></u> <u>D</u>	Prepared		
Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	<49.9	RO) (GC) Qualifier	49.9	mg/Kg			05/16/22 15:00	1
Total TPH  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10	<49.9  ge Organics (Di	CO) (GC) Qualifier U	49.9	mg/Kg		Prepared	05/16/22 15:00 Analyzed	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	<pre>&lt;49.9 ge Organics (Di Result &lt;49.9</pre>	CO) (GC) Qualifier U	49.9  RL 49.9	mg/Kg  Unit  mg/Kg		Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 00:00	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<pre>&lt;49.9 ge Organics (Di Result &lt;49.9</pre>	RO) (GC) Qualifier U	49.9  RL 49.9	mg/Kg  Unit  mg/Kg		Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 00:00	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<49.9 ge Organics (Display="2">Result <49.9	CO) (GC) Qualifier U U	49.9  RL 49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 00:00 05/14/22 00:00	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.9 ge Organics (Display="2">Result <49.9 <49.9 <49.9	CO) (GC) Qualifier U U	49.9  RL 49.9  49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 00:00 05/14/22 00:00	Dil Fac

Project/Site: James E Upper

Client: Ensolum Job ID: 890-2297-1 SDG: 03d2024016

Lab Sample ID: 890-2297-4

**Client Sample ID: TP2-1-2** 

Date Collected: 05/09/22 11:25 Matrix: Solid Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Method: 300.0 - Anions, Ion Chromatography - Soluble							
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	323	5.01	mg/Kg			05/16/22 16:35	1

Client Sample ID: TP3-0-1 Lab Sample ID: 890-2297-5

Date Collected: 05/09/22 11:30

Matrix: Solid

Date Received: 05/11/22 11:24 Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000397	U	0.000397	mg/Kg		05/16/22 09:29	05/16/22 17:26	1
Toluene	0.00279		0.000397	mg/Kg		05/16/22 09:29	05/16/22 17:26	1
Ethylbenzene	0.00807		0.000397	mg/Kg		05/16/22 09:29	05/16/22 17:26	1
m-Xylene & p-Xylene	0.0348		0.000794	mg/Kg		05/16/22 09:29	05/16/22 17:26	1
o-Xylene	0.0257		0.000397	mg/Kg		05/16/22 09:29	05/16/22 17:26	1
Xylenes, Total	0.0605		0.000794	mg/Kg		05/16/22 09:29	05/16/22 17:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	158	S1+	70 - 130			05/16/22 09:29	05/16/22 17:26	1
1,4-Difluorobenzene (Surr)	86		70 - 130			05/16/22 09:29	05/16/22 17:26	1

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0714	0.000794	mg/Kg			05/16/22 17:06	1

Method: 8015 NM - Diesel Range O	rganics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	7300		250	mg/Kg			05/16/22 15:00	1

Analyte	Result (	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<250 L	U	250	mg/Kg		05/12/22 13:30	05/14/22 06:25	5
Diesel Range Organics (Over C10-C28)	5860		250	mg/Kg		05/12/22 13:30	05/14/22 06:25	5
Oll Range Organics (Over C28-C36)	1440		250	mg/Kg		05/12/22 13:30	05/14/22 06:25	5
Surrogate	%Recovery (	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	79		70 - 130			05/12/22 13:30	05/14/22 06:25	5
o-Terphenyl	85		70 - 130			05/12/22 13:30	05/14/22 06:25	5

Method: 300.0 - Anions, Ion Chromatography - Soluble								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1020		4.98	mg/Kg			05/16/22 16:45	1

Lab Sample ID: 890-2297-6

# **Client Sample Results**

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP3-2-3

Date Collected: 05/09/22 11:33 Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 17:52	
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 17:52	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 17:52	•
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/16/22 09:29	05/16/22 17:52	
o-Xylene	0.0561		0.00200	mg/Kg		05/16/22 09:29	05/16/22 17:52	,
Xylenes, Total	0.0561		0.00401	mg/Kg		05/16/22 09:29	05/16/22 17:52	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)			70 - 130			05/16/22 09:29	05/16/22 17:52	
1,4-Difluorobenzene (Surr)	116		70 - 130			05/16/22 09:29	05/16/22 17:52	1
Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0561		0.00401	mg/Kg			05/16/22 17:06	-
: Method: 8015 NM - Diesel Range			ΡI	Unit	n	Propared	Analyzod	Dil Fa
- -	e Organics (DR	O) (GC)						
- -		Qualifier	<b>RL</b> 49.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 05/16/22 15:00	Dil Fac
Method: 8015 NM - Diesel Range Analyte	Result	Qualifier		<mark>Unit</mark> mg/Kg	<u>D</u>	Prepared		Dil Fac
Method: 8015 NM - Diesel Range Analyte	Result   <49.9	Qualifier U			<u>D</u>	Prepared		Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH	Result <49.9  ge Organics (D Result	Qualifier U RO) (GC) Qualifier			<u>D</u>	Prepared Prepared		
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Rang	Result <49.9  ge Organics (D	Qualifier U RO) (GC) Qualifier	49.9	mg/Kg			05/16/22 15:00	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9  ge Organics (D Result	Qualifier U  RO) (GC) Qualifier U	49.9	mg/Kg		Prepared	05/16/22 15:00 Analyzed	Dil Fa
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10	ge Organics (D Result <49.9	Qualifier U  RO) (GC) Qualifier U	49.9  RL 49.9	mg/Kg  Unit  mg/Kg		Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 00:21	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U	49.9  RL 49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 00:21 05/14/22 00:21	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U	49.9  RL 49.9  49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 00:21 05/14/22 00:21	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U	49.9  RL 49.9  49.9  49.9  Limits	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30 Prepared	05/16/22 15:00  Analyzed 05/14/22 00:21 05/14/22 00:21  Analyzed	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U  Qualifier	49.9  RL 49.9  49.9  49.9  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30  Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 00:21 05/14/22 00:21  Analyzed 05/14/22 00:21	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U  RO) (GC) Qualifier U  U  Qualifier	49.9  RL 49.9  49.9  49.9  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30  Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 00:21 05/14/22 00:21  Analyzed 05/14/22 00:21	Dil Fac

**Client Sample ID: TP4-0-1** 

Date Collected: 05/09/22 12:55

Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/16/22 18:17	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/16/22 18:17	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/16/22 18:17	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/16/22 09:29	05/16/22 18:17	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/16/22 18:17	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/16/22 09:29	05/16/22 18:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			05/16/22 09:29	05/16/22 18:17	

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Matrix: Solid

Lab Sample ID: 890-2297-7

Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

**Client Sample ID: TP4-0-1** Lab Sample ID: 890-2297-7 Date Collected: 05/09/22 12:55

Matrix: Solid

Sample Depth: 0 - 1

Date Received: 05/11/22 11:24

Method: 8021B - Volatile Organic Compound	s (GC) (Continued)
-------------------------------------------	--------------------

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1.4-Difluorobenzene (Surr)	88	70 - 130	05/16/22 09:29	05/16/22 18:17	

Method: Total	BTEX - Total	BTEX Calculation	าท

Analyte	Result Qualifie		Unit	D	Prepared	Analyzed	Dil Fac
Total BTFX	<0.00404 U	0.00404	ma/Ka			05/16/22 17:06	1

Mothod: 2015 NM	Diccol Pango	Organice	(DPO) (GC)

Analyte	•	•	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH			<50.0	U	50.0	ma/Ka			05/16/22 15:00	1	

ALC: LOCATE NA	D: 1 D	•	(DDO) (	
Method: 8015B NM	- Diesel Range	Organics	(DKO) (	GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 00:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 00:42	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 00:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	76		70 - 130	05/12/22 13:30	05/14/22 00:42	1
o-Terphenyl	79		70 - 130	05/12/22 13:30	05/14/22 00:42	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30.6		5.00	mg/Kg		-	05/17/22 15:44	1

**Client Sample ID: TP4-1-2** Lab Sample ID: 890-2297-8

Date Collected: 05/09/22 12:57 Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Mathadi 0004D	Valatile Overen	ic Compounds (GC)
Memoo: Auzib	- voianie Urdan	ic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 18:43	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 18:43	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 18:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/16/22 09:29	05/16/22 18:43	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 18:43	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/16/22 09:29	05/16/22 18:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			05/16/22 09:29	05/16/22 18:43	1
1,4-Difluorobenzene (Surr)	88		70 - 130			05/16/22 09:29	05/16/22 18:43	1

ı						
ı	Mothod	Total	DTEV	Total	DTEV	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00398	U	0.00398	ma/Ka			05/16/22 17:06	1

	Method: 8015 NM -	- Diesel Range	<b>Organics</b>	(DRO)	(GC)
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Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	ma/Ka			05/16/22 15:00	

**Eurofins Carlsbad** 

Matrix: Solid

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP4-1-2

Lab Sample ID: 890-2297-8 Date Collected: 05/09/22 12:57 Matrix: Solid Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/14/22 01:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/14/22 01:03	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/14/22 01:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	76		70 - 130			05/12/22 13:30	05/14/22 01:03	1
o-Terphenyl	83		70 - 130			05/12/22 13:30	05/14/22 01:03	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	594		4.95	mg/Kg			05/16/22 17:12	1

Lab Sample ID: 890-2297-9 **Client Sample ID: TP5-0-1** Matrix: Solid

Date Collected: 05/09/22 13:00

Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 19:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 19:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 19:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/16/22 09:29	05/16/22 19:09	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 19:09	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/16/22 09:29	05/16/22 19:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			05/16/22 09:29	05/16/22 19:09	1
1,4-Difluorobenzene (Surr)	90		70 - 130			05/16/22 09:29	05/16/22 19:09	1
Method: Total BTEX - Total BTE	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			05/16/22 17:06	1
Method: 8015 NM - Diesel Rang	no Organico (DP	O) (GC)						
wethou. 60 15 NW - Diesei Kang	ge Organics (DK	U) (GC)						
∆nalyte	Result	Qualifier	RI	Unit	D	Prenared	<b>Analyzed</b>	Dil Fac
	Result 1100	Qualifier	RL 49.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 05/16/22 15:00	Dil Fac
Analyte Total TPH		Qualifier			<u>D</u>	Prepared		
Total TPH	1100				<u>D</u>	Prepared		
Total TPH  Method: 8015B NM - Diesel Rar	1100 nge Organics (D				<u>D</u>	Prepared Prepared		1
	1100 nge Organics (D	RO) (GC) Qualifier	49.9	mg/Kg			05/16/22 15:00	1
Total TPH  Method: 8015B NM - Diesel Rar Analyte  Gasoline Range Organics (GRO)-C6-C10	1100 nge Organics (D Result	RO) (GC) Qualifier	49.9	mg/Kg  Unit  mg/Kg		Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 05:21	1 Dil Fac
Total TPH  Method: 8015B NM - Diesel Rar Analyte  Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over	1100 nge Organics (D Result	RO) (GC) Qualifier	49.9	mg/Kg		Prepared	05/16/22 15:00 Analyzed	1 Dil Fac
Method: 8015B NM - Diesel Rar Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	1100 nge Organics (D Result <49.9 787	RO) (GC) Qualifier	49.9  RL 49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 05:21  05/14/22 05:21	1 Dil Fac
Method: 8015B NM - Diesel Rar Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over	nge Organics (D Result <49.9	RO) (GC) Qualifier	49.9  RL 49.9	mg/Kg  Unit  mg/Kg		Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 05:21	Dil Fac
Method: 8015B NM - Diesel Rar Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over	1100 nge Organics (D Result <49.9 787	RO) (GC) Qualifier	49.9  RL 49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 05:21  05/14/22 05:21	1 Dil Fac 1
Total TPH  Method: 8015B NM - Diesel Rar Analyte	1100 nge Organics (D Result <49.9 787	RO) (GC) Qualifier U	49.9  RL 49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 05:21  05/14/22 05:21	1 Dil Fac 1
Total TPH  Method: 8015B NM - Diesel Rar Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	1100 nge Organics (D Result <49.9 787 312	RO) (GC) Qualifier U	49.9  RL 49.9  49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 05:21  05/14/22 05:21	1 Dil Fac 1 1 1

Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

**Client Sample ID: TP5-0-1** Lab Sample ID: 890-2297-9 Date Collected: 05/09/22 13:00

Matrix: Solid

Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Method: 300.0 - Anions, Ion Chron	natography - Soluble						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	714	4.99	mg/Kg			05/16/22 17:22	1

Lab Sample ID: 890-2297-10 **Client Sample ID: TP5-2-3** 

Date Collected: 05/09/22 13:03 Matrix: Solid

Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 20:53	
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 20:53	
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 20:53	
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/16/22 09:29	05/16/22 20:53	
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 20:53	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/16/22 09:29	05/16/22 20:53	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130			05/16/22 09:29	05/16/22 20:53	1
1,4-Difluorobenzene (Surr)	91		70 - 130			05/16/22 09:29	05/16/22 20:53	1
Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/16/22 17:06	1
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9		49.9	mg/Kg	_ =		05/16/22 15:00	
-							05/16/22 15:00	1
Method: 8015B NM - Diesel Rand	ne Organics (D	RO) (GC)					05/16/22 15:00	1
	•		RL	Unit	D	Prepared		Dil Fac
Analyte Gasoline Range Organics	•	Qualifier	<b>RL</b> 49.9	Unit mg/Kg	<u>D</u>	Prepared 05/12/22 13:30	Analyzed 05/14/22 01:25	
Analyte Gasoline Range Organics (GRO)-C6-C10	Result	Qualifier U			<u>D</u>		Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)		Qualifier U	49.9	mg/Kg	<u>D</u>	05/12/22 13:30	<b>Analyzed</b> 05/14/22 01:25	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <49.9   <49.9	Qualifier U U U	49.9	mg/Kg	<u>D</u>	05/12/22 13:30 05/12/22 13:30	Analyzed 05/14/22 01:25	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate	Result   <49.9   <49.9   <49.9	Qualifier U U U	49.9 49.9 49.9	mg/Kg	<u> </u>	05/12/22 13:30 05/12/22 13:30 05/12/22 13:30	Analyzed 05/14/22 01:25 05/14/22 01:25 05/14/22 01:25	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result   <49.9   <49.9   <49.9   <49.9   %Recovery	Qualifier U U U	49.9 49.9 49.9 <i>Limits</i>	mg/Kg	<u> </u>	05/12/22 13:30 05/12/22 13:30 05/12/22 13:30 Prepared	Analyzed 05/14/22 01:25 05/14/22 01:25 05/14/22 01:25 Analyzed	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result   <49.9   <49.9   <49.9     <49.9     <80.0   <49.9     <49.9   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8	Qualifier  U  U  Qualifier	49.9 49.9 49.9 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	05/12/22 13:30 05/12/22 13:30 05/12/22 13:30 Prepared 05/12/22 13:30	Analyzed 05/14/22 01:25 05/14/22 01:25 05/14/22 01:25  Analyzed 05/14/22 01:25	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier  U  U  Qualifier	49.9 49.9 49.9 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	05/12/22 13:30 05/12/22 13:30 05/12/22 13:30 Prepared 05/12/22 13:30	Analyzed 05/14/22 01:25 05/14/22 01:25 05/14/22 01:25  Analyzed 05/14/22 01:25	Dil Fac

Lab Sample ID: 890-2297-11

#### **Client Sample Results**

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP6-0-1

Date Collected: 05/09/22 13:28 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 21:19	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 21:19	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 21:19	1
m-Xylene & p-Xylene	0.0201		0.00402	mg/Kg		05/16/22 09:29	05/16/22 21:19	1
o-Xylene	0.0253		0.00201	mg/Kg		05/16/22 09:29	05/16/22 21:19	1
Xylenes, Total	0.0454		0.00402	mg/Kg		05/16/22 09:29	05/16/22 21:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130			05/16/22 09:29	05/16/22 21:19	1
1,4-Difluorobenzene (Surr)	89		70 - 130			05/16/22 09:29	05/16/22 21:19	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0454		0.00402	mg/Kg			05/16/22 17:06	1
Method: 8015 NM - Diesel Range								
_								
_		Qualifier	RL 49.9	<mark>Unit</mark> mg/Kg	<u>D</u>	Prepared	Analyzed 05/16/22 15:00	
Analyte	Result	Qualifier			<u>D</u>	Prepared		
Analyte Total TPH	<b>Result</b> <49.9	Qualifier U			<u>D</u>	Prepared		
Analyte Total TPH  Method: 8015B NM - Diesel Rang	Result <49.9  ge Organics (Di Result	Qualifier U RO) (GC) Qualifier			<u>D</u>	Prepared Prepared		1
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	Result <49.9  ge Organics (Di	Qualifier U RO) (GC) Qualifier	49.9	mg/Kg			05/16/22 15:00	1 Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang	Result <49.9  ge Organics (Di Result	Qualifier U  RO) (GC) Qualifier U	49.9	mg/Kg		Prepared	05/16/22 15:00 Analyzed	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9  ge Organics (Di Result <49.9	Qualifier U  RO) (GC) Qualifier U	49.9  RL 49.9	mg/Kg  Unit  mg/Kg		Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 01:46	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U	49.9  RL 49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 01:46  05/14/22 01:46	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U	49.9  RL 49.9  49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 01:46 05/14/22 01:46	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U  Qualifier	49.9  RL 49.9  49.9  49.9  Limits	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30 Prepared	Analyzed 05/14/22 01:46 05/14/22 01:46 05/14/22 01:46 Analyzed	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U  Qualifier S1- S1-	49.9  RL 49.9  49.9  49.9  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30  Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 01:46 05/14/22 01:46  Analyzed 05/14/22 01:46	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result <49.9  ge Organics (D) Result <49.9 <49.9 <49.9  %Recovery 64 66  omatography -	Qualifier U  RO) (GC) Qualifier U  U  Qualifier S1- S1-	49.9  RL 49.9  49.9  49.9  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30  Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 01:46 05/14/22 01:46  Analyzed 05/14/22 01:46	Dil Fac  Dil Fac  1  Dil Fac  1  Dil Fac  1  Dil Fac  1  Dil Fac

**Client Sample ID: TP6-2-3** Lab Sample ID: 890-2297-12 Date Collected: 05/09/22 13:30

Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 21:45	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 21:45	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 21:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/16/22 09:29	05/16/22 21:45	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 21:45	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/16/22 09:29	05/16/22 21:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			05/16/22 09:29	05/16/22 21:45	1

**Eurofins Carlsbad** 

**Matrix: Solid** 

Sample Depth: 2 - 3

Job ID: 890-2297-1

Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

**Client Sample ID: TP6-2-3** Lab Sample ID: 890-2297-12

Date Collected: 05/09/22 13:30 Matrix: Solid Date Received: 05/11/22 11:24

Method: 8021B - Volatile	Organic Compounds	(GC)	(Continued)
Wethou. 002 ID - Volatile	Organic Compounds	1001	(Continueu)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	107		70 - 130	05/16/22 09:29	05/16/22 21:45	1

Method: Total BTEX - Total BTEX (	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/16/22 17:06	1

ſ	Method: 8015 NM - Diesel Range Organ	nics (DRO) (GC)						
	Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Total TPH	<50.0 U	50.0	mg/Kg			05/16/22 15:00	1
Method: 8015B NM - Diesel Range	Organics (DRO) (GC)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

rilaryto	rtoouit	Qualifici		Omic	_	i iopaioa	raidiyeda	D uo
Gasoline Range Organics	<50.0	U	50.0	mg/Kg	_	05/12/22 13:30	05/14/22 02:08	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 02:08	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 02:08	1
Currogato	% Pocovory	Qualifier	Limite			Propared	Analyzod	Dil Eac

Surrogate	%Recovery	Qualifier	Limits	Prepare	ed Analyzed	d Dil Fac
1-Chlorooctane	75		70 - 130	05/12/22	13:30 05/14/22 02	2:08 1
o-Terphenyl	82		70 - 130	05/12/22	13:30 05/14/22 02	2:08 1

Method: 300.0 - Anions, Ion Chromatography - Soluble								
	Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Chlorido	60.8	5.00	ma/Ka			05/16/22 18:26	1

Client Sample ID: TP7-0-1 Lab Sample ID: 890-2297-13

Date Collected: 05/09/22 13:55 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Mothod: 9021D	Volatile Organie	Compounds (GC)
Melliou. Ouz ID -	voiatile Organic	Compounds (GC)

motification of gains	,	()						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 22:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 22:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 22:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/16/22 09:29	05/16/22 22:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 22:11	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/16/22 09:29	05/16/22 22:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			05/16/22 09:29	05/16/22 22:11	1
1,4-Difluorobenzene (Surr)	99		70 - 130			05/16/22 09:29	05/16/22 22:11	1

Method: Total BTEX - Total BTEX Ca	lculation				
1,4-Difluorobenzene (Surr)	99	70 - 130	05/16/22 09:29	05/16/22 22:11	1
4-Bromotiuoropenzene (Surr)	103	70 - 130	05/16/22 09:29	05/16/22 22:11	7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/16/22 17:06	1

Method: 8015 NM - Diesel Range O	rganics (DRO) (GC)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	17700	249	mg/Kg			05/16/22 15:00	1

**Eurofins Carlsbad** 

**Matrix: Solid** 

Lab Sample ID: 890-2297-13

Job ID: 890-2297-1

Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP7-0-1

Date Collected: 05/09/22 13:55 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<249	U	249	mg/Kg		05/12/22 13:30	05/14/22 06:04	5
Diesel Range Organics (Over C10-C28)	14000		249	mg/Kg		05/12/22 13:30	05/14/22 06:04	5
Oll Range Organics (Over C28-C36)	3740		249	mg/Kg		05/12/22 13:30	05/14/22 06:04	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130			05/12/22 13:30	05/14/22 06:04	5
o-Terphenyl	110		70 - 130			05/12/22 13:30	05/14/22 06:04	5
Method: 300.0 - Anions, Ion Ch	romatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3860		24.8	mg/Kg			05/16/22 18:35	5

Client Sample ID: TP7-2-3 Lab Sample ID: 890-2297-14 Date Collected: 05/09/22 13:58 Matrix: Solid

Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 22:38	1
Toluene	< 0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 22:38	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 22:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/16/22 09:29	05/16/22 22:38	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		05/16/22 09:29	05/16/22 22:38	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/16/22 09:29	05/16/22 22:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			05/16/22 09:29	05/16/22 22:38	1
1,4-Difluorobenzene (Surr)	99		70 - 130			05/16/22 09:29	05/16/22 22:38	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/16/22 17:06	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/16/22 15:00	1
Method: 8015B NM - Diesel Rang	je Organics (Di	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 02:29	1
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 02:29	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 02:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130			05/12/22 13:30	05/14/22 02:29	1

Client: Ensolum Project/Site: James E Upper Job ID: 890-2297-1

SDG: 03d2024016

Client Sample ID: TP7-2-3

Date Collected: 05/09/22 13:58 Date Received: 05/11/22 11:24

Lab Sample ID: 890-2297-14 Matrix: Solid

Sample Depth: 2 - 3

M	ethod: 300.0 - Anions, Ion Chrom	atography -	Soluble						
Ar	nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
CI	hloride	797		5.01	mg/Kg			05/16/22 18:45	1

**Client Sample ID: TP8-0-1** Lab Sample ID: 890-2297-15 Matrix: Solid

Date Collected: 05/09/22 14:36 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 23:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 23:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 23:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/16/22 09:29	05/16/22 23:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 23:04	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/16/22 09:29	05/16/22 23:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			05/16/22 09:29	05/16/22 23:04	1
1,4-Difluorobenzene (Surr)	95		70 - 130			05/16/22 09:29	05/16/22 23:04	1
Method: Total BTEX - Total BTE	K Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			05/16/22 17:06	1
Analyte Total TPH	<b>Result</b> <49.8	Qualifier U	49.8	mg/Kg	<u>D</u>	Prepared	Analyzed 05/16/22 15:00	Dil Fac
Method: 8015B NM - Diesel Rang	ne Organics (D	PO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/12/22 13:30	05/14/22 02:51	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/12/22 13:30	05/14/22 02:51	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/12/22 13:30	05/14/22 02:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130			05/12/22 13:30	05/14/22 02:51	1
o-Terphenyl	80		70 - 130			05/12/22 13:30	05/14/22 02:51	1
Method: 300.0 - Anions, Ion Chr	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26.5		4.98	mg/Kg			05/16/22 18:54	1

Lab Sample ID: 890-2297-16

Client: Ensolum Job ID: 890-2297-1
Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP8-1-2

Date Collected: 05/09/22 14:40 Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 23:30	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 23:30	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 23:30	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/16/22 09:29	05/16/22 23:30	1
o-Xylene	< 0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/16/22 23:30	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/16/22 09:29	05/16/22 23:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			05/16/22 09:29	05/16/22 23:30	1
1,4-Difluorobenzene (Surr)	102		70 - 130			05/16/22 09:29	05/16/22 23:30	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/16/22 17:06	1
_								
_		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte		Qualifier		Unit mg/Kg	<u>D</u>	Prepared	Analyzed 05/16/22 15:00	
Analyte Total TPH	Result   <50.0	Qualifier U			<u>D</u>	Prepared		
Analyte Total TPH  Method: 8015B NM - Diesel Range	Result <50.0	Qualifier U RO) (GC)	50.0	mg/Kg	<u> </u>		05/16/22 15:00	1
Analyte Total TPH  Method: 8015B NM - Diesel Rangen	Result <50.0  ge Organics (Dige Result	Qualifier U RO) (GC) Qualifier	50.0	mg/Kg	<u>D</u>	Prepared	05/16/22 15:00 Analyzed	Dil Fac
Method: 8015 NM - Diesel Range Analyte  Total TPH  Method: 8015B NM - Diesel Range Analyte  Gasoline Range Organics (GRO)-C6-C10	Result <50.0	Qualifier U RO) (GC) Qualifier	50.0	mg/Kg	<u> </u>		05/16/22 15:00	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.0  ge Organics (Dige Result	Qualifier U  RO) (GC) Qualifier U	50.0	mg/Kg	<u> </u>	Prepared	05/16/22 15:00 Analyzed	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over		Qualifier U  RO) (GC) Qualifier U	50.0 RL 50.0	mg/Kg  Unit  mg/Kg	<u> </u>	Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 03:34	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <50.0	Qualifier U  RO) (GC) Qualifier U  U	50.0  RL  50.0  50.0	mg/Kg  Unit  mg/Kg	<u> </u>	Prepared 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 03:34  05/14/22 03:34	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <50.0	Qualifier U  RO) (GC) Qualifier U  U	50.0  RL  50.0  50.0  50.0	mg/Kg  Unit  mg/Kg	<u> </u>	Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 03:34 05/14/22 03:34	Dil Face
Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	Result   <50.0	Qualifier U  RO) (GC) Qualifier U  U	50.0  RL 50.0  50.0  50.0  Limits	mg/Kg  Unit  mg/Kg	<u> </u>	Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30 Prepared	Analyzed 05/14/22 03:34 05/14/22 03:34 05/14/22 03:34 Analyzed	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result   <50.0	Qualifier U  RO) (GC) Qualifier U  U  Qualifier	50.0  RL 50.0  50.0  50.0  Limits 70 - 130	mg/Kg  Unit  mg/Kg	<u> </u>	Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30  Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 03:34  05/14/22 03:34  Analyzed 05/14/22 03:34	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U  RO) (GC) Qualifier U  U  Qualifier	50.0  RL 50.0  50.0  50.0  Limits 70 - 130	mg/Kg  Unit  mg/Kg	<u> </u>	Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30  Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 03:34  05/14/22 03:34  Analyzed 05/14/22 03:34	Dil Fac  Dil Fac  1  Dil Fac  1  Dil Fac  Dil Fac  Dil Fac

**Client Sample ID: TP9-0-1** 

Date Collected: 05/09/22 14:43 Date Received: 05/11/22 11:24

Date Received. 00/11/22 11:2-

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 23:57	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 23:57	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 23:57	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/16/22 09:29	05/16/22 23:57	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 23:57	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/16/22 09:29	05/16/22 23:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			05/16/22 09:29	05/16/22 23:57	

**Eurofins Carlsbad** 

Lab Sample ID: 890-2297-17

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Matrix: Solid

# **Client Sample Results**

Client: Ensolum Job ID: 890-2297-1
Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP9-0-1 Lab Sample ID: 890-2297-17

Date Collected: 05/09/22 14:43 Matrix: Solid
Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Method: 8021B - Volatile Organic	Compounds (G	C) (	Continued)
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Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	89	70 - 130	05/16/22 09:29	05/16/22 23:57	1

Method: Total	BTEX - Total BTEX	Calculation

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399 U	0.00399	ma/Ka			05/16/22 17:06	1

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Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	ma/Ka			05/16/22 15:00	1

Method: 8015B	NM - Diesel	Range Ore	anice l	(DRO)	(GC)
Methou. ou isb	IAIN - DIESEI	Range Org	janics i	(DRU)	(GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 03:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 03:55	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/12/22 13:30	05/14/22 03:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Quali	lifier Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	70	70 - 130	05/12/22 13:30	05/14/22 03:55	1
o-Terphenyl	72	70 - 130	05/12/22 13:30	05/14/22 03:55	1

Method: 300.0 - Anions,	Ion Chromatography - Soluble	

Analyte	Result Qua	alifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.83	5.02	mg/Kg			05/16/22 19:12	1

Client Sample ID: TP9-1-2

Date Collected: 05/09/22 14:45

Lab Sample ID: 890-2297-18

Matrix: Solid

Date Collected: 05/09/22 14:45 Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Mathadi 0004D	Valatile Overen	ic Compounds (GC)
Memoo: Auzib	- voianie Urdan	ic Compounds (GC)

mounda. our ib volutile orga	ino compoundo (	(33)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/17/22 00:22	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/17/22 00:22	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/17/22 00:22	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/16/22 09:29	05/17/22 00:22	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:29	05/17/22 00:22	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/16/22 09:29	05/17/22 00:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			05/16/22 09:29	05/17/22 00:22	1
1,4-Difluorobenzene (Surr)	96		70 - 130			05/16/22 09:29	05/17/22 00:22	1

Method:	Total	RTFY -	Total RTFY	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00402	U	0.00402	ma/Ka			05/16/22 17:06	1

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

Analyte		Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH		<49.9	U	49.9	mg/Kg			05/16/22 15:00	1

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Lab Sample ID: 890-2297-18

Job ID: 890-2297-1

Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP9-1-2 Date Collected: 05/09/22 14:45

Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/14/22 04:17	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/14/22 04:17	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/14/22 04:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	79		70 - 130			05/12/22 13:30	05/14/22 04:17	1
o-Terphenyl	82		70 - 130			05/12/22 13:30	05/14/22 04:17	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Amaluda	Rosult	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	Nosun							

Lab Sample ID: 890-2297-19 Client Sample ID: TP10-0-1 Date Collected: 05/10/22 09:15 Matrix: Solid

Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/17/22 00:48	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/17/22 00:48	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/17/22 00:48	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/16/22 09:29	05/17/22 00:48	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:29	05/17/22 00:48	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/16/22 09:29	05/17/22 00:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			05/16/22 09:29	05/17/22 00:48	1
1,4-Difluorobenzene (Surr)	90		70 - 130			05/16/22 09:29	05/17/22 00:48	1
Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			05/16/22 17:06	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte								
riidiyio	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH			<b>RL</b> 49.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 05/16/22 15:00	Dil Fac
Total TPH	<49.9	U			<u>D</u>	Prepared		
Total TPH  Method: 8015B NM - Diesel Rang	<49.9 ge Organics (Di	U			<u>D</u> 	Prepared Prepared		
Total TPH  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics	<49.9 ge Organics (Di	RO) (GC) Qualifier	49.9	mg/Kg		<u> </u>	05/16/22 15:00	1
<del>-</del>	<49.9  ge Organics (DI  Result	RO) (GC) Qualifier U	49.9	mg/Kg		Prepared	05/16/22 15:00 Analyzed	1 Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<49.9 ge Organics (DI Result <49.9	U  RO) (GC) Qualifier U	49.9  RL 49.9	mg/Kg  Unit  mg/Kg		Prepared 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 04:38	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.9 ge Organics (DI Result  <49.9	U RO) (GC) Qualifier U U	49.9  RL 49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed  05/14/22 04:38  05/14/22 04:38	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<49.9 ge Organics (DI Result <49.9 <49.9 <49.9	U RO) (GC) Qualifier U U	49.9  RL 49.9  49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:30 05/12/22 13:30 05/12/22 13:30	05/16/22 15:00  Analyzed 05/14/22 04:38 05/14/22 04:38	1 Dil Fac

**Matrix: Solid** 

SDG: 03d2024016

Project/Site: James E Upper

Lab Sample ID: 890-2297-19

Matrix: Solid

Client Sample ID: TP10-0-1 Date Collected: 05/10/22 09:15

Date Received: 05/11/22 11:24 Sample Depth: 0 - 1

Client: Ensolum

Method: 300.0 - Anions, Ion Chromatography - Soluble RL Analyte Result Qualifier Unit D Analyzed Dil Fac Prepared 25.0 05/14/22 02:18 Chloride 1650 mg/Kg

Client Sample ID: TP10-2-3 Lab Sample ID: 890-2297-20

Date Collected: 05/10/22 09:18 Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Analyte

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 02:59	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 02:59	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 02:59	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 02:59	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 02:59	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 02:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			05/16/22 09:33	05/17/22 02:59	1
1,4-Difluorobenzene (Surr)	91		70 - 130			05/16/22 09:33	05/17/22 02:59	1

Method: 8015B NM - Diesel Range	Organics (DI	RO) (GC)						
Total TPH	<49.9	U	49.9	mg/Kg			05/16/22 15:00	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/16/22 17:06	1

Unit

Prepared

Analyzed

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/14/22 05:00	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/14/22 05:00	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/12/22 13:30	05/14/22 05:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130			05/12/22 13:30	05/14/22 05:00	1
o-Terphenyl	77		70 - 130			05/12/22 13:30	05/14/22 05:00	1

Method: 300.0 - Anions, Ion Chrom	atography - \$	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1300		25.0	mg/Kg			05/14/22 02:46	5

Lab Sample ID: 890-2297-21

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP11-0-1

Date Collected: 05/10/22 09:45 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.199	U	0.199	mg/Kg		05/16/22 09:33	05/17/22 06:04	100
Toluene	0.268		0.199	mg/Kg		05/16/22 09:33	05/17/22 06:04	100
Ethylbenzene	0.273		0.199	mg/Kg		05/16/22 09:33	05/17/22 06:04	100
m-Xylene & p-Xylene	8.48		0.398	mg/Kg		05/16/22 09:33	05/17/22 06:04	100
o-Xylene	7.33		0.199	mg/Kg		05/16/22 09:33	05/17/22 06:04	100
Xylenes, Total	15.8		0.398	mg/Kg		05/16/22 09:33	05/17/22 06:04	100
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			05/16/22 09:33	05/17/22 06:04	100
1,4-Difluorobenzene (Surr)	95		70 - 130			05/16/22 09:33	05/17/22 06:04	100
- Method: Total BTEX - Total BTI	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	16.4		0.398	mg/Kg			05/16/22 17:06	1
Analyte		Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Analyte Total TPH	Result 16500	Qualifier	RL	Unit  mg/Kg	D	Prepared	Analyzed 05/16/22 15:00	Dil Fac
-				3 3				
Method: 8015B NM - Diesel Rai	nge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1780		250	mg/Kg		05/12/22 13:33	05/13/22 14:12	5
Diesel Range Organics (Over C10-C28)	11700		250	mg/Kg		05/12/22 13:33	05/13/22 14:12	Ę
Oll Range Organics (Over C28-C36)	2980		250	mg/Kg		05/12/22 13:33	05/13/22 14:12	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			05/12/22 13:33	05/13/22 14:12	
o-Terphenyl	96		70 - 130			05/12/22 13:33	05/13/22 14:12	ŧ
Method: 300.0 - Anions, Ion Ch	romatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: TP11-2-3 Lab Sample ID: 890-2297-22 Matrix: Solid

3220

24.9

mg/Kg

Date Collected: 05/10/22 09:48 Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Chloride

Method: 8021B - Volatile Org	ganic Compounds (	GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 03:19	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 03:19	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 03:19	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/16/22 09:33	05/17/22 03:19	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 03:19	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/16/22 09:33	05/17/22 03:19	1

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05/14/22 02:55

Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

**Client Sample ID: TP11-2-3** Lab Sample ID: 890-2297-22 Matrix: Solid

Date Collected: 05/10/22 09:48 Date Received: 05/11/22 11:24 Sample Depth: 2 - 3

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101	70 - 130	05/16/22 09:33	05/17/22 03:19	1
1,4-Difluorobenzene (Surr)	104	70 - 130	05/16/22 09:33	05/17/22 03:19	1
1,4-Dinuolopenzene (Sull)	104	70 - 130	03/10/22 09.33	03/11/22 03.19	

Method: Total BTEX - Total BTEX Calculation									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Total BTEX	<0.00399	U	0.00399	mg/Kg			05/16/22 17:06	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Total TPH	145		49.9	mg/Kg			05/16/22 15:00	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/12/22 13:33	05/13/22 16:04	1
	Diesel Range Organics (Over C10-C28)	52.3		49.9	mg/Kg		05/12/22 13:33	05/13/22 16:04	1
	Oll Range Organics (Over C28-C36)	92.3		49.9	mg/Kg		05/12/22 13:33	05/13/22 16:04	1
	Surragata	9/ Bassyany	Qualifier	Limita			Dramarad	Analyzad	Dil Eco

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130	05/12/22 13:33	05/13/22 16:04	1
o-Terphenyl	90		70 - 130	05/12/22 13:33	05/13/22 16:04	1

Method: 300.0 - Anions, Ion Chromatography - Soluble								
	Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	1160	24.8	mg/Kg			05/14/22 03:04	5

Client Sample ID: TP12-0-1 Lab Sample ID: 890-2297-23 Date Collected: 05/10/22 10:15 **Matrix: Solid** 

Date Received: 05/11/22 11:24 Sample Depth: 0 - 1

Method: 8021B - Volatile Organ	ethod: 8021B - Volatile Organic Compounds (GC)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 03:40	1	
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 03:40	1	
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 03:40	1	
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 03:40	1	
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 03:40	1	
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 03:40	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	113		70 - 130			05/16/22 09:33	05/17/22 03:40	1	
1,4-Difluorobenzene (Surr)	100		70 - 130			05/16/22 09:33	05/17/22 03:40	1	

Method: Total BTEX - Total BTEX (	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/16/22 17:06	1

Lab Sample ID: 890-2297-23

Lab Sample ID: 890-2297-24

**Matrix: Solid** 

Client: Ensolum Job ID: 890-2297-1 SDG: 03d2024016 Project/Site: James E Upper

Client Sample ID: TP12-0-1

Date Collected: 05/10/22 10:15 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Method: 8015 NM - Diesel Range (							
Analyte	Result Qual	lifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	56.9	50.0	mg/Kg			05/16/22 15:00	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 13:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U F1	50.0	mg/Kg		05/12/22 13:33	05/13/22 13:05	1
Oll Range Organics (Over C28-C36)	56.9		50.0	mg/Kg		05/12/22 13:33	05/13/22 13:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analvzed	Dil Fac

89	70 - 130	05/12/22 13:33	05/13/22 13:05	1
89	70 - 130	05/12/22 13:33	05/13/22 13:05	1
omatography - Soluble				
	89	89 70 - 130 89 70 - 130	89     70 - 130     05/12/22 13:33       89     70 - 130     05/12/22 13:33	89     70 - 130     05/12/22 13:33     05/13/22 13:05       89     70 - 130     05/12/22 13:33     05/13/22 13:05

Result Qualifier RL Dil Fac Analyte Unit D Prepared Analyzed 4.96 05/14/22 03:14 Chloride 8.68 mg/Kg

Client Sample ID: TP12-1-2

Date Collected: 05/10/22 10:17 Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Method: 8021B - Volatile Organic Compounds (GC)

wethou: 8021B - volatile Orga	mic Compounds (	(GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 04:01	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 04:01	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 04:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/16/22 09:33	05/17/22 04:01	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 04:01	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/16/22 09:33	05/17/22 04:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130			05/16/22 09:33	05/17/22 04:01	1
1 1 Diffuorabanzana (Surr)	06		70 120			05/46/22 00:22	05/17/22 04:01	1

1.4 Diffusional and (Sure)	96	70 - 130	05/16/22 09:33	05/17/22 04:01	
1,4-Difluorobenzene (Surr)	90	70 - 130	05/16/22 09.33	05/17/22 04.01	1
— Method: Total BTEX - Total BTEX Calculat	ion				
Michiga. Total BTEX - Total BTEX Galculat	1011				

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/16/22 17:06	1
_								

Method: 8015 NM - Diesel Range Organics (DRO) (GC)							
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	72.5	49.9	mg/Kg			05/16/22 15:00	1

Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		05/12/22 13:33	05/13/22 16:26	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		05/12/22 13:33	05/13/22 16:26	1
C10-C28)								

**Eurofins Carlsbad** 

5/18/2022

Job ID: 890-2297-1 SDG: 03d2024016

Matrix: Solid

Client: Ensolum Project/Site: James E Upper

Lab Sample ID: 890-2297-24

**Client Sample ID: TP12-1-2** 

Date Collected: 05/10/22 10:17 Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)									
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Oll Range Organics (Over	72.5	49.9	mg/Kg		05/12/22 13:33	05/13/22 16:26	1		

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130	05/12/22 13:33	05/13/22 16:26	1
o-Terphenyl	96		70 - 130	05/12/22 13:33	05/13/22 16:26	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.3		5.00	mg/Kg			05/14/22 03:41	1

Client Sample ID: TP13-0-1 Lab Sample ID: 890-2297-25 **Matrix: Solid** 

Date Collected: 05/10/22 10:45 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Method: 8021B - Vola	atile Organic	Compounds	(GC)
		D14	01

	, , , , , , , , , , , , , , , , , , , ,	,						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 04:21	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 04:21	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 04:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/16/22 09:33	05/17/22 04:21	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 04:21	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/16/22 09:33	05/17/22 04:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	05/16/22 09:	33 05/17/22 04:21	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/16/22 09:	33 05/17/22 04:21	1

**Method: Total BTEX - Total BTEX Calculation** 

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			05/16/22 17:06	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	211		50.0	mg/Kg			05/16/22 15:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 15:19	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 15:19	1
C10-C28)								
Oll Range Organics (Over	211		50.0	mg/Kg		05/12/22 13:33	05/13/22 15:19	1
C28-C36)								

Surrogate	%Recovery Qualifier	Limits

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	05/12/22 13:33	05/13/22 15:19	1
o-Terphenyl	92		70 - 130	05/12/22 13:33	05/13/22 15:19	1

Matrix: Solid

Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP13-0-1 Lab Sample ID: 890-2297-25

Date Collected: 05/10/22 10:45 Matrix: Solid Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

	Method: 300.0 - Anions, Ion Chrom	natography -	Soluble						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Į	Chloride	54.6		5.01	mg/Kg			05/14/22 03:51	1

Lab Sample ID: 890-2297-26 **Client Sample ID: TP13-2-3** 

Date Collected: 05/10/22 10:47 Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:33	05/17/22 04:42	
Toluene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:33	05/17/22 04:42	
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:33	05/17/22 04:42	
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		05/16/22 09:33	05/17/22 04:42	
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:33	05/17/22 04:42	
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/16/22 09:33	05/17/22 04:42	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	137	S1+	70 - 130			05/16/22 09:33	05/17/22 04:42	
1,4-Difluorobenzene (Surr)	91		70 - 130			05/16/22 09:33	05/17/22 04:42	
Method: Total BTEX - Total B1	FEX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00403	U	0.00403	mg/Kg			05/16/22 17:06	
Method: 8015 NM - Diesel Rar Analyte Total TPH	•	Qualifier	<b>RL</b> 49.9	Mg/Kg	<u>D</u>	Prepared	Analyzed 05/16/22 15:00	Dil Fa
Method: 8015B NM - Diesel Ra	ange Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/12/22 13:33	05/13/22 16:47	
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		05/12/22 13:33	05/13/22 16:47	
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.9 <b>63.3</b>	U	49.9 49.9	mg/Kg mg/Kg		05/12/22 13:33 05/12/22 13:33	05/13/22 16:47 05/13/22 16:47	
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over								Dil Fa
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	63.3		49.9			05/12/22 13:33	05/13/22 16:47	Dil Fa
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	63.3 %Recovery		49.9 <i>Limit</i> s			05/12/22 13:33  Prepared	05/13/22 16:47  Analyzed	Dil Fa
Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)  Surrogate  1-Chlorooctane	63.3  **Recovery 85 96  *hromatography -	Qualifier Soluble	49.9  Limits  70 - 130  70 - 130	mg/Kg		05/12/22 13:33  Prepared  05/12/22 13:33	05/13/22 16:47  Analyzed  05/13/22 16:47	Dil Fa
Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	63.3  **Recovery 85 96  *hromatography -	Qualifier	49.9  Limits  70 - 130		<u>D</u>	05/12/22 13:33  Prepared  05/12/22 13:33	05/13/22 16:47  Analyzed  05/13/22 16:47	Dil Fa

Released to Imaging: 12/6/2022 4:11:46 PM

Lab Sample ID: 890-2297-27

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

**Client Sample ID: TP14-0-1** 

Date Collected: 05/10/22 11:25 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 05:03	
Toluene	< 0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 05:03	
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 05:03	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/16/22 09:33	05/17/22 05:03	
o-Xylene	< 0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 05:03	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/16/22 09:33	05/17/22 05:03	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	106		70 - 130			05/16/22 09:33	05/17/22 05:03	
1,4-Difluorobenzene (Surr)	97		70 - 130			05/16/22 09:33	05/17/22 05:03	
- Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/16/22 17:06	
Method: 8015 NM - Diesel Rang	e Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	323		49.9	mg/Kg			05/16/22 15:00	
Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/12/22 13:33	05/13/22 14:56	
Diesel Range Organics (Over	166		49.9	mg/Kg		05/12/22 13:33	05/13/22 14:56	
C10-C28)			40.0	0.2		05/40/00 40 00	05/40/00 44 50	
Oll Range Organics (Over C28-C36)	157		49.9	mg/Kg		05/12/22 13:33	05/13/22 14:56	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	87		70 - 130			05/12/22 13:33	05/13/22 14:56	
o-Terphenyl	90		70 - 130			05/12/22 13:33	05/13/22 14:56	
Method: 300.0 - Anions, Ion Ch	romatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	15.8		5.05	mg/Kg			05/14/22 04:09	-

Client Sample ID: TP14-2-3 Lab Sample ID: 890-2297-28 Date Collected: 05/10/22 11:28 Matrix: Solid

Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

– Method: 8021B - Volatile Org	ganic Compounds (	GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 05:23	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 05:23	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 05:23	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 05:23	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 05:23	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 05:23	1

SDG: 03d2024016

Client Sample ID: TP14-2-3

Project/Site: James E Upper

Date Collected: 05/10/22 11:28 Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Client: Ensolum

Lab Sample ID: 890-2297-28

Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			05/16/22 09:33	05/17/22 05:23	1
1,4-Difluorobenzene (Surr)	96		70 - 130			05/16/22 09:33	05/17/22 05:23	1
Method: Total BTEX - Total BT	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/16/22 17:06	1
Method: 8015 NM - Diesel Ran	ge Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	57.4		50.0	mg/Kg			05/16/22 15:00	1
Method: 8015B NM - Diesel Ra	ange Organics (D	PO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 17:10	1
(GRO)-C6-C10 Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 17:10	1
C10-C28)								
Oll Range Organics (Over C28-C36)	57.4		50.0	mg/Kg		05/12/22 13:33	05/13/22 17:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130			05/12/22 13:33	05/13/22 17:10	1
o-Terphenyl	97		70 - 130			05/12/22 13:33	05/13/22 17:10	1
Method: 300.0 - Anions, Ion C	hromatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.4		4.97	mg/Kg			05/14/22 04:18	1

Client Sample ID: TP15-1-2 Lab Sample ID: 890-2297-29 Date Collected: 05/10/22 12:30 **Matrix: Solid** 

Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 07:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 07:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 07:28	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/16/22 09:33	05/17/22 07:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 07:28	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/16/22 09:33	05/17/22 07:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			05/16/22 09:33	05/17/22 07:28	1
1,4-Difluorobenzene (Surr)	98		70 - 130			05/16/22 09:33	05/17/22 07:28	1
- Method: Total BTEX - Total B1	ΓEX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			05/16/22 17:06	1

Project/Site: James E Upper SDG: 03d2024016

**Client Sample ID: TP15-1-2** Lab Sample ID: 890-2297-29

Date Collected: 05/10/22 12:30 Matrix: Solid Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Client: Ensolum

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	50.2		50.0	mg/Kg			05/16/22 15:00	
Method: 8015B NM - Diesel Ra	ange Organics (DI	<b>RO) (GC)</b>						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 17:53	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 17:53	
Oll Range Organics (Over C28-C36)	50.2		50.0	mg/Kg		05/12/22 13:33	05/13/22 17:53	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	96		70 - 130			05/12/22 13:33	05/13/22 17:53	1
o-Terphenyl	106		70 - 130			05/12/22 13:33	05/13/22 17:53	:

Client Sample ID: TP15-2-3 Lab Sample ID: 890-2297-30

4.98

mg/Kg

Date Collected: 05/10/22 12:32

8.17

Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 07:48	-
Toluene	< 0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 07:48	
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 07:48	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/16/22 09:33	05/17/22 07:48	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 07:48	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/16/22 09:33	05/17/22 07:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			05/16/22 09:33	05/17/22 07:48	1
1,4-Difluorobenzene (Surr)	100		70 - 130			05/16/22 09:33	05/17/22 07:48	1
Method: Total BTEX - Total BTEX Analyte Total BTEX		Qualifier U	RL	<mark>Unit</mark>	<u>D</u>	Prepared	Analyzed 05/16/22 17:06	
Method: Total BTEX - Total BTEX Analyte Total BTEX	Result < 0.00398	U			<u>D</u>			
Method: Total BTEX - Total BTEX Analyte	Result <0.00398  Organics (DR	U			<u>D</u>			Dil Fac
Method: Total BTEX - Total BTEX Analyte Total BTEX  Method: 8015 NM - Diesel Range	Result <0.00398  Organics (DR	U O) (GC) Qualifier	0.00398	mg/Kg		Prepared	05/16/22 17:06	1
Method: Total BTEX - Total BTEX Analyte Total BTEX  Method: 8015 NM - Diesel Range Analyte	Result <0.00398  Organics (DRO Result <50.0	U O) (GC) Qualifier U	0.00398	mg/Kg		Prepared	05/16/22 17:06  Analyzed	1
Method: Total BTEX - Total BTEX Analyte Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH	Result <0.00398  Organics (DRO Result <50.0  ge Organics (DI Organics	U O) (GC) Qualifier U	0.00398	mg/Kg		Prepared	05/16/22 17:06  Analyzed	1
Method: Total BTEX - Total BTEX Analyte Total BTEX  Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range	Result <0.00398  Organics (DRO Result <50.0  ge Organics (Dlog Org	O) (GC) Qualifier U  RO) (GC) Qualifier	0.00398  RL  50.0	mg/Kg  Unit  mg/Kg	<u>D</u>	Prepared Prepared	05/16/22 17:06  Analyzed  05/16/22 15:00	Dil Fac
Method: Total BTEX - Total BTEX Analyte Total BTEX  Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte	Result < 0.00398  Organics (DR0 Result < 50.0  ge Organics (DI Result Re	O) (GC) Qualifier U  RO) (GC) Qualifier	0.00398  RL  50.0	mg/Kg  Unit  mg/Kg	<u>D</u>	Prepared Prepared	05/16/22 17:06  Analyzed  05/16/22 15:00  Analyzed	Dil Fac
Method: Total BTEX - Total BTEX Analyte Total BTEX  Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result < 0.00398  Organics (DR0 Result < 50.0  ge Organics (DI Result Re	O) (GC) Qualifier U  RO) (GC) Qualifier U	0.00398  RL  50.0	mg/Kg  Unit  mg/Kg	<u>D</u>	Prepared Prepared	05/16/22 17:06  Analyzed  05/16/22 15:00  Analyzed	Dil Fac
Method: Total BTEX - Total BTEX Analyte Total BTEX  Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10	Result <pre></pre> <pre> Corganics (DR) Result </pre> <pre> <pre> Corganics (DI) Result </pre> <pre> Corganics (DI) Result </pre> <pre> Corganics (DI) Result </pre> <pre> Corganics (DI) Result </pre></pre>	O) (GC) Qualifier U  RO) (GC) Qualifier U	0.00398  RL  50.0  RL  50.0	mg/Kg  Unit mg/Kg  Unit mg/Kg	<u>D</u>	Prepared  Prepared  05/12/22 13:33	05/16/22 17:06  Analyzed 05/16/22 15:00  Analyzed 05/13/22 18:15	Dil Fac

**Eurofins Carlsbad** 

05/14/22 04:27

**Matrix: Solid** 

Matrix: Solid

**Matrix: Solid** 

Lab Sample ID: 890-2297-30

Lab Sample ID: 890-2297-31

Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP15-2-3

Date Collected: 05/10/22 12:32 Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130	05/12/22 13:33	05/13/22 18:15	1
o-Terphenyl	97		70 - 130	05/12/22 13:33	05/13/22 18:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Chloride 8.55 5.04 mg/Kg 05/14/22 04:55

Client Sample ID: TP16-0-1

Date Collected: 05/10/22 12:55 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 08:09	
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 08:09	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 08:09	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/16/22 09:33	05/17/22 08:09	
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 08:09	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/16/22 09:33	05/17/22 08:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101	-	70 - 130			05/16/22 09:33	05/17/22 08:09	1
1,4-Difluorobenzene (Surr)	102		70 - 130			05/16/22 09:33	05/17/22 08:09	1
Method: Total BTEX - Total BT	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			05/16/22 17:06	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analysis	Dogulé	Ouglifier	ы	Hnit	_ n	Branarad	Analyzad	Dil Eco
	Result 289	Qualifier	<b>RL</b> 50.0	mg/Kg	<u>D</u>	Prepared	Analyzed 05/16/22 15:00	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Ra	289	<u> </u>			<u>D</u>	Prepared		
Total TPH Method: 8015B NM - Diesel Ra	289 inge Organics (Di	<u> </u>			<u>D</u> 	Prepared Prepared		1
Total TPH  Method: 8015B NM - Diesel Ra Analyte  Gasoline Range Organics	289 inge Organics (Di	RO) (GC) Qualifier	50.0	mg/Kg	<u> </u>		05/16/22 15:00	Dil Fac
Total TPH  Method: 8015B NM - Diesel Ra Analyte  Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over	289 inge Organics (DI Result	RO) (GC) Qualifier	50.0	mg/Kg	<u> </u>	Prepared	05/16/22 15:00  Analyzed	Dil Fac
Total TPH	enge Organics (DI Result <50.0	RO) (GC) Qualifier	50.0 RL 50.0	mg/Kg  Unit  mg/Kg	<u> </u>	Prepared 05/12/22 13:33	05/16/22 15:00  Analyzed  05/13/22 15:41	Dil Fac
Total TPH  Method: 8015B NM - Diesel Ra Analyte  Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over	enge Organics (DI Result <50.0	RO) (GC) Qualifier U	50.0  RL  50.0  50.0	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 05/12/22 13:33	05/16/22 15:00  Analyzed 05/13/22 15:41 05/13/22 15:41	Dil Fac
Total TPH  Method: 8015B NM - Diesel Ra Analyte  Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)	289 inge Organics (DI Result <50.0 165 124	RO) (GC) Qualifier U	50.0  RL  50.0  50.0  50.0	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 05/12/22 13:33 05/12/22 13:33	05/16/22 15:00  Analyzed 05/13/22 15:41 05/13/22 15:41 05/13/22 15:41	Dil Fac
Total TPH  Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	289 inge Organics (DI Result <50.0 165 124 %Recovery	RO) (GC) Qualifier U	50.0  RL  50.0  50.0  50.0	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 05/12/22 13:33 05/12/22 13:33 05/12/22 13:33 Prepared	Analyzed 05/13/22 15:41 05/13/22 15:41 05/13/22 15:41 Analyzed	Dil Fac
Total TPH  Method: 8015B NM - Diesel Ra Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	165	RO) (GC) Qualifier U	50.0  RL  50.0  50.0  50.0  Limits  70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 05/12/22 13:33 05/12/22 13:33 05/12/22 13:33  Prepared 05/12/22 13:33	Analyzed 05/13/22 15:41 05/13/22 15:41 05/13/22 15:41  Analyzed 05/13/22 15:41	Dil Fac
Total TPH  Method: 8015B NM - Diesel Ra Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	165	RO) (GC) Qualifier U	50.0  RL  50.0  50.0  50.0  Limits  70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 05/12/22 13:33 05/12/22 13:33 05/12/22 13:33  Prepared 05/12/22 13:33	Analyzed 05/13/22 15:41 05/13/22 15:41 05/13/22 15:41  Analyzed 05/13/22 15:41	

Lab Sample ID: 890-2297-32

# **Client Sample Results**

Client: Ensolum Job ID: 890-2297-1
Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP16-2-3

Date Collected: 05/10/22 12:58 Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 08:30	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 08:30	1
Ethylbenzene	< 0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 08:30	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 08:30	1
o-Xylene	< 0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 08:30	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 08:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			05/16/22 09:33	05/17/22 08:30	1
1,4-Difluorobenzene (Surr)	102		70 - 130			05/16/22 09:33	05/17/22 08:30	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/16/22 17:06	1
Method: 8015 NM - Diesel Range	•		DI	Unit	Ь	Propared	Analyzad	Dil Eso
	•							
Method: 8015 NM - Diesel Range Analyte Total TPH	•	Qualifier	<b>RL</b> 49.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 05/16/22 15:00	Dil Fac
Analyte Total TPH		Qualifier U			<u>D</u>	Prepared		Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Range	Result <49.9  ge Organics (Di	Qualifier U RO) (GC)	49.9	mg/Kg		· ·	05/16/22 15:00	1
Analyte Total TPH  Method: 8015B NM - Diesel Ran Analyte	Result <49.9  ge Organics (Dige Result	Qualifier U RO) (GC) Qualifier	49.9	mg/Kg	<u>D</u>	Prepared	05/16/22 15:00 Analyzed	1 Dil Fac
Analyte Total TPH	Result <49.9  ge Organics (Di	Qualifier U RO) (GC) Qualifier	49.9	mg/Kg		· ·	05/16/22 15:00	1 Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9  ge Organics (Dige Result	Qualifier U  RO) (GC) Qualifier U	49.9	mg/Kg		Prepared	05/16/22 15:00 Analyzed	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10	ge Organics (D) Result <49.9  49.9	Qualifier U  RO) (GC) Qualifier U	49.9  RL 49.9	mg/Kg  Unit  mg/Kg		Prepared 05/12/22 13:33	05/16/22 15:00  Analyzed  05/13/22 18:37	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U	49.9  RL 49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:33 05/12/22 13:33	05/16/22 15:00  Analyzed 05/13/22 18:37 05/13/22 18:37	1 Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U	49.9  RL 49.9  49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:33 05/12/22 13:33	05/16/22 15:00  Analyzed 05/13/22 18:37 05/13/22 18:37	Dil Face 1 1 1 Dil Face
Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U	49.9  RL 49.9  49.9  49.9  Limits	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:33 05/12/22 13:33 05/12/22 13:33 Prepared	05/16/22 15:00  Analyzed 05/13/22 18:37 05/13/22 18:37 05/13/22 18:37  Analyzed	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U  Qualifier	49.9  RL 49.9  49.9  49.9  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:33 05/12/22 13:33 05/12/22 13:33  Prepared 05/12/22 13:33	05/16/22 15:00  Analyzed 05/13/22 18:37  05/13/22 18:37  Analyzed 05/13/22 18:37	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U  Qualifier	49.9  RL 49.9  49.9  49.9  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 05/12/22 13:33 05/12/22 13:33 05/12/22 13:33  Prepared 05/12/22 13:33	05/16/22 15:00  Analyzed 05/13/22 18:37  05/13/22 18:37  Analyzed 05/13/22 18:37	

Client Sample ID: TP17-0-1

Date Collected: 05/10/22 13:23

Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/16/22 09:33	05/17/22 08:50	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/16/22 09:33	05/17/22 08:50	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/16/22 09:33	05/17/22 08:50	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/16/22 09:33	05/17/22 08:50	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/16/22 09:33	05/17/22 08:50	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/16/22 09:33	05/17/22 08:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			05/16/22 09:33	05/17/22 08:50	1

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Lab Sample ID: 890-2297-33

**Matrix: Solid** 

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Lab Sample ID: 890-2297-33

Lab Sample ID: 890-2297-34

**Matrix: Solid** 

# **Client Sample Results**

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP17-0-1

Date Collected: 05/10/22 13:23 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Method: 8021B - Volatile O	rganic Compou	nds (GC)	(Continued)
Michiga: OUL 1B Volume C	i gaino compou	1145 (55)	(Odinanaca)

Surrogate	%Recovery Qι	Qualifier Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	104	70 - 130	05/16/22 09:33	05/17/22 08:50	1

Method: To	ntal RTFY.	Total BTEX	Calculation
mictilou. It	Jiai Di La	TOTAL DIEX	Odiculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			05/16/22 17:06	1

Method: 8015 NM - Diesel Range Organics (DRO)	(CC)	
Method. 6015 NM - Diesel Kange Organics (DRO)	(66)	

Analyte	Result Qu	ualifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1000	49.8	mg/Kg			05/16/22 15:00	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/12/22 13:33	05/13/22 14:34	1
Diesel Range Organics (Over C10-C28)	776		49.8	mg/Kg		05/12/22 13:33	05/13/22 14:34	1
Oll Range Organics (Over C28-C36)	225		49.8	mg/Kg		05/12/22 13:33	05/13/22 14:34	1
Survey mate	9/ <b>D</b> anayamı	Ovalifian	Limita			D	Amakanad	D# 5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130	05/12/22 13:33	05/13/22 14:34	1
o-Terphenyl	86		70 - 130	05/12/22 13:33	05/13/22 14:34	1

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	195	4.95	mg/Kg			05/14/22 05:41	1

**Client Sample ID: TP17-2-3** 

Date Collected: 05/10/22 13:25

Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Welliou. 002 ID - Volatile Orga	inic compounds (	,00)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:33	05/17/22 09:11	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:33	05/17/22 09:11	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:33	05/17/22 09:11	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/16/22 09:33	05/17/22 09:11	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/16/22 09:33	05/17/22 09:11	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/16/22 09:33	05/17/22 09:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			05/16/22 09:33	05/17/22 09:11	1
1,4-Difluorobenzene (Surr)	103		70 - 130			05/16/22 09:33	05/17/22 09:11	1

Method: Total BTEX - Total BTEX Calculat	
	On

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			05/16/22 17:06	1

Lab Sample ID: 890-2297-34

Lab Sample ID: 890-2297-35

**Matrix: Solid** 

# **Client Sample Results**

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

**Client Sample ID: TP17-2-3** 

Date Collected: 05/10/22 13:25 Date Received: 05/11/22 11:24

Sample Depth: 2 - 3

Method: 8015 NM - Diesel Range O	rganics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/16/22 15:00	1

Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 18:59	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 18:59	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 18:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130			05/12/22 13:33	05/13/22 18:59	1
o-Terphenyl	93		70 - 130			05/12/22 13:33	05/13/22 18:59	1

١	Method: 300.0 - Anions, Ion Chrom	natography -	Soluble							
	Analyte	Result	Qualifier	RL	Un	it D	)	Prepared	Analyzed	Dil Fac
	Chloride	14.1		4.97	mg	/Kg			05/14/22 05:50	1

Client Sample ID: TP18-0-1

Date Collected: 05/10/22 14:08 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 09:32	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 09:32	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 09:32	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 09:32	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 09:32	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 09:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130			05/16/22 09:33	05/17/22 09:32	1
1,4-Difluorobenzene (Surr)	101		70 - 130			05/16/22 09:33	05/17/22 09:32	1
Method: Total BTEX - Total B1	ΓEX Calculation							
Method: Total BTEX - Total BT Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
			RL 0.00402	Unit mg/Kg	<u>D</u>	Prepared	<b>Analyzed</b> 05/16/22 17:06	Dil Fac
Analyte	Result   <0.00402	U			<u>D</u>	Prepared		Dil Fac
Analyte Total BTEX	Result <0.00402 nge Organics (DR)	U			D	Prepared Prepared		1
Analyte Total BTEX  Method: 8015 NM - Diesel Rar	Result <0.00402 nge Organics (DR)	O) (GC) Qualifier	0.00402	mg/Kg			05/16/22 17:06	1
Analyte Total BTEX  Method: 8015 NM - Diesel Rar Analyte	Result <0.00402  nge Organics (DR Result <49.8	O) (GC) Qualifier U	0.00402	mg/Kg			05/16/22 17:06  Analyzed	1 Dil Fac
Analyte Total BTEX  Method: 8015 NM - Diesel Rar Analyte Total TPH	nge Organics (DR Result <49.8 ange Organics (D	O) (GC) Qualifier U	0.00402	mg/Kg			05/16/22 17:06  Analyzed	Dil Fac
Analyte Total BTEX  Method: 8015 NM - Diesel Rar Analyte Total TPH  Method: 8015B NM - Diesel Rar	nge Organics (DR Result <49.8 ange Organics (D	O) (GC) Qualifier U  RO) (GC) Qualifier	0.00402 RL 49.8	mg/Kg  Unit  mg/Kg	<u>D</u>	Prepared	05/16/22 17:06  Analyzed  05/16/22 15:00	1 Dil Fac

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05/13/22 19:21

49.8

mg/Kg

05/12/22 13:33

<49.8 U

Oll Range Organics (Over C28-C36)

C10-C28)

Lab Sample ID: 890-2297-35

# **Client Sample Results**

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP18-0-1

Date Collected: 05/10/22 14:08 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	1-Chlorooctane	82		70 - 130	05/12/22 13:33	05/13/22 19:21	1
l	o-Terphenyl	92		70 - 130	05/12/22 13:33	05/13/22 19:21	1

Method: 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL Unit D Prepared Analyzed <5.01 U Chloride 5.01 mg/Kg 05/14/22 05:59

Client Sample ID: TP18-1-2 Lab Sample ID: 890-2297-36 Date Collected: 05/10/22 14:10 **Matrix: Solid** 

Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 09:52	
Toluene	< 0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 09:52	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 09:52	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/16/22 09:33	05/17/22 09:52	
o-Xylene	< 0.00199	U	0.00199	mg/Kg		05/16/22 09:33	05/17/22 09:52	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/16/22 09:33	05/17/22 09:52	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	102		70 - 130			05/16/22 09:33	05/17/22 09:52	
1,4-Difluorobenzene (Surr)	103		70 - 130			05/16/22 09:33	05/17/22 09:52	
- Method: Total BTEX - Total BTE)	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			05/16/22 17:06	
Mathadi 2015 NM Diagal Danga	Owneries (DD)	0) (00)						
Method: 8015 NM - Diesel Range Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0						•	
IOIGI II II	<50.0	U	50.0	mg/Kg			05/16/22 15:00	-
- -	<50.0	U	50.0	mg/Kg			05/16/22 15:00	
Method: 8015B NM - Diesel Ranç			50.0	mg/Kg			05/16/22 15:00	
	ge Organics (D		50.0	mg/Kg Unit	<u>D</u>	Prepared	05/16/22 15:00  Analyzed	
ି Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)  Qualifier			<u>D</u>	Prepared 05/12/22 13:33		Dil Fa
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	ge Organics (D	RO) (GC) Qualifier	RL	Unit	<u>D</u>		Analyzed	Dil Fa
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (Di Result <50.0	RO) (GC) Qualifier U	RL 50.0	Unit mg/Kg	<u> </u>	05/12/22 13:33	<b>Analyzed</b> 05/13/22 19:43	Dil Fa
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	ge Organics (DI Result <50.0	RO) (GC) Qualifier U	<b>RL</b> 50.0	Unit mg/Kg mg/Kg	<u>D</u>	05/12/22 13:33 05/12/22 13:33	Analyzed 05/13/22 19:43 05/13/22 19:43	Dil Fa
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	ge Organics (D) Result <50.0 <50.0	RO) (GC) Qualifier U	RL 50.0 50.0 50.0	Unit mg/Kg mg/Kg	<u>D</u>	05/12/22 13:33 05/12/22 13:33 05/12/22 13:33	Analyzed 05/13/22 19:43 05/13/22 19:43	Dil Fa
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	ge Organics (D Result <50.0 <50.0 <50.0	RO) (GC) Qualifier U	RL 50.0 50.0 50.0 <i>Limits</i>	Unit mg/Kg mg/Kg	<u>D</u>	05/12/22 13:33 05/12/22 13:33 05/12/22 13:33 <i>Prepared</i>	Analyzed 05/13/22 19:43 05/13/22 19:43 05/13/22 19:43 Analyzed	Dil Fa
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	ge Organics (D)  Result  <50.0  <50.0  <50.0   **Recovery**  86  98	RO) (GC) Qualifier U U Qualifier	RL 50.0 50.0 50.0 Limits 70 - 130	Unit mg/Kg mg/Kg	<u>D</u>	05/12/22 13:33 05/12/22 13:33 05/12/22 13:33 Prepared 05/12/22 13:33	Analyzed 05/13/22 19:43 05/13/22 19:43 05/13/22 19:43  Analyzed 05/13/22 19:43	Dil Fa
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	ge Organics (D)  Result  <50.0  <50.0  <50.0   **Recovery  86 98  omatography -	RO) (GC) Qualifier U U Qualifier	RL 50.0 50.0 50.0 Limits 70 - 130	Unit mg/Kg mg/Kg	<u>D</u>	05/12/22 13:33 05/12/22 13:33 05/12/22 13:33 Prepared 05/12/22 13:33	Analyzed 05/13/22 19:43 05/13/22 19:43 05/13/22 19:43  Analyzed 05/13/22 19:43	Dil Fa

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Dil Fac

Lab Sample ID: 890-2297-37

# **Client Sample Results**

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP19-0-1

Date Collected: 05/10/22 14:13 Date Received: 05/11/22 11:24

Sample Depth: 0 - 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 10:13	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 10:13	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 10:13	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 10:13	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/16/22 09:33	05/17/22 10:13	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/16/22 09:33	05/17/22 10:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			05/16/22 09:33	05/17/22 10:13	1
1,4-Difluorobenzene (Surr)	104		70 - 130			05/16/22 09:33	05/17/22 10:13	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/16/22 17:06	1
Analyte Total TPH		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH							· · · · · · · · · · · · · · · · · · ·	טוו ו עט
	<50.0	U	50.0	mg/Kg			05/16/22 15:00	
Method: 8015B NM - Diesel Ran			50.0	mg/Kg				
• •	ge Organics (D		50.0	mg/Kg Unit	D	Prepared		1
: Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC) Qualifier			D	Prepared 05/12/22 13:33	05/16/22 15:00	1 Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (D	RO) (GC) Qualifier	RL	Unit	<u>D</u>		05/16/22 15:00 Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10	ge Organics (D Result <50.0	RO) (GC) Qualifier U	RL 50.0	<mark>Unit</mark> mg/Kg	<u>D</u>	05/12/22 13:33	05/16/22 15:00  Analyzed  05/13/22 20:04	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	ge Organics (D Result <50.0	RO) (GC) Qualifier U	<b>RL</b> 50.0	<b>Unit</b> mg/Kg mg/Kg	<u>D</u>	05/12/22 13:33 05/12/22 13:33	05/16/22 15:00  Analyzed  05/13/22 20:04  05/13/22 20:04	1 Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	ge Organics (D Result <50.0 <50.0	RO) (GC) Qualifier U	RL 50.0 50.0 50.0	<b>Unit</b> mg/Kg mg/Kg	<u>D</u>	05/12/22 13:33 05/12/22 13:33 05/12/22 13:33	05/16/22 15:00  Analyzed 05/13/22 20:04 05/13/22 20:04	Dil Face 1 1 1 Dil Face
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	ge Organics (D Result <50.0 <50.0 <50.0	RO) (GC) Qualifier U	#L 50.0 50.0 50.0 Limits	<b>Unit</b> mg/Kg mg/Kg	<u>D</u>	05/12/22 13:33 05/12/22 13:33 05/12/22 13:33 <i>Prepared</i>	05/16/22 15:00  Analyzed 05/13/22 20:04 05/13/22 20:04  05/13/22 20:04  Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	ge Organics (D Result <50.0 <50.0 <50.0 <80.0 %Recovery 95 102	RO) (GC) Qualifier U U Qualifier	RL 50.0 50.0 50.0 Limits 70 - 130	<b>Unit</b> mg/Kg mg/Kg	<u>D</u>	05/12/22 13:33 05/12/22 13:33 05/12/22 13:33 Prepared 05/12/22 13:33	05/16/22 15:00  Analyzed 05/13/22 20:04  05/13/22 20:04  Analyzed  05/13/22 20:04	Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	ge Organics (D  Result  <50.0  <50.0  <50.0   **Recovery  95  102  omatography -	RO) (GC) Qualifier U U Qualifier	RL 50.0 50.0 50.0 Limits 70 - 130	<b>Unit</b> mg/Kg mg/Kg	<u>D</u>	05/12/22 13:33 05/12/22 13:33 05/12/22 13:33 Prepared 05/12/22 13:33	05/16/22 15:00  Analyzed 05/13/22 20:04  05/13/22 20:04  Analyzed  05/13/22 20:04	Dil Fac

Client Sample ID: TP19-1-2

Date Collected: 05/10/22 14:15

Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/16/22 09:33	05/17/22 10:34	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/16/22 09:33	05/17/22 10:34	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/16/22 09:33	05/17/22 10:34	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/16/22 09:33	05/17/22 10:34	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/16/22 09:33	05/17/22 10:34	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/16/22 09:33	05/17/22 10:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			05/16/22 09:33	05/17/22 10:34	1

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Lab Sample ID: 890-2297-38

**Matrix: Solid** 

Lab Sample ID: 890-2297-38

#### **Client Sample Results**

Client: EnsolumJob ID: 890-2297-1Project/Site: James E UpperSDG: 03d2024016

Client Sample ID: TP19-1-2

Date Collected: 05/10/22 14:15 Date Received: 05/11/22 11:24

Sample Depth: 1 - 2

Analyte

Chloride

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	106		70 - 130			05/16/22 09:33	05/17/22 10:34	1
Method: Total BTEX - Total BTE)	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			05/16/22 17:06	1
Method: 8015 NM - Diesel Range	Organics (DR)	O) (GC)						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			05/16/22 15:00	1
Mothod: 901EP NM Diocol Pane	no Organico (D	BO) (GC)						
Method: 8015B NM - Diesel Ranç Analyte		RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte		Qualifier	RL 49.9	<mark>Unit</mark> mg/Kg	<u>D</u>	Prepared 05/12/22 13:33	Analyzed 05/13/22 20:26	Dil Fac
	Result	Qualifier			<u>D</u>			Dil Fac
Analyte Gasoline Range Organics	Result	Qualifier U			<u>D</u>			Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over		Qualifier U	49.9	mg/Kg	<u>D</u>	05/12/22 13:33	05/13/22 20:26	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)		Qualifier U	49.9	mg/Kg	<u>D</u>	05/12/22 13:33	05/13/22 20:26	Dil Fac 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <49.9   <49.9	Qualifier U U U	49.9	mg/Kg	<u>D</u>	05/12/22 13:33 05/12/22 13:33	05/13/22 20:26 05/13/22 20:26	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10	Result   <49.9   <49.9   <49.9	Qualifier U U U	49.9 49.9 49.9	mg/Kg	<u> </u>	05/12/22 13:33 05/12/22 13:33 05/12/22 13:33	05/13/22 20:26 05/13/22 20:26 05/13/22 20:26	1 1

4.97

Unit

mg/Kg

Prepared

Analyzed

05/14/22 06:27

Result Qualifier

<4.97 U

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Dil Fac

#### **Surrogate Summary**

Client: Ensolum

Project/Site: James E Upper

SDG: 03d2024016

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	resent ourrogate recovery (Acceptance Linits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2293-A-8-D MS	Matrix Spike	103	94	
890-2293-A-8-E MSD	Matrix Spike Duplicate	108	104	
890-2297-1	TP1-0-1	135 S1+	100	
890-2297-2	TP1-2-3	96	87	
390-2297-3	TP2-0-1	89	91	
890-2297-4	TP2-1-2	92	90	
390-2297-5	TP3-0-1	158 S1+	86	
890-2297-6	TP3-2-3	116	116	
390-2297-7	TP4-0-1	99	88	
390-2297-8	TP4-1-2	108	88	
390-2297-9	TP5-0-1	108	90	
390-2297-9 390-2297-10	TP5-2-3	115	91	
390-2297-10	TP6-0-1	125		
390-2297-11	TP6-2-3	102	89 107	
890-2297-13	TP7-0-1	103	99	
890-2297-14	TP7-2-3	108	99	
890-2297-15	TP8-0-1	113	95	
890-2297-16	TP8-1-2	108	102	
890-2297-17	TP9-0-1	106	89	
390-2297-18	TP9-1-2	110	96	
390-2297-19	TP10-0-1	103	90	
390-2297-20	TP10-2-3	117	91	
390-2297-20 MS	TP10-2-3	123	98	
390-2297-20 MSD	TP10-2-3	104	104	
390-2297-21	TP11-0-1	109	95	
390-2297-22	TP11-2-3	101	104	
390-2297-23	TP12-0-1	113	100	
890-2297-24	TP12-1-2	127	96	
390-2297-25	TP13-0-1	103	98	
890-2297-26	TP13-2-3	137 S1+	91	
890-2297-27	TP14-0-1	106	97	
390-2297-28	TP14-2-3	103	96	
390-2297-29	TP15-1-2	95	98	
390-2297-30	TP15-2-3	102	100	
890-2297-31	TP16-0-1	101	102	
390-2297-32	TP16-2-3	100	102	
390-2297-33	TP17-0-1	110	104	
390-2297-34	TP17-2-3	102	103	
390-2297-35	TP18-0-1	96	101	
390-2297-36	TP18-1-2	102	103	
390-2297-37	TP19-0-1	98	104	
390-2297-38	TP19-1-2	103	106	
LCS 880-25602/1-A	Lab Control Sample	112	93	
LCS 880-25603/1-A	Lab Control Sample	97	102	
_CSD 880-25602/2-A	Lab Control Sample Dup	100	90	
LCSD 880-25603/2-A	Lab Control Sample Dup	114	97	
MB 880-25601/5-A	Method Blank	99	98	
MB 880-25602/5-A	Method Blank	79	91	
MB 880-25603/5-A	Method Blank	106	93	

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#### **Surrogate Summary**

Client: Ensolum

Project/Site: James E Upper

Job ID: 890-2297-1 SDG: 03d2024016

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

latrix: Solid				Prep Type: Total/N
				Percent Surrogate Recovery (Acceptance Limits)
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2297-1	TP1-0-1	74	99	
890-2297-2	TP1-2-3	82	88	
890-2297-2 MS	TP1-2-3	81	78	
890-2297-2 MSD	TP1-2-3	84	81	
890-2297-3	TP2-0-1	74	78	
890-2297-4	TP2-1-2	74	81	
890-2297-5	TP3-0-1	79	85	
890-2297-6	TP3-2-3	83	90	
890-2297-7	TP4-0-1	76	79	
890-2297-8	TP4-1-2	76	83	
890-2297-9	TP5-0-1	88	94	
890-2297-10	TP5-2-3	78	84	
890-2297-11	TP6-0-1	64 S1-	66 S1-	
890-2297-12	TP6-2-3	75	82	
890-2297-13	TP7-0-1	81	110	
890-2297-14	TP7-2-3	75	82	
890-2297-15	TP8-0-1	78	80	
890-2297-16	TP8-1-2	82	87	
890-2297-17	TP9-0-1	70	72	
890-2297-18	TP9-1-2	79	82	
890-2297-19	TP10-0-1	85	91	
890-2297-20	TP10-2-3	71	77	
890-2297-21	TP11-0-1	105	96	
890-2297-22	TP11-2-3	82	90	
890-2297-23	TP12-0-1	89	89	
890-2297-23 MS	TP12-0-1	87	81	
890-2297-23 MSD	TP12-0-1	78	73	
890-2297-24	TP12-1-2	85	96	
890-2297-25	TP13-0-1	88	92	
890-2297-26	TP13-2-3	85	96	
890-2297-27	TP14-0-1	87	90	
890-2297-28	TP14-2-3	87	97	
890-2297-29	TP15-1-2	96	106	
890-2297-30	TP15-2-3	86	97	
890-2297-31	TP16-0-1	90	92	
890-2297-32	TP16-2-3	91	99	
890-2297-33	TP17-0-1	80	86	
890-2297-34	TP17-2-3	82	93	
890-2297-35	TP18-0-1	82	92	
890-2297-36	TP18-1-2	86	98	
890-2297-37	TP19-0-1	95	102	
890-2297-38	TP19-1-2	84	91	
LCS 880-25431/2-A	Lab Control Sample	108	110	
LCS 880-25432/2-A	Lab Control Sample	96	96	
LCSD 880-25431/3-A	Lab Control Sample Dup	107	108	
LCSD 880-25432/3-A	Lab Control Sample Dup	96	94	

# **Surrogate Summary**

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

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

Matrix: Solid Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)				
		1CO1	OTPH1			
Lab Sample ID	Client Sample ID	(70-130)	(70-130)			
MB 880-25431/1-A	Method Blank	99	109			
MB 880-25432/1-A	Method Blank	83	91			
Surrogate Legend						
1CO = 1-Chlorooctane						
OTPH = o-Terphenyl						

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25601/5-A

**Matrix: Solid** 

Analysis Batch: 25595

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25601

MB	MB		
Result	Qualifier	RL	
<0.00200	U	0.00200	

Dil Fac Analyte Unit Prepared Analyzed Benzene mg/Kg 05/16/22 09:24 05/16/22 15:54 Toluene <0.00200 U 0.00200 mg/Kg 05/16/22 09:24 05/16/22 15:54 0.00200 Ethylbenzene <0.00200 U 05/16/22 09:24 05/16/22 15:54 mg/Kg <0.00400 U 0.00400 05/16/22 15:54 m-Xylene & p-Xylene mg/Kg 05/16/22 09:24 o-Xylene <0.00200 U 0.00200 mg/Kg 05/16/22 09:24 05/16/22 15:54 Xylenes, Total <0.00400 U 0.00400 05/16/22 09:24 05/16/22 15:54 mg/Kg

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	05/16/22 09:24	05/16/22 15:54	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/16/22 09:24	05/16/22 15:54	1

Lab Sample ID: MB 880-25602/5-A

**Matrix: Solid** 

Analysis Batch: 25594

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

Prep Batch: 25602

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 14:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 14:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 14:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/16/22 09:29	05/16/22 14:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:29	05/16/22 14:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/16/22 09:29	05/16/22 14:48	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	l Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	05/16/22 09	:29 05/16/22 14:48	1
1,4-Difluorobenzene (Surr)	91		70 - 130	05/16/22 09	:29 05/16/22 14:48	1

Lab Sample ID: LCS 880-25602/1-A

**Matrix: Solid** 

Analysis Batch: 25594

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 25602

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1120		mg/Kg		112	70 - 130	
Toluene	0.100	0.1170		mg/Kg		117	70 - 130	
Ethylbenzene	0.100	0.1145		mg/Kg		115	70 - 130	
m-Xylene & p-Xylene	0.200	0.2273		mg/Kg		114	70 - 130	
o-Xylene	0.100	0.1129		mg/Kg		113	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	112	70 - 130
1.4-Difluorobenzene (Surr)	93	70 - 130

Lab Sample ID: LCSD 880-25602/2-A

Matrix: Solid

Matrix: Solid							Prep i	iype: io	tai/NA
Analysis Batch: 25594							Prep	Batch:	25602
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1007		mg/Kg		101	70 - 130	11	35

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Dron Types Total/NA

Job ID: 890-2297-1 Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

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

Lab Sample ID: LCSD 880-25602/2-A

**Matrix: Solid** 

Analysis Batch: 25594

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 25602

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit 0.100 Toluene 0.1075 108 70 - 130 35 mg/Kg 8 Ethylbenzene 0.100 0.1068 mg/Kg 107 70 - 130 35 0.200 m-Xylene & p-Xylene 0.2165 mg/Kg 108 70 - 130 35 5 o-Xylene 0.100 0.1056 mg/Kg 106 70 - 130 35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: 890-2293-A-8-D MS

**Matrix: Solid** 

Analysis Batch: 25594

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 25602

MS MS %Rec Sample Sample Spike Result Qualifier Analyte Added Result Qualifier Unit %Rec Limits Benzene <0.00199 0.101 0.1032 102 70 - 130 mg/Kg Toluene <0.00199 U 0.101 0.1059 105 70 - 130 mg/Kg Ethylbenzene <0.00199 U 0.101 0.1057 105 70 - 130 mg/Kg 0.202 m-Xylene & p-Xylene <0.00398 U 0.2157 107 70 - 130 mg/Kg o-Xylene <0.00199 U 0.101 0.1050 mg/Kg 104 70 - 130

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	103	70 - 130
1,4-Difluorobenzene (Surr)	94	70 - 130

Lab Sample ID: 890-2293-A-8-E MSD

**Matrix: Solid** 

Analysis Batch: 25594

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 25602

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U	0.101	0.1120		mg/Kg		111	70 - 130	8	35
Toluene	<0.00199	U	0.101	0.1046		mg/Kg		104	70 - 130	1	35
Ethylbenzene	<0.00199	U	0.101	0.1040		mg/Kg		103	70 - 130	2	35
m-Xylene & p-Xylene	<0.00398	U	0.201	0.2099		mg/Kg		104	70 - 130	3	35
o-Xylene	<0.00199	U	0.101	0.1020		mg/Kg		101	70 - 130	3	35

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	108	70 - 130
1,4-Difluorobenzene (Surr)	104	70 - 130

Lab Sample ID: MB 880-25603/5-A

**Matrix: Solid** 

**Analysis Batch: 25595** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25603

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 02:37	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 02:37	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 02:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/16/22 09:33	05/17/22 02:37	1

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Client: Ensolum

Project/Site: James E Upper

Job ID: 890-2297-1

SDG: 03d2024016

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

Lab Sample ID: MB 880-25603/5-A

**Matrix: Solid** 

Analysis Batch: 25595

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25603

	1110	1410										
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac				
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/16/22 09:33	05/17/22 02:37	1				
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/16/22 09:33	05/17/22 02:37	1				

MR MR

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	05/16/22 09:33	05/17/22 02:37	1
1,4-Difluorobenzene (Surr)	93		70 - 130	05/16/22 09:33	05/17/22 02:37	1

**Client Sample ID: Lab Control Sample** 

Lab Sample ID: LCS 880-25603/1-A **Matrix: Solid** 

**Analysis Batch: 25595** 

Prep Type: Total/NA

Prep Batch: 25603

	<b>Spike</b>	LCS	LUS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1020		mg/Kg		102	70 - 130	
Toluene	0.100	0.09657		mg/Kg		97	70 - 130	
Ethylbenzene	0.100	0.08230		mg/Kg		82	70 - 130	
m-Xylene & p-Xylene	0.200	0.1704		mg/Kg		85	70 - 130	
o-Xylene	0.100	0.08715		mg/Kg		87	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	97	70 - 130
1,4-Difluorobenzene (Surr)	102	70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25603

Lab Sample ID: LCSD 880-25603/2-A Matrix: Solid **Analysis Batch: 25595** 

•	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09287		mg/Kg		93	70 - 130	9	35
Toluene	0.100	0.09913		mg/Kg		99	70 - 130	3	35
Ethylbenzene	0.100	0.09105		mg/Kg		91	70 - 130	10	35
m-Xylene & p-Xylene	0.200	0.1961		mg/Kg		98	70 - 130	14	35
o-Xylene	0.100	0.1006		mg/Kg		101	70 - 130	14	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	114	70 - 130
1.4-Difluorobenzene (Surr)	97	70 - 130

Lab Sample ID: 890-2297-20 MS Client Sample ID: TP10-2-3

**Matrix: Solid** 

Analysis Batch: 25595

Prep Type: Total/NA Prep Batch: 25603

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.0996	0.07805		mg/Kg		78	70 - 130	
Toluene	<0.00201	U	0.0996	0.08683		mg/Kg		87	70 - 130	
Ethylbenzene	<0.00201	U	0.0996	0.08164		mg/Kg		82	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1758		mg/Kg		88	70 - 130	
o-Xylene	<0.00201	U	0.0996	0.08956		mg/Kg		90	70 - 130	

Job ID: 890-2297-1 Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

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

MS MS

Lab Sample ID: 890-2297-20 MS

**Matrix: Solid** 

Analysis Batch: 25595

Client Sample ID: TP10-2-3 Prep Type: Total/NA

Prep Batch: 25603

%Recovery Surrogate Qualifier Limits 4-Bromofluorobenzene (Surr) 123 70 - 130 1,4-Difluorobenzene (Surr) 98 70 - 130

Lab Sample ID: 890-2297-20 MSD Client Sample ID: TP10-2-3

Analysis Batch: 25595

**Matrix: Solid** Prep Type: Total/NA Prep Batch: 25603

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit <0.00201 Ū 0.0992 0.08756 88 70 - 13011 35 Benzene mg/Kg Toluene <0.00201 U 0.0992 0.08365 mg/Kg 84 70 - 130 4 35 <0.00201 U 0.0992 0.07194 mg/Kg 73 70 - 130 13 35 Ethylbenzene m-Xylene & p-Xylene <0.00402 U 0.198 0.1481 mg/Kg 75 70 - 130 17 35 o-Xylene <0.00201 U 0.0992 0.07526 mg/Kg 76 70 - 130 35

MSD MSD

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

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

Lab Sample ID: MB 880-25431/1-A

**Matrix: Solid** 

**Analysis Batch: 25488** 

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

Prep Batch: 25431

MB MB Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Gasoline Range Organics <50.0 U 50.0 mg/Kg 05/12/22 13:30 05/13/22 21:51 (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg 05/12/22 13:30 05/13/22 21:51 C10-C28) OII Range Organics (Over C28-C36) <50.0 U 50.0 05/12/22 13:30 05/13/22 21:51 mg/Kg

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 99 70 130 05/12/22 13:30 05/13/22 21:51 o-Terphenyl 109 05/12/22 13:30 05/13/22 21:51 70 - 130

Lab Sample ID: LCS 880-25431/2-A

**Matrix: Solid** 

**Analysis Batch: 25488** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25431

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits 1000 108 Gasoline Range Organics 1085 mg/Kg 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1079 mg/Kg 108 70 - 130

C10-C28)

LCS LCS Qualifier Surrogate %Recovery Limits 1-Chlorooctane 108 70 - 130 70 - 130 o-Terphenyl 110

Client: Ensolum

1-Chlorooctane

o-Terphenyl

Job ID: 890-2297-1 Project/Site: James E Upper

SDG: 03d2024016

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

107

108

Lab Sample ID: LCSD 880-254 Matrix: Solid Analysis Batch: 25488	131/3-A					Clie	nt Sam	nple ID:		ol Sampl Type: To Batch:	tal/NA
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	1184		mg/Kg		118	70 - 130	9	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	1067		mg/Kg		107	70 - 130	1	20
C10-C28)											
	LCSD L	.CSD									
Surrogate	%Recovery Q	Qualifier	Limits								

Client Sample ID: TP1-2-3 Lab Sample ID: 890-2297-2 MS Matrix: Solid Prep Type: Total/NA **Analysis Batch: 25488** Prep Batch: 25431

70 - 130

70 - 130

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits <49.9 U 1000 1047 101 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 1000 749.1 mg/Kg 75 70 - 130 C10-C28)

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

Lab Sample ID: 890-2297-2 MSD Client Sample ID: TP1-2-3 **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 25488

Analysis Batch: 25488									Prep	Batch:	25431
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1148		mg/Kg		111	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	785.3		mg/Kg		79	70 - 130	5	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	84		70 - 130
o-Terphenyl	81		70 - 130

Lab Sample ID: MB 880-25432/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

**Analysis Batch: 25488** 

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 12:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 12:00	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/12/22 13:33	05/13/22 12:00	1

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Prep Batch: 25432

Client: Ensolum Job ID: 890-2297-1 SDG: 03d2024016 Project/Site: James E Upper

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

Lab Sample ID: MB 880-25432/1-A

**Matrix: Solid** 

**Analysis Batch: 25488** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25432

MB MB

	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	1-Chlorooctane	83		70 - 130	05/12/22 13:	33 05/13/22 12:00	1
l	o-Terphenyl	91		70 - 130	05/12/22 13:	33 05/13/22 12:00	1

Lab Sample ID: LCS 880-25432/2-A Client Sample ID: Lab Control Sample

**Matrix: Solid** 

Analysis Batch: 25488

Prep Type: Total/NA

Prep Batch: 25432

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits 1044 Gasoline Range Organics 1000 104 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1001 mg/Kg 100 70 - 130 C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: LCSD 880-25432/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

**Analysis Batch: 25488** 

Prep Type: Total/NA

Prep Batch: 25432

	<b>Бріке</b>	LC2D	LCSD				%Rec		KPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1048		mg/Kg		105	70 - 130	0	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1005		mg/Kg		100	70 - 130	0	20
C10-C28)									

C10-C28)

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	96	70 - 130
o-Terphenyl	94	70 - 130

Client Sample ID: TP12-0-1 Lab Sample ID: 890-2297-23 MS **Matrix: Solid** 

Analysis Batch: 25488

Prep Type: Total/NA Prep Batch: 25432

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<50.0	U	1000	1057		mg/Kg		103	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<50.0	U F1	1000	718.3	F1	mg/Kg		68	70 - 130	
C10-C28)										

MS MS

Surrogate	%Recovery Qual	ifier Limits
1-Chlorooctane	87	70 - 130
o-Terphenyl	81	70 - 130

### QC Sample Results

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

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

Lab Sample ID: 890-2297-23 MSD Client Sample ID: TP12-0-1 **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 25488 Prep Batch: 25432

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	949.1		mg/Kg		93	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	998	647.4	F1	mg/Kg		61	70 - 130	10	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	78		70 - 130
o-Terphenyl	73		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-25439/1-A Client Sample ID: Method Blank **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 25556

мв мв Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 05/16/22 14:45

Lab Sample ID: LCS 880-25439/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 25556

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	239.4		mg/Kg		96	90 - 110	 -

Lab Sample ID: LCSD 880-25439/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 25556

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	239.1		mg/Kg		96	90 - 110	0	20	

Lab Sample ID: 890-2297-9 MS Client Sample ID: TP5-0-1 **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 25556

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	714		250	962.7		ma/Ka		100	90 110	 

Lab Sample ID: 890-2297-9 MSD Client Sample ID: TP5-0-1 **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 25556

Analysis Daton, 2000											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	714		250	961.9	·	mg/Kg		99	90 - 110	0	20

Client: Ensolum Project/Site: James E Upper

SDG: 03d2024016

**Prep Type: Soluble** 

Client Sample ID: Method Blank

### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-25440/1-A

**Matrix: Solid** 

Analysis Batch: 25557

MB MB

Dil Fac Analyte Result Qualifier RLUnit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 05/14/22 01:51

Lab Sample ID: LCS 880-25440/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 25557** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 248.2 mg/Kg 99 90 - 110

Lab Sample ID: LCSD 880-25440/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 25557

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 250 245.6 mg/Kg 90 - 110

Lab Sample ID: 890-2297-19 MS Client Sample ID: TP10-0-1 **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 25557** 

MS MS Sample Sample Spike %Rec Analyte Added %Rec Result Qualifier Result Qualifier Unit D Limits Chloride 1650 1250 2870 90 - 110 mg/Kg

Lab Sample ID: 890-2297-19 MSD Client Sample ID: TP10-0-1 **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 25557** 

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit 1250 Chloride 1650 2885 mg/Kg 99 90 - 110 20

Lab Sample ID: 890-2297-29 MS Client Sample ID: TP15-1-2 **Prep Type: Soluble** 

Matrix: Solid

**Analysis Batch: 25557** 

Sample Sample Spike MS MS %Rec Result Qualifier Added Analyte Result Qualifier Unit D %Rec Limits Chloride 8 17 249 261.5 mg/Kg 102 90 - 110

Lab Sample ID: 890-2297-29 MSD Client Sample ID: TP15-1-2 **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 25557** 

MSD MSD %Rec RPD Sample Sample Spike Result Qualifier Added Analyte Result Qualifier Limits RPD Limit Unit %Rec Chloride 8.17 249 259.4 mg/Kg 101 90 - 110 20

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

### **GC VOA**

### Analysis Batch: 25594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-1	TP1-0-1	Total/NA	Solid	8021B	25602
890-2297-2	TP1-2-3	Total/NA	Solid	8021B	25602
890-2297-3	TP2-0-1	Total/NA	Solid	8021B	25602
890-2297-4	TP2-1-2	Total/NA	Solid	8021B	25602
890-2297-5	TP3-0-1	Total/NA	Solid	8021B	25602
890-2297-6	TP3-2-3	Total/NA	Solid	8021B	25602
890-2297-7	TP4-0-1	Total/NA	Solid	8021B	25602
890-2297-8	TP4-1-2	Total/NA	Solid	8021B	25602
890-2297-9	TP5-0-1	Total/NA	Solid	8021B	25602
890-2297-10	TP5-2-3	Total/NA	Solid	8021B	25602
890-2297-11	TP6-0-1	Total/NA	Solid	8021B	25602
890-2297-12	TP6-2-3	Total/NA	Solid	8021B	25602
890-2297-13	TP7-0-1	Total/NA	Solid	8021B	25602
890-2297-14	TP7-2-3	Total/NA	Solid	8021B	25602
890-2297-15	TP8-0-1	Total/NA	Solid	8021B	25602
890-2297-16	TP8-1-2	Total/NA	Solid	8021B	25602
890-2297-17	TP9-0-1	Total/NA	Solid	8021B	25602
890-2297-18	TP9-1-2	Total/NA	Solid	8021B	25602
890-2297-19	TP10-0-1	Total/NA	Solid	8021B	25602
MB 880-25602/5-A	Method Blank	Total/NA	Solid	8021B	25602
LCS 880-25602/1-A	Lab Control Sample	Total/NA	Solid	8021B	25602
LCSD 880-25602/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25602
890-2293-A-8-D MS	Matrix Spike	Total/NA	Solid	8021B	25602
890-2293-A-8-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	25602

#### Analysis Batch: 25595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-20	TP10-2-3	Total/NA	Solid	8021B	25603
890-2297-21	TP11-0-1	Total/NA	Solid	8021B	25603
890-2297-22	TP11-2-3	Total/NA	Solid	8021B	25603
890-2297-23	TP12-0-1	Total/NA	Solid	8021B	25603
890-2297-24	TP12-1-2	Total/NA	Solid	8021B	25603
890-2297-25	TP13-0-1	Total/NA	Solid	8021B	25603
890-2297-26	TP13-2-3	Total/NA	Solid	8021B	25603
890-2297-27	TP14-0-1	Total/NA	Solid	8021B	25603
890-2297-28	TP14-2-3	Total/NA	Solid	8021B	25603
890-2297-29	TP15-1-2	Total/NA	Solid	8021B	25603
890-2297-30	TP15-2-3	Total/NA	Solid	8021B	25603
890-2297-31	TP16-0-1	Total/NA	Solid	8021B	25603
890-2297-32	TP16-2-3	Total/NA	Solid	8021B	25603
890-2297-33	TP17-0-1	Total/NA	Solid	8021B	25603
890-2297-34	TP17-2-3	Total/NA	Solid	8021B	25603
890-2297-35	TP18-0-1	Total/NA	Solid	8021B	25603
890-2297-36	TP18-1-2	Total/NA	Solid	8021B	25603
890-2297-37	TP19-0-1	Total/NA	Solid	8021B	25603
890-2297-38	TP19-1-2	Total/NA	Solid	8021B	25603
MB 880-25601/5-A	Method Blank	Total/NA	Solid	8021B	25601
MB 880-25603/5-A	Method Blank	Total/NA	Solid	8021B	25603
LCS 880-25603/1-A	Lab Control Sample	Total/NA	Solid	8021B	25603
LCSD 880-25603/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25603
890-2297-20 MS	TP10-2-3	Total/NA	Solid	8021B	25603

Client: Ensolum

Project/Site: James E Upper

SDG: 03d2024016

**GC VOA (Continued)** 

**Analysis Batch: 25595 (Continued)** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-20 MSD	TP10-2-3	Total/NA	Solid	8021B	25603

Prep Batch: 25601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-25601/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 25602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-1	TP1-0-1	Total/NA	Solid	5035	<del>-</del>
890-2297-2	TP1-2-3	Total/NA	Solid	5035	
890-2297-3	TP2-0-1	Total/NA	Solid	5035	
890-2297-4	TP2-1-2	Total/NA	Solid	5035	
890-2297-5	TP3-0-1	Total/NA	Solid	5035	
890-2297-6	TP3-2-3	Total/NA	Solid	5035	
890-2297-7	TP4-0-1	Total/NA	Solid	5035	
890-2297-8	TP4-1-2	Total/NA	Solid	5035	
890-2297-9	TP5-0-1	Total/NA	Solid	5035	
890-2297-10	TP5-2-3	Total/NA	Solid	5035	
890-2297-11	TP6-0-1	Total/NA	Solid	5035	
890-2297-12	TP6-2-3	Total/NA	Solid	5035	
890-2297-13	TP7-0-1	Total/NA	Solid	5035	
890-2297-14	TP7-2-3	Total/NA	Solid	5035	
890-2297-15	TP8-0-1	Total/NA	Solid	5035	
890-2297-16	TP8-1-2	Total/NA	Solid	5035	
890-2297-17	TP9-0-1	Total/NA	Solid	5035	
890-2297-18	TP9-1-2	Total/NA	Solid	5035	
890-2297-19	TP10-0-1	Total/NA	Solid	5035	
MB 880-25602/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25602/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25602/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2293-A-8-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2293-A-8-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 25603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-20	TP10-2-3	Total/NA	Solid	5035	
890-2297-21	TP11-0-1	Total/NA	Solid	5035	
890-2297-22	TP11-2-3	Total/NA	Solid	5035	
890-2297-23	TP12-0-1	Total/NA	Solid	5035	
890-2297-24	TP12-1-2	Total/NA	Solid	5035	
890-2297-25	TP13-0-1	Total/NA	Solid	5035	
890-2297-26	TP13-2-3	Total/NA	Solid	5035	
890-2297-27	TP14-0-1	Total/NA	Solid	5035	
890-2297-28	TP14-2-3	Total/NA	Solid	5035	
890-2297-29	TP15-1-2	Total/NA	Solid	5035	
890-2297-30	TP15-2-3	Total/NA	Solid	5035	
890-2297-31	TP16-0-1	Total/NA	Solid	5035	
890-2297-32	TP16-2-3	Total/NA	Solid	5035	
890-2297-33	TP17-0-1	Total/NA	Solid	5035	
890-2297-34	TP17-2-3	Total/NA	Solid	5035	
890-2297-35	TP18-0-1	Total/NA	Solid	5035	

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Client: Ensolum
Project/Site: James E Upper
SDG: 03d2024016

## **GC VOA (Continued)**

### Prep Batch: 25603 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-36	TP18-1-2	Total/NA	Solid	5035	
890-2297-37	TP19-0-1	Total/NA	Solid	5035	
890-2297-38	TP19-1-2	Total/NA	Solid	5035	
MB 880-25603/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25603/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25603/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2297-20 MS	TP10-2-3	Total/NA	Solid	5035	
890-2297-20 MSD	TP10-2-3	Total/NA	Solid	5035	

### Analysis Batch: 25665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-1	TP1-0-1	Total/NA	Solid	Total BTEX	-
890-2297-2	TP1-2-3	Total/NA	Solid	Total BTEX	
890-2297-3	TP2-0-1	Total/NA	Solid	Total BTEX	
890-2297-4	TP2-1-2	Total/NA	Solid	Total BTEX	
890-2297-5	TP3-0-1	Total/NA	Solid	Total BTEX	
890-2297-6	TP3-2-3	Total/NA	Solid	Total BTEX	
890-2297-7	TP4-0-1	Total/NA	Solid	Total BTEX	
890-2297-8	TP4-1-2	Total/NA	Solid	Total BTEX	
890-2297-9	TP5-0-1	Total/NA	Solid	Total BTEX	
890-2297-10	TP5-2-3	Total/NA	Solid	Total BTEX	
890-2297-11	TP6-0-1	Total/NA	Solid	Total BTEX	
890-2297-12	TP6-2-3	Total/NA	Solid	Total BTEX	
890-2297-13	TP7-0-1	Total/NA	Solid	Total BTEX	
890-2297-14	TP7-2-3	Total/NA	Solid	Total BTEX	
890-2297-15	TP8-0-1	Total/NA	Solid	Total BTEX	
890-2297-16	TP8-1-2	Total/NA	Solid	Total BTEX	
890-2297-17	TP9-0-1	Total/NA	Solid	Total BTEX	
890-2297-18	TP9-1-2	Total/NA	Solid	Total BTEX	
890-2297-19	TP10-0-1	Total/NA	Solid	Total BTEX	
890-2297-20	TP10-2-3	Total/NA	Solid	Total BTEX	
890-2297-21	TP11-0-1	Total/NA	Solid	Total BTEX	
890-2297-22	TP11-2-3	Total/NA	Solid	Total BTEX	
890-2297-23	TP12-0-1	Total/NA	Solid	Total BTEX	
890-2297-24	TP12-1-2	Total/NA	Solid	Total BTEX	
890-2297-25	TP13-0-1	Total/NA	Solid	Total BTEX	
890-2297-26	TP13-2-3	Total/NA	Solid	Total BTEX	
890-2297-27	TP14-0-1	Total/NA	Solid	Total BTEX	
890-2297-28	TP14-2-3	Total/NA	Solid	Total BTEX	
890-2297-29	TP15-1-2	Total/NA	Solid	Total BTEX	
890-2297-30	TP15-2-3	Total/NA	Solid	Total BTEX	
890-2297-31	TP16-0-1	Total/NA	Solid	Total BTEX	
890-2297-32	TP16-2-3	Total/NA	Solid	Total BTEX	
890-2297-33	TP17-0-1	Total/NA	Solid	Total BTEX	
890-2297-34	TP17-2-3	Total/NA	Solid	Total BTEX	
890-2297-35	TP18-0-1	Total/NA	Solid	Total BTEX	
890-2297-36	TP18-1-2	Total/NA	Solid	Total BTEX	
890-2297-37	TP19-0-1	Total/NA	Solid	Total BTEX	
890-2297-38	TP19-1-2	Total/NA	Solid	Total BTEX	

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Client: Ensolum
Project/Site: James E Upper
SDG: 03d2024016

### GC Semi VOA

### Prep Batch: 25431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-2297-1	TP1-0-1	Total/NA	Solid	8015NM Prep	
890-2297-2	TP1-2-3	Total/NA	Solid	8015NM Prep	
890-2297-3	TP2-0-1	Total/NA	Solid	8015NM Prep	
890-2297-4	TP2-1-2	Total/NA	Solid	8015NM Prep	
890-2297-5	TP3-0-1	Total/NA	Solid	8015NM Prep	
890-2297-6	TP3-2-3	Total/NA	Solid	8015NM Prep	
890-2297-7	TP4-0-1	Total/NA	Solid	8015NM Prep	
890-2297-8	TP4-1-2	Total/NA	Solid	8015NM Prep	
890-2297-9	TP5-0-1	Total/NA	Solid	8015NM Prep	
890-2297-10	TP5-2-3	Total/NA	Solid	8015NM Prep	
890-2297-11	TP6-0-1	Total/NA	Solid	8015NM Prep	
890-2297-12	TP6-2-3	Total/NA	Solid	8015NM Prep	
890-2297-13	TP7-0-1	Total/NA	Solid	8015NM Prep	
890-2297-14	TP7-2-3	Total/NA	Solid	8015NM Prep	
890-2297-15	TP8-0-1	Total/NA	Solid	8015NM Prep	
890-2297-16	TP8-1-2	Total/NA	Solid	8015NM Prep	
890-2297-17	TP9-0-1	Total/NA	Solid	8015NM Prep	
890-2297-18	TP9-1-2	Total/NA	Solid	8015NM Prep	
890-2297-19	TP10-0-1	Total/NA	Solid	8015NM Prep	
890-2297-20	TP10-2-3	Total/NA	Solid	8015NM Prep	
MB 880-25431/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25431/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25431/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2297-2 MS	TP1-2-3	Total/NA	Solid	8015NM Prep	
890-2297-2 MSD	TP1-2-3	Total/NA	Solid	8015NM Prep	

### Prep Batch: 25432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-2297-21	TP11-0-1	Total/NA	Solid	8015NM Prep	
890-2297-22	TP11-2-3	Total/NA	Solid	8015NM Prep	
890-2297-23	TP12-0-1	Total/NA	Solid	8015NM Prep	
890-2297-24	TP12-1-2	Total/NA	Solid	8015NM Prep	
890-2297-25	TP13-0-1	Total/NA	Solid	8015NM Prep	
890-2297-26	TP13-2-3	Total/NA	Solid	8015NM Prep	
890-2297-27	TP14-0-1	Total/NA	Solid	8015NM Prep	
890-2297-28	TP14-2-3	Total/NA	Solid	8015NM Prep	
890-2297-29	TP15-1-2	Total/NA	Solid	8015NM Prep	
390-2297-30	TP15-2-3	Total/NA	Solid	8015NM Prep	
390-2297-31	TP16-0-1	Total/NA	Solid	8015NM Prep	
890-2297-32	TP16-2-3	Total/NA	Solid	8015NM Prep	
890-2297-33	TP17-0-1	Total/NA	Solid	8015NM Prep	
890-2297-34	TP17-2-3	Total/NA	Solid	8015NM Prep	
890-2297-35	TP18-0-1	Total/NA	Solid	8015NM Prep	
890-2297-36	TP18-1-2	Total/NA	Solid	8015NM Prep	
890-2297-37	TP19-0-1	Total/NA	Solid	8015NM Prep	
890-2297-38	TP19-1-2	Total/NA	Solid	8015NM Prep	
MB 880-25432/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25432/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25432/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2297-23 MS	TP12-0-1	Total/NA	Solid	8015NM Prep	
890-2297-23 MSD	TP12-0-1	Total/NA	Solid	8015NM Prep	

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Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

GC Semi VOA

Analysis Batch: 25488

TP1-0-1 TP1-2-3 TP2-0-1 TP2-1-2 TP3-0-1 TP3-2-3 TP4-0-1 TP4-1-2 TP5-0-1 TP5-2-3 TP6-0-1 TP6-2-3 TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2 TP9-0-1	Total/NA	Solid	8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM	2543° 2543° 2543° 2543° 2543° 2543° 2543° 2543° 2543°
TP2-0-1 TP2-1-2 TP3-0-1 TP3-2-3 TP4-0-1 TP4-1-2 TP5-0-1 TP5-2-3 TP6-0-1 TP6-2-3 TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2	Total/NA	Solid	8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM	2543' 2543' 2543' 2543' 2543' 2543' 2543' 2543'
TP2-1-2 TP3-0-1 TP3-2-3 TP4-0-1 TP4-1-2 TP5-0-1 TP5-2-3 TP6-0-1 TP6-2-3 TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2	Total/NA	Solid	8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM	2543' 2543' 2543' 2543' 2543' 2543' 2543'
TP3-0-1 TP3-2-3 TP4-0-1 TP4-1-2 TP5-0-1 TP5-2-3 TP6-0-1 TP6-2-3 TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2	Total/NA	Solid	8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM	2543 <sup>2</sup> 2543 <sup>2</sup> 2543 <sup>2</sup> 2543 <sup>2</sup> 2543 <sup>2</sup>
TP3-2-3 TP4-0-1 TP4-1-2 TP5-0-1 TP5-2-3 TP6-0-1 TP6-2-3 TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2	Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Solid Solid Solid Solid Solid Solid Solid	8015B NM 8015B NM 8015B NM 8015B NM 8015B NM 8015B NM	2543 <sup>2</sup> 2543 <sup>2</sup> 2543 <sup>2</sup> 2543 <sup>2</sup>
TP4-0-1 TP4-1-2 TP5-0-1 TP5-2-3 TP6-0-1 TP6-2-3 TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2	Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Solid Solid Solid Solid Solid Solid	8015B NM 8015B NM 8015B NM 8015B NM 8015B NM	2543 <sup>°</sup> 2543 <sup>°</sup> 2543 <sup>°</sup>
TP4-1-2 TP5-0-1 TP5-2-3 TP6-0-1 TP6-2-3 TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2	Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Solid Solid Solid Solid Solid	8015B NM 8015B NM 8015B NM 8015B NM	2543° 2543° 2543°
TP5-0-1 TP5-2-3 TP6-0-1 TP6-2-3 TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2	Total/NA Total/NA Total/NA Total/NA Total/NA	Solid Solid Solid Solid	8015B NM 8015B NM 8015B NM	2543° 2543°
TP5-2-3 TP6-0-1 TP6-2-3 TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2	Total/NA Total/NA Total/NA Total/NA Total/NA	Solid Solid Solid	8015B NM 8015B NM	2543
TP6-0-1 TP6-2-3 TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2	Total/NA Total/NA Total/NA Total/NA	Solid Solid	8015B NM	
TP6-2-3 TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2	Total/NA Total/NA Total/NA	Solid		05/0
TP7-0-1 TP7-2-3 TP8-0-1 TP8-1-2	Total/NA Total/NA		00450 NIM	2543°
TP7-2-3 TP8-0-1 TP8-1-2	Total/NA	Solid	8015B NM	2543
TP8-0-1 TP8-1-2			8015B NM	2543
TP8-1-2		Solid	8015B NM	2543
	Total/NA	Solid	8015B NM	2543
TD0 0 1	Total/NA	Solid	8015B NM	2543
I F 3-U- I	Total/NA	Solid	8015B NM	2543
TP9-1-2	Total/NA	Solid	8015B NM	2543
TP10-0-1	Total/NA	Solid	8015B NM	2543
TP10-2-3	Total/NA	Solid	8015B NM	2543
			8015B NM	2543
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	Total/NA	JUILU		/5/13
	TP11-0-1 TP11-2-3 TP11-2-3 TP12-0-1 TP12-1-2 TP13-0-1 TP13-2-3 TP14-0-1 TP14-2-3 TP15-1-2 TP15-2-3 TP16-0-1 TP16-2-3 TP17-0-1 TP17-2-3 TP18-0-1 TP19-0-1 TP19-1-2 Method Blank Method Blank Method Blank Lab Control Sample Lab Control Sample Lab Control Sample Dup TP1-2-3 TP12-3 TP12-3 TP12-0-1 TP12-0-1 TP12-0-1	TP11-0-1 Total/NA TP11-2-3 Total/NA TP12-0-1 Total/NA TP12-1-2 Total/NA TP13-0-1 Total/NA TP13-2-3 Total/NA TP14-0-1 Total/NA TP15-1-2 Total/NA TP15-2-3 Total/NA TP16-0-1 Total/NA TP17-0-1 Total/NA TP17-2-3 Total/NA TP18-1-2 Total/NA TP18-1-2 Total/NA TP19-1-2 Total/NA TP19-1-2 Total/NA TP19-1-2 Total/NA TP19-1-2 Total/NA TP19-1-2 Total/NA TP19-1-2 Total/NA Total/NA Total/NA TP19-1-2 Total/NA Total/NA Total/NA Total/NA TP19-1-2 Total/NA	TP11-0-1	TP11-0-1

Client: Ensolum
Project/Site: James E Upper
SDG: 03d2024016

GC Semi VOA

### Analysis Batch: 25646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-1	TP1-0-1	Total/NA	Solid	8015 NM	
890-2297-2	TP1-2-3	Total/NA	Solid	8015 NM	
890-2297-3	TP2-0-1	Total/NA	Solid	8015 NM	
890-2297-4	TP2-1-2	Total/NA	Solid	8015 NM	
890-2297-5	TP3-0-1	Total/NA	Solid	8015 NM	
890-2297-6	TP3-2-3	Total/NA	Solid	8015 NM	
890-2297-7	TP4-0-1	Total/NA	Solid	8015 NM	
890-2297-8	TP4-1-2	Total/NA	Solid	8015 NM	
890-2297-9	TP5-0-1	Total/NA	Solid	8015 NM	
890-2297-10	TP5-2-3	Total/NA	Solid	8015 NM	
890-2297-11	TP6-0-1	Total/NA	Solid	8015 NM	
890-2297-12	TP6-2-3	Total/NA	Solid	8015 NM	
890-2297-13	TP7-0-1	Total/NA	Solid	8015 NM	
890-2297-14	TP7-2-3	Total/NA	Solid	8015 NM	
890-2297-15	TP8-0-1	Total/NA	Solid	8015 NM	
890-2297-16	TP8-1-2	Total/NA	Solid	8015 NM	
890-2297-17	TP9-0-1	Total/NA	Solid	8015 NM	
890-2297-18	TP9-1-2	Total/NA	Solid	8015 NM	
890-2297-19	TP10-0-1	Total/NA	Solid	8015 NM	
890-2297-20	TP10-2-3	Total/NA	Solid	8015 NM	
890-2297-21	TP11-0-1	Total/NA	Solid	8015 NM	
890-2297-22	TP11-2-3	Total/NA	Solid	8015 NM	
890-2297-23	TP12-0-1	Total/NA	Solid	8015 NM	
890-2297-24	TP12-1-2	Total/NA	Solid	8015 NM	
890-2297-25	TP13-0-1	Total/NA	Solid	8015 NM	
890-2297-26	TP13-2-3	Total/NA	Solid	8015 NM	
890-2297-27	TP14-0-1	Total/NA	Solid	8015 NM	
890-2297-28	TP14-2-3	Total/NA	Solid	8015 NM	
890-2297-29	TP15-1-2	Total/NA	Solid	8015 NM	
890-2297-30	TP15-2-3	Total/NA	Solid	8015 NM	
890-2297-31	TP16-0-1	Total/NA	Solid	8015 NM	
890-2297-32	TP16-2-3	Total/NA	Solid	8015 NM	
890-2297-33	TP17-0-1	Total/NA	Solid	8015 NM	
890-2297-34	TP17-2-3	Total/NA	Solid	8015 NM	
890-2297-35	TP18-0-1	Total/NA	Solid	8015 NM	
890-2297-36	TP18-1-2	Total/NA	Solid	8015 NM	
890-2297-37	TP19-0-1	Total/NA	Solid	8015 NM	
890-2297-38	TP19-1-2	Total/NA	Solid	8015 NM	

**HPLC/IC** 

### Leach Batch: 25439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-1	TP1-0-1	Soluble	Solid	DI Leach	
890-2297-2	TP1-2-3	Soluble	Solid	DI Leach	
890-2297-3	TP2-0-1	Soluble	Solid	DI Leach	
890-2297-4	TP2-1-2	Soluble	Solid	DI Leach	
890-2297-5	TP3-0-1	Soluble	Solid	DI Leach	
890-2297-6	TP3-2-3	Soluble	Solid	DI Leach	
890-2297-7	TP4-0-1	Soluble	Solid	DI Leach	
890-2297-8	TP4-1-2	Soluble	Solid	DI Leach	

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Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

## **HPLC/IC** (Continued)

### Leach Batch: 25439 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-9	TP5-0-1	Soluble	Solid	DI Leach	
890-2297-10	TP5-2-3	Soluble	Solid	DI Leach	
890-2297-11	TP6-0-1	Soluble	Solid	DI Leach	
890-2297-12	TP6-2-3	Soluble	Solid	DI Leach	
890-2297-13	TP7-0-1	Soluble	Solid	DI Leach	
890-2297-14	TP7-2-3	Soluble	Solid	DI Leach	
890-2297-15	TP8-0-1	Soluble	Solid	DI Leach	
890-2297-16	TP8-1-2	Soluble	Solid	DI Leach	
890-2297-17	TP9-0-1	Soluble	Solid	DI Leach	
890-2297-18	TP9-1-2	Soluble	Solid	DI Leach	
MB 880-25439/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25439/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-25439/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2297-9 MS	TP5-0-1	Soluble	Solid	DI Leach	
890-2297-9 MSD	TP5-0-1	Soluble	Solid	DI Leach	

#### Leach Batch: 25440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-2297-19	TP10-0-1	Soluble	Solid	DI Leach	
890-2297-20	TP10-2-3	Soluble	Solid	DI Leach	
890-2297-21	TP11-0-1	Soluble	Solid	DI Leach	
890-2297-22	TP11-2-3	Soluble	Solid	DI Leach	
890-2297-23	TP12-0-1	Soluble	Solid	DI Leach	
890-2297-24	TP12-1-2	Soluble	Solid	DI Leach	
890-2297-25	TP13-0-1	Soluble	Solid	DI Leach	
890-2297-26	TP13-2-3	Soluble	Solid	DI Leach	
890-2297-27	TP14-0-1	Soluble	Solid	DI Leach	
890-2297-28	TP14-2-3	Soluble	Solid	DI Leach	
890-2297-29	TP15-1-2	Soluble	Solid	DI Leach	
890-2297-30	TP15-2-3	Soluble	Solid	DI Leach	
890-2297-31	TP16-0-1	Soluble	Solid	DI Leach	
890-2297-32	TP16-2-3	Soluble	Solid	DI Leach	
890-2297-33	TP17-0-1	Soluble	Solid	DI Leach	
890-2297-34	TP17-2-3	Soluble	Solid	DI Leach	
890-2297-35	TP18-0-1	Soluble	Solid	DI Leach	
890-2297-36	TP18-1-2	Soluble	Solid	DI Leach	
890-2297-37	TP19-0-1	Soluble	Solid	DI Leach	
890-2297-38	TP19-1-2	Soluble	Solid	DI Leach	
MB 880-25440/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25440/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-25440/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2297-19 MS	TP10-0-1	Soluble	Solid	DI Leach	
890-2297-19 MSD	TP10-0-1	Soluble	Solid	DI Leach	
890-2297-29 MS	TP15-1-2	Soluble	Solid	DI Leach	
890-2297-29 MSD	TP15-1-2	Soluble	Solid	DI Leach	

### Analysis Batch: 25556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-1	TP1-0-1	Soluble	Solid	300.0	25439
890-2297-2	TP1-2-3	Soluble	Solid	300.0	25439
890-2297-3	TP2-0-1	Soluble	Solid	300.0	25439

Client: Ensolum

Project/Site: James E Upper

SDG: 03d2024016

## **HPLC/IC** (Continued)

### **Analysis Batch: 25556 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2297-4	TP2-1-2	Soluble	Solid	300.0	25439
890-2297-5	TP3-0-1	Soluble	Solid	300.0	25439
890-2297-6	TP3-2-3	Soluble	Solid	300.0	25439
890-2297-7	TP4-0-1	Soluble	Solid	300.0	25439
890-2297-8	TP4-1-2	Soluble	Solid	300.0	25439
890-2297-9	TP5-0-1	Soluble	Solid	300.0	25439
890-2297-10	TP5-2-3	Soluble	Solid	300.0	25439
890-2297-11	TP6-0-1	Soluble	Solid	300.0	25439
890-2297-12	TP6-2-3	Soluble	Solid	300.0	25439
890-2297-13	TP7-0-1	Soluble	Solid	300.0	25439
890-2297-14	TP7-2-3	Soluble	Solid	300.0	25439
890-2297-15	TP8-0-1	Soluble	Solid	300.0	25439
890-2297-16	TP8-1-2	Soluble	Solid	300.0	25439
890-2297-17	TP9-0-1	Soluble	Solid	300.0	25439
890-2297-18	TP9-1-2	Soluble	Solid	300.0	25439
MB 880-25439/1-A	Method Blank	Soluble	Solid	300.0	25439
LCS 880-25439/2-A	Lab Control Sample	Soluble	Solid	300.0	25439
LCSD 880-25439/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25439
890-2297-9 MS	TP5-0-1	Soluble	Solid	300.0	25439
890-2297-9 MSD	TP5-0-1	Soluble	Solid	300.0	25439

### Analysis Batch: 25557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-2297-19	TP10-0-1	Soluble	Solid	300.0	25440
890-2297-20	TP10-2-3	Soluble	Solid	300.0	25440
890-2297-21	TP11-0-1	Soluble	Solid	300.0	25440
890-2297-22	TP11-2-3	Soluble	Solid	300.0	25440
890-2297-23	TP12-0-1	Soluble	Solid	300.0	25440
890-2297-24	TP12-1-2	Soluble	Solid	300.0	25440
890-2297-25	TP13-0-1	Soluble	Solid	300.0	25440
890-2297-26	TP13-2-3	Soluble	Solid	300.0	25440
890-2297-27	TP14-0-1	Soluble	Solid	300.0	25440
890-2297-28	TP14-2-3	Soluble	Solid	300.0	25440
890-2297-29	TP15-1-2	Soluble	Solid	300.0	25440
890-2297-30	TP15-2-3	Soluble	Solid	300.0	25440
890-2297-31	TP16-0-1	Soluble	Solid	300.0	25440
890-2297-32	TP16-2-3	Soluble	Solid	300.0	25440
890-2297-33	TP17-0-1	Soluble	Solid	300.0	25440
890-2297-34	TP17-2-3	Soluble	Solid	300.0	25440
890-2297-35	TP18-0-1	Soluble	Solid	300.0	25440
890-2297-36	TP18-1-2	Soluble	Solid	300.0	25440
890-2297-37	TP19-0-1	Soluble	Solid	300.0	25440
890-2297-38	TP19-1-2	Soluble	Solid	300.0	25440
MB 880-25440/1-A	Method Blank	Soluble	Solid	300.0	25440
LCS 880-25440/2-A	Lab Control Sample	Soluble	Solid	300.0	25440
LCSD 880-25440/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25440
890-2297-19 MS	TP10-0-1	Soluble	Solid	300.0	25440
890-2297-19 MSD	TP10-0-1	Soluble	Solid	300.0	25440
890-2297-29 MS	TP15-1-2	Soluble	Solid	300.0	25440
890-2297-29 MSD	TP15-1-2	Soluble	Solid	300.0	25440

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SDG: 03d2024016

**Client Sample ID: TP1-0-1** 

Project/Site: James E Upper

Client: Ensolum

Date Collected: 05/09/22 10:16 Date Received: 05/11/22 11:24

Lab Sample ID: 890-2297-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 15:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		5			25488	05/14/22 05:42	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25439	05/12/22 14:56	CH	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 15:49	CH	XEN MID

**Client Sample ID: TP1-2-3** Lab Sample ID: 890-2297-2

Date Collected: 05/09/22 10:20

Date Received: 05/11/22 11:24

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 16:09	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 22:56	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25439	05/12/22 14:56	CH	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 15:59	CH	XEN MID

**Client Sample ID: TP2-0-1** Lab Sample ID: 890-2297-3 Date Collected: 05/09/22 11:22 **Matrix: Solid** 

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 16:35	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 08:38	SM	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	25439	05/12/22 14:56	CH	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 16:08	CH	XEN MID

**Client Sample ID: TP2-1-2** Lab Sample ID: 890-2297-4

Date Collected: 05/09/22 11:25 Date Received: 05/11/22 11:24

Г	Datab	Datab		Dil	1 141 1	Final	D-4-l-	Barrand		
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 17:01	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID

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**Matrix: Solid** 

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Job ID: 890-2297-1 Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP2-1-2 Lab Sample ID: 890-2297-4 Date Collected: 05/09/22 11:25

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 00:00	SM	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	25439	05/12/22 14:56	СН	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 16:35	CH	XEN MID

Client Sample ID: TP3-0-1 Lab Sample ID: 890-2297-5

**Matrix: Solid** 

Date Collected: 05/09/22 11:30 Date Received: 05/11/22 11:24

Date Received: 05/11/22 11:24

Batch Batch Dil Initial Final Batch Prepared Method Amount Amount Number **Prep Type** Type Run Factor or Analyzed Analyst Lab Prep Total/NA 5035 5.04 g 5 mL 25602 05/16/22 09:29 MR XEN MID Total/NA Analysis 8021B 5 mL 1.0 mL 25594 MR XEN MID 05/16/22 17:26 1 Total/NA Analysis Total BTEX 1 25665 05/16/22 17:06 SM XEN MID Total/NA 8015 NM 25646 XEN MID Analysis 05/16/22 15:00 SM 1 Total/NA Prep 8015NM Prep 10.01 g 10 mL 25431 05/12/22 13:30 DM XEN MID Total/NA 8015B NM 5 25488 05/14/22 06:25 SM XEN MID Analysis Soluble Leach DI Leach 5.02 g 50 mL 25439 05/12/22 14:56 CH XEN MID Soluble Analysis 300.0 1 25556 05/16/22 16:45 СН XEN MID

Client Sample ID: TP3-2-3 Lab Sample ID: 890-2297-6

Date Collected: 05/09/22 11:33 **Matrix: Solid** Date Received: 05/11/22 11:24

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA Prep 5035 4.99 g 5 mL 25602 05/16/22 09:29 MR XEN MID Total/NA 8021B 25594 05/16/22 17:52 MR XEN MID Analysis 1 Total/NA Analysis Total BTEX 1 25665 05/16/22 17:06 SM XEN MID Total/NA Analysis 8015 NM 25646 05/16/22 15:00 SM XEN MID 1 Total/NA Prep 8015NM Prep 10.03 g 10 mL 25431 05/12/22 13:30 DM XEN MID Total/NA Analysis 8015B NM 25488 05/14/22 00:21 SM XEN MID 1 Soluble Leach DI Leach 5.03 g 50 mL 25439 05/12/22 14:56 СН XEN MID Soluble Analysis 300.0 25556 05/16/22 16:54 CH XEN MID 1

Lab Sample ID: 890-2297-7 Client Sample ID: TP4-0-1

Date Collected: 05/09/22 12:55 **Matrix: Solid** Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 18:17	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 00:42	SM	XEN MID

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

**Client Sample ID: TP4-0-1** Lab Sample ID: 890-2297-7

Date Collected: 05/09/22 12:55 Matrix: Solid Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	25439	05/12/22 14:56	СН	XEN MID
Soluble	Analysis	300.0		1			25556	05/17/22 15:44	CH	XEN MID

**Client Sample ID: TP4-1-2** Lab Sample ID: 890-2297-8

Date Collected: 05/09/22 12:57 **Matrix: Solid** 

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 18:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 01:03	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	25439	05/12/22 14:56	CH	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 17:12	CH	XEN MID

Client Sample ID: TP5-0-1 Lab Sample ID: 890-2297-9

Date Collected: 05/09/22 13:00

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 19:09	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 05:21	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25439	05/12/22 14:56	CH	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 17:22	CH	XEN MID

**Client Sample ID: TP5-2-3** Lab Sample ID: 890-2297-10

Date Collected: 05/09/22 13:03 Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 20:53	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 01:25	SM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	25439	05/12/22 14:56	CH	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 17:49	CH	XEN MID

**Eurofins Carlsbad** 

**Matrix: Solid** 

**Matrix: Solid** 

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

**Client Sample ID: TP6-0-1** Lab Sample ID: 890-2297-11

Date Collected: 05/09/22 13:28 Matrix: Solid Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 21:19	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 01:46	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25439	05/12/22 14:56	СН	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 17:58	CH	XEN MID

**Client Sample ID: TP6-2-3** Lab Sample ID: 890-2297-12

Date Collected: 05/09/22 13:30 Matrix: Solid Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 21:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 02:08	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	25439	05/12/22 14:56	CH	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 18:26	CH	XEN MID

**Client Sample ID: TP7-0-1** Lab Sample ID: 890-2297-13 Date Collected: 05/09/22 13:55 **Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 22:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		5			25488	05/14/22 06:04	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	25439	05/12/22 14:56	CH	XEN MID
Soluble	Analysis	300.0		5			25556	05/16/22 18:35	CH	XEN MID

**Client Sample ID: TP7-2-3** Lab Sample ID: 890-2297-14 Date Collected: 05/09/22 13:58 **Matrix: Solid** 

Date Received: 05/11/22 11:24

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 22:38	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID

SDG: 03d2024016

**Client Sample ID: TP7-2-3** 

Project/Site: James E Upper

Client: Ensolum

Date Collected: 05/09/22 13:58 Date Received: 05/11/22 11:24

Lab Sample ID: 890-2297-14

Matrix: Solid

**Matrix: Solid** 

**Matrix: Solid** 

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 02:29	SM	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	25439	05/12/22 14:56	СН	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 18:45	CH	XEN MID

**Client Sample ID: TP8-0-1** Lab Sample ID: 890-2297-15

Date Collected: 05/09/22 14:36 Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 23:04	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 02:51	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25439	05/12/22 14:56	CH	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 18:54	CH	XEN MID

**Client Sample ID: TP8-1-2** Lab Sample ID: 890-2297-16

Date Collected: 05/09/22 14:40 Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 23:30	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 03:34	SM	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	25439	05/12/22 14:56	СН	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 19:03	CH	XEN MID

Lab Sample ID: 890-2297-17 Client Sample ID: TP9-0-1

Date Collected: 05/09/22 14:43 Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/16/22 23:57	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.01 g	10 mL	25431 25488	05/12/22 13:30 05/14/22 03:55	DM SM	XEN MID XEN MID

**Eurofins Carlsbad** 

Released to Imaging: 12/6/2022 4:11:46 PM

SDG: 03d2024016

**Client Sample ID: TP9-0-1** 

Project/Site: James E Upper

Client: Ensolum

Date Collected: 05/09/22 14:43 Date Received: 05/11/22 11:24

Lab Sample ID: 890-2297-17

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	25439	05/12/22 14:56	CH	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 19:12	CH	XEN MID

**Client Sample ID: TP9-1-2** Lab Sample ID: 890-2297-18

Date Collected: 05/09/22 14:45 **Matrix: Solid** 

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 00:22	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 04:17	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25439	05/12/22 14:56	СН	XEN MID
Soluble	Analysis	300.0		1			25556	05/16/22 19:22	CH	XEN MID

Client Sample ID: TP10-0-1 Lab Sample ID: 890-2297-19

Date Collected: 05/10/22 09:15 **Matrix: Solid** Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	25602	05/16/22 09:29	MR	XEN MID
Total/NA	Analysis	8021B		1			25594	05/17/22 00:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 04:38	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	25440	05/12/22 14:59	СН	XEN MID
Soluble	Analysis	300.0		5			25557	05/14/22 02:18	CH	XEN MID

Client Sample ID: TP10-2-3 Lab Sample ID: 890-2297-20

Date Collected: 05/10/22 09:18 Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 02:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25431	05/12/22 13:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/14/22 05:00	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		5			25557	05/14/22 02:46	CH	XEN MID

**Eurofins Carlsbad** 

**Matrix: Solid** 

Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP11-0-1 Lab Sample ID: 890-2297-21 Date Collected: 05/10/22 09:45

Matrix: Solid

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	25595	05/17/22 06:04	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		5			25488	05/13/22 14:12	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		5			25557	05/14/22 02:55	CH	XEN MID

**Client Sample ID: TP11-2-3** Lab Sample ID: 890-2297-22

Date Collected: 05/10/22 09:48 Matrix: Solid

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 03:19	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 16:04	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		5			25557	05/14/22 03:04	CH	XEN MID

**Client Sample ID: TP12-0-1** Lab Sample ID: 890-2297-23

Date Collected: 05/10/22 10:15 Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 03:40	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 13:05	SM	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 03:14	CH	XEN MID

**Client Sample ID: TP12-1-2** Lab Sample ID: 890-2297-24 Date Collected: 05/10/22 10:17 **Matrix: Solid** 

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 04:01	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID

**Eurofins Carlsbad** 

**Matrix: Solid** 

Released to Imaging: 12/6/2022 4:11:46 PM

Project/Site: James E Upper **Client Sample ID: TP12-1-2** 

Client: Ensolum

Lab Sample ID: 890-2297-24

Date Collected: 05/10/22 10:17 Date Received: 05/11/22 11:24

Matrix: Solid	

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 16:26	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	25440	05/12/22 14:59	СН	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 03:41	CH	XEN MID

Lab Sample ID: 890-2297-25

**Matrix: Solid** 

Date Collected: 05/10/22 10:45 Date Received: 05/11/22 11:24

Client Sample ID: TP13-0-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 04:21	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 15:19	SM	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 03:51	CH	XEN MID

Client Sample ID: TP13-2-3 Lab Sample ID: 890-2297-26

Date Collected: 05/10/22 10:47 **Matrix: Solid** Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 04:42	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 16:47	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 04:00	CH	XEN MID

Client Sample ID: TP14-0-1 Lab Sample ID: 890-2297-27

Date Collected: 05/10/22 11:25 Date Received: 05/11/22 11:24

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 05:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.02 g	10 mL	25432 25488	05/12/22 13:33 05/13/22 14:56	DM SM	XEN MID XEN MID

**Eurofins Carlsbad** 

**Matrix: Solid** 

Client: Ensolum Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP14-0-1 Lab Sample ID: 890-2297-27

Date Collected: 05/10/22 11:25 Matrix: Solid Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	25440	05/12/22 14:59	СН	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 04:09	CH	XEN MID

**Client Sample ID: TP14-2-3** Lab Sample ID: 890-2297-28

Date Collected: 05/10/22 11:28 **Matrix: Solid** 

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 05:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 17:10	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	25440	05/12/22 14:59	CH	XEN MIC
Soluble	Analysis	300.0		1			25557	05/14/22 04:18	CH	XEN MID

**Client Sample ID: TP15-1-2** Lab Sample ID: 890-2297-29

Date Collected: 05/10/22 12:30 **Matrix: Solid** 

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 07:28	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 17:53	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 04:27	CH	XEN MID

Client Sample ID: TP15-2-3 Lab Sample ID: 890-2297-30

Date Collected: 05/10/22 12:32 Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 07:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 18:15	SM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 04:55	CH	XEN MID

**Eurofins Carlsbad** 

**Matrix: Solid** 

Released to Imaging: 12/6/2022 4:11:46 PM

Client: Ensolum

Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP16-0-1 Lab Sample ID: 890-2297-31

Date Collected: 05/10/22 12:55 Matrix: Solid Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 08:09	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 15:41	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 05:04	CH	XEN MID

Client Sample ID: TP16-2-3 Lab Sample ID: 890-2297-32 Matrix: Solid

Date Collected: 05/10/22 12:58 Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 08:30	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 18:37	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25440	05/12/22 14:59	СН	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 05:32	CH	XEN MID

Client Sample ID: TP17-0-1 Lab Sample ID: 890-2297-33

Date Collected: 05/10/22 13:23 **Matrix: Solid** Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 08:50	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 14:34	SM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 05:41	CH	XEN MID

Client Sample ID: TP17-2-3 Lab Sample ID: 890-2297-34

Date Collected: 05/10/22 13:25 **Matrix: Solid** Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 09:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID

Client: Ensolum

Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

**Client Sample ID: TP17-2-3** 

Date Collected: 05/10/22 13:25 Date Received: 05/11/22 11:24

Lab Sample ID: 890-2297-34

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 18:59	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	25440	05/12/22 14:59	СН	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 05:50	CH	XEN MID

Client Sample ID: TP18-0-1 Lab Sample ID: 890-2297-35 Date Collected: 05/10/22 14:08 **Matrix: Solid** 

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 09:32	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 19:21	SM	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 05:59	CH	XEN MID

Client Sample ID: TP18-1-2 Lab Sample ID: 890-2297-36 Date Collected: 05/10/22 14:10 **Matrix: Solid** 

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 09:52	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 19:43	SM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25440	05/12/22 14:59	СН	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 06:09	CH	XEN MID

Client Sample ID: TP19-0-1 Lab Sample ID: 890-2297-37

Date Collected: 05/10/22 14:13 Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 10:13	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.01 g	10 mL	25432 25488	05/12/22 13:33 05/13/22 20:04	DM SM	XEN MID XEN MID

**Eurofins Carlsbad** 

**Matrix: Solid** 

Client: Ensolum Job ID: 890-2297-1 Project/Site: James E Upper SDG: 03d2024016

Client Sample ID: TP19-0-1 Lab Sample ID: 890-2297-37

Date Collected: 05/10/22 14:13 Matrix: Solid Date Received: 05/11/22 11:24

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Soluble DI Leach 25440 Leach 4.96 g 50 mL 05/12/22 14:59 СН XEN MID 300.0 05/14/22 06:18 Soluble Analysis 1 25557 СН XEN MID

Client Sample ID: TP19-1-2 Lab Sample ID: 890-2297-38

Date Collected: 05/10/22 14:15 **Matrix: Solid** 

Date Received: 05/11/22 11:24

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	25603	05/16/22 09:33	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25595	05/17/22 10:34	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25665	05/16/22 17:06	SM	XEN MID
Total/NA	Analysis	8015 NM		1			25646	05/16/22 15:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25432	05/12/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25488	05/13/22 20:26	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	25440	05/12/22 14:59	CH	XEN MID
Soluble	Analysis	300.0		1			25557	05/14/22 06:27	CH	XEN MID

**Laboratory References:** 

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

## **Accreditation/Certification Summary**

Client: Ensolum
Project/Site: James E Upper
SDG: 03d2024016

### **Laboratory: Eurofins Midland**

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-21-22	06-30-22
The following analytes	are included in this report, but	t the laboratory is not certific	ed by the governing authority. This list ma	v include analytes for
the agency does not of	• •	t the laboratory is not certific	su by the governing authority. This list his	ay include analytes lo
,	• •	Matrix	Analyte	ay include analytes for
the agency does not of	fer certification.	,	, , ,	ay include analytes lo

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## **Method Summary**

Job ID: 890-2297-1 Client: Ensolum Project/Site: James E Upper

SDG: 03d2024016

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

#### **Protocol References:**

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

## **Sample Summary**

Client: Ensolum

Project/Site: James E Upper

Job ID: 890-2297-1 SDG: 03d2024016

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2297-1	TP1-0-1	Solid	05/09/22 10:16	05/11/22 11:24	0 - 1
890-2297-2	TP1-2-3	Solid	05/09/22 10:20	05/11/22 11:24	2 - 3
890-2297-3	TP2-0-1	Solid	05/09/22 11:22	05/11/22 11:24	0 - 1
890-2297-4	TP2-1-2	Solid	05/09/22 11:25	05/11/22 11:24	1 - 2
890-2297-5	TP3-0-1	Solid	05/09/22 11:30	05/11/22 11:24	0 - 1
890-2297-6	TP3-2-3	Solid	05/09/22 11:33	05/11/22 11:24	2 - 3
890-2297-7	TP4-0-1	Solid	05/09/22 12:55	05/11/22 11:24	0 - 1
890-2297-8	TP4-1-2	Solid	05/09/22 12:57	05/11/22 11:24	1 - 2
890-2297-9	TP5-0-1	Solid	05/09/22 13:00	05/11/22 11:24	0 - 1
890-2297-10	TP5-2-3	Solid	05/09/22 13:03	05/11/22 11:24	2 - 3
890-2297-11	TP6-0-1	Solid	05/09/22 13:28	05/11/22 11:24	0 - 1
890-2297-12	TP6-2-3	Solid	05/09/22 13:30	05/11/22 11:24	2 - 3
890-2297-13	TP7-0-1	Solid	05/09/22 13:55	05/11/22 11:24	0 - 1
890-2297-14	TP7-2-3	Solid	05/09/22 13:58	05/11/22 11:24	2 - 3
890-2297-15	TP8-0-1	Solid	05/09/22 14:36	05/11/22 11:24	0 - 1
890-2297-16	TP8-1-2	Solid	05/09/22 14:40	05/11/22 11:24	1 - 2
890-2297-17	TP9-0-1	Solid	05/09/22 14:43	05/11/22 11:24	0 - 1
890-2297-18	TP9-1-2	Solid	05/09/22 14:45	05/11/22 11:24	1 - 2
890-2297-19	TP10-0-1	Solid	05/10/22 09:15	05/11/22 11:24	0 - 1
890-2297-20	TP10-2-3	Solid	05/10/22 09:18	05/11/22 11:24	2 - 3
890-2297-21	TP11-0-1	Solid	05/10/22 09:45	05/11/22 11:24	0 - 1
890-2297-22	TP11-2-3	Solid	05/10/22 09:48	05/11/22 11:24	2 - 3
890-2297-23	TP12-0-1	Solid	05/10/22 10:15	05/11/22 11:24	0 - 1
890-2297-24	TP12-1-2	Solid	05/10/22 10:17	05/11/22 11:24	1 - 2
890-2297-25	TP13-0-1	Solid	05/10/22 10:45	05/11/22 11:24	0 - 1
890-2297-26	TP13-2-3	Solid	05/10/22 10:47	05/11/22 11:24	2 - 3
890-2297-27	TP14-0-1	Solid	05/10/22 11:25	05/11/22 11:24	0 - 1
890-2297-28	TP14-2-3	Solid	05/10/22 11:28	05/11/22 11:24	2 - 3
890-2297-29	TP15-1-2	Solid	05/10/22 12:30	05/11/22 11:24	1 - 2
890-2297-30	TP15-2-3	Solid	05/10/22 12:32	05/11/22 11:24	2 - 3
890-2297-31	TP16-0-1	Solid	05/10/22 12:55	05/11/22 11:24	0 - 1
890-2297-32	TP16-2-3	Solid	05/10/22 12:58	05/11/22 11:24	2 - 3
890-2297-33	TP17-0-1	Solid	05/10/22 13:23	05/11/22 11:24	0 - 1
890-2297-34	TP17-2-3	Solid	05/10/22 13:25	05/11/22 11:24	2 - 3
890-2297-35	TP18-0-1	Solid	05/10/22 14:08	05/11/22 11:24	0 - 1
890-2297-36	TP18-1-2	Solid	05/10/22 14:10	05/11/22 11:24	1 - 2
890-2297-37	TP19-0-1	Solid	05/10/22 14:13	05/11/22 11:24	0 - 1

Solid

05/10/22 14:15

05/11/22 11:24 1 - 2

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TP19-1-2

890-2297-38

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Chain of Custody

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Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

**Environment Testing** 

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Xenco

Work Order No:

Level IV Superfund DI Water: H<sub>2</sub>O MeOH: Me HNO 3: HN NaOH: Na NaOH+Ascorbic Acid: SAPC Sample Comments Preservative Codes Zn Acetate+NaOH: Zn PST/UST TRRP RRC Na 2 S 2 O 3: Na SO 3 Other: 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<sub>2</sub> Na Sr Tl Sn U V Zn NaHSO 4: NABIS Hg: 1631 / 245.1 / 7470 / 7471 UST/PST | PRP | Brownfields | H3PO 4: HP None: NO H2SO4: H2 Cool: Cool Work Order Comments HCL: HC ADaPT www.xenco.com Reporting: Level II | Level III EDD State of Project: Deliverables: 890-2297 Chain of Custody TCLP/SPLP6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U ANALYSIS REQUEST Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199 いっ @ ensolun (0:00% Ad BTEX 1208) Camp 1,900 Kiennlings Cont Pres. Code # of Parameters Bill to: (if different) Company Name: Grab/ Comp 0.0 DATOOL 5.6 City, State ZIP: TAT starts the day received by the lab, if received by 4:30pm 5 Š Rush Address: Depth 2-2 77 2-5 7-7 Ye -ノ 1-0 **Turn Around** -0 0-1 0 1254 Email: 1125 1130 300 Routine 220 1255 1303 Due Date: Corrected Temperature: 1133 177 Wet Ice: Sampled 30.0 Temperature Reading: Time Thermometer ID: Correction Factor: 5/1/22 Sampled 2 817-683-2507 Date Kales Junings (3) Circle Method(s) and Metal(s) to be analyzed いるとう Sures & war Rece Harry Matrix 3104 LOZ 050 531 Yes No N/A Temp Blank: 200.8 / 6020: Yes No NI Ensolum S Sancs Sample Identification TP5-0-下アイーマーラ TP3-2-3 TP4-0-1 T-1-1-5 T-0-21 TP2-1-2 TP3-0-1 171-2-3 Samples Received Intact: TP1-0-Total 200.7 / 6010 Sample Custody Seals: Cooler Custody Seals: SAMPLE RECEIPT Project Number: **Total Containers:** Project Manager: Sampler's Name: Company Name: Project Location: City, State ZIP: Project Name: Address: Phone: PO#:

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

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Page 70 of 75

park 2 of By RH

Work Order No:

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334

**Environment Testing** 

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Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Chain of Custody

EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296

Date/Time

Regived by: (Signature)

Relinquished by: (Signature)

5/11/22 1040 Date/Time

Received by: (Signature)

Relinquished by: (Signature)

				Hobb	, NM (575) 39	2-7550, Carl	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	www.xenco.com	m Page Q of 4
Project Manager:	Kales Sunings	35		Bill to: (if different)	0			Work Order Comments	Comments
Company Name:				Company Name:				Program: UST/PST	Brownfields ☐ RRC ☐ Superfund ☐
Address:				Address:				State of Project:	
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Phone:			Email:	Kjannys	0	ession	1.co.	Deliverables: EDD AD	ADaPT ☐ Other:
Project Name:	mes E L	Soan	Tum	Turn Around			ANALYSI	ANALYSIS REQUEST	Preservative Codes
Project Number:			Routine	Rush	Pres. Code				None: NO DI Water: H <sub>2</sub> O
Project Location:			Due Date:			-	-		Cool: Cool MeOH: Me
Sampler's Name:			TAT starts the	TAT starts the day received by	_	2.00	2.00		
PO #:			the lab, if rece	the lab, if received by 4:30pm		1-	04		H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No	neten 20	570	+		H <sub>3</sub> PO <sub>4</sub> : HP
Samples Received Intact:	Yes No	Thermometer ID:	er D.	\		28	(U)		NaHSO 4: NABIS
Cooler Custody Seals:	Yes No N/A	Correction Factor:	actor:	1 4		)	3		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
Sample Custody Seals:	Yes No N/A	Temperature Readin	e Reading:	(0)	X	-	7		Zn Acetate+NaOH: Zn
Total Containers:		Corrected To	Corrected Temperature:		ની_ —	tid	)		NaOH+Ascorbic Acid: SAPC
				) der			-		
Sample Identification	Matrix	Sampled	Sampled	Depth Gomp Cont	Cont Cont	L	)		Sample Comments
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4-2-34			1330	23.					
1-0-417			1355	1)-0					
TP7-2-3			1258	17.					
TP8-51			1436	11,00					
7-13-1-2			140	1-7,					
189-0-1			1443	0.1					
7-1-627	4	>	1445	1-7,		_			
TP10-0-	7-	27/01/5	915	11,1-0					
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Total 200.7 / 6010	200.8 / 6020:	8	3CRA 13PP	M Texas 11	Al Sb As	Ba Be B	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K	Se	ir TI Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed	Metal(s) to be ana	lyzed	TCLP / SF	PLP 6010 : 8RC	RA Sb As	Ba Be	TCLP/SPLP6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	to Ni Se Ag Tl U Hg: 1631/245.1/7470	1 / 7470 / 7471
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order lof service. Eurofins Sknro will be liable only for the cost of samples and shall not assume any respons	and relinquishment of sample only for the cost of samp	les constitutes a villes and shall not	/alid purchase orde assume any respon	er from client company	to Eurofins Xer	nco, its affiliate irred by the cl	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control	ndard terms and conditions stances beyond the control	
of Eurofins Xenco. A minimum chan	ge of \$85.00 will be applied	to each project a	nd a charge of \$51	or each sample submi	tted to Eurofins	Xenco, but no	of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated of Eurofins Xenco.	rced unless previously negotiated,	

Chain of Custody

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**Environment Testing** 

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Work Order No:

Project Name   Proj					Нор	os, NM (575)	392-7550, Ca	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	www.xenco.com	Page 3 of 4
State of Program: USTPST   PRP    Stat		ale Jenny	54		Bill to: (if differe	nt)			Work Order C	
State of Project:   Stat			,		Company Nam	òi				
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Finally   Control   Cont	City, State ZIP:				City, State ZIP:				Reporting: Level II Level III	PST/UST TRRP Level IV
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Property   Temp Blank: Yes No   Werker: Yes No   Themporation   Werker: Yes No   War   Corrected Temperature:   Wes No   War   Corrected Temperature:   West No   Wer   Corrected Temperature:   West No   Wert   Corrected Temperature:   West No   W	Sampler's Name:			AT starts the	day received by			(0		
Temp Blank: Yes No   Werke: Yes No   Edit   Co   Co   Co   Co   Co   Co   Co   C	PO #:			the lab, if rece	ived by 4:30pm	•	6	re		
Yes No         The perpending viol.         The perpending viol. <td>SAMPLE RECEIPT</td> <td>Temp Blank:</td> <td>Yes No</td> <td>Werrice:</td> <td>Yes No</td> <td></td> <td>70</td> <td>08</td> <td></td> <td>H<sub>3</sub>PO<sub>4</sub>: HP</td>	SAMPLE RECEIPT	Temp Blank:	Yes No	Werrice:	Yes No		70	08		H <sub>3</sub> PO <sub>4</sub> : HP
Yes No MM         Corrected Temperature:         X         X         Y           reation         Matrix         Sampled Sampled Comp Cont Cont Cont Cont Cont Cont Cont Cont	Samples Received Intact:		Thermometer	D: <b>O</b>			30	V		NaHSO 4: NABIS
Yes No N/A Temperature:   X	Cooler Custody Seals:	MA	Correction Fac	Ju		-	7	القار		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
Gornected Temperature:         LD &	Sample Custody Seals:	N/A	Temperature R	gading:			) - x	)		Zn Acetate+NaOH: Zn
Matrix Sampled Sampled Grab # of C	Total Containers:		Corrected Tem	perature:		_	tic T	,		NaOH+Ascorbic Acid; SAPC
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1045 1125 1128 1128 1230	TP12-1-2			1017	,7-1					
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(125 (128 (128 (128 (128 (128 (128 (128 (128	TP13-2-3			140	2-5					
1230 1	1-0- 419T			1125	0-1.					
1270 1	TP14-2-3			1128	2.3'					
V V (232 2	TP15-1-2			12.70	1-7					
	TP15-2-3		<b>→</b>	(232		>	7	3		

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<sub>2</sub> Na Sr Tl Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471 TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control Circle Method(s) and Metal(s) to be analyzed 200.8 / 6020: Total 200.7 / 6010

of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge	applied to each project and a charge of 55 for each sample	e submitted to Euroms Acres, par not arente	je of 55 for each sample submitted to Cufollis Aerico, but not disayzed. Hese terms will be emoticed diress promotaly regovered.		
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Work Order No:

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296

**Environment Testing** 

💸 eurofins

Chain of Custody
Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

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Project Manager:	Kale: Semingi	1,		Bill to: (if different)	11)				Work Order	Work Order Comments	
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SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No	nətə	51				H <sub>3</sub> PO <sub>4</sub> : HP	
Samples Received Intact:	Yes No	Thermometer ID:	or ID:	-		08				NaHSO 4: NABIS	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	actor:	5,		3) x				Na 25 20 3: NaSO 3	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	e Reading:			) + 9.				Zn Acetate+NaOH: Zn	H: Zn
Total Containers:		Corrected Te	Corrected Temperature:			1d-	1			NaOH+Ascorbic Acid: SAPC	Acid: SAPC
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Sample Identification	lon Matrix	Ŋ	Sampled	Depth	Cont					Saulpie	STILLING
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TP-12-1-2	-2 A	+	1415	1-2: 5	49	4					
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	200.8 / 6020: Metal(s) to be ana		CRA 13PPA TCLP / SPI	7 Texas 11 LP 6010 : 8R		As Ba Be B Co As Ba Be Cd	4 Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Min Mo Ni K LP6010:8RCRA Sb As Ba Be Cd Cr Co Cu Pb Min Mo Ni Se Ag Tl U	Pb Mg Mn Mo Io Ni Se Ag TI	¥ =	Se Ag SIO <sub>2</sub> Na Sr 11 Sn U V Ln Hg: 1631 / 245.1 / 7470 / 7471	
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Sence will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Eurofins Sence, A minimum charge of \$5.50 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Sence, but not analyzed. These terms will be enforced unless previously negotiated.	and relinquishment of samp able only for the cost of samp rge of \$85.00 will be applied i	hes constitutes a voles and shall not to each project at	valid purchase orc assume any respond a charge of \$5	der from cilent comparantier from school or seed of the school of the sc	ny to Eurofin or expense:	s Xenco, its affiliates an s incurred by the client offins Xenco, but not an	nd subcontractors. It assigns stail such losses are due to circums alyzed. These terms will be enfo	ndard terms and condition trances beyond the contracted unless previously ne	nns ol gotlated.		
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## **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2297-1 SDG Number: 03d2024016

Login Number: 2297 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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

### **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2297-1 SDG Number: 03d2024016

Login Number: 2297 **List Source: Eurofins Midland** List Number: 2 List Creation: 05/12/22 10:47 AM

Creator: Rodriguez, Leticia

<6mm (1/4").

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	N/A	



# **Environment Testing America**

### **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-1783-1

Laboratory Sample Delivery Group: 31403720.000 task 28.02

Client Project/Site: James E Upper Battery

For:

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

Attn: Kalei Jennings

WRAMER

Authorized for release by: 1/7/2022 11:12:32 AM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

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Released to Imaging: 12/6/2022 4:11:46 PM

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

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

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Client: WSP USA Inc. Project/Site: James E Upper Battery Laboratory Job ID: 890-1783-1 SDG: 31403720.000 task 28.02

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### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-1783-1 Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

**GC VOA** 

**Qualifiers** 

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

**GC Semi VOA** 

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

**HPLC/IC** 

Qualifier **Qualifier Description** MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. F1 MS and/or MSD recovery exceeds control limits. U Indicates the analyte was analyzed for but not detected.

**Glossary** 

EDL

LOD

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 Contains No Free Liquid CNF DER Duplicate Error Ratio (normalized absolute difference) Dil Fac Dilution Factor DL Detection Limit (DoD/DOE)

DLC

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

Decision Level Concentration (Radiochemistry)

Limit of Detection (DoD/DOE)

Limit of Quantitation (DoD/DOE) 100 EPA recommended "Maximum Contaminant Level" MCL Minimum Detectable Activity (Radiochemistry) MDA

Estimated Detection Limit (Dioxin)

MDC Minimum Detectable Concentration (Radiochemistry) MDL Method Detection Limit

Minimum Level (Dioxin) ML 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 Positive / Present POS POL Practical Quantitation Limit

**PRES** Presumptive **Quality Control** QC

RER Relative Error Ratio (Radiochemistry)

RI 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: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1783-1

SDG: 31403720.000 task 28.02

Job ID: 890-1783-1

**Laboratory: Eurofins Xenco** 

Narrative

Job Narrative 890-1783-1

#### Receipt

The samples were received on 12/30/2021 9:04 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 2.8°C

#### GC VOA

Method 8021B: The following samples were diluted due to the nature of the sample matrix: SS01 (890-1783-1), SS02 (890-1783-2), SS03 (890-1783-3), SS04 (890-1783-4), SS05 (890-1783-5), SS06 (890-1783-6) and SS07 (890-1783-7) at 20.0, 20.0, 20.0, 20.0, 20.0, 20.0, and 20.0. Elevated reporting limits (RLs) are provided.

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

#### GC Semi VOA

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-15882 and analytical batch 880-15874 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: SS02 (890-1783-2), SS03 (890-1783-3), SS04 (890-1783-4) and SS05 (890-1783-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: SS06 (890-1783-6). 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

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

Matrix: Solid

### **Client Sample Results**

Client: WSP USA Inc.

Job ID: 890-1783-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

Client Sample ID: SS01 Lab Sample ID: 890-1783-1

Date Collected: 12/29/21 12:27
Date Received: 12/30/21 09:04

Sample Depth: 0.25

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	0.135		0.0399	mg/Kg		01/03/22 10:15	01/03/22 21:55	2
Toluene	1.77		0.0399	mg/Kg		01/03/22 10:15	01/03/22 21:55	2
Ethylbenzene	2.48		0.0399	mg/Kg		01/03/22 10:15	01/03/22 21:55	2
m-Xylene & p-Xylene	5.08		0.0798	mg/Kg		01/03/22 10:15	01/03/22 21:55	2
o-Xylene	2.92		0.0399	mg/Kg		01/03/22 10:15	01/03/22 21:55	2
Xylenes, Total	8.00		0.0798	mg/Kg		01/03/22 10:15	01/03/22 21:55	2
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	96		70 - 130			01/03/22 10:15	01/03/22 21:55	2
1,4-Difluorobenzene (Surr)	75		70 - 130			01/03/22 10:15	01/03/22 21:55	2
Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	12.4		0.0798	mg/Kg			01/05/22 13:44	
Total TPH	7050		500	mg/Kg			01/05/22 14:19	
Analyte Total TPH		Qualifier		Unit mg/Kg	<u>D</u>	Prepared	Analyzed 01/05/22 14:19	Dil Fa
Method: 8015B NM - Diesel Rang								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	774		500	mg/Kg		01/03/22 10:55	01/04/22 02:14	1
(O110)-00-010								
Diesel Range Organics (Over	6280		500	mg/Kg		01/03/22 10:55	01/04/22 02:14	1
Diesel Range Organics (Over C10-C28)	<b>6280</b> <500	U	500 500	mg/Kg mg/Kg		01/03/22 10:55 01/03/22 10:55	01/04/22 02:14	
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)								1
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<500		500			01/03/22 10:55	01/04/22 02:14	1 Dil Fa
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	<500 %Recovery		500			01/03/22 10:55  Prepared	01/04/22 02:14  Analyzed	1 <b>Dil Fa</b>
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion Chro	<500  **Recovery 119 128	Qualifier	500  Limits  70 - 130			01/03/22 10:55  Prepared 01/03/22 10:55	01/04/22 02:14  Analyzed  01/04/22 02:14	10 Dil Fa
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	<500  **Recovery 119 128  omatography -	Qualifier	500  Limits  70 - 130		D	01/03/22 10:55  Prepared 01/03/22 10:55	01/04/22 02:14  Analyzed  01/04/22 02:14	11 11 11 11 11 11 11 11 11 11 11 11 11

Client Sample ID: SS02

Date Collected: 12/29/21 12:29

Lab Sample ID: 890-1783-2

Matrix: Solid

Date Collected: 12/29/21 12:29 Date Received: 12/30/21 09:04

Sample Depth: 0.25

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0400	U	0.0400	mg/Kg		01/03/22 10:15	01/03/22 22:16	20
Toluene	1.14		0.0400	mg/Kg		01/03/22 10:15	01/03/22 22:16	20
Ethylbenzene	1.93		0.0400	mg/Kg		01/03/22 10:15	01/03/22 22:16	20
m-Xylene & p-Xylene	3.56		0.0800	mg/Kg		01/03/22 10:15	01/03/22 22:16	20
o-Xylene	1.77		0.0400	mg/Kg		01/03/22 10:15	01/03/22 22:16	20
Xylenes, Total	5.33		0.0800	mg/Kg		01/03/22 10:15	01/03/22 22:16	20
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/03/22 10:15	01/03/22 22:16	20

Matrix: Solid

Client: WSP USA Inc.

Job ID: 890-1783-1 Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

**Client Sample ID: SS02** Lab Sample ID: 890-1783-2

Date Collected: 12/29/21 12:29 Date Received: 12/30/21 09:04

Sample Depth: 0.25

Method: 8021B - Volatile Organic Compou	unds (GC) (Continued)
-----------------------------------------	-----------------------

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	75		70 - 130	01/03/22 10:15	01/03/22 22:16	20

Mathad:	Total	RTFY.	. Total	RTEY	Calculation

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	8.40	0.0800	mg/Kg		_	01/05/22 13:44	1

Mothod: 9015 NM - Diocal Pango	Organice (DPO) (CC)

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	5650	250	ma/Ka			01/05/22 14:19	1	

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

Analyte	Result	Qualifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	672	250	mg/Kg		01/03/22 10:55	01/04/22 02:34	5
Diesel Range Organics (Over C10-C28)	4980	250	mg/Kg		01/03/22 10:55	01/04/22 02:34	5
Oll Range Organics (Over C28-C	36) <250	U 250	mg/Kg		01/03/22 10:55	01/04/22 02:34	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	144	S1+	70 - 130	01/03/22 10:55	01/04/22 02:34	5
o-Terphenyl	147	S1+	70 - 130	01/03/22 10:55	01/04/22 02:34	5

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	427	4.98	mg/Kg			01/04/22 12:03	1

**Client Sample ID: SS03** Lab Sample ID: 890-1783-3 **Matrix: Solid** 

Date Collected: 12/29/21 12:30 Date Received: 12/30/21 09:04

Sample Depth: 0.25

Method: 8021B - Volatile Organic Compounds (G	3C)	
-----------------------------------------------	-----	--

Analyte	Result C	Qualifier	KL	Unit	D	Prepared	Analyzed	DII Fac
Benzene	0.0712		0.0404	mg/Kg		01/03/22 10:15	01/03/22 22:37	20
Toluene	2.97		0.0404	mg/Kg		01/03/22 10:15	01/03/22 22:37	20
Ethylbenzene	4.31		0.0404	mg/Kg		01/03/22 10:15	01/03/22 22:37	20
m-Xylene & p-Xylene	8.79		0.0808	mg/Kg		01/03/22 10:15	01/03/22 22:37	20
o-Xylene	4.72		0.0404	mg/Kg		01/03/22 10:15	01/03/22 22:37	20
Xylenes, Total	13.5		0.0808	mg/Kg		01/03/22 10:15	01/03/22 22:37	20
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			01/03/22 10:15	01/03/22 22:37	20

2007-9000				,	
4-Bromofluorobenzene (Surr)	95	70 - 130	01/03/22 10:15	01/03/22 22:37	20
1,4-Difluorobenzene (Surr)	80	70 - 130	01/03/22 10:15	01/03/22 22:37	20

#### **Method: Total BTEX - Total BTEX Calculation**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	20.9		0.0808	mg/Kg			01/05/22 13:44	1

Analyte	Resul	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	8980		499	mg/Kg	]		01/05/22 14:19	1

Client: WSP USA Inc. Job ID: 890-1783-1

Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

**Client Sample ID: SS03** Lab Sample ID: 890-1783-3 Date Collected: 12/29/21 12:30 Matrix: Solid Date Received: 12/30/21 09:04

Sample Depth: 0.25

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1390		499	mg/Kg		01/03/22 10:55	01/04/22 02:54	10
Diesel Range Organics (Over C10-C28)	7590		499	mg/Kg		01/03/22 10:55	01/04/22 02:54	10
Oll Range Organics (Over C28-C36)	<499	U	499	mg/Kg		01/03/22 10:55	01/04/22 02:54	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	158	S1+	70 - 130			01/03/22 10:55	01/04/22 02:54	10
o-Terphenyl	164	S1+	70 - 130			01/03/22 10:55	01/04/22 02:54	10
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
			25.2	mg/Kg				

Lab Sample ID: 890-1783-4 **Client Sample ID: SS04 Matrix: Solid** 

Date Collected: 12/29/21 12:32 Date Received: 12/30/21 09:04

Sample Depth: 0.25

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	0.265		0.0404	mg/Kg		01/03/22 10:15	01/03/22 22:58	20
Toluene	5.67		0.0404	mg/Kg		01/03/22 10:15	01/03/22 22:58	20
Ethylbenzene	4.45		0.0404	mg/Kg		01/03/22 10:15	01/03/22 22:58	20
m-Xylene & p-Xylene	8.23		0.0808	mg/Kg		01/03/22 10:15	01/03/22 22:58	20
o-Xylene	3.79		0.0404	mg/Kg		01/03/22 10:15	01/03/22 22:58	20
Xylenes, Total	12.0		0.0808	mg/Kg		01/03/22 10:15	01/03/22 22:58	20
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	100		70 - 130			01/03/22 10:15	01/03/22 22:58	20
1,4-Difluorobenzene (Surr)	77		70 - 130			01/03/22 10:15	01/03/22 22:58	20
Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	22.4		0.0808	mg/Kg			01/05/22 13:44	
Mothod: 2015 NM Diocal Banca	Organias (DD)							
Method: 8015 NM - Diesel Range	Organics (DR)	O) (GC)						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
•	•	, ,	RL 499	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 01/05/22 14:19	Dil Fac
Analyte	Result 10500	Qualifier			<u>D</u>	Prepared		
Analyte Total TPH	Result 10500	Qualifier			<u>D</u>	Prepared Prepared		,
Analyte Total TPH  Method: 8015B NM - Diesel Rang	Result 10500	Qualifier RO) (GC)	499	mg/Kg		<u> </u>	01/05/22 14:19	Dil Fa
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 10500 ge Organics (D	Qualifier RO) (GC)	499 RL	mg/Kg		Prepared	01/05/22 14:19  Analyzed	Dil Fa
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10	Result 10500  ge Organics (Dige Result 1930	Qualifier  RO) (GC)  Qualifier	499 RL 499	mg/Kg  Unit  mg/Kg		Prepared 01/03/22 10:55	01/05/22 14:19  Analyzed  01/04/22 03:14	<b>Dil Fa</b>
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result 10500  ge Organics (Dige Result 1930 8560	Qualifier  RO) (GC) Qualifier	499 RL 499 499	mg/Kg  Unit mg/Kg  mg/Kg		Prepared 01/03/22 10:55 01/03/22 10:55	01/05/22 14:19  Analyzed 01/04/22 03:14  01/04/22 03:14	Dil Fac
Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result 10500  ge Organics (Di  Result 1930  8560  <499	Qualifier  RO) (GC) Qualifier	499  RL 499  499  499	mg/Kg  Unit mg/Kg  mg/Kg		Prepared 01/03/22 10:55 01/03/22 10:55	Analyzed 01/04/22 03:14 01/04/22 03:14	

Matrix: Solid

### **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-1783-1

Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

Client Sample ID: SS04 Lab Sample ID: 890-1783-4

Date Collected: 12/29/21 12:32 Matrix: Solid Date Received: 12/30/21 09:04

Sample Depth: 0.25

Method: 300.0 - Anions, Ion Chro	matography - Soluble						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	993	4.98	mg/Kg			01/04/22 12:19	1

**Client Sample ID: SS05** Lab Sample ID: 890-1783-5

Date Collected: 12/29/21 12:36 Date Received: 12/30/21 09:04

Sample Depth: 0.25

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.342		0.0401	mg/Kg		01/03/22 10:15	01/03/22 23:19	20
Toluene	7.03		0.0401	mg/Kg		01/03/22 10:15	01/03/22 23:19	20
Ethylbenzene	6.50		0.0401	mg/Kg		01/03/22 10:15	01/03/22 23:19	20
m-Xylene & p-Xylene	12.3		0.0802	mg/Kg		01/03/22 10:15	01/03/22 23:19	20
o-Xylene	5.74		0.0401	mg/Kg		01/03/22 10:15	01/03/22 23:19	20
Xylenes, Total	18.0		0.0802	mg/Kg		01/03/22 10:15	01/03/22 23:19	20
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130			01/03/22 10:15	01/03/22 23:19	20
1,4-Difluorobenzene (Surr)	77		70 - 130			01/03/22 10:15	01/03/22 23:19	20
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	31.9		0.0802	mg/Kg			01/05/22 13:44	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	12100		500	mg/Kg			01/05/22 14:19	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1820		500	mg/Kg		01/03/22 10:55	01/04/22 03:34	10
Diesel Range Organics (Over C10-C28)	10300		500	mg/Kg		01/03/22 10:55	01/04/22 03:34	10
OII Range Organics (Over C28-C36)	<500	U	500	mg/Kg		01/03/22 10:55	01/04/22 03:34	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	155	S1+	70 - 130			01/03/22 10:55	01/04/22 03:34	10
o-Terphenyl	153	S1+	70 - 130			01/03/22 10:55	01/04/22 03:34	10
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	866		4.95	mg/Kg	_	·	01/04/22 12:27	1

### **Client Sample Results**

Client: WSP USA Inc.

Job ID: 890-1783-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

Client Sample ID: SS06 Lab Sample ID: 890-1783-6

Date Collected: 12/29/21 12:40 Matrix: Solid
Date Received: 12/30/21 09:04

Sample Depth: 0.25

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U	0.0398	mg/Kg		01/03/22 10:15	01/03/22 23:40	20
Toluene	0.273		0.0398	mg/Kg		01/03/22 10:15	01/03/22 23:40	20
Ethylbenzene	0.320		0.0398	mg/Kg		01/03/22 10:15	01/03/22 23:40	20
m-Xylene & p-Xylene	0.650		0.0795	mg/Kg		01/03/22 10:15	01/03/22 23:40	20
o-Xylene	0.284		0.0398	mg/Kg		01/03/22 10:15	01/03/22 23:40	20
Xylenes, Total	0.934		0.0795	mg/Kg		01/03/22 10:15	01/03/22 23:40	20
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130			01/03/22 10:15	01/03/22 23:40	20
1,4-Difluorobenzene (Surr)	81		70 - 130			01/03/22 10:15	01/03/22 23:40	20
Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	1.53		0.0795	mg/Kg			01/05/22 13:44	
Analyte	Nesuit	Qualifier	RL	Unit	D	Prepared	Analyzed	
Analyte	Nesuit	Qualifici	112	Onit		rrepared	Allulyzou	Dil Fac
Total TPH	97.6		50.0	mg/Kg			01/05/22 14:19	1
- -		RO) (GC)	50.0	mg/Kg			01/05/22 14:19	1
: Method: 8015B NM - Diesel Ranç	ge Organics (D	RO) (GC) Qualifier	50.0 RL	mg/Kg Unit		Prepared	01/05/22 14:19  Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	ge Organics (D	Qualifier			<u>D</u>	Prepared 01/03/22 10:55		Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (D	Qualifier	RL	Unit	<u>D</u>	<u>·</u>	Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	ge Organics (DI Result <50.0	Qualifier U	RL 50.0	<mark>Unit</mark> mg/Kg	<u>D</u>	01/03/22 10:55	<b>Analyzed</b> 01/04/22 03:54	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	ge Organics (D) Result <50.0 97.6	Qualifier U	RL 50.0	<mark>Unit</mark> mg/Kg mg/Kg	<u>D</u>	01/03/22 10:55 01/03/22 10:55	Analyzed 01/04/22 03:54 01/04/22 03:54	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate	ge Organics (D) Result <50.0  97.6 <50.0	Qualifier U	RL 50.0 50.0 50.0	<mark>Unit</mark> mg/Kg mg/Kg	<u>D</u>	01/03/22 10:55 01/03/22 10:55 01/03/22 10:55	Analyzed 01/04/22 03:54 01/04/22 03:54 01/04/22 03:54	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	ge Organics (D)  Result  <50.0  97.6  <50.0  %Recovery  136	Qualifier  U  U  Qualifier	RL 50.0 50.0 50.0 <i>Limits</i>	<mark>Unit</mark> mg/Kg mg/Kg	<u>D</u>	01/03/22 10:55 01/03/22 10:55 01/03/22 10:55 Prepared	Analyzed 01/04/22 03:54 01/04/22 03:54 01/04/22 03:54 Analyzed	Dil Fa
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl  Method: 300.0 - Anions, Ion Chro	ge Organics (D) Result <50.0  97.6  <50.0  %Recovery  136  135	Qualifier  U  Qualifier  S1+ S1+	RL 50.0 50.0 50.0 Limits 70 - 130	<mark>Unit</mark> mg/Kg mg/Kg	<u>D</u>	01/03/22 10:55 01/03/22 10:55 01/03/22 10:55 Prepared 01/03/22 10:55	Analyzed 01/04/22 03:54 01/04/22 03:54 01/04/22 03:54  Analyzed 01/04/22 03:54	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	ge Organics (D)  Result  <50.0  97.6  <50.0  %Recovery  136  135  omatography -	Qualifier  U  Qualifier  S1+ S1+	RL 50.0 50.0 50.0 Limits 70 - 130	<mark>Unit</mark> mg/Kg mg/Kg	<u>D</u>	01/03/22 10:55 01/03/22 10:55 01/03/22 10:55 Prepared 01/03/22 10:55	Analyzed 01/04/22 03:54 01/04/22 03:54 01/04/22 03:54  Analyzed 01/04/22 03:54	

Client Sample ID: SS07 Lab Sample ID: 890-1783-7

Date Collected: 12/29/21 12:42 Date Received: 12/30/21 09:04

Sample Depth: 0.25

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0402	U	0.0402	mg/Kg		01/03/22 10:15	01/04/22 00:01	20
Toluene	0.0783		0.0402	mg/Kg		01/03/22 10:15	01/04/22 00:01	20
Ethylbenzene	0.124		0.0402	mg/Kg		01/03/22 10:15	01/04/22 00:01	20
m-Xylene & p-Xylene	0.0974		0.0803	mg/Kg		01/03/22 10:15	01/04/22 00:01	20
o-Xylene	0.0985		0.0402	mg/Kg		01/03/22 10:15	01/04/22 00:01	20
Xylenes, Total	0.196		0.0803	mg/Kg		01/03/22 10:15	01/04/22 00:01	20
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			01/03/22 10:15	01/04/22 00:01	20

Eurofins Xenco

Matrix: Solid

2

5

9

11

13

1/7/2022

### **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-1783-1

Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

**Client Sample ID: SS07** Lab Sample ID: 890-1783-7

Date Collected: 12/29/21 12:42 Matrix: Solid Date Received: 12/30/21 09:04

Sample Depth: 0.25

Chloride

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	92		70 - 130			01/03/22 10:15	01/04/22 00:01	20
Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.398		0.0803	mg/Kg			01/05/22 13:44	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	594		50.0	mg/Kg			01/05/22 14:19	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang	• •	, , ,	DI.	l lmi4		Duamanad	Amahamad	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/03/22 10:55	01/04/22 07:25	1
Diesel Range Organics (Over	594		50.0	mg/Kg		01/03/22 10:55	01/04/22 07:25	1
C10-C28)	004		33.3	99		0 1/00/22 10:00	0 0 22 0 20	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/03/22 10:55	01/04/22 07:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	134	S1+	70 - 130			01/03/22 10:55	01/04/22 07:25	1
o-Terphenyl	127		70 - 130			01/03/22 10:55	01/04/22 07:25	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa

4.97

mg/Kg

44.7

01/04/22 12:42

DFBZ = 1,4-Difluorobenzene (Surr)

### **Surrogate Summary**

Client: WSP USA Inc.

Job ID: 890-1783-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-9761-A-1-F MS	Matrix Spike	105	103	
880-9761-A-1-G MSD	Matrix Spike Duplicate	115	112	
890-1783-1	SS01	96	75	
890-1783-2	SS02	100	75	
390-1783-3	SS03	95	80	
390-1783-4	SS04	100	77	
390-1783-5	SS05	118	77	
390-1783-6	SS06	86	81	
390-1783-7	SS07	109	92	
LCS 880-15880/1-A	Lab Control Sample	110	104	
_CSD 880-15880/2-A	Lab Control Sample Dup	104	99	
	Method Blank	118	104	

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-1780-A-1-D MS	Matrix Spike	118	113	
0-1780-A-1-E MSD	Matrix Spike Duplicate	119	117	
0-1783-1	SS01	119	128	
90-1783-2	SS02	144 S1+	147 S1+	
0-1783-3	SS03	158 S1+	164 S1+	
00-1783-4	SS04	137 S1+	155 S1+	
0-1783-5	SS05	155 S1+	153 S1+	
0-1783-6	SS06	136 S1+	135 S1+	
0-1783-7	SS07	134 S1+	127	
CS 880-15882/2-A	Lab Control Sample	101	84	
SD 880-15882/3-A	Lab Control Sample Dup	105	87	
B 880-15882/1-A	Method Blank	112	126	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

### **QC Sample Results**

Client: WSP USA Inc.

Job ID: 890-1783-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-15880/5-A

Lab Sample ID: LCS 880-15880/1-A

Matrix: Solid Analysis Batch: 15550 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 15880

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		01/03/22 10:15	01/03/22 16:07	1
Toluene	<0.00198	U	0.00198	mg/Kg		01/03/22 10:15	01/03/22 16:07	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		01/03/22 10:15	01/03/22 16:07	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		01/03/22 10:15	01/03/22 16:07	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		01/03/22 10:15	01/03/22 16:07	1
Xylenes, Total	< 0.00397	U	0.00397	mg/Kg		01/03/22 10:15	01/03/22 16:07	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130	01/03/22 10:15	01/03/22 16:07	1
1,4-Difluorobenzene (Surr)	104		70 - 130	01/03/22 10:15	01/03/22 16:07	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 15880

Matrix: Solid Analysis Batch: 15550

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07590		mg/Kg		76	70 - 130	
Toluene	0.100	0.08444		mg/Kg		84	70 - 130	
Ethylbenzene	0.100	0.08959		mg/Kg		90	70 - 130	
m-Xylene & p-Xylene	0.200	0.1803		mg/Kg		90	70 - 130	
o-Xylene	0.100	0.08893		mg/Kg		89	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	110	70 - 130
1,4-Difluorobenzene (Surr)	104	70 - 130

Lab Sample ID: LCSD 880-15880/2-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 15550

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07867		mg/Kg		79	70 - 130	4	35
Toluene	0.100	0.07724		mg/Kg		77	70 - 130	9	35
Ethylbenzene	0.100	0.08677		mg/Kg		87	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1679		mg/Kg		84	70 - 130	7	35

0.08165

mg/Kg

0.100

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1.4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 880-9761-A-1-F MS

Matrix: Solid

o-Xylene

Analysis Batch: 15550

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 15880

70 - 130

Prep Type: Total/NA

Prep Batch: 15880

35

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0990	0.06999		mg/Kg		71	70 - 130	
Toluene	<0.00200	U	0.0990	0.07015		mg/Kg		71	70 - 130	

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### QC Sample Results

Client: WSP USA Inc. Job ID: 890-1783-1 Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

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

Client Sample ID: Matrix Spike Lab Sample ID: 880-9761-A-1-F MS **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 15550 Prep Batch: 15880

Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits D <0.00200 U 0.0990 0.07018 71 70 - 130 Ethylbenzene mg/Kg m-Xylene & p-Xylene <0.00400 0.198 0.1314 F1 mg/Kg 66 70 - 130 <0.00200 U 0.0990 0.06933 70 70 - 130 o-Xylene mg/Kg

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

Lab Sample ID: 880-9761-A-1-G MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 15550

Sample Sample Spike MSD MSD %Rec. RPD Result Qualifier %Rec RPD Limit Analyte babbA Result Qualifier Limits Unit D Benzene <0.00200 U 0.100 0.07134 mg/Kg 71 70 - 130 2 35 Toluene <0.00200 0.100 0.07064 mg/Kg 71 70 - 130 1 35 Ethylbenzene <0.00200 U 0.100 0.07258 73 70 - 130 35 mg/Kg 3 m-Xylene & p-Xylene <0.00400 UF1 0.200 0.1504 mg/Kg 75 70 - 130 13 35 0.100 0.07389 74 70 - 130 o-Xylene <0.00200 U mg/Kg 6 35

MSD MSD Qualifier Limits Surrogate %Recovery 70 - 130 4-Bromofluorobenzene (Surr) 115 1,4-Difluorobenzene (Surr) 112 70 - 130

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

Lab Sample ID: MB 880-15882/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

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Analysis Batch: 15874 Prep Batch: 15882 мв мв Result Qualifier RL Unit D Prepared Dil Fac Analyte Analyzed 01/03/22 10:55 <50.0 U 50.0 01/03/22 20:25 mg/Kg

Gasoline Range Organics (GRO)-C6-C10 01/03/22 10:55 01/03/22 20:25 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg C10-C28) OII Range Organics (Over C28-C36) <50.0 U 50.0 01/03/22 10:55 01/03/22 20:25 mg/Kg

MB MB %Recovery Limits Dil Fac Qualifier Prepared Analyzed Surrogate 01/03/22 10:55 1-Chlorooctane 112 70 - 130 01/03/22 20:25 126 70 - 130 01/03/22 10:55 01/03/22 20:25 o-Terphenyl

Lab Sample ID: LCS 880-15882/2-A Client Sample ID: Lab Control Sample

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 15874 Prep Batch: 15882

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics	1000	861.5		mg/Kg		86	70 - 130
(GRO)-C6-C10							
Diesel Range Organics (Over	1000	1101		mg/Kg		110	70 - 130
C10-C28)							

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Prep Batch: 15880

Client: WSP USA Inc. Job ID: 890-1783-1 SDG: 31403720.000 task 28.02 Project/Site: James E Upper Battery

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

LCS LCS

Sample Sample

Lab Sample ID: LCS 880-15882/2-A

**Matrix: Solid** 

Analysis Batch: 15874

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 15882

%Recovery Qualifier Surrogate Limits 1-Chlorooctane 101 70 - 130 o-Terphenyl 84 70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 15882

Lab Sample ID: LCSD 880-15882/3-A **Matrix: Solid** 

Analysis Batch: 15874

	Spike	LCSD	LCSD			%Rec.		RPD
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	940.4	mg/Kg	 I	94	70 - 130	9	20
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1162	mg/Kg	l	116	70 - 130	5	20
C10-C28)								

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	87		70 - 130

Lab Sample ID: 890-1780-A-1-D MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

Analysis Batch: 15874

Prep Type: Total/NA

Prep Batch: 15882

Prep Batch: 15882

	Sample	Sample	Spike	IVIO	IVIO				70Kec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U F1	996	515.1	F1	mg/Kg		50	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U F1	996	491.8	F1	mg/Kg		49	70 - 130	
C10 C20)										

C10-C28)

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	118		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: 890-1780-A-1-E MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 15874

_	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	<49.9	U F1	999	522.7	F1	mg/Kg		51	70 - 130	1	20	
(GRO)-C6-C10 Diesel Range Organics (Over	<49.9	U F1	999	512.8	F1	mg/Kg		51	70 <sub>-</sub> 130	4	20	

C10-C28)

	MSD MSD	
Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	119	70 - 130
o-Terphenyl	117	70 - 130

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Client Sample ID: Matrix Spike Duplicate

Client Sample ID: Matrix Spike Duplicate

**Prep Type: Soluble** 

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike

### QC Sample Results

Client: WSP USA Inc. Job ID: 890-1783-1 Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-15878/1-A

**Matrix: Solid** 

Analysis Batch: 15923

мв мв

Analyte Result Qualifier RLUnit D Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 01/04/22 08:47

Lab Sample ID: LCS 880-15878/2-A

**Matrix: Solid** 

**Analysis Batch: 15923** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 246.7 mg/Kg 99 90 - 110

Lab Sample ID: LCSD 880-15878/3-A

Analysis Batch: 15923

LCSD LCSD %Rec. RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 246.2 mg/Kg 90 - 110

Lab Sample ID: 890-1779-A-1-B MS

**Matrix: Solid** 

**Matrix: Solid** 

**Analysis Batch: 15923** 

MS MS Sample Sample Spike %Rec. Added Result Qualifier Analyte Result Qualifier Unit %Rec Limits Chloride 1110 250 1297 4 90 - 110 mg/Kg

Lab Sample ID: 890-1779-A-1-C MSD

**Matrix: Solid** 

Analysis Batch: 15923

Sample Sample Spike MSD MSD %Rec. RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 1110 250 1287 4 mg/Kg 70 90 - 110

Lab Sample ID: 890-1782-A-4-B MS

**Matrix: Solid** 

**Analysis Batch: 15923** 

Sample Spike MS MS %Rec. Sample Result Qualifier Added Qualifier Analyte Result Unit D %Rec Limits 12500 Chloride 24100 F1 34400 F1 mg/Kg 82 90 - 110

Lab Sample ID: 890-1782-A-4-C MSD

**Matrix: Solid** 

**Analysis Batch: 15923** 

MSD MSD %Rec. RPD Sample Sample Spike Result Qualifier Added Analyte Result Qualifier Limits RPD Limit Unit D %Rec 12500 Chloride 24100 F1 35910 mg/Kg 94 90 - 110 20

### **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-1783-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

### **GC VOA**

### Analysis Batch: 15550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1783-1	SS01	Total/NA	Solid	8021B	15880
890-1783-2	SS02	Total/NA	Solid	8021B	15880
890-1783-3	SS03	Total/NA	Solid	8021B	15880
890-1783-4	SS04	Total/NA	Solid	8021B	15880
890-1783-5	SS05	Total/NA	Solid	8021B	15880
890-1783-6	SS06	Total/NA	Solid	8021B	15880
890-1783-7	SS07	Total/NA	Solid	8021B	15880
MB 880-15880/5-A	Method Blank	Total/NA	Solid	8021B	15880
LCS 880-15880/1-A	Lab Control Sample	Total/NA	Solid	8021B	15880
LCSD 880-15880/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	15880
880-9761-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	15880
880-9761-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	15880

### Prep Batch: 15880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1783-1	SS01	Total/NA	Solid	5035	
890-1783-2	SS02	Total/NA	Solid	5035	
890-1783-3	SS03	Total/NA	Solid	5035	
890-1783-4	SS04	Total/NA	Solid	5035	
890-1783-5	SS05	Total/NA	Solid	5035	
890-1783-6	SS06	Total/NA	Solid	5035	
890-1783-7	SS07	Total/NA	Solid	5035	
MB 880-15880/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-15880/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-15880/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-9761-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
880-9761-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 16096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1783-1	SS01	Total/NA	Solid	Total BTEX	
890-1783-2	SS02	Total/NA	Solid	Total BTEX	
890-1783-3	SS03	Total/NA	Solid	Total BTEX	
890-1783-4	SS04	Total/NA	Solid	Total BTEX	
890-1783-5	SS05	Total/NA	Solid	Total BTEX	
890-1783-6	SS06	Total/NA	Solid	Total BTEX	
890-1783-7	SS07	Total/NA	Solid	Total BTEX	

### **GC Semi VOA**

### Analysis Batch: 15874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1783-1	SS01	Total/NA	Solid	8015B NM	15882
890-1783-2	SS02	Total/NA	Solid	8015B NM	15882
890-1783-3	SS03	Total/NA	Solid	8015B NM	15882
890-1783-4	SS04	Total/NA	Solid	8015B NM	15882
890-1783-5	SS05	Total/NA	Solid	8015B NM	15882
890-1783-6	SS06	Total/NA	Solid	8015B NM	15882
890-1783-7	SS07	Total/NA	Solid	8015B NM	15882
MB 880-15882/1-A	Method Blank	Total/NA	Solid	8015B NM	15882
LCS 880-15882/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	15882

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### **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-1783-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

### **GC Semi VOA (Continued)**

### **Analysis Batch: 15874 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-15882/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	15882
890-1780-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	15882
890-1780-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	15882

### Prep Batch: 15882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1783-1	SS01	Total/NA	Solid	8015NM Prep	
890-1783-2	SS02	Total/NA	Solid	8015NM Prep	
890-1783-3	SS03	Total/NA	Solid	8015NM Prep	
890-1783-4	SS04	Total/NA	Solid	8015NM Prep	
890-1783-5	SS05	Total/NA	Solid	8015NM Prep	
890-1783-6	SS06	Total/NA	Solid	8015NM Prep	
890-1783-7	SS07	Total/NA	Solid	8015NM Prep	
MB 880-15882/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-15882/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-15882/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1780-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1780-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 16097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1783-1	SS01	Total/NA	Solid	8015 NM	
890-1783-2	SS02	Total/NA	Solid	8015 NM	
890-1783-3	SS03	Total/NA	Solid	8015 NM	
890-1783-4	SS04	Total/NA	Solid	8015 NM	
890-1783-5	SS05	Total/NA	Solid	8015 NM	
890-1783-6	SS06	Total/NA	Solid	8015 NM	
890-1783-7	SS07	Total/NA	Solid	8015 NM	

### **HPLC/IC**

### Leach Batch: 15878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1783-1	SS01	Soluble	Solid	DI Leach	
890-1783-2	SS02	Soluble	Solid	DI Leach	
890-1783-3	SS03	Soluble	Solid	DI Leach	
890-1783-4	SS04	Soluble	Solid	DI Leach	
890-1783-5	SS05	Soluble	Solid	DI Leach	
890-1783-6	SS06	Soluble	Solid	DI Leach	
890-1783-7	SS07	Soluble	Solid	DI Leach	
MB 880-15878/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-15878/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-15878/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1779-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1779-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-1782-A-4-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1782-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### Analysis Batch: 15923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1783-1	SS01	Soluble	Solid	300.0	15878

### **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-1783-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

### **HPLC/IC (Continued)**

### **Analysis Batch: 15923 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1783-2	SS02	Soluble	Solid	300.0	15878
890-1783-3	SS03	Soluble	Solid	300.0	15878
890-1783-4	SS04	Soluble	Solid	300.0	15878
890-1783-5	SS05	Soluble	Solid	300.0	15878
890-1783-6	SS06	Soluble	Solid	300.0	15878
890-1783-7	SS07	Soluble	Solid	300.0	15878
MB 880-15878/1-A	Method Blank	Soluble	Solid	300.0	15878
LCS 880-15878/2-A	Lab Control Sample	Soluble	Solid	300.0	15878
LCSD 880-15878/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	15878
890-1779-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	15878
890-1779-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15878
890-1782-A-4-B MS	Matrix Spike	Soluble	Solid	300.0	15878
890-1782-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15878

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### **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-1783-1 Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

**Client Sample ID: SS01** Lab Sample ID: 890-1783-1

Date Collected: 12/29/21 12:27 Matrix: Solid Date Received: 12/30/21 09:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	15880	01/03/22 10:15	KL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	15550	01/03/22 21:55	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16096	01/05/22 13:44	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16097	01/05/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	15882	01/03/22 10:55	DM	XEN MID
Total/NA	Analysis	8015B NM		10			15874	01/04/22 02:14	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	15878	01/03/22 10:05	CH	XEN MID
Soluble	Analysis	300.0		5			15923	01/06/22 15:26	CH	XEN MID

**Client Sample ID: SS02** Lab Sample ID: 890-1783-2 Matrix: Solid

Date Collected: 12/29/21 12:29 Date Received: 12/30/21 09:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	15880	01/03/22 10:15	KL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	15550	01/03/22 22:16	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16096	01/05/22 13:44	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16097	01/05/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	15882	01/03/22 10:55	DM	XEN MID
Total/NA	Analysis	8015B NM		5			15874	01/04/22 02:34	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	15878	01/03/22 10:05	CH	XEN MID
Soluble	Analysis	300.0		1			15923	01/04/22 12:03	CH	XEN MID

**Client Sample ID: SS03** Lab Sample ID: 890-1783-3

Date Collected: 12/29/21 12:30 **Matrix: Solid** Date Received: 12/30/21 09:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	15880	01/03/22 10:15	KL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	15550	01/03/22 22:37	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16096	01/05/22 13:44	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16097	01/05/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	15882	01/03/22 10:55	DM	XEN MID
Total/NA	Analysis	8015B NM		10			15874	01/04/22 02:54	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	15878	01/03/22 10:05	CH	XEN MID
Soluble	Analysis	300.0		5			15923	01/04/22 12:11	CH	XEN MID

**Client Sample ID: SS04** Lab Sample ID: 890-1783-4

Date Collected: 12/29/21 12:32 **Matrix: Solid** Date Received: 12/30/21 09:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	15880	01/03/22 10:15	KL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	15550	01/03/22 22:58	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16096	01/05/22 13:44	AJ	XEN MID

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Client: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1783-1

SDG: 31403720.000 task 28.02

**Client Sample ID: SS04** 

Lab Sample ID: 890-1783-4

Matrix: Solid

Date Collected: 12/29/21 12:32 Date Received: 12/30/21 09:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			16097	01/05/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	15882	01/03/22 10:55	DM	XEN MID
Total/NA	Analysis	8015B NM		10			15874	01/04/22 03:14	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	15878	01/03/22 10:05	CH	XEN MID
Soluble	Analysis	300.0		1			15923	01/04/22 12:19	CH	XEN MID

**Client Sample ID: SS05** Lab Sample ID: 890-1783-5

Date Collected: 12/29/21 12:36

**Matrix: Solid** 

Date Received: 12/30/21 09:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	15880	01/03/22 10:15	KL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	15550	01/03/22 23:19	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16096	01/05/22 13:44	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16097	01/05/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	15882	01/03/22 10:55	DM	XEN MID
Total/NA	Analysis	8015B NM		10			15874	01/04/22 03:34	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	15878	01/03/22 10:05	СН	XEN MID
Soluble	Analysis	300.0		1			15923	01/04/22 12:27	CH	XEN MID

**Client Sample ID: SS06** Lab Sample ID: 890-1783-6

Date Collected: 12/29/21 12:40 Date Received: 12/30/21 09:04 **Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	15880	01/03/22 10:15	KL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	15550	01/03/22 23:40	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16096	01/05/22 13:44	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16097	01/05/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	15882	01/03/22 10:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15874	01/04/22 03:54	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	15878	01/03/22 10:05	CH	XEN MID
Soluble	Analysis	300.0		10			15923	01/04/22 12:35	CH	XEN MID

**Client Sample ID: SS07** Lab Sample ID: 890-1783-7

Date Collected: 12/29/21 12:42 Date Received: 12/30/21 09:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	15880	01/03/22 10:15	KL	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	15550	01/04/22 00:01	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16096	01/05/22 13:44	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16097	01/05/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	15882	01/03/22 10:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15874	01/04/22 07:25	AJ	XEN MID

**Eurofins Xenco** 

**Matrix: Solid** 

### **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-1783-1 Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

**Client Sample ID: SS07** Lab Sample ID: 890-1783-7

Date Collected: 12/29/21 12:42 Matrix: Solid Date Received: 12/30/21 09:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	15878	01/03/22 10:05	CH	XEN MID
Soluble	Analysis	300.0		1			15923	01/04/22 12:42	CH	XEN MID

#### **Laboratory References:**

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

### **Accreditation/Certification Summary**

Client: WSP USA Inc.

Job ID: 890-1783-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

### **Laboratory: Eurofins Xenco**

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

uthority		ogram	Identification Number	Expiration Date				
Гехаѕ		NELAP T104704400-21-22 06-30						
The following analytes	are included in this report bu	t the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for y				
the agency does not of	' '	t the laboratory to not ocium	od by the governing dutienty. The list me	ay include analytes for				
the agency does not of Analysis Method	' '	Matrix	Analyte	ay molade analytes for t				
0 ,	fer certification.	•	, , ,					

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### **Method Summary**

Client: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1783-1

SDG: 31403720.000 task 28.02

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

#### **Protocol References:**

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

### Sample Summary

Client: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1783-1

SDG: 31403720.000 task 28.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1783-1	SS01	Solid	12/29/21 12:27	12/30/21 09:04	0.25
890-1783-2	SS02	Solid	12/29/21 12:29	12/30/21 09:04	0.25
890-1783-3	SS03	Solid	12/29/21 12:30	12/30/21 09:04	0.25
890-1783-4	SS04	Solid	12/29/21 12:32	12/30/21 09:04	0.25
890-1783-5	SS05	Solid	12/29/21 12:36	12/30/21 09:04	0.25
890-1783-6	SS06	Solid	12/29/21 12:40	12/30/21 09:04	0.25
890-1783-7	SS07	Solid	12/29/21 12:42	12/30/21 09:04	0.25

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5	ANNOG OF	Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed		5507	SS06	\$805	8804	8803	3302	8880	SS01	Sample Identification	Sample Custody Seals: Yes	Cooler Custody Seals: Yes	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name: Payton Benner	P.O. Number:	Project Number: 3140	Project Name: James E Upi	Phone: 817-683-2503	City, State ZIP: Midland, Texas 79705	Address: 3300 North A	Company Name: WSP USA	Project Manager: Kalei Jennings		XIII
	m to	Received	inquishment of samples constitutions of samples and shall not cost of samples and shall not be applied to each project and	200.8 / 6020: Metal(s) to be analyzed		5 12/29/2				-	-		S 12/29/21	Matrix Sampled	Tot	No (NIA) Corr	, No	/a &	Temp Blank: (Yes) No	ner		31403720.000 Task 28.02	E Upper Battery	33	(as 79705	3300 North A Street Building 1, unit 222		gs	ORIES	Ď
	T .	Received by: (Signature)	tutes a valid purchase o assume any responsibil d a charge of \$5 for each	8RCRA 13PPM Tex TCLP / SPLP 6010:		12:42	12:40	12:36	12:32	12:30	10.00	19.90	12:27	Time D	Total Containers:	Correction Factor: -C	N M O	Thermometer ID	Wet Ice: (Yes	Due Date:	Rush:	Routine	Turn Around	Email: Kale	City,	222 Address	Comp	Bill to	Midland,TX (43 s,NM (575-392-7550)	Houston,TX (28
	10		order from client com- lity for any losses or a sample submitted to	Texas 11 Al Sb )10: 8RCRA Sb		-	0.25	+	-	_	-	+	0.25	Depth Number				iners	N <sub>O</sub>			1	ound	Email: Kalei.jennings@wsp.com	City, State ZIP: M		Company Name: W	Bill to: (if different)	32-704-5440) EL Pa Phoenix,AZ (480-38	1) 240-4200 Dallas
	30.210	Date/Time	pany to Xenco, its expenses incurred Xenco, but not a	b As Ba Be b As Ba Be		>	×	×	: >	: <b>&gt;</b>	< >	×	_	BTEX (I	EPA	0=8	021)							.com	Midland, Texas 79705	300 North A Str	WSP USA	Kalei Jennings	aso,TX (915)585 55-0900) Atlanta	,TX (214) 902-03
, o	4	Relinquished by: (Signature)	affiliates and subcontractors. It assigns I by the client if such losses are due to o alyzed. These terms will be enforced un													890-1/83 Chain of Custody							ANALYSIS REQUEST		9705	3300 North A Street Building 1, unit 222			Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
		iture) Received by: (Signature)	It assigns standard terms and conditions for due to circumstances beyond the control forced unless previously negotiated.	Mo Ni K Se Ag SiO2											 	n of Custody							JEST	Deliverables: EDD ADaPT	□evel III	Ħ	Program: UST/PST ☐RP ☐row	Work Order	-620-2000) <u>www.xenco.com</u>	
		ture) Date/Time		Na Sr Tl Sn U V Zn 1631 / 245.1 / 7470 / 7471 : Hg		, , , , , , , , , , , , , , , , , , ,	DISCOURTE	מס מחדר	סופסטידיי	מיסטידה ר	DISCRETE	DISCRETE	DISCRETE	Sample Comments	lab, if received by 4:30pm	TAT starts the day recevied by the					AEE-DD:2017.00001.GAP.CM	API: 90-015-45854	Work Order Notes	PT Other:	ST 📋		□rownfields □RC 1□perfund □	Work Order Comments	m 2age1_ of1_	

### **Login Sample Receipt Checklist**

 Client: WSP USA Inc.
 Job Number: 890-1783-1

 SDG Number: 31403720.000 task 28.02

3DG Nulliber: 31403720.000 task 20.02

Login Number: 1783

List Source: Eurofins Xenco

List Number: 1 Creator: Clifton, Cloe

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

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### **Login Sample Receipt Checklist**

Client: WSP USA Inc. Job Number: 890-1783-1

SDG Number: 31403720.000 task 28.02

Login Number: 1783 **List Source: Eurofins Xenco** List Number: 2

List Creation: 01/03/22 08:30 AM Creator: Lowe, Katie

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

True

<6mm (1/4").

Containers requiring zero headspace have no headspace or bubble is

## **Environment Testing America**

### **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-1784-1

Laboratory Sample Delivery Group: 31403720.000 task 28.02

Client Project/Site: James E Upper Battery

For:

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

Attn: Kalei Jennings

RAMER

Authorized for release by: 1/5/2022 1:33:35 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

..... LINKS .....

**Review your project** results through

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 12/6/2022 4:11:46 PM

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

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

Client: WSP USA Inc. Project/Site: James E Upper Battery Laboratory Job ID: 890-1784-1 SDG: 31403720.000 task 28.02

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### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-1784-1 Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

#### **Qualifiers**

**GC VOA** 

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

U Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

F1 MS and/or MSD recovery exceeds control limits. S1+ Surrogate recovery exceeds control limits, high biased. Indicates the analyte was analyzed for but not detected.

**HPLC/IC** 

Qualifier **Qualifier Description** 

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

DFR 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

Decision Level Concentration (Radiochemistry) DLC

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Method Detection Limit MDL 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

Toxicity Equivalent Factor (Dioxin) TEF Toxicity Equivalent Quotient (Dioxin) TEQ

**TNTC** Too Numerous To Count

#### Case Narrative

Client: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1784-1

SDG: 31403720.000 task 28.02

Job ID: 890-1784-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-1784-1

#### Receipt

The samples were received on 12/30/2021 9:04 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 2.8°C

#### **GC VOA**

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

#### GC Semi VOA

Method 8015MOD NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-15882 and analytical batch 880-15874 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: SS09 (890-1784-2). 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

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

### **Client Sample Results**

Client: WSP USA Inc.

Job ID: 890-1784-1

Project/Site: James F Upper Battery

SDG: 31403720 000 task 28 02

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

Client Sample ID: SS08

Date Collected: 12/29/21 12:44

Date Received: 12/30/21 09:04

Lab Sample ID: 890-1784-1

Matrix: Solid

Sample Depth: 0.25

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00857	F1	0.00202	mg/Kg		01/03/22 16:00	01/04/22 11:22	1
Toluene	0.0327	F1	0.00202	mg/Kg		01/03/22 16:00	01/04/22 11:22	1
Ethylbenzene	0.00531		0.00202	mg/Kg		01/03/22 16:00	01/04/22 11:22	1
m-Xylene & p-Xylene	0.00905		0.00404	mg/Kg		01/03/22 16:00	01/04/22 11:22	1
o-Xylene	0.00330		0.00202	mg/Kg		01/03/22 16:00	01/04/22 11:22	1
Xylenes, Total	0.0124		0.00404	mg/Kg		01/03/22 16:00	01/04/22 11:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			01/03/22 16:00	01/04/22 11:22	1
1,4-Difluorobenzene (Surr)	116		70 - 130			01/03/22 16:00	01/04/22 11:22	1
- Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0589		0.00404	mg/Kg			01/05/22 13:44	1
Analyte Total TPH	Result 55.8	Qualifier	49.9	mg/Kg	B	Prepared	01/05/22 14:19	Dil Fac
Analyte Total TPH		Qualifier	RL 49.9	Unit ma/Ka	D	Prepared	Analyzed 01/05/22 14:19	Dil Fac
Method: 8015B NM - Diesel Rang					_			
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/03/22 10:55	01/04/22 00:53	1
Diesel Range Organics (Over	55.8		49.9	mg/Kg		01/03/22 10:55	01/04/22 00:53	1
C10-C28)								
C10-C28) OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/03/22 10:55	01/04/22 00:53	1
•	<49.9 <b>%Recovery</b>		49.9 <i>Limits</i>	mg/Kg		01/03/22 10:55  Prepared	01/04/22 00:53  Analyzed	•
OII Range Organics (Over C28-C36)				mg/Kg				Dil Fac
Oll Range Organics (Over C28-C36)  Surrogate	%Recovery		Limits	mg/Kg		Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)  Surrogate  1-Chlorooctane	%Recovery 128 121	Qualifier	Limits 70 - 130	mg/Kg		<b>Prepared</b> 01/03/22 10:55	Analyzed 01/04/22 00:53	1
Oll Range Organics (Over C28-C36)  Surrogate  1-Chlorooctane o-Terphenyl	%Recovery 128 121  omatography -	Qualifier	Limits 70 - 130	mg/Kg Unit	D	<b>Prepared</b> 01/03/22 10:55	Analyzed 01/04/22 00:53	Dil Fac

Client Sample ID: SS09

Date Collected: 12/29/21 12:46

Lab Sample ID: 890-1784-2

Matrix: Solid

Date Collected: 12/29/21 12:46 Date Received: 12/30/21 09:04

Sample Depth: 0.25

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00497		0.00200	mg/Kg		01/03/22 16:00	01/04/22 11:43	1
Toluene	0.0220		0.00200	mg/Kg		01/03/22 16:00	01/04/22 11:43	1
Ethylbenzene	0.00441		0.00200	mg/Kg		01/03/22 16:00	01/04/22 11:43	1
m-Xylene & p-Xylene	0.00753		0.00401	mg/Kg		01/03/22 16:00	01/04/22 11:43	1
o-Xylene	0.00353		0.00200	mg/Kg		01/03/22 16:00	01/04/22 11:43	1
Xylenes, Total	0.0111		0.00401	mg/Kg		01/03/22 16:00	01/04/22 11:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/03/22 16:00	01/04/22 11:43	1

Client: WSP USA Inc.

Job ID: 890-1784-1 Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

**Client Sample ID: SS09** Lab Sample ID: 890-1784-2 Date Collected: 12/29/21 12:46 Matrix: Solid Date Received: 12/30/21 09:04

Sample Depth: 0.25

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

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	104	70 - 130	01/03/22 16:00	01/04/22 11:43	1

Method:	Total RTF)	( - Total RTF	X Calculation

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0424	0.00401	mg/Kg			01/05/22 13:44	1

Mothod: 2015 NM - Diocol	Pango Organice (DPO) (CC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	ma/Ka			01/05/22 14:19	1

Mothod: 901ED	NM Diocol	Pango Ore	aniec /	DBO	CC
Method: 8015B	MINI - DIESEI	Range Org	janics (	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		01/03/22 10:55	01/04/22 01:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/03/22 10:55	01/04/22 01:54	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/03/22 10:55	01/04/22 01:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	132	S1+	70 - 130	01/03/22 10:55	01/04/22 01:54	1
o-Terphenyl	129		70 - 130	01/03/22 10:55	01/04/22 01:54	1

Method: 300.0 - Anions,	Ion Chromatography - Soluble	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.1		4.95	mg/Kg			01/04/22 20:07	1

**Client Sample ID: SS10** Lab Sample ID: 890-1784-3 **Matrix: Solid** 

Date Collected: 12/29/21 12:48 Date Received: 12/30/21 09:04

Sample Depth: 0.25

Method: 8021B -	V-1-4:1- O	 - 100

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0169		0.00198	mg/Kg		01/03/22 16:00	01/04/22 12:03	1
Toluene	0.0461		0.00198	mg/Kg		01/03/22 16:00	01/04/22 12:03	1
Ethylbenzene	0.00669		0.00198	mg/Kg		01/03/22 16:00	01/04/22 12:03	1
m-Xylene & p-Xylene	0.0105		0.00397	mg/Kg		01/03/22 16:00	01/04/22 12:03	1
o-Xylene	0.00335		0.00198	mg/Kg		01/03/22 16:00	01/04/22 12:03	1
Xylenes, Total	0.0139		0.00397	mg/Kg		01/03/22 16:00	01/04/22 12:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			01/03/22 16:00	01/04/22 12:03	1
1.4-Difluorobenzene (Surr)	108		70 - 130			01/03/22 16:00	01/04/22 12:03	1

4-Bromofluorobenzene (Surr)	98	70 - 130	01/03/22 16:00	01/04/22 12:03	1
1,4-Difluorobenzene (Surr)	108	70 - 130	01/03/22 16:00	01/04/22 12:03	1

#### Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0835		0.00397	mg/Kg			01/05/22 13:44	1

	Method: 8015 NM - Diesel	Range Organics (DRO	D) (GC)	۱
ı	Michiga. 00 to Min - Diese	i italige Organics (Ditt		,

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/05/22 14:19	1

### **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-1784-1 Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

**Client Sample ID: SS10** Lab Sample ID: 890-1784-3 Date Collected: 12/29/21 12:48 Matrix: Solid Date Received: 12/30/21 09:04

Sample Depth: 0.25

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		01/03/22 10:55	01/04/22 01:13	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		01/03/22 10:55	01/04/22 01:13	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/03/22 10:55	01/04/22 01:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	129		70 - 130			01/03/22 10:55	01/04/22 01:13	1
o-Terphenyl	128		70 - 130			01/03/22 10:55	01/04/22 01:13	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
			5.00	mg/Kg			01/04/22 20:15	

### **Surrogate Summary**

Client: WSP USA Inc.

Job ID: 890-1784-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Li
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-1784-1	SS08	98	116	
90-1784-1 MS	SS08	122	122	
390-1784-1 MSD	SS08	111	99	
390-1784-2	SS09	101	104	
90-1784-3	SS10	98	108	
CS 880-15927/1-A	Lab Control Sample	129	127	
CSD 880-15927/2-A	Lab Control Sample Dup	121	86	
MB 880-15927/5-A	Method Blank	98	100	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-1780-A-1-D MS	Matrix Spike	118	113	
890-1780-A-1-E MSD	Matrix Spike Duplicate	119	117	
890-1784-1	SS08	128	121	
890-1784-2	SS09	132 S1+	129	
890-1784-3	SS10	129	128	
LCS 880-15882/2-A	Lab Control Sample	101	84	
LCSD 880-15882/3-A	Lab Control Sample Dup	105	87	
MB 880-15882/1-A	Method Blank	112	126	

Surrogate Legend

1CO = 1-Chlorooctane

Released to Imaging: 12/6/2022 4:11:46 PM

OTPH = o-Terphenyl

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# **QC Sample Results**

Client: WSP USA Inc. Job ID: 890-1784-1 Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-15927/5-A

**Matrix: Solid** 

Analysis Batch: 15941

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 15927

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/03/22 16:00	01/04/22 11:01	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/03/22 16:00	01/04/22 11:01	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/03/22 16:00	01/04/22 11:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/03/22 16:00	01/04/22 11:01	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/03/22 16:00	01/04/22 11:01	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/03/22 16:00	01/04/22 11:01	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	d Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	01/03/22 16	6:00 01/04/22 11:01	
1.4-Difluorobenzene (Surr)	100		70 - 130	01/03/22 16	6:00 01/04/22 11:01	1

Lab Sample ID: LCS 880-15927/1-A Client Sample ID: Lab Control Sample

Matrix: Solid

Analysis Batch: 15941

Prep Type: Total/NA

Prep Batch: 15927

	<b>Spike</b>	LUS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08248		mg/Kg		82	70 - 130	
Toluene	0.100	0.08100		mg/Kg		81	70 - 130	
Ethylbenzene	0.100	0.08558		mg/Kg		86	70 - 130	
m-Xylene & p-Xylene	0.200	0.1666		mg/Kg		83	70 - 130	
o-Xylene	0.100	0.08934		mg/Kg		89	70 - 130	

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	129		70 - 130
1,4-Difluorobenzene (Surr)	127		70 - 130

Lab Sample ID: LCSD 880-15927/2-A

Matrix: Solid

Analysis Batch: 15941

Client Sample ID: Lab Control Sample D	up
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Prep Type: Total/NA

Prep Batch: 15927

	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.07244		mg/Kg		72	70 - 130	13	35	
Toluene	0.100	0.07742		mg/Kg		77	70 - 130	5	35	
Ethylbenzene	0.100	0.08428		mg/Kg		84	70 - 130	2	35	
m-Xylene & p-Xylene	0.200	0.1776		mg/Kg		89	70 - 130	6	35	
o-Xylene	0.100	0.08900		mg/Kg		89	70 - 130	0	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	121		70 - 130
1.4-Difluorobenzene (Surr)	86		70 - 130

Lab Sample ID: 890-1784-1 MS

Matrix: Solid

Analysis Batch: 15941

**Client Sample ID: SS08** Prep Type: Total/NA

Prep Batch: 15927

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.00857	F1	0.100	0.07782	F1	mg/Kg		69	70 - 130	
Toluene	0.0327	F1	0.100	0.07480	F1	mg/Kg		42	70 - 130	

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# QC Sample Results

Job ID: 890-1784-1 Client: WSP USA Inc. Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

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

Analysis Batch: 15941

Lab Sample ID: 890-1784-1 MS **Client Sample ID: SS08 Matrix: Solid** Prep Type: Total/NA Prep Batch: 15927

Sample	Sample	Spike	MS	MS				%Rec.
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
0.00531		0.100	0.08134		mg/Kg		76	70 _ 130
0.00905		0.201	0.1662		mg/Kg		78	70 - 130
0.00330		0.100	0.08427		mg/Kg		81	70 - 130
	Result 0.00531 0.00905	Result         Qualifier           0.00531         0.00905	Result 0.00531         Qualifier Qualifier 0.100           0.00905         0.201	Result 0.00531         Qualifier Added 0.100         Result 0.08134           0.00905         0.201         0.1662	Result 0.00531         Qualifier Added 0.100         Result 0.08134         Qualifier 0.100           0.00905         0.201         0.1662	Result         Qualifier         Added         Result         Qualifier         Unit           0.00531         0.100         0.08134         mg/Kg           0.00905         0.201         0.1662         mg/Kg	Result 0.00531         Qualifier Qualifier 0.100         Added 0.00531         Result Qualifier Qualifier 0.008134         Unit mg/Kg         D           0.00905         0.201         0.1662         mg/Kg	Result 0.00531         Qualifier 0.100         Added 0.201         Result 0.08134         Qualifier mg/Kg         D %Rec 76           0.00905         0.201         0.1662         mg/Kg         78

MS MS

Surrogate	%Recovery Qu	ualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1.4-Difluorobenzene (Surr)	122		70 <sub>-</sub> 130

Lab Sample ID: 890-1784-1 MSD

**Matrix: Solid** 

**Client Sample ID: SS08** Prep Type: Total/NA Analysis Batch: 15941 Prep Batch: 15927 Sample Sample Spike MSD MSD %Rec.

Result Qualifier Added Result Qualifier %Rec Limits RPD Limit Analyte Unit 0.0998 64 7 Benzene 0.00857 F1 0.07286 F1 mg/Kg 70 - 130 35 Toluene 0.0327 F1 0.0998 0.07303 F1 40 70 - 130 35 mg/Kg 2 Ethylbenzene 0.00531 0.0998 0.07956 mg/Kg 74 70 - 130 2 35 m-Xylene & p-Xylene 0.00905 0.200 0.1649 78 70 - 130 35 mg/Kg 0.0998 o-Xylene 0.00330 0.08450 81 70 - 130 mg/Kg

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

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

Lab Sample ID: MB 880-15882/1-A	Client Sample ID: Method Blank
Matrix: Solid	Prep Type: Total/NA
Analysis Batch: 15874	Prep Batch: 15882
MB MB	

il Fac
1
1
1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	01/03/22 10:55	01/03/22 20:25	1
o-Terphenyl	126		70 - 130	01/03/22 10:55	01/03/22 20:25	1

Lab Sample ID: LCS 880-15882/2-A

**Matrix: Solid** 

Analysis Batch: 15874								Batch: 15882
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	861.5		mg/Kg		86	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1101		mg/Kg		110	70 - 130	
C10-C28)								

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Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

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Client: WSP USA Inc. Job ID: 890-1784-1 Project/Site: James E Upper Battery SDG: 31403720.000 task 28.02

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

LCS LCS

%Recovery Qualifier

101

84

Lab Sample ID: LCS 880-15882/2-A **Client Sample ID: Lab Control Sample** 

Limits

70 - 130

70 - 130

**Matrix: Solid** 

Surrogate

o-Terphenyl

1-Chlorooctane

Analysis Batch: 15874

Prep Type: Total/NA

Prep Batch: 15882

Lab Sample ID: LCSD 880-15882/3-A

**Matrix: Solid** 

Analysis Batch: 15874

Client Sample ID: Lab Control Sample Dup

70 - 130

116

Prep Type: Total/NA

Prep Batch: 15882

5

Spike LCSD LCSD %Rec. RPD Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 1000 940.4 94 70 - 1309 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1162

mg/Kg

C10-C28)

LCSD LCSD

Surrogate %Recovery Qualifier Limits 105 70 - 130 1-Chlorooctane 87 70 - 130 o-Terphenyl

Lab Sample ID: 890-1780-A-1-D MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

**Analysis Batch: 15874** 

Prep Type: Total/NA

Prep Batch: 15882

Sample Sample MS MS Spike Added Analyte Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <49.9 UF1 996 515.1 F1 mg/Kg 50 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 UF1 996 491.8 F1 mg/Kg 49 70 - 130

C10-C28)

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 118 70 - 130 o-Terphenyl 113

Lab Sample ID: 890-1780-A-1-E MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid** 

Analysis Batch: 15874

Prep Type: Total/NA Prep Batch: 15882

RPD

Sample Sample MSD MSD Spike %Rec. Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit U F1 999 522.7 F1 51 Gasoline Range Organics <49.9 70 - 130 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <49.9 UF1 999 512.8 F1 mg/Kg 51 70 - 130 20

C10-C28)

MSD MSD

%Recovery Qualifier Surrogate Limits 1-Chlorooctane 119 70 - 130 117 70 - 130 o-Terphenyl

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## **QC Sample Results**

Client: WSP USA Inc.

Job ID: 890-1784-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-15879/1-A

Matrix: Solid

Analysis Batch: 15967

Client Sample ID: Method Blank
Prep Type: Soluble

mg/Kg

99

90 - 110

Client Sample ID: Matrix Spike Duplicate

**Prep Type: Soluble** 

 MB
 MB

 Analyte
 Result
 Qualifier
 RL
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 D
 Prepared
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 Dil Fac

 Chloride
 <5.00</td>
 U
 5.00
 mg/Kg
 01/04/22 16:19
 1

Lab Sample ID: LCS 880-15879/2-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 15967

Chloride

Spike LCS LCS %Rec.

Analyte Added Result Qualifier Unit D %Rec Limits

250

Lab Sample ID: LCSD 880-15879/3-A

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Prep Type: Soluble

248.0

Analysis Batch: 15967

LCSD LCSD %Rec. RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 248.4 mg/Kg 90 - 110

Lab Sample ID: 880-9768-A-2-B MS

Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Soluble

Matrix. John

Analysis Batch: 15967

MS MS Sample Sample Spike %Rec. Analyte Result Qualifier Added Qualifier %Rec Result Unit Limits Chloride 58.0 250 318.9 104 90 - 110 mg/Kg

Lab Sample ID: 880-9768-A-2-C MSD

Matrix: Solid

Analysis Batch: 15967

Sample Sample Spike MSD MSD %Rec. RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 58.0 309.1 mg/Kg 100 90 - 110 20

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# **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-1784-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

**GC VOA** 

Prep Batch: 15927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1784-1	SS08	Total/NA	Solid	5035	
890-1784-2	SS09	Total/NA	Solid	5035	
890-1784-3	SS10	Total/NA	Solid	5035	
MB 880-15927/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-15927/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-15927/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1784-1 MS	SS08	Total/NA	Solid	5035	
890-1784-1 MSD	SS08	Total/NA	Solid	5035	

Analysis Batch: 15941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1784-1	SS08	Total/NA	Solid	8021B	15927
890-1784-2	SS09	Total/NA	Solid	8021B	15927
890-1784-3	SS10	Total/NA	Solid	8021B	15927
MB 880-15927/5-A	Method Blank	Total/NA	Solid	8021B	15927
LCS 880-15927/1-A	Lab Control Sample	Total/NA	Solid	8021B	15927
LCSD 880-15927/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	15927
890-1784-1 MS	SS08	Total/NA	Solid	8021B	15927
890-1784-1 MSD	SS08	Total/NA	Solid	8021B	15927

Analysis Batch: 16096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1784-1	SS08	Total/NA	Solid	Total BTEX	· ·
890-1784-2	SS09	Total/NA	Solid	Total BTEX	
890-1784-3	SS10	Total/NA	Solid	Total BTEX	

**GC Semi VOA** 

Analysis Batch: 15874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1784-1	SS08	Total/NA	Solid	8015B NM	15882
890-1784-2	SS09	Total/NA	Solid	8015B NM	15882
890-1784-3	SS10	Total/NA	Solid	8015B NM	15882
MB 880-15882/1-A	Method Blank	Total/NA	Solid	8015B NM	15882
LCS 880-15882/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	15882
LCSD 880-15882/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	15882
890-1780-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	15882
890-1780-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	15882

Prep Batch: 15882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1784-1	SS08	Total/NA	Solid	8015NM Prep	<u> </u>
890-1784-2	SS09	Total/NA	Solid	8015NM Prep	
890-1784-3	SS10	Total/NA	Solid	8015NM Prep	
MB 880-15882/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-15882/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-15882/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1780-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1780-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

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# **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-1784-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

## GC Semi VOA

#### Analysis Batch: 16097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1784-1	SS08	Total/NA	Solid	8015 NM	
890-1784-2	SS09	Total/NA	Solid	8015 NM	
890-1784-3	SS10	Total/NA	Solid	8015 NM	
_					

#### **HPLC/IC**

#### Leach Batch: 15879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1784-1	SS08	Soluble	Solid	DI Leach	
890-1784-2	SS09	Soluble	Solid	DI Leach	
890-1784-3	SS10	Soluble	Solid	DI Leach	
MB 880-15879/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-15879/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-15879/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-9768-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-9768-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### **Analysis Batch: 15967**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1784-1	SS08	Soluble	Solid	300.0	15879
890-1784-2	SS09	Soluble	Solid	300.0	15879
890-1784-3	SS10	Soluble	Solid	300.0	15879
MB 880-15879/1-A	Method Blank	Soluble	Solid	300.0	15879
LCS 880-15879/2-A	Lab Control Sample	Soluble	Solid	300.0	15879
LCSD 880-15879/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	15879
880-9768-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	15879
880-9768-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15879

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Client: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1784-1

SDG: 31403720.000 task 28.02

Client Sample ID: SS08 Lab

Lab Sample ID: 890-1784-1

Date Collected: 12/29/21 12:44

Date Received: 12/30/21 09:04

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	15927	01/03/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15941	01/04/22 11:22	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16096	01/05/22 13:44	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16097	01/05/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	15882	01/03/22 10:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15874	01/04/22 00:53	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	15879	01/03/22 10:06	CH	XEN MID
Soluble	Analysis	300.0		1			15967	01/04/22 19:59	CH	XEN MID

Client Sample ID: SS09 Lab Sample ID: 890-1784-2

Date Collected: 12/29/21 12:46 Matrix: Solid

Date Received: 12/30/21 09:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	15927	01/03/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15941	01/04/22 11:43	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16096	01/05/22 13:44	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16097	01/05/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	15882	01/03/22 10:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15874	01/04/22 01:54	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	15879	01/03/22 10:06	CH	XEN MID
Soluble	Analysis	300.0		1			15967	01/04/22 20:07	CH	XEN MID

Client Sample ID: SS10 Lab Sample ID: 890-1784-3

Date Collected: 12/29/21 12:48
Date Received: 12/30/21 09:04

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	15927	01/03/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15941	01/04/22 12:03	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16096	01/05/22 13:44	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16097	01/05/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	15882	01/03/22 10:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15874	01/04/22 01:13	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	15879	01/03/22 10:06	CH	XEN MID
Soluble	Analysis	300.0		1			15967	01/04/22 20:15	CH	XEN MID

Laboratory References:

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

Eurofins Xenco, Carlsbad

**Matrix: Solid** 

# **Accreditation/Certification Summary**

Client: WSP USA Inc.

Job ID: 890-1784-1

Project/Site: James E Upper Battery

SDG: 31403720.000 task 28.02

#### Laboratory: Eurofins Xenco, Midland

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

Authority	Pre	ogram	Identification Number	Expiration Date		
Texas	NE	LAP	T104704400-21-22	06-30-22		
The following analytes	are included in this report bu	t the laboratory is not certifi	ed by the governing authority. This list ma	av include analytes for y		
the agency does not of	' '	t the laboratory to not ocium	od by the governing dutienty. The list me	ay include analytes for		
the agency does not of Analysis Method	' '	Matrix	Analyte	ay molade analytes for t		
0 ,	fer certification.	•	, , ,			

3

6

0

10

13

14

## **Method Summary**

Client: WSP USA Inc.

Method

8021B

Total BTEX 8015 NM

8015B NM

8015NM Prep

DI Leach

300.0

5035

Project/Site: James E Upper Battery

**Method Description** 

Total BTEX Calculation

Microextraction

Volatile Organic Compounds (GC)

Diesel Range Organics (DRO) (GC)

Diesel Range Organics (DRO) (GC)

**Deionized Water Leaching Procedure** 

Anions, Ion Chromatography

Closed System Purge and Trap

Job ID: 890-1784-1

SDG: 31403720.000 task 28.02

XEN MID

Protocol	Laboratory	
SW846	XEN MID	- 4
TAL SOP	XEN MID	
SW846	XEN MID	
SW846	XEN MID	
MCAWW	XEN MID	
SW846	XEN MID	
SW846	XEN MID	

ASTM

#### **Protocol References:**

ASTM = ASTM International

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Eurofins Xenco, Carlsbad

# Sample Summary

Client: WSP USA Inc.

Project/Site: James E Upper Battery

Job ID: 890-1784-1

SDG: 31403720.000 task 28.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1784-1	SS08	Solid	12/29/21 12:44	12/30/21 09:04	0.25
890-1784-2	SS09	Solid	12/29/21 12:46	12/30/21 09:04	0.25
890-1784-3	SS10	Solid	12/29/21 12:48	12/30/21 09:04	0.25

Δ

5

6

8

9

1 0

12

13

14

# Project Manager: Kalei Jeni

Phone:

817-683-2503

James E Upper Battery

31403720.000 Task 28.02

Address: City, State ZIP:

Company Name:

Sampler's Name: P.O. Number: Project Number: Project Name:

Payton Benner

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 Chain of Custody

ATORIES Hobbs.NM (575-392	7550) Phoenix.AZ (480	Midland,TX (432-704-5440) EL Paso.TX (915)585-3443 Lubbock,TX (806)794-1296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	-620-2000) www.xenco.com
Kalei Jennings	Bill to: (if different) Kale, Jennings	Kalei Jennings	
WSPUSA	Company Name: WSP USA	WSPUSA	Program: UST/PST BRP Brownfields RC Sperfund
3300 North A Street Building 1, unit 222	Address:	3300 North A Street Building 1, unit 222	State of Project:
Midland, Texas 79705	City, State ZIP:	City, State ZIP: Midland, Texas 79705	Reporting:Level III

Routine Rush: Due Date:  et Ice: (Yes) No ainers  1)	Turn Around ANALYSI	Email: Kalei.jennings@wsp.com	City, State ZIP: Midland, Texas 79705	Address: 3300 North A Street Building 1, unit 222	Company Name: WSP USA	Bill to: (if different) Kalei Jennings	75-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296	*** *** *** *** *** *** *** *** *** **
200 Charles Castoox	ANALYSIS REQUEST Work Order Notes	Deliverables: EDD ADaPT Other:	Reporting:Level II	State of Project:	Program: UST/PST _RPrownfields _RC	Work Order Comments	,FL (813-620-2000) www.xenco.com	-1296	

	philip	Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed							SS10	SS09	SS08	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT
	13	nature)	nt and relinquishment of s nly for the cost of samples 175.00 will be applied to ea	200.8 / 6020: d Metal(s) to be an							S	S	S	ion Matrix	Yes No N/A	Yes No (N/A	No No	3.0/2.8	Temp Blank: /(Yes) No
	ce Cal	Received by	amples constitut and shall not as ch project and a	8A 8A							12/29/21	12/29/21	12/29/21	Date Sampled	Total	Correc	77	, T	/(Yes) No
	D	Received by: (Signature)	es a valid purcha sume any respon charge of \$5 for	8RCRA 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo N TCLP/SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U							12:48	12:46	12:44	Time Sampled	Total Containers:	Correction Factor:	500 M	Thermometer ID	Wet Ice: (Yes)
		)	se order from clasibility for any le	1 Texas 11 6010: 8RC							0.25	0.25	0.25	Depth		2.0	N		Yes No
	2		ient com osses or omitted to	RA S						-	-			Numbe	er of	Co	ntai	ners	3
	3.30	Date/Time	pany to a expense o Xenco,	b As	-	-	_		-	-	×	×	×	TPH (EF	_	_			
	5	me	(enco, it s incurre but not	Ba Be Ba Be	-	-	-		+	-	×	×	×	BTEX (E	_	_	_		
6	4000		s affiliat ed by the analyzed	0 B C					+	+	×	×	×	Chlorid	e (El	PA 3	00.0	)	
	14	Relin	es and s e client if d. These	B Cd Ca Cr Co Cd Cr Co Cu Pl	-	-	-		+	-	-		-		_	ļ	<u> </u>		
		Relinquished by:	ubcontr such lo terms w	Or C	-	-			+	-	+	-	-		_	Ogo-Trot Chair of Caccar	178		
		d by:	actors. sses are ill be en	Pb M		+	-		+	+	-		_		-	1			
		(Signature)	It assigns standard terms and conditions edue to circumstances beyond the contro forced unless previously negotiated.	n Mo				H	-	+	+	H			_	9			
		ature)	ns stand circums unless p	Ni Si		-	_		+	+	$\vdash$			-	-	a ciou	istody		Ē
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		eceive	condition the con lated.	× σ		+-	-			+	+	-	-						
		Received by: (Signature)	trol	e Ag	1	$\vdash$	-			+	+	-	L		_	-			
		(Signa		SiO2	$\parallel$	-		H	-	+	-	-	-				-		_
		ature)		Na S 1631 /		+	$\vdash$	$\vdash$	-	+	+	-	-	-			Τ		_
				245.1										San	lab, if	AT starts			
		Date/Time		Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn n Mo Ni Se Ag Ti U 1631/245.1/7470/7471: Hg							DISCRETE	DISCRETE	DISCRETE	Sample Comments	lab, if received by 4:30pm	TAT starts the day recevied by the			

Work Order No:

# **Login Sample Receipt Checklist**

Client: WSP USA Inc. Job Number: 890-1784-1 SDG Number: 31403720.000 task 28.02

List Source: Eurofins Xenco, Carlsbad

Login Number: 1784 List Number: 1 Creator: Clifton, Cloe

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

<6mm (1/4").

# **Login Sample Receipt Checklist**

Client: WSP USA Inc. Job Number: 890-1784-1

SDG Number: 31403720.000 task 28.02

Login Number: 1784 List Source: Eurofins Xenco, Midland List Number: 2 List Creation: 01/03/22 08:29 AM

Creator: Lowe, Katie

<6mm (1/4").

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



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	NAPP2129846676
District RP	
Facility ID	
Application ID	

# **Release Notification**

# **Responsible Party**

Responsible Party	ConocoPhillips	OGRID	
Contact Name	Kelsy Waggaman	Contact Telephone	432-88-9057
Contact email	Kelsy.Waggaman@ConocoPhillips.com	Incident # (assigned by OCD)	NAPP2129846676
Contact mailing address	600 West Illinois Avenue, Midlar	nd, Texas 79701	

Location	of Release	e Source
Location	UI NEIEAS	e Source

Latitude	32.408	333			Longitude -1(	03.840278	
			(NAD 83 in dec	imal de	grees to 5 decimal places)	s)	
Site Name		James E Up	per		Site Type	Tank Battery	
Date Release	Discovered	October 12	, 2021		API# (if applicable)	30-015-26645	
Unit Letter	Section	Township	Range		County		
F	12	22S	30E		Lea		
_	12	ZZO	OOL		Loa		
Surface Owne	er: State	Federal Tr	ibal Private (A	lame:		)	
			<b>N</b> T 4	I <b>T</b> 7 I	CD I		

#### 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) 2.2	Volume Recovered (bbls) 0
Produced Water	Volume Released (bbls) 15.8	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	■ Yes □ No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a water dump valve malfunction.

The release was on the pad and flowed into the pasture. A vacuum truck was dispatched to remove all freestanding fluids.

Concho will evaluate the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

Received by OCD: 9/28/202211:57:39 PM1 Form C-141 State of New Mexico Page 2 Oil Conservation Division

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Incident ID	NAPP2129846676
District RP	
Facility ID	
Application ID	

Was this a major release as defined by	If YES, for what reason(s) does the respo	nsible party consider this a major release?
19.15.29.7(A) NMAC?		
☐ Yes ■ No		
If YES, was immediate n	Lotice given to the OCD? By whom? To w	hom? When and by what means (phone, email, etc)?
	Initial R	esponse
The responsible		ly unless they could create a safety hazard that would result in injury
■ The source of the rele	ease has been stopped.	
■ The impacted area ha	s been secured to protect human health and	the environment.
Released materials ha	ave been contained via the use of berms or	dikes, absorbent pads, or other containment devices.
<u> </u>	ecoverable materials have been removed an	
If all the actions described	d above have <u>not</u> been undertaken, explain	why:
has begun, please attach	a narrative of actions to date. If remedial	remediation immediately after discovery of a release. If remediation efforts have been successfully completed or if the release occurred please attach all information needed for closure evaluation.
regulations all operators are public health or the environn failed to adequately investig addition, OCD acceptance of and/or regulations.	required to report and/or file certain release not ment. The acceptance of a C-141 report by the Gate and remediate contamination that pose a thref a C-141 report does not relieve the operator of	best of my knowledge and understand that pursuant to OCD rules and ifications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In responsibility for compliance with any other federal, state, or local laws
Printed Name Brittar	ıy N. Esparza	Title: Environmental Technician
Signature:	tanetopange	Date: 10/25/2021
email: Brittany.Espar	za@ConocoPhillips.com	Date: 10/25/2021 Telephone: (432) 221-0398
		-
OCD Only		
Received by: Ramona	a Marcus	Date:11/1/2021

eceived by OCD: 1	0/25/2021 1:27	:23 PM acility Name & Number: J	James E Upper B	attery			NAPP2129	846676	Page 3 of 4
			Cabin Lake Area						
	F	Release Discovery Date & Time:	10/12/21 8:45am	¥					
		Release Type: (	Oil Mixture						
	Provide an	known details about the event: F	PSV Spill						
				Spill Calculation - Subst	ırface Spill - Rectangle				
	Was	the release on pad or off-pad?		•	See reference table	e below			
Has it	rained at least	a half inch in the last 24 hours?			See reference table	e below			
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	200.0	60.0	0.25	15.16%	44.500	6.746	12.00%	0.810	5.937
Rectangle B	45.0	30.0	1.00	10.50%	20.025	2.103	12.00%	0.252	1.850
Rectangle C	27.0	27.0	2.00	15.16%	21.627	3.279	12.00%	0.393	2.885
Rectangle D	21.0	24.0	2.00	15.16%	14.952	2.267	12.00%	0.272	1.995
Rectangle E	24.0	9.0	2.00	15.16%	6.408	0.971	12.00%	0.117	0.855
Rectangle F	36.0	12.0	2.00	15.16%	12.816	1.943	12.00%	0.233	1.710
Rectangle G	21.0	21.0	1.00	10.50%	6.542	0.687	12.00%	0.082	0.604
Rectangle H				Ĵ.	0.000	0.000		0.000	0.000
Rectangle I					0.000	0.000		0.000	0.000
Released to Imaging	2: 11/1/2021 6:	15:30 AM			0.000	0.000		0.000	0.000
					Total Volume Release:	17.995		2.159	15.836

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410

Phone:(505) 334-6178 Fax:(505) 334-6170 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 57709

#### CONDITIONS

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	57709
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	11/1/2021

	Page 235 of 2	<i>51</i>
Incident ID	NAPP2129846676	
District RP		
Facility ID		
Application ID		

# **Site Assessment/Characterization**

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	X Yes No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vercontamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	tical extents of soil
Characterization Report Checklist: Each of the following items must be included in the report.	
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wel</li> <li>Field data</li> <li>Data table of soil contaminant concentration data</li> <li>Depth to water determination</li> <li>Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li> </ul>	ls.
Roring or excavation logs	

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.

Topographic/Aerial maps

Photographs including date and GIS information

☐ Laboratory data including chain of custody

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ID	NAPP2129846676	

Incident ID	NAPP2129846676
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Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Printed Name:Charles Beauvais	Title:Senior Environmental Engineer	
Signature: Charles R. Beauvais 99	Date:09/28/2022	
email:Charles.R.Beauvais@conocophillips.com	Telephone:575-988-2043	
OCD Only		
Received by:	Date:	

Incident ID NAPP2129846676
District RP
Facility ID
Application ID

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be	e included in the plan.	
<ul> <li>Detailed description of proposed remediation technique</li> <li>Scaled sitemap with GPS coordinates showing delineation points</li> <li>Estimated volume of material to be remediated</li> <li>Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>		
<u>Deferral Requests Only</u> : Each of the following items must be co	nfirmed as part of any request for deferral of remediation.	
Contamination must be in areas immediately under or around p deconstruction.	roduction equipment where remediation could cause a major facility	
Extents of contamination must be fully delineated.		
Contamination does not cause an imminent risk to human healt	h, the environment, or groundwater.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.  Printed Name:Charles Beauvais Title:Senior Environmental Engineer		
Signature: Charles R. Beauvais 19	Date:09/28/2022	
email:Charles.R.Beauvais@conocophillips.com	Telephone:575-988-2043	
OCD Only		
Received by:	Date:	
☐ Approved ☑ Approved with Attached Conditions of	Approval Denied Deferral Approved	
Signature: Jannifer Nobili	Date: 12/06/2022	

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	NAPP2200639375
District RP	
Facility ID	
Application ID	

# **Release Notification**

# **Responsible Party**

Responsible Party	ConocoPhillips	OGRID	
Contact Name	Kelsy Waggaman	Contact Telephone	(432) 688 - 9057
Contact email	Kelsy.Waggaman@ConocoPhillips.com	Incident # (assigned by OCD)	NAPP2200639375
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		
Location of Dologo Course			

			Location	of Release Source	
Latitude	32.408	333		Longitude103	3.840278
			(NAD 83 in deci	imal degrees to 5 decimal places)	
Site Name		James E Up	per	Site Type Ta	ank Battery
Date Release	Discovered	December 2	20, 2021	API# (if applicable)	
Unit Letter	Section	Township	Range	County	
Е	12	22S	30E	Eddy	
Surface Owner: State Federal Tribal Private (Name:)					

## Nature and Volume of Release

Materia	al(s) Released (Select all that apply and attach calculations or specif	ic justification for the volumes provided below)
Crude Oil	Volume Released (bbls) 3	Volume Recovered (bbls) 2
Produced Water	Volume Released (bbls) 21	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	■ Yes □ No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		
	aused by a failed pressure relief valve on f pad. A vacuum truck was dispatched to	·

ConocoPhillips will have the spill area evaluated for any possible impact from the release.

Received by OCD: 9/28/2022/1:57:39 PM Form C-141 State of New Mexico Page 2 Oil Conservation Division

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Incident ID	NAPP2200639375
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Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
☐ Yes ■ No	
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
	Initial Response
The responsible	party must undertake the following actions immediately unless they could create a safety hazard that would result in injury
■ The source of the rele	ease has been stopped.
■ The impacted area ha	is been secured to protect human health and the environment.
Released materials ha	ave been contained via the use of berms or dikes, absorbent pads, or other containment devices.
All free liquids and re	ecoverable materials have been removed and managed appropriately.
If all the actions described	d above have <u>not</u> been undertaken, explain why:
Dar 10 15 20 8 R (4) NM	IAC 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 at area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
regulations all operators are public health or the environr failed to adequately investig	rmation given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and required to report and/or file certain release notifications and perform corrective actions for releases which may endanger ment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have attended at and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In f a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws
Printed Name Brittar	Title: Environmental Technician  Date: 1/6/2022  Concho.com (432) 221-0398
S. Bart	1/6/2022
Signature:	Date: 1/6/2022  Concho.com  Telephone: (432) 221-0398
email: Desparza@	Telephone: (432) 221-0396
OCD Only	
Received by: Ramona M	Marcus Date: 1/6/2022

Rectangle E

Rectangle F

Rectangle G

Rectangle H

Rectangle I

Released to Imaging: 1/6/2022 4:44:30 PM

0.000

0.000

0.000

0.000

0.000

0.000

Total Volume Release:

0.000

0.000

0.000

0.000

0.000

0.000

17.317

0.000

0.000

0.000

0.000

0.000

0.000

2.251

0.000

0.000

0.000

0.000

0.000

0.000

15.066

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 70845

#### CONDITIONS

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	70845
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created B	y Condition	Condition Date
rmarcu	None	1/6/2022

State of New Mexico

Incident ID	NAPP2200639375
District RP	
Facility ID	
Application ID	

# **Site Assessment/Characterization**

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&gt;100</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	X Yes No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vecontamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	rtical extents of soil
Characterization Report Checklist: Each of the following items must be included in the report.	
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well Field data</li> <li>□ Data table of soil contaminant concentration data</li> <li>□ Depth to water determination</li> <li>□ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li> <li>□ Boring or excavation logs</li> <li>□ Photographs including date and GIS information</li> <li>□ Topographic/Aerial maps</li> <li>□ Laboratory data including chain of custody</li> </ul>	lls.

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.

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District RP
Facility ID
Application ID

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must b	e included in the plan.
<ul> <li>☑ Detailed description of proposed remediation technique</li> <li>☑ Scaled sitemap with GPS coordinates showing delineation poin</li> <li>☑ Estimated volume of material to be remediated</li> <li>☑ Closure criteria is to Table 1 specifications subject to 19.15.29.</li> <li>☑ Proposed schedule for remediation (note if remediation plan tin</li> </ul>	12(C)(4) NMAC
Deferral Requests Only: Each of the following items must be con-	nfirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around p deconstruction.	roduction equipment where remediation could cause a major facility
Extents of contamination must be fully delineated.	
Contamination does not cause an imminent risk to human healt	h, the environment, or groundwater.
	e and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of laws and/or regulations.  Title:Senior Environmental Engineer  Date:09/28/2022
OCD Only	
Received by:	Date:
Approved Approved with Attached Conditions of	Approval Denied Deferral Approved
Signature:	Date:

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

Responsible Party

ConocoPhillips

Volume Released (bbls)

Volume Released (bbls)

Volume Released (Mcf)

produced water >10,000 mg/l?

Is the concentration of dissolved chloride in the

Volume/Weight Released (provide units)

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	NAPP2202446534
District RP	
Facility ID	
Application ID	

217817

Volume Recovered (bbls)

Volume Recovered (bbls)

Volume Recovered (Mcf)

Volume/Weight Recovered (provide units)

☐ Yes ☐ No

# **Release Notification**

# **Responsible Party**

**OGRID** 

Contact Nan	ne	Kelsy Wa	ggaman	Contact Telephone	(432) 688-9057
Contact ema	il	Kelsy.Waggam	an@ConocoPhillips.co	m Incident # (assigned by OCD)	NAPP2202446534
Contact mail	ling address	600 West III	inois Avenue, Midl	and, Texas 79701	
			I agation of	Release Source	
Latitude	32.408	333		Longitude	40278
Site Name		James E Up	pper	Site Type Tank	Battery
Date Release	Discovered	January 1,	2022	API# (if applicable)	
Unit Letter	Section	Township	Range	County	
Е	12	22S	30E	Lea	
Surface Owne	r: State	■ Federal □ Tr	ibal Private (Name	olume of Release	)
	Material	(s) Released (Select al		lations or specific justification for the	volumes provided below)
Crude Oi	1	Volume Release	d (bbls) 61	Volume Reco	vered (bbls) 0

Cause of Release

Condensate

Natural Gas

Other (describe)

Produced Water

The release was caused by a valve failure. The release occurred on and off pad. ConocoPhillips will have the spill area evaluated for impact from the release.

Received by OCD: 9/28/2022 125789 PM1 State of New Mexico Page 2 Oil Conservation Division

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Incident ID	NAPP2202446534
District RP	
Facility ID	
Application ID	

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, ete)?  Notification was given by Kelsy Waggaman via email on January 3, 2022 at 5:40 PM to ocd.enviro@state.nm.us and BLM_NM_CFO_Spill@blm.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.  Thereby 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 environment. In		ES, for what reason(s) does the resp	onsible party consider this a major release?
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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.	and/or regulations.		
Printed Name Brittany N. Esparza Environmental Technician	Printed Name Brittany N	l. Esparza	Title: Environmental Technician
Signature: Pattan Espange Detai 1/24/2022	Signatura: Buttary	weparne	Date: 1/24/2022
Printed Name Brittany N. Esparza  Signature:  Brittany N. Esparza  Date:  Environmental Technician  1/24/2022  Telephone:  (432) 221-0398	Rrittany Fenarza@	ConocoPhillins com	
email:	email:		Telephone: (+02) 221-0390
OCD Only	OCD Only		
Received by: Ramona Marcus Date: 1/24/2022			40.4000

48 Sp	ill Volume	Estimate	Form
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Released to Imaging: 12/6/2022 4:11:46 1				L48 Spill Volume	Fstimate Form				Received by OCD: 9/28/2022 1:57:39 PM
eceived by OCD	: 1/24/2022 1.	2:58:57aCAN Name & Number:	James E Upper	E-TO Opin ( C.a.n.)	Estimate i oim				Page 3 of 4
			Cabin Lake, Hobbs					NAPP2202446	F24
	F	Release Discovery Date & Time:						NAPP2202446	534
		Release Type:	AND DESCRIPTION OF THE PROPERTY OF THE PROPERT	0.011/0.010/0.00					
	Provide any	known details about the event:	Spill originated from	n the pressure releave valve on the	production separator.				
				Spill Calculation - Subsu	ırface Spill - Rectangle				
	Was	the release on pad or off-pad?			See reference tal	ole below			
Has i	t rained at least	a half inch in the last 24 hours?			See reference tal	ole below			
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	52.0	40.0	1.00	10.50%	30.853	3.240	13.00%	0.421	2.818
Rectangle B	120.0	180.0	0.25	10.50%	80.100	8.411	13.00%	1.093	7.317
Rectangle C	60.0	14.0	3.00	15.16%	37.380	5.667	13.00%	0.737	4.930
Rectangle D					0.000	0.000		0.000	0.000
Rectangle E				is a second	0.000	0.000		0.000	0.000
Rectangle F				100	0.000	0.000		0.000	0.000
Rectangle G		e e			0.000	0.000		0.000	0.000
Rectangle H		e e			0.000	0.000		0.000	0.000
Rectangle I				10	0.000	0.000		0.000	0.000
Released to Imag	ing: 1/24/202	2 1:26:52 PM		15	0.000	0.000		0.000	0.000 .
					Total Volume Release	17.317	I	2.251	15.066

	Page 248 of 2.	<i>51</i>
Incident ID	NAPP2202446534	
District RP		
Facility ID		
Application ID		

# Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&gt;100</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	X Yes No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and ver contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	tical extents of soil
Characterization Report Checklist: Each of the following items must be included in the report.	
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wel</li> <li>Field data</li> <li>Data table of soil contaminant concentration data</li> <li>Depth to water determination</li> </ul>	ls.

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.

Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release

Boring or excavation logs

Topographic/Aerial maps

Photographs including date and GIS information

Laboratory data including chain of custody

Received by OCD: 9/28/2022 1:57:39 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

<b>Page 249 of</b> .	431	L

Incident ID	NAPP2202446534
District RP	
Facility ID	
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Printed Name:Charles Beauvais	Title:Senior Environmental Engineer			
Signature: Charles R. Beauvais 99	Date:09/28/2022			
email:Charles.R.Beauvais@conocophillips.com	Telephone:575-988-2043			
OCD Only				
Received by:	Date:09/28/2022			

Page 250 of 251 Incident ID NAPP2202446534 District RP Facility ID Application ID

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.				
<ul> <li>Detailed description of proposed remediation technique</li> <li>Scaled sitemap with GPS coordinates showing delineation points</li> <li>Estimated volume of material to be remediated</li> <li>Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>				
Deferral Requests Only: Each of the following items must be co	nfirmed as part of any request for deferral of remediation.			
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.				
Extents of contamination must be fully delineated.				
Contamination does not cause an imminent risk to human health, the environment, or groundwater.				
The state of the decision of the state of th	to the last of the last last and advantage of the OCD			
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Printed Name:Charles Beauvais	Title:Senior Environmental Engineer			
Signature: Charles R. Beauvais 19	Date:09/28/2022			
email:Charles.R.Beauvais@conocophillips.com	Telephone:575-988-2043			
OCD Only				
Jocelyn Harimon Received by:	09/28/2022 Date:			
Approved	Approval Denied Deferral Approved			
Signature:	Date:			

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II

811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 147027

#### **CONDITIONS**

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	147027
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
jnobui	Remediation Plan Approved with Conditions. Sidewall samples should be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release, regardless of depth to groundwater. Variance has been approved: composite confirmation samples will be collected from the bottom of the excavation from areas representing no more than four hundred (400) square feet; sidewalls no more than two hundred (200) square feet.	12/6/2022