

SITE INFORMATION

Report Type: Closure Report 1R-4690 / nOY1712541751

General Site Information:

Site:	Manda B Tract C Tank Battery					
Company:	JR Oil					
Section, Township and Range	Unit C	Sec. 28	T 22S	R 37E		
Lease Number:						
County:	Lea County, NM					
GPS:	32.368859			-103.169723		
Surface Owner:	Private					
Mineral Owner:	Private					
Directions:	From intersection of HWY 18 and King Rd, head West on King Rd and follow for 0.56 miles. Turn right (North) on lease road and follow for 0.48 miles. Location is on left					

Release Data:

Date Released:	4/26/2017
Type Release:	Oil and Produced Water
Source of Contamination:	Failed Check Valve
Fluid Released:	4 bbls oil & 10 bbls water
Fluids Recovered:	4.5 bbls oil & water

Official Communication:

Name:	Joe Tippy		Clair Gonzales
Company:	JR OIL LTD		Tetra Tech
Address:	PO Box 2975		901 W. Wall St.
			Ste 100
City:	Hobbs, New Mexico 88241		Midland, Texas, 79701
Phone number:	(575) 390 - 1280		(432) 682-4559
Fax:			
Email:	JoeTippy@valornet.com		clair.gonzales@tetrattech.com

Site Characterization

Depth to Groundwater:	At 0.50 miles from site depth of groundwater is 60.46' ft, 02.09.2023, USGS
Karst Potential:	Low

Recommended Remedial Action Levels (RRALs)

Benzene	Total BTEX	TPH (GRO+DRO)	TPH (GRO+DRO+MRO)	Chlorides
10 mg/kg	50 mg/kg	1,000 mg/kg	2,500 mg/kg	10,000 mg/kg



June 18, 2024

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**RE: Remediation Closure Report
JR Oil LTD
Manda B Tract C Tank Battery
Lea County, New Mexico
1R-4690
nOY1712541751**

Oil Conservation Division:

Tetra Tech, Inc. (Tetra Tech) was contracted by JR Oil LTD (JR Oil) to assess a release that occurred at the Manda B Tract C Battery Tank, Unit C, Section 28, Township 22 South, Range 37 East, Lea County, New Mexico (Site). The spill site coordinates are 32.368859°, -103.169723°. The site location is shown on **Figures 1 and 2**.

Background

According to the State of New Mexico C-141 Initial Report, the release at the Site was caused by a leak in a check valve on the water line of the Rice SWD failing, causing the release of 4 barrels (bbls) of oil and 10 bbls of produced water. The release impacted the pad, flowing alongside the lease road and migrated into the adjacent pasture to the south. Additionally, 4.5 bbls of oil and produced water were recovered from the release. On April 26, 2017, the release was discovered. On April 27, 2017, the release was reported to the New Mexico Oil Conservation Division (NMOCD). The C-141 is shown in **Appendix A**.

Previous Closed Incident

The current release overlapped the remediation area of a previously approved closure that contained a liner at 2.0 feet below ground surface (ft bgs). According to the New Mexico C-141 Initial Reports, two releases occurred on dates March 17, 2014 and May 20, 2014, where fluids were released from a overflowed tank. A total of 40 bbls of mixed fluids and 30 bbls of produced water were released. According to the previously approved closure, which was written by a previous consultant, excavation activities took place from dates March 23, 2015, through March 27, 2015, where the areas of impact were excavated to a depth of 2.0 ft bgs in an area approximately 40.0 ft in length and 45.0 ft in width, west of the battery. Within the 2.0 ft excavation, a liner was installed with approximately dimension of 32.0 ft in length by 14.0 ft in width. Additionally, an area of approximately 75.0 ft in length and 10.0 ft in width was excavated to a total depth of 4.0' ft bgs south of the battery alongside the lease road. On April 24, 2015, the closure was approved by the New Mexico Oil conservation Division (NMOCD). The liner location within the current excavation is shown on **Figure 4**, and the previous closure report is shown in **Appendix B**.



Site Characterization

Significant Water Features

According to the NFHL (National Flood Hazard Layer) Flood Data Application and the USGS (United States Geological Survey) National Water Information System Mapper, there were no watercourses, lakebeds, sinkholes, playa lakes, springs, wetlands, subsurface mines, private domestic water wells, or floodplains located within the specified distances. Additionally, the site is located in a low karst area. The NFHL Map, USGS Mapper, and Karst map are shown in **Appendix C**.

Significant Boundaries

According to Google Earth US Government City Boundaries and US School Districts, the lateral extents of the release were not within an incorporated municipal boundary, defined municipal fresh water well field, or a school district. Additionally, there were no occupied permanent residences, schools, hospitals, institution, or churches located within the specified distances of the lateral extents of the release.

Groundwater Review

Groundwater research was completed for the site through the USGS (United States Geological Survey) National Water Information System and New Mexico Office of the State Engineer (NMOSE) Water Rights Reporting System. Groundwater research conducted through these two resources, show the three closest water wells within a .55-mile radius of the Site. The well reported on the USGS National Water Information System reports a total depth of 112 ft bgs and measured water level of 60.46 ft bgs and is approximately 0.50 miles of the Site. The well reported on the USGS National Water Information System reports a total depth of 140 ft bgs and measured water level of 62 ft bgs and is approximately 0.50 miles of the Site. The well reported on the NMOSE Water Rights Reporting Systems reports a water level measured at 94.35 ft bgs and is approximately 0.52 miles of the Site. The groundwater information is shown in **Appendix C**.

Distance from Site	Date of Data	Resource of Information	Depth of Well	Depth to Water
0.50 Miles	02/09/2023	USGS	112'	60.46'
0.50 Miles	09/01/1953	USGS	140'	62.00'
0.52 Miles	09/25/1972	NMOSE	110'	65.00'

Regulatory

A risk-based evaluation was performed for the site following the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases, updated July 18, 2018. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram



(mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the site characterization, the proposed RRAL for TPH, beyond the top 4.0' of soil, is 2,500 mg/kg (GRO + DRO + ORO) and 1,000 mg/kg (DRO + GRO). Additionally, based on the site characterization, the proposed RRAL for chlorides, beyond the top 4.0' of soil, is 10,000 mg/kg.

Site Assessment Activities

Initial Site Assessment Activities

Tetra Tech conducted site assessment activities on October 18, 2023. A total of six (6) investigative bores (AH-1 through AH-6) were installed to depths ranging from surface to 4.5 ft bgs, to attempt to assess soil in the area. Deeper samples were not collected from investigative bores (AH-2, AH-3, AH-4, and AH-6) due to dense geological formation. Additionally, a total of eight (8) investigative surface bores (H-1 through H-8) were installed to total depths of 1.0 ft bgs, to horizontally delineate the investigative area. The investigative area and sample locations are shown on **Figure 3**.

The samples were submitted to Eurofins Laboratories in Midland, Texas and Cardinal Laboratories in Hobbs, New Mexico to be analyzed for TPH by method 8015 modified, BTEX by method 8021B, and Chloride by EPA Method 300.0 or Method SM 4500. The analytical results are summarized in **Table 1** and the analytical laboratory reports are included in **Appendix D**.

Referring to Table 1, investigative bore (AH-2) indicated a chloride concentration above reclamation standards, with a concentration of 621 mg/kg, at a depth of 2-2.5 ft bgs. Investigative bores (AH-1 – AH-6) indicated TPH concentrations to be above RRALs, with concentrations ranging from 132 mg/kg to 13,593 mg/kg, at depths ranging from surface to 4.5 ft bgs. Investigative bores (AH-1 through AH-6) indicated benzene and BTEX concentrations below RRALs. Additionally, investigative surface borings (H-1 through H-8) indicated chloride, TPH, benzene, and BTEX concentrations below RRALs.

Additional Site Assessment Activities

On January 31, 2023, a total of five (5) delineation trenches (T-1, T-2, T-3, T-4 and T-5) were installed to total depths of 4.0 ft bgs in areas of investigative bores (AH-2, AH-3, AH-4, AH-5, and AH-6), where auger refusal was encountered during the initial delineation assessment activities, to attempt to fully delineate the release impacted area. The impact and sample locations are shown on **Figure 3**.

The samples were submitted to Eurofins Laboratories in Midland, Texas and Cardinal Laboratories in Hobbs, New Mexico to be analyzed for TPH by method 8015 modified, BTEX by method 8021B, and Chloride by EPA Method 300.0 or Method SM 4500. The analytical results are summarized in **Table 1** and the analytical laboratory reports are included in **Appendix D**.

Referring to Table 1, vertical delineation trenches (T-1 through T-5) indicated benzene, BTEX, and chloride concentrations below RRALs. However, trenches (T-1 through T-5) indicated TPH concentrations above RRALs, ranging from 132 mg/kg to 2,790 mg/kg at depths



ranging from surface to 4.0 ft bgs. Vertical delineation was found in all trenches (T-1 through T-5) for all constituents.

Remediation Activities

JR Oil conducted remediation activities from January 31, 2024 to March 29, 2024. The areas of determined impact were excavated to total depths ranging from 2.0 ft bgs to 4.0 ft bgs. The excavation areas and depths are shown on **Figure 4**. Remediation activities included the careful removal and proper disposal of the top 2.0 ft of soil from the previously approved liner from approved closure report dating April 24, 2015.

Following remediation activities, Tetra Tech conducted confirmation sampling by collecting 5-point composite bottom hole samples and 5-point composite sidewall samples every 200 square feet within the remediation. All confirmation samples are collected as a composite 5-point die pattern to ensure a representative sample of sidewalls and floor of the excavation are collected. Additionally, a C-141N was filed for the sampling notification as well, and is attached along with the final C-141 in **Appendix A**. A total of thirteen (13) bottom holes (BH-1 through BH-13) were collected and a total of twenty (20) sidewalls (SW-1 through SW-20) were collected to confirm full removal of the impacted soil. The confirmation soil samples were submitted to the Cardinal Laboratory in Hobbs, New Mexico to be analyzed for TPH by method 8015 modified, BTEX by method 8021B, and Chloride by EPA Method 300.0 and EPA Method 4500. The analytical results are summarized in **Table 2** and the analytical laboratory reports are included in **Appendix D**.

Regarding all final samples collected from the remediation, analytical results indicated benzene, BTEX, TPH, and chloride concentrations were below the RRALs.

Conclusions

Based on the C-141's (nOY1712541751) and information provided by JR Oil, Tetra Tech performed site characterization and groundwater research to determine groundwater depth, proximity from significant water features, and proximity from specified populated entities to determine RRALs and assess the impacted area. Based on the *OCD Guidelines for Remediation of Leaks, Spills, and Releases*, updated July 18, 2023, according to the groundwater data found during research activities, for soil beyond the top 4.0 ft, RRALs of 10,000 mg/kg for chlorides and 2,500 mg/kg for total TPH were followed. Based on Tetra Tech assessment activities, investigative bores (AH-1 through AH-6) indicated TPH concentrations that exceeded RRALs and required additional delineation and remediation.

Following remediation of the areas of impact, Tetra Tech conducted confirmation soil sampling of the area by collecting 5-point composite confirmation bottom hole and sidewall samples to ensure the impacted soil was fully removed. Approximately 631 cubic yards total of impacted soil was removed and properly disposed of. The area was backfilled with clean to surface grade material. The analytical results indicated all confirmation samples reported below the RRALs for all constituents.



The disturbed area was approximately 4,800 square feet and following backfill of the disturbed area, the site was seeded for sites with loamy fine sand to sandy clay loam soil composition. Revegetation of the site will be monitored, following the rain season (March through June) and if vegetation has not progressed, the site will be reseeded as needed to meet the requirement of 50 percent life-form coverage and at least 70 percent plant cover based on pre-disturbed levels, as stated by the NMOCD. Following the proper vegetation of the site, a vegetation report will be submitted to prove restoration of the site and will request full closure. The soil survey data is shown **Appendix E**.

Based on this information, it is recommended that the remediated pad at this Site requires no further action. The C-141 is included in **Appendix A**.

If you require any additional information or have any questions or comments, please contact us at (432) 682-4559.

Respectfully submitted,
TETRA TECH

A handwritten signature in black ink, appearing to read 'Miguel Flores'.

Miguel Flores,
Field Tech IV

A handwritten signature in black ink, appearing to read 'Brittany Long'.

Brittany Long,
Project Manager

A handwritten signature in blue ink, appearing to read 'Clair Gonzales'.

Clair Gonzales, P.G.
Senior Project Manager



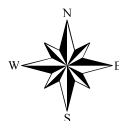
Figures



Document Path: C:\Users\LORENZO\OneDrive - Tetra Tech, Inc\Documents\Projects\JROIL Luf\03262 - Manda B Tract C Battery\GIS\MXD\03262 - Figure 1 - Manda B.mxd

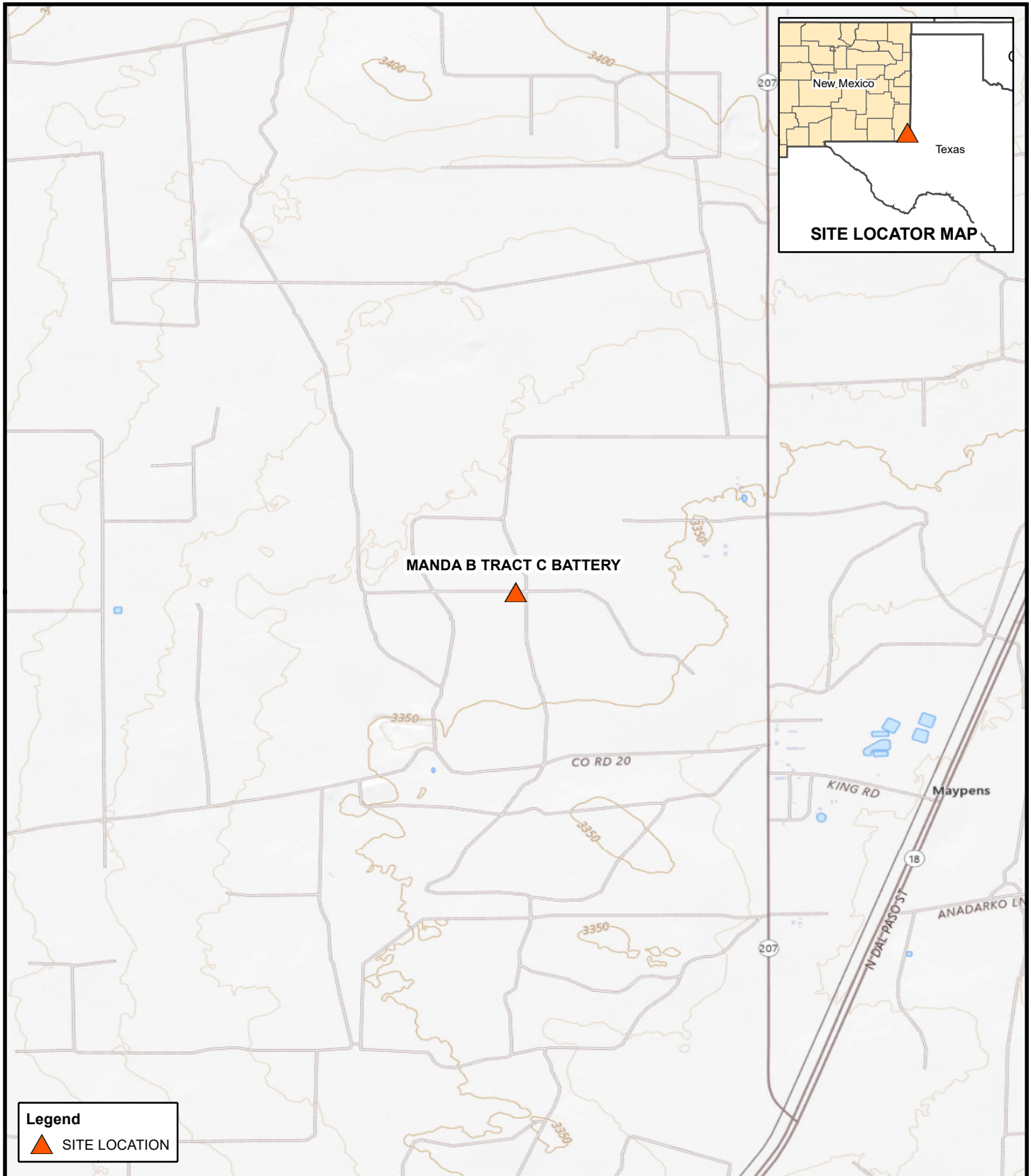


901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559



0 10,000 20,000
Approximate Scale in Feet

Service Layer Credits: World Street Map, ESRI.

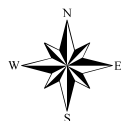


Legend
▲ SITE LOCATION

TETRA TECH
www.tetrattech.com

901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559

JR OIL



0 875 1,750
Approximate Scale in Feet

TOPOGRAPHIC MAP
MANDA B TRACT C BATTERY

LEA COUNTY, NEW MEXICO
(32.368834°, -103.169770°)

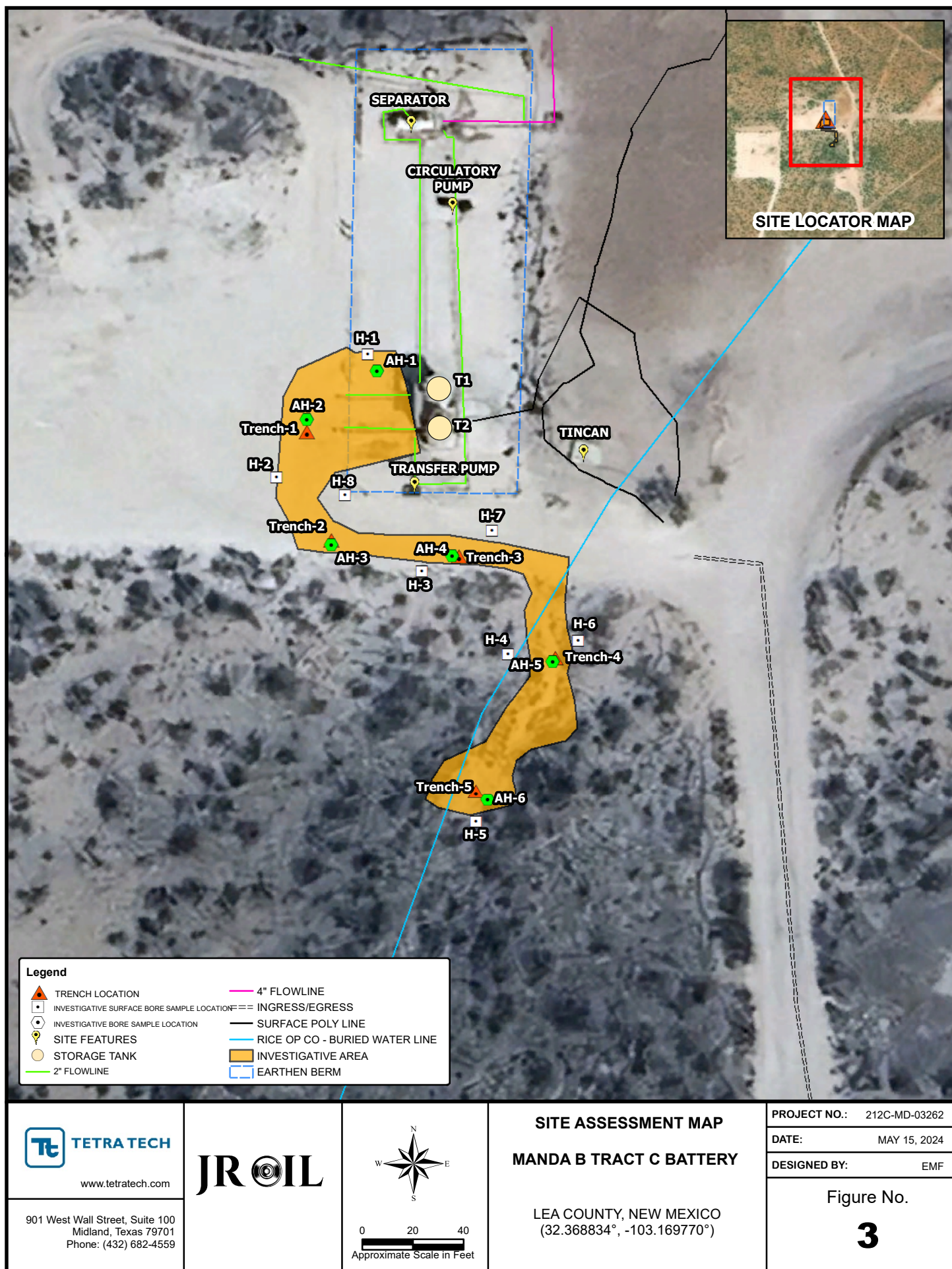
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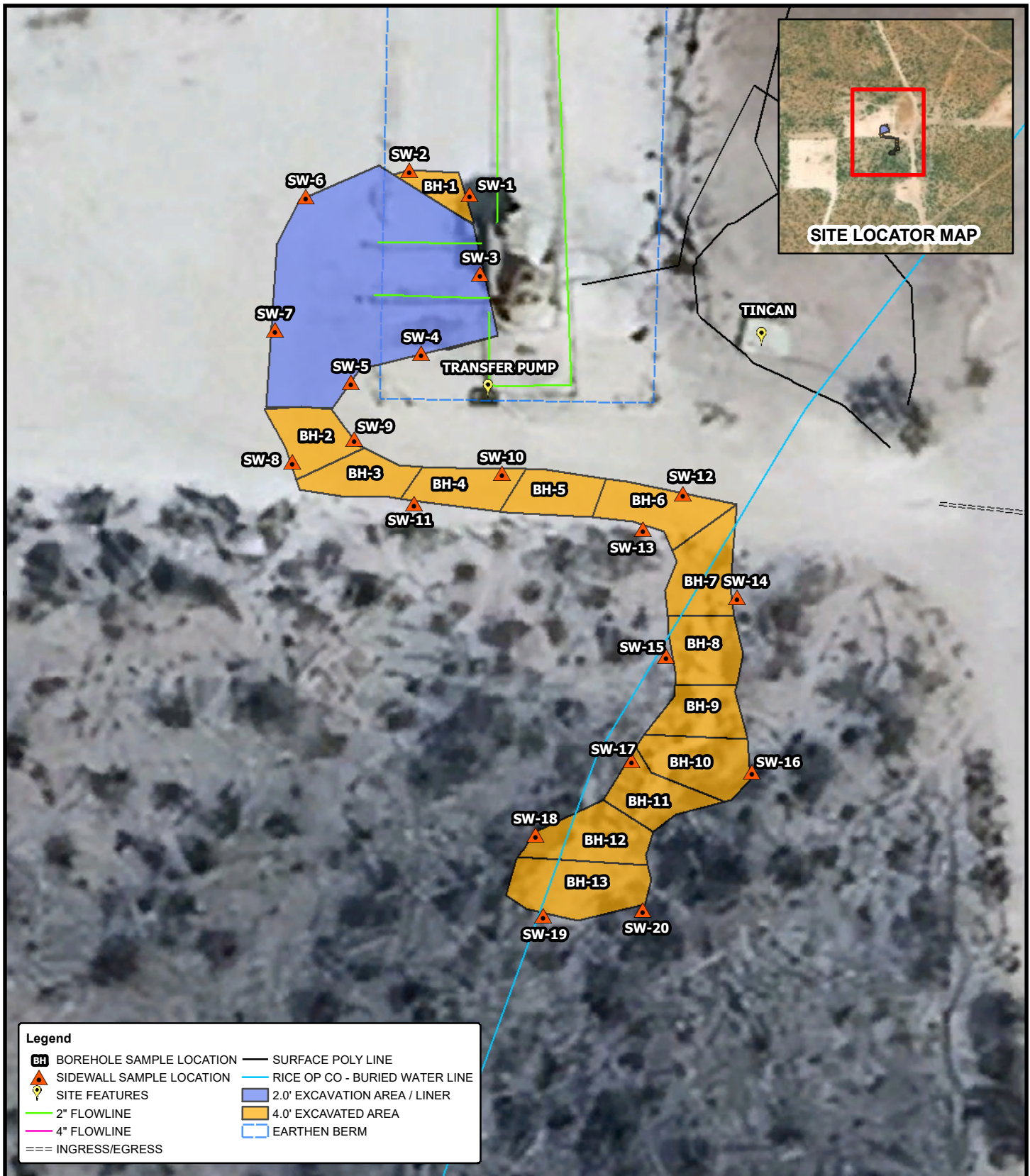
DATE: MAY 15, 2024

DESIGNED BY: EMF

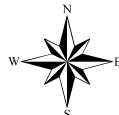
Figure No.

2





901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559



0 10 20
Approximate Scale in Feet

EXCAVATION AREA MAP MANDA B TRACT C BATTERY

LEA COUNTY, NEW MEXICO
(32.368834°, -103.169770°)

PROJECT NO.: 212C-MD-03262

DATE: MAY 15, 2024

DESIGNED BY: EMF

Figure No.

4



Tables

Table 1
JR Oil LTD
Manda B Tract C Battery
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
RRALs							100 mg/kg		10 mg/kg				50 mg/kg	600 mg/kg
RRALs (Beyond Top 4.0' of Soil)					1,000 mg/kg			2,500 mg/kg	10 mg/kg				50 mg/kg	10,000 mg/kg
AH-1	10/18/2023	0-1	-	X	<75.6	10,200	<75.6	10,200	<0.00383	<0.00454	<0.00563	<0.0101	<0.0101	49.5
	"	1-1.5	-	X	<15.2	5090	<15.2	5,090	<0.00383	<0.00453	<0.00562	<0.0100	<0.0100	44.1
	"	2-2.5	-	X	<15.0	4,400	<15.0	4400	<0.00384	<0.00455	<0.00564	<0.0101	<0.0101	92.8
	"	3-3.5	-	X	<15.0	425	<15.0	425	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	249
	"	4-4.5	-	X	16.9	272	<14.9	289	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	241
AH-2	10/18/2023	0-1	-	X	<74.4	4,420	<74.4	4,420	<0.000387	<0.000459	<0.000568	<0.00102	<0.00102	234
	"	1-1.5	-	X	82.2	5,160	<75.7	5,242	<0.000387	<0.000458	<0.000567	<0.00101	<0.00101	229
	"	2-2.5	-	X	<15.1	724	<15.1	724	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	621
Trench-1	1/31/2024	0-1	X	-	<10.0	2,350	440	2,790	<0.050	<0.050	<0.050	<0.150	<0.300	208
	"	2	X	-	<10.0	1,930	713	2,643	<0.050	<0.050	<0.050	<0.150	<0.300	352
	"	3	X	-	<10.0	1,880	904	2,784	<0.050	<0.050	<0.050	<0.150	<0.300	384
	"	4	X	-	<10.0	296	158	454	<0.050	<0.050	<0.050	<0.150	<0.300	944
AH-3	10/18/2023	0-1	-	X	<15.1	4,290	<15.1	4,290	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	94.9
	"	1-1.5	-	X	<14.9	2,320	<14.9	2,320	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	154
	"	2-2.5	-	X	22.2	166	<14.9	188	<0.000387	<0.000459	<0.000568	<0.00102	<0.00102	385
Trench-2	1/31/2024	0-1	X	-	<10.0	1,180	495	1,675	<0.050	<0.050	<0.050	<0.150	<0.300	352
	"	2	X	-	<10.0	893	382	1,275	<0.050	<0.050	<0.050	<0.150	<0.300	336
	"	3	X	-	<10.0	990	358	1,348	<0.050	<0.050	<0.050	<0.150	<0.300	304
	"	4	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0

Table 1
JR Oil LTD
Manda B Tract C Battery
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)		
			In-Situ	Removed	GRO	DRO	MRO	Total								
RRALs									100 mg/kg	10 mg/kg	50 mg/kg				600 mg/kg	
RRALs (Beyond Top 4.0' of Soil)									1,000 mg/kg	2,500 mg/kg	10 mg/kg	50 mg/kg				10,000 mg/kg
AH-4	10/18/2023	0-1	-	X	<75.3	6,940	<75.3	6,940	<0.000386	<0.000457	<0.000566	<0.00101	<0.00101	52.3		
	"	1-1.5	-	X	32.2	4,440	311	4,783	<0.00765	<0.00907	<0.0112	<0.0201	<0.0201	64.2		
	"	2-2.5	-	X	38.0	908	67.5	1,014	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	42.5		
Trench-3	1/31/2024	0-1	X	-	<10.0	1,730	673	2,403	<0.050	<0.050	<0.050	<0.150	<0.300	64.0		
	"	2	X	-	<10.0	45.4	39.8	85.2	<0.050	<0.050	<0.050	<0.150	<0.300	96.0		
	"	3	X	-	<10.0	294	222	516	<0.050	<0.050	<0.050	<0.150	<0.300	304		
	"	4	X	-	<10.0	683	257	940	<0.050	<0.050	<0.050	<0.150	<0.300	240		
AH-5	10/18/2023	0-1	-	X	38.5	1,780	241	2,060	<0.000386	<0.000457	<0.000566	<0.00101	<0.00101	44.1		
	"	1-1.5	-	X	22.3	1,360	214	1,596	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	77.2		
	"	2-2.5	-	X	<15.1	1,350	167	1,517	<0.000381	<0.000451	<0.000559	<0.00100	<0.00100	255		
	"	3-3.5	-	X	21.4	1,260	127	1,408	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	516		
	"	4-4.5	-	X	40.9	3,650	219	3,910	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	540		
Trench-4	1/31/2024	0-1	X	-	<10.0	140	67.0	207	<0.050	<0.050	<0.050	<0.150	<0.300	48.0		
	"	2	X	-	<10.0	48.1	27.8	75.9	<0.050	<0.050	<0.050	<0.150	<0.300	32.0		
	"	3	X	-	<10.0	361	234	595	<0.050	<0.050	<0.050	<0.150	<0.300	160		
	"	4	X	-	<10.0	123	62.1	185	<0.050	<0.050	<0.050	<0.150	<0.300	192		
AH-6	10/18/2023	0-1	-	X	33.4	2,100	307	2,440	<0.000387	<0.000459	0.000958	<0.00102	0.000958	37.7		
	"	1-1.5	-	X	31.5	800	143	975	<0.000387	<0.000458	<0.000567	<0.00101	<0.00101	58.5		
	"	2-2.5	-	X	26.9	67.0	<15.1	93.9	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	52.1		
	"	3-3.5	-	X	163	12,100	1,330	13,593	<0.000381	<0.000451	<0.000559	<0.00100	<0.00100	189		
Trench-5	1/31/2024	0-1	X	-	<10.0	58.6	20.4	79.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0		
	"	2	X	-	<10.0	91.7	39.8	132	<0.050	<0.050	<0.050	<0.150	<0.300	16.0		
	"	3	X	-	<10.0	51.3	26.4	77.7	<0.050	<0.050	<0.050	<0.150	<0.300	32.0		
	"	4	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0		

Table 1
JR Oil LTD
Manda B Tract C Battery
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
RRALs								100 mg/kg	10 mg/kg				50 mg/kg	600 mg/kg
RRALs (Beyond Top 4.0' of Soil)					1,000 mg/kg			2,500 mg/kg	10 mg/kg				50 mg/kg	10,000 mg/kg
H-1	10/18/2023	0-1	X	-	24.2	15.4	<14.9	39.6	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	69.2
H-2	10/18/2023	0-1	X	-	19.0	38.3	<15.2	57.3	<0.000387	<0.000458	<0.000567	<0.00101	<0.00101	38.3
H-3	10/18/2023	0-1	X	-	21.4	37.3	<15.1	58.7	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	32.6
H-4	10/18/2023	0-1	X	-	19.9	61.8	<15.0	81.7	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	36.3
H-5	10/18/2023	0-1	X	-	21.6	21.2	<14.9	42.8	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	23.3
H-6	10/18/2023	0-1	X	-	22.8	15.5	<14.9	38.3	<0.000387	<0.000459	<0.000568	<0.00102	<0.00102	33.0
H-7	10/18/2023	0-1	X	-	21.3	74.6	<15.0	95.9	<0.000386	<0.000457	<0.000566	<0.00101	<0.00101	37.9
H-8	10/18/2023	0-1	X	-	18.8	63.8	<15.0	82.6	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	94.6

NOTES

RRALs (Recommended Remediation Action Levels) are based on NMOCD (New Mexico Oil Conservation Division) *Guidelines for Remediation of Leaks, Spills, and Releases*.

All screening values and results are presented in milligrams per kilogram (mg/kg)

Bolded cells represent a detected concentration above the respective screening value.

< = analyte was not detected above the respective sample detection limit

ft = feet below ground surface

(-) = not analyzed for respective constituent

TPH = total petroleum hydrocarbons

BTEX = benzene, toluene, ethylbenzene, xylene


 Exceedance

Table 2
JR Oil LTD
Manda B Tract C Battery
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
RRALs								100 mg/kg	10 mg/kg				50 mg/kg	600 mg/kg
RRALs (Beyond Top 4.0' of Soil)					1,000 mg/kg				2,500 mg/kg	10 mg/kg			50 mg/kg	10,000 mg/kg
BH-1	3/6/2024	4.0	X	-	<10.0	190	35.2	225	<0.050	<0.050	<0.050	<0.150	<0.300	544
BH-2	3/6/2024	4.0	X	-	<10.0	901	199	1100	<0.050	<0.050	<0.050	<0.150	<0.300	2000
BH-3	3/6/2024	4.0	X	-	<10.0	761	167	928	<0.050	<0.050	<0.050	<0.150	<0.300	1760
BH-4	3/6/2024	4.0	X	-	<10.0	906	198	1104	<0.050	<0.050	<0.050	<0.150	<0.300	1790
BH-5	3/6/2024	4.0	X	-	<10.0	143	90.5	234	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
BH-6	3/6/2024	4.0	X	-	<10.0	164	92.1	256	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
BH-7	3/6/2024	4.0	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
BH-8	3/6/2024	4.0	X	-	<10.0	226	152	378	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
BH-9	3/6/2024	4.0	X	-	<10.0	669	162	831	<0.050	<0.050	<0.050	<0.150	<0.300	480
BH-10	3/6/2024	4.0	X	-	<10.0	892	209	1,101	<0.050	<0.050	<0.050	<0.150	<0.300	448
BH-11	3/6/2024	4.0	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
BH-12	3/6/2024	4.0	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
BH-13	3/6/2024	4.0	X	-	<10.0	282	53.4	335	<0.050	<0.050	<0.050	<0.150	<0.300	368
SW-1	3/6/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW-2	3/6/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
SW-3	3/6/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	96.0
SW-4	3/6/2024	-	-	X	<10.0	2,270	484	2,754	<0.050	<0.050	<0.050	<0.150	<0.300	272
	3/29/2024	-	X	-	<10.0	34.8	<10.0	34.8	<0.050	<0.050	<0.050	<0.150	<0.300	288
SW-5	3/6/2024	-	-	X	<10.0	3,060	731	3,791	<0.050	<0.050	<0.050	<0.150	<0.300	160
	3/29/2024	-	X	-	<10.0	36.9	11.7	48.6	<0.050	<0.050	<0.050	<0.150	<0.300	256
SW-6	3/6/2024	-	-	X	<10.0	270	75.6	346	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
	3/29/2024	-	X	-	<10.0	17.2	<10.0	17.2	<0.050	<0.050	<0.050	<0.150	<0.300	160
SW-7	3/6/2024	-	X	-	<10.0	94	<10.0	94	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
SW-8	3/6/2024	-	X	-	<10.0	66.7	<10.0	66.7	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW-9	3/6/2024	-	X	-	<10.0	23.8	<10.0	23.8	<0.050	<0.050	<0.050	<0.150	<0.300	48.0

Table 2
JR Oil LTD
Manda B Tract C Battery
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
RRALs								100 mg/kg	10 mg/kg				50 mg/kg	600 mg/kg
RRALs (Beyond Top 4.0' of Soil)					1,000 mg/kg			2,500 mg/kg	10 mg/kg				50 mg/kg	10,000 mg/kg
SW-10	3/6/2024	-	X	-	<10.0	68.7	<10.0	68.7	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW-11	3/6/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
SW-12	3/6/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
SW-13	3/6/2024	-	X	-	<10.0	29	<10.0	29	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
SW-14	3/6/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
SW-15	3/6/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
SW-16	3/6/2024	-	-	X	<10.0	1140	269	1409	<0.050	<0.050	<0.050	<0.150	<0.300	112
	3/29/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
SW-17	3/6/2024	-	-	X	<10.0	1,390	336	1,726	<0.050	<0.050	<0.050	<0.150	<0.300	176
	3/29/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
SW-18	3/6/2024	-	-	X	<10.0	1130	276	1406	<0.050	<0.050	<0.050	<0.150	<0.300	128
	3/29/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
SW-19	3/6/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
SW-20	3/6/2024	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0

NOTES

RRALs (Recommended Remediation Action Levels) are based on NMOCD (New Mexico Oil Conservation Devision) *Guidelines for Remediation of Leaks, Spills, and Releases*.

All screening values and results are presented in milligrams per kilogram (mg/kg)

Bolded cells represent a detected concentration above the respective screening value.

< = analyte was not detected above the respective sample detection limit

ft = feet below ground surface

(-) = not analyzed for respective constituent

TPH = total petroleum hydrocarbons

BTEX = benzene, toluene, ethylbenzene, xylene

 Exceedance
 Removed



Photographic Documentation

JR Oil
Manda B Tract 2024
Lea County, New Mexico

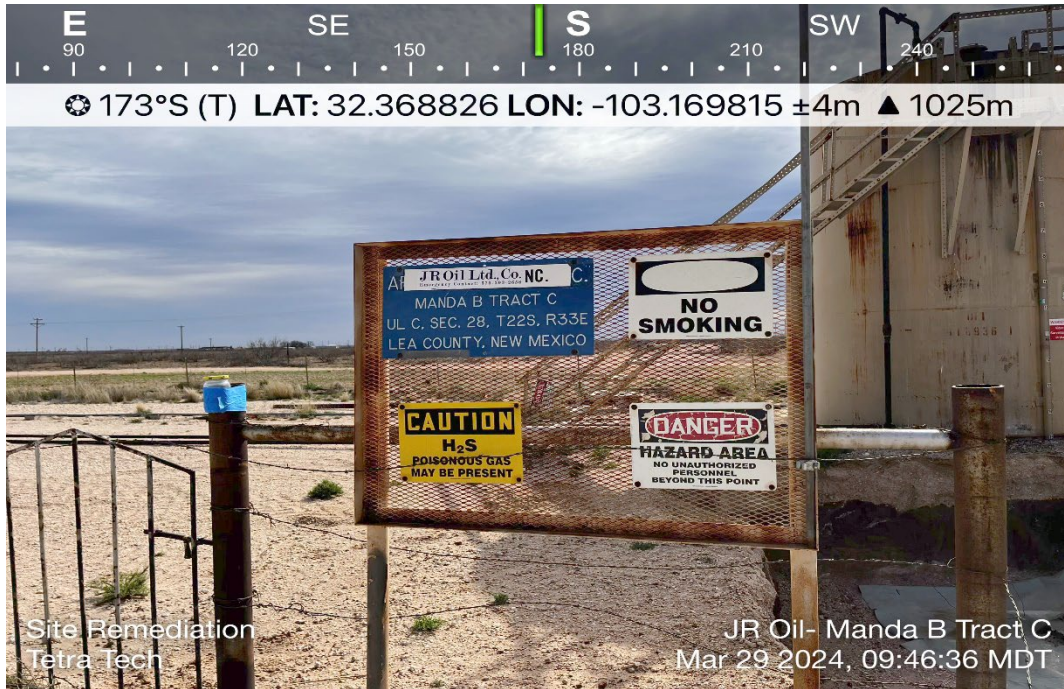


Photo 1 - Remediation Activities - View South



Photo 2 - Remediation Activities - View North-west

Manda B Tract 2024
Lea County, New Mexico



Photo 3 - Remediation Activities - View South-west



Photo 4 - Remediation Activities - View North

Manda B Tract 2024
Lea County, New Mexico



Photo 5 - Remediation Activities – View West



Photo 5 - Remediation Activities – View North-west

Manda B Tract 2024
Lea County, New Mexico



Photo 6 - Remediation Activities – View East



Appendix A

C-141 Document

Page 24 of 243
Received by OGD: 2/14/2025 3:54:39 PM
Released to Imaging: 3/7/2025 1:18:59 PM

District I
1625 N. French Dr., Hobbs, NM 88240
District II
311 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
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR ☒ Initial Report ☐ Final Report

Name of Company	OXY USA INC	Contact	CASEY L SUMMERS
Address	PO BOX 4294; HOUSTON, TX 77210	Telephone No.	575-513-8289
Facility Name	MANDA B TRACT C BATTERY	Facility Type	BATTERY
Surface Owner	PRIVATE	Mineral Owner	PRIVATE
		API No. 30-025-25438 (closest well)	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	28	22S	37E					LEA

Latitude 32.368859 Longitude -103.169723 NAD83

NATURE OF RELEASE

Type of Release	OIL & PRODUCED WATER	Volume of Release	4 BBLS OIL / 10 BBLS PW	Volume Recovered	4.5 BBLS
Source of Release	CHECK VALVE ON WATER LINE	Date and Hour of Occurrence	4-26-2017	Date and Hour of Discovery	4-26-2016
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	OLIVIA YU-NMOCD;		
By Whom?	CASEY L SUMMERS	Date and Hour	4-27-2017 9:42 AM		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By Olivia Yu at 11:28 am, May 05, 2017

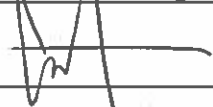

Describe Cause of Problem and Remedial Action Taken.*

Leak was due to a check valve on the water line to the Rice SWD failing. Valve has been repaired. Approximately 4.5 bbls was recovered by vacuum truck.

Describe Area Affected and Cleanup Action Taken.*

The affected area is approximately 90x90 FT around oil tank, 5x90 FT down lease road, 4x80 FT in pasture, and 25x25 FT pool (measurements are subject to change with future GPS track). Remediation will be completed in accordance with a remediation plan approved by the NMOCD.

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

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: CASEY L SUMMERS		Approved by Environmental Specialist: 	
Title: ENVIRONMENTAL ADVISOR		Approval Date: 5/5/2017	Expiration Date:
E-mail Address: casey_summers@oxy.com		Conditions of Approval:	Attached <input checked="" type="checkbox"/>

Date: 5-4-17 Phone: 575-513-8289

see attached directive nOY1712541751
pOY1712542002 1RP-4690

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 5/4/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 1R-4690 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 1 office in Hobbs on or before 6/5/2017. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold

OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Incident ID	
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?	_____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input type="checkbox"/> 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?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 327202

QUESTIONS

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID: 256073
	Action Number: 327202
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nOY1712541751
Incident Name	NOY1712541751 2017 MINOR A OS @ 30-025-25438
Incident Type	Oil Release
Incident Status	Initial C-141 Approved
Incident Well	[30-025-25438] MANDA #001

Location of Release Source	
Site Name	Unavailable.
Date Release Discovered	04/26/2017
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	1,600
What is the estimated number of samples that will be gathered	8
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/29/2024
Time sampling will commence	09:30 AM
Please provide any information necessary for observers to contact samplers	Tetra Tech / 432-741-5813
Please provide any information necessary for navigation to sampling site	From intersection of HWY 18 and King Rd, head West on King Rd and follow for 0.56 miles. Turn right (North) on lease road and follow for 0.48 miles. Location is on left.

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

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

CONDITIONS

Action 327202

CONDITIONS

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID: 256073
	Action Number: 327202
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
tetrattech	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	3/27/2024

District I

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District III

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Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

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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

QUESTIONS

Action 320643

QUESTIONS

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID: 256073
	Action Number: 320643
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nOY1712541751
Incident Name	NOY1712541751 2017 MINOR A OS @ 30-025-25438
Incident Type	Oil Release
Incident Status	Initial C-141 Approved
Incident Well	[30-025-25438] MANDA #001

Location of Release Source	
Site Name	Unavailable.
Date Release Discovered	04/26/2017
Surface Owner	Private

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	4,399
What is the estimated number of samples that will be gathered	39
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/08/2024
Time sampling will commence	08:05 AM
Please provide any information necessary for observers to contact samplers	TetraTech/4327415813
Please provide any information necessary for navigation to sampling site	From intersection of HWY 18 and King Rd, head West on King Rd and follow for 0.56 miles. Turn right (North) on lease road and follow for 0.48 miles. Location is on left.

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CONDITIONS

Action 320643

CONDITIONS

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID: 256073
	Action Number: 320643
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
tetrattech	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	3/6/2024



Appendix B

Previous Approved Closure (Previous Consultant)

RECEIVED

By OCD; Dr. Oberding at 11:07 am, Apr 24, 2015

Closure Report**APPROVED**

By OCD; Dr. Oberding at 11:07 am, Apr 24, 2015

Site Description

Site Name:	Manda B Tract C Tank Battery
Company:	Oxy Permian Ltd.
Legal Description:	U/L C, Section 28, T22S, R37E
County:	Lea County, NM
GPS Coordinates:	N 32.36877° W 103.16985°

Release Data

Date of Release:	03/17/2014 and 05/20/2014
Type of Release:	Oil and produced water and Produced water
Source of Release:	Tank overflow
Volume of Release:	40 bbls mix and 30 bbls
Volume Recovered:	0 bbls

Remediation Specifications

Remediation Parameters:	Excavate the areas around SP1, SP2, and SP3 to a depth of 2 feet. Then, place a liner in the excavation. Excavate the area around SP4 to a depth of 4 feet. Backfill the site with clean soil.	
Remediation Activities:	03/23/2015 to 03/27/2015	
Plan Sent to OCD:	10/21/2014	Email from Cliff Brunson to Tomas Oberding
OCD Approval of Plan:	10/22/2014	Email from Tomas Oberding to Cliff Brunson
Plan Sent to BLM:	n/a	n/a
BLM Approval of Plan:	n/a	n/a

Supporting Documentation

Initial C-141	Signed 04/15/2014 and 06/02//2014
Final C-141	Signed 04/21/2015
Site Diagram	March 2014 and May 2014
Groundwater Plot	50'-100'
TOPO Maps	March 2014
Lab Summary	04/15/2014-04/17/2015, 05/22/2014, and 08/28/2014
Lab Analysis	04/15/2014-04/17/2015, 05/22/2014, and 08/28/2014
Correspondence	Request and approval of remediation plan via email

Request for Closure

Based on the completion of the remediation plan as agreed upon, BBC International requests closure approval from NMOCD.

Cliff Brunson, President of BBC International Inc.

04/22/2015

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State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Oxy Permian Ltd.	Contact	Chancey Summers
Address	1017 W. Stanolind Rd, Hobbs, NM 88240	Telephone No.	(575) 397-8216
Facility Name	Manda B Tract C Tank Battery	Facility Type	Tank Battery
Surface Owner	BLM	Mineral Owner	
		API No.	

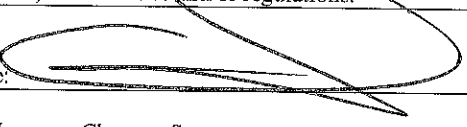
LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	28	22S	37E					Lea County, NM

Latitude N 32.36877°

Longitude W 103.16985°

NATURE OF RELEASE

Type of Release	Oil and Produced water	Volume of Release	40 bbls mix	Volume Recovered	0 bbls
Source of Release	Water dump on separator malfunctioned and caused the oil tanks to overflow	Date and Hour of Occurrence	03/17/2014	Date and Hour of Discovery	
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Geoffrey Leking, NMOCD and Jennifer VanCuren, BLM		
By Whom?	Kathy Purvis	Date and Hour	03/17/2014 @ 3:08 pm		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			
If a Watercourse was Impacted, Describe Fully.*					
Describe Cause of Problem and Remedial Action Taken.*					
The water dump on the separator malfunctioned and caused the oil tanks to overflow spilling 40 bbls of oil and produced water onto the ground. No fluids were recovered and the water dump issue was resolved.					
Describe Area Affected and Cleanup Action Taken.*					
The affected area is approximately 8' x 80' on location. Remediation will be completed in accordance with a remediation plan approved by NMOCD and the BLM.					
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.					
Signature: 		OIL CONSERVATION DIVISION			
Printed Name: Chancey Summers		Approved by Environmental Specialist:			
Title: HES Specialist		Approval Date:		Expiration Date:	
E-mail Address: Chancey.Summers@oxy.com		Conditions of Approval:		Attached <input type="checkbox"/>	
Date: 4-15-14		Phone: (575) 397-8216			

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Oxy Permian Ltd.	Contact	Chancey Summers
Address	1017 W. Stanolind Rd, Hobbs, NM 88240	Telephone No.	(575) 397-8216
Facility Name	Manda B Tract C Tank Battery	Facility Type	Tank Battery
Surface Owner	BLM	Mineral Owner	
		API No.	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	28	22S	37E					Lea County, NM

Latitude N 32.36877° Longitude W 103.16985°

NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	30 bbls	Volume Recovered	0 bbls
Source of Release	Trash collected in transfer pump meter and caused it to plug up triggering the tanks to spill over	Date and Hour of Occurrence	05/20/2014	Date and Hour of Discovery	
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Geoffrey Leking and Tomas Oberding, NMOCD		
By Whom?	Kathy Purvis	Date and Hour	05/21/2014 @ 11:57 am		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

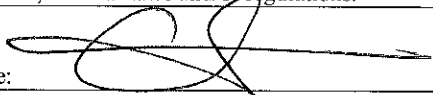
Describe Cause of Problem and Remedial Action Taken.*

Trash collected in the transfer pump and plugged it up triggering the tanks to spill over and leak 30 bbls of produced water onto the ground. No fluids were recovered and the transfer pump was cleared of debris.

Describe Area Affected and Cleanup Action Taken.*

The affected area is approximately 35' x 50' on location and down the road. Remediation will be completed in accordance with a remediation plan approved by NMOCD and the BLM.

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

Signature: 	OIL CONSERVATION DIVISION		
Printed Name: Chancey Summers	Approved by Environmental Specialist:		
Title: HES Specialist	Approval Date:	Expiration Date:	
E-mail Address: Chancey.Summers@oxy.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 6-2-14 Phone: (575) 397-8216			

* Attach Additional Sheets If Necessary

District I
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State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Oxy Permian Ltd.	Contact	Christopher Jones
Address	1502 W. Commerce Dr., Carlsbad, NM	Telephone No.	(575) 628-4121
Facility Name	Manda B Tract C Tank Battery	Facility Type	Tank Battery
Surface Owner	BLM	Mineral Owner	
		API No.	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	28	22S	37E					Lea County, NM

Latitude N 32.36877° Longitude W 103.16985°

NATURE OF RELEASE

Type of Release	Oil and Produced water	Volume of Release	40 bbls mix	Volume Recovered	0 bbls
Source of Release	Water dump on separator malfunctioned and caused the oil tanks to overflow	Date and Hour of Occurrence	03/17/2014	Date and Hour of Discovery	
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Geoffrey Leking, NMOCD and Jennifer VanCuren, BLM		
By Whom?	Kathy Purvis	Date and Hour	03/17/2014 @ 3:08 pm		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			
If a Watercourse was Impacted, Describe Fully.*					
Describe Cause of Problem and Remedial Action Taken.*					
The water dump on the separator malfunctioned and caused the oil tanks to overflow spilling 40 bbls of oil and produced water onto the ground. No fluids were recovered and the water dump issue was resolved.					
Describe Area Affected and Cleanup Action Taken.*					
The affected area is approximately 8' x 80' on location. Remediation was completed in accordance with the remediation plan approved by Tomas Oberding of NMOCD via email on 10/22/2014.					
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.					
Signature: Chris Jones		OIL CONSERVATION DIVISION			
Printed Name: Christopher Jones		Approved by Environmental Specialist:			
Title: HES Specialist		Approval Date:		Expiration Date:	
E-mail Address: Christopher_Jones@oxy.com		Conditions of Approval:		Attached <input type="checkbox"/>	
Date:		Phone: (575) 628-4121			

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Oxy Permian Ltd.	Contact	Christopher Jones
Address	1502 W. Commerce Dr., Carlsbad, NM	Telephone No.	(575) 628-4121
Facility Name	Manda B Tract C Tank Battery	Facility Type	Tank Battery
Surface Owner	BLM	Mineral Owner	
		API No.	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	28	22S	37E					Lea County, NM

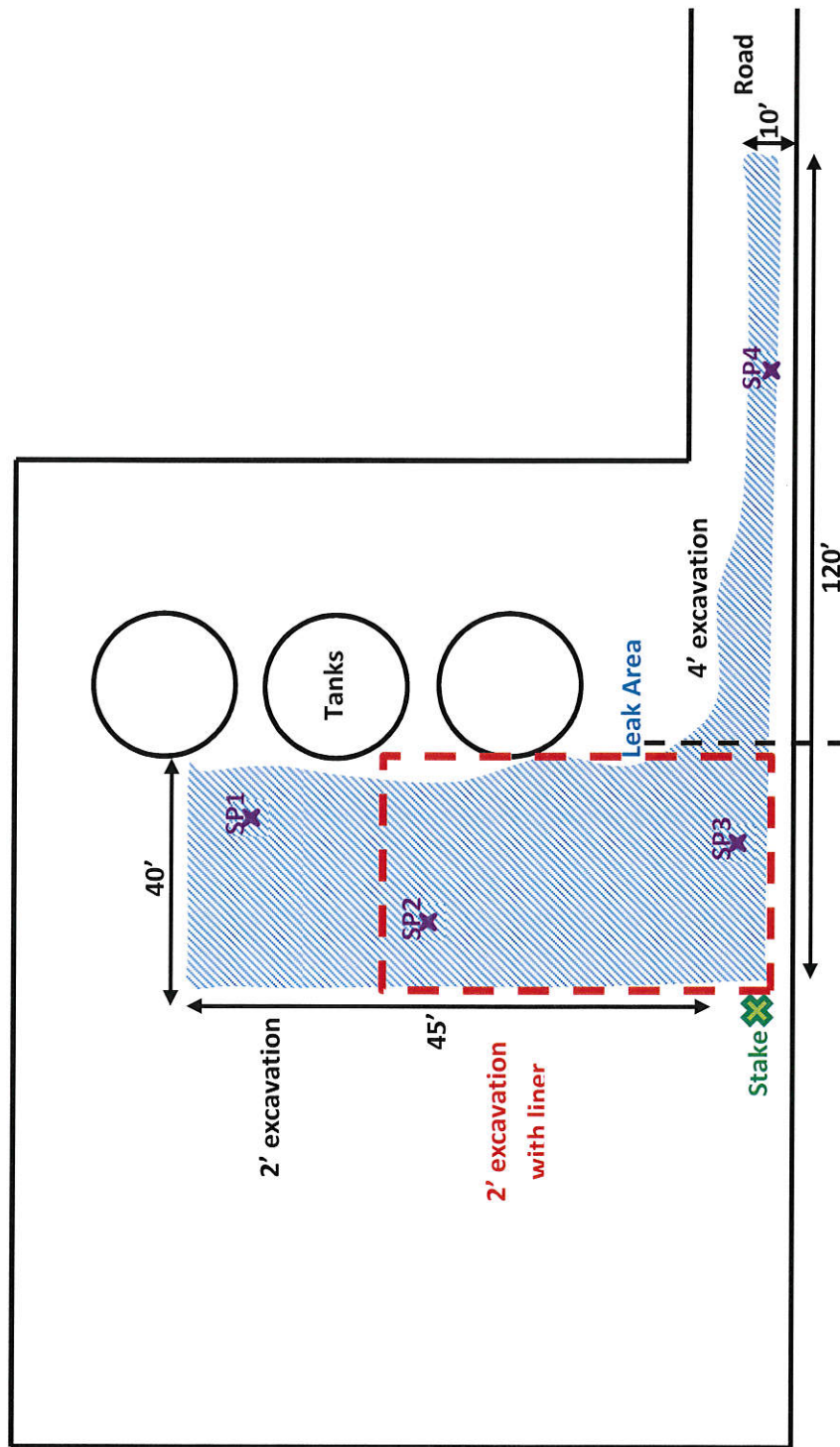
Latitude N 32.36877° Longitude W 103.16985°

NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	30 bbls	Volume Recovered	0 bbls
Source of Release	Trash collected in transfer pump meter and caused it to plug up triggering the tanks to spill over	Date and Hour of Occurrence	05/20/2014	Date and Hour of Discovery	
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Geoffrey Leking and Tomas Oberding, NMOCD		
By Whom?	Kathy Purvis	Date and Hour	05/21/2014 @ 11:57 am		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			
If a Watercourse was Impacted, Describe Fully.*					
Describe Cause of Problem and Remedial Action Taken.*					
Trash collected in the transfer pump and plugged it up triggering the tanks to spill over and leak 30 bbls of produced water onto the ground. No fluids were recovered and the transfer pump was cleared of debris.					
Describe Area Affected and Cleanup Action Taken.*					
The affected area is approximately 35' x 50' on location and down the road. Remediation was completed in accordance with the remediation plan approved by Tomas Oberding of NMOCD via email on 10/22/2014.					
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.					
Signature: Chris Jones <small>Digitally signed by Chris Jones DN: cn=Chris Jones, o, ou, email=ckjones888@yahoo.com, c=US Date: 2015.04.21 11:28:28 -05'00'</small>		OIL CONSERVATION DIVISION			
Printed Name: Christopher Jones		Approved by Environmental Specialist:			
Title: HES Specialist		Approval Date:		Expiration Date:	
E-mail Address: Christopher_Jones@oxy.com		Conditions of Approval:		Attached <input type="checkbox"/>	
Date:		Phone: (575) 628-4121			

* Attach Additional Sheets If Necessary

Oxy
Manda B Tract C Tank Battery



BBC International, Inc.

Oxy

Manda B Tract C Tank Battery

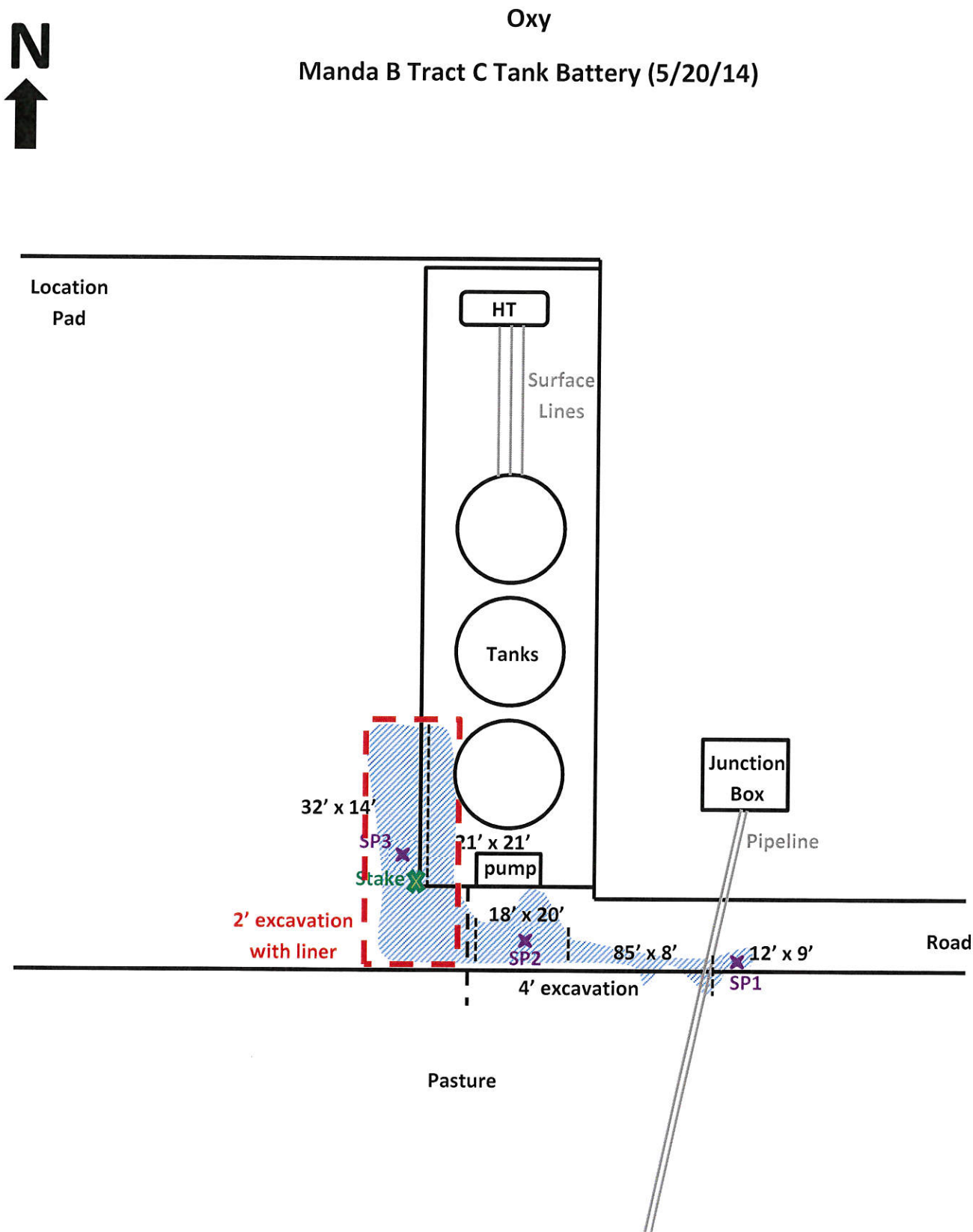
Date: 03/28/14 DRWG by: K. Purvis

NOT TO SCALE File: Oxy 2014

U/L C, Section 28, T22S, R37E

Lea County, NM

N 32.36877° W 103.16985°



U/L C, Section 28, T22S, R37E
Lea County, NM
N 32.36871° W 103.16980°

BBC International, Inc.

Oxy

Manda B Tract C Tank Battery

Date: 05/23/2014

DRWG by: K. Purvis

NOT TO SCALE

File: Oxy 2014

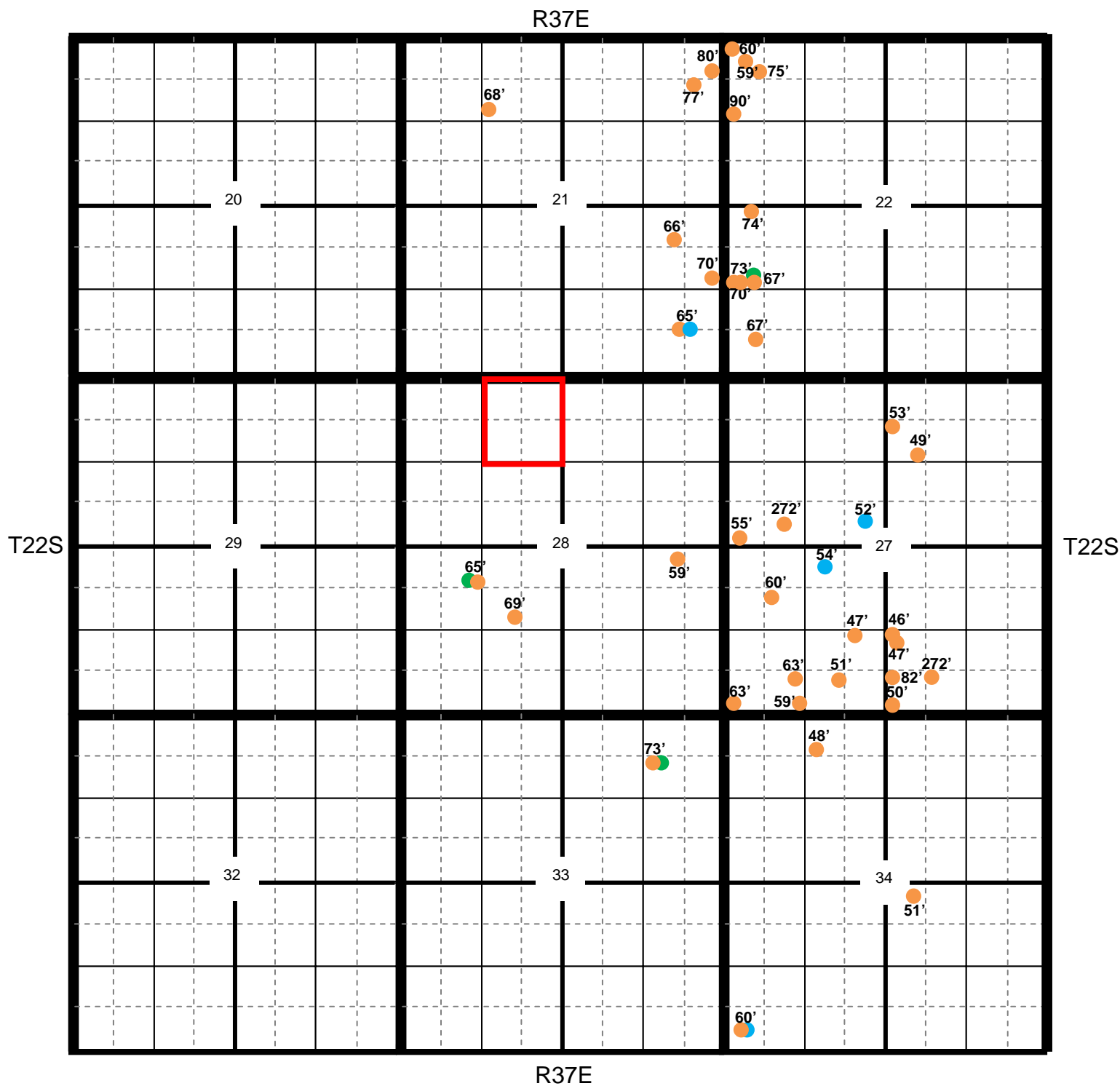


Groundwater Plot

Oxy Manda B Tract C Tank Battery

County
LeaUnit Letter
CSection
28Township
22SRange
37E

Trend Map 50'-100'



* Location

● OCD

● USGS

● SEO

● All Databases

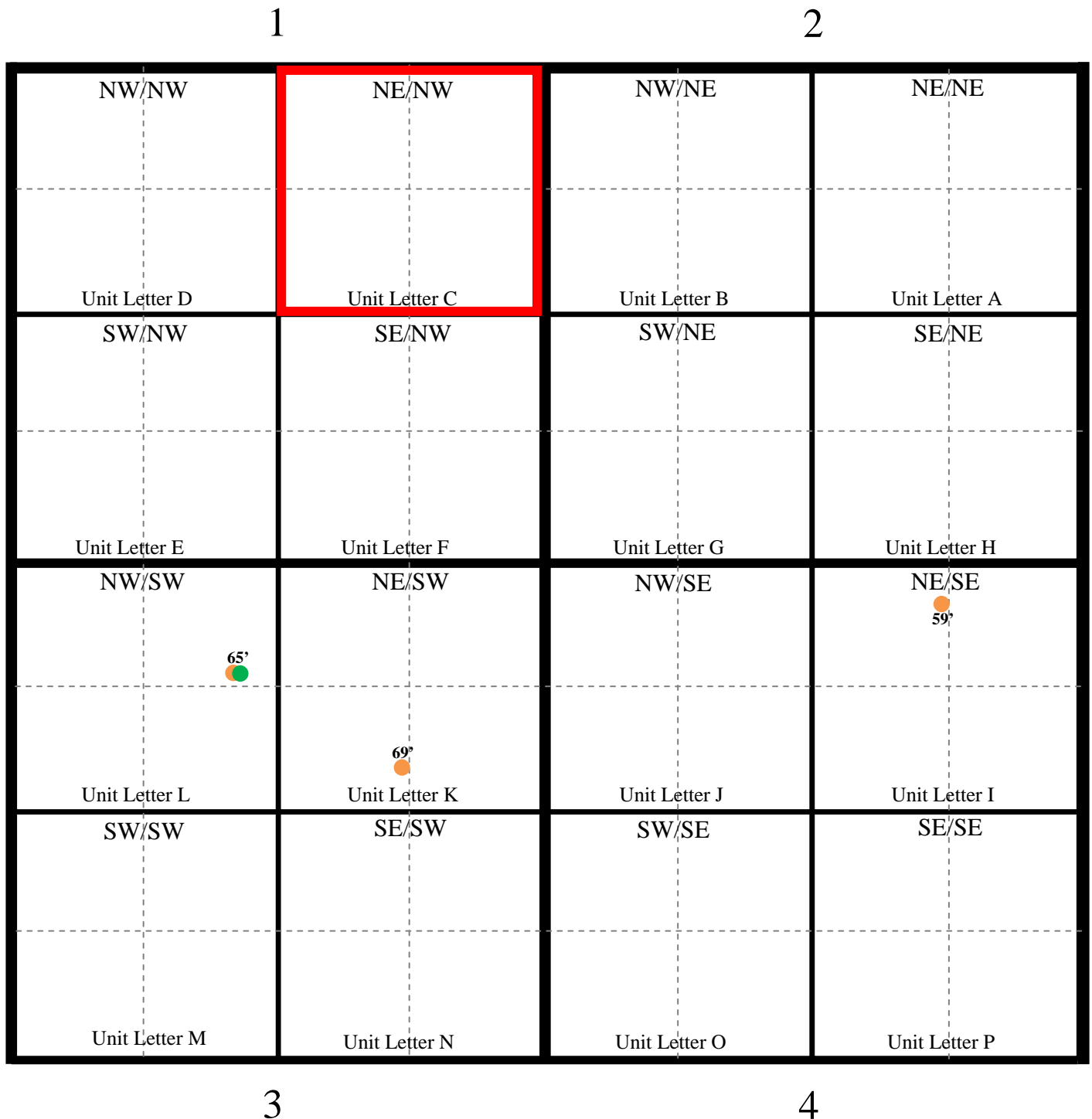


Section Quarters

Oxy Manda B Tract C Tank Battery

County	Unit Letter	Section	Township	Range
Lea	C	28	22S	37E

Trend Map 50'-100'



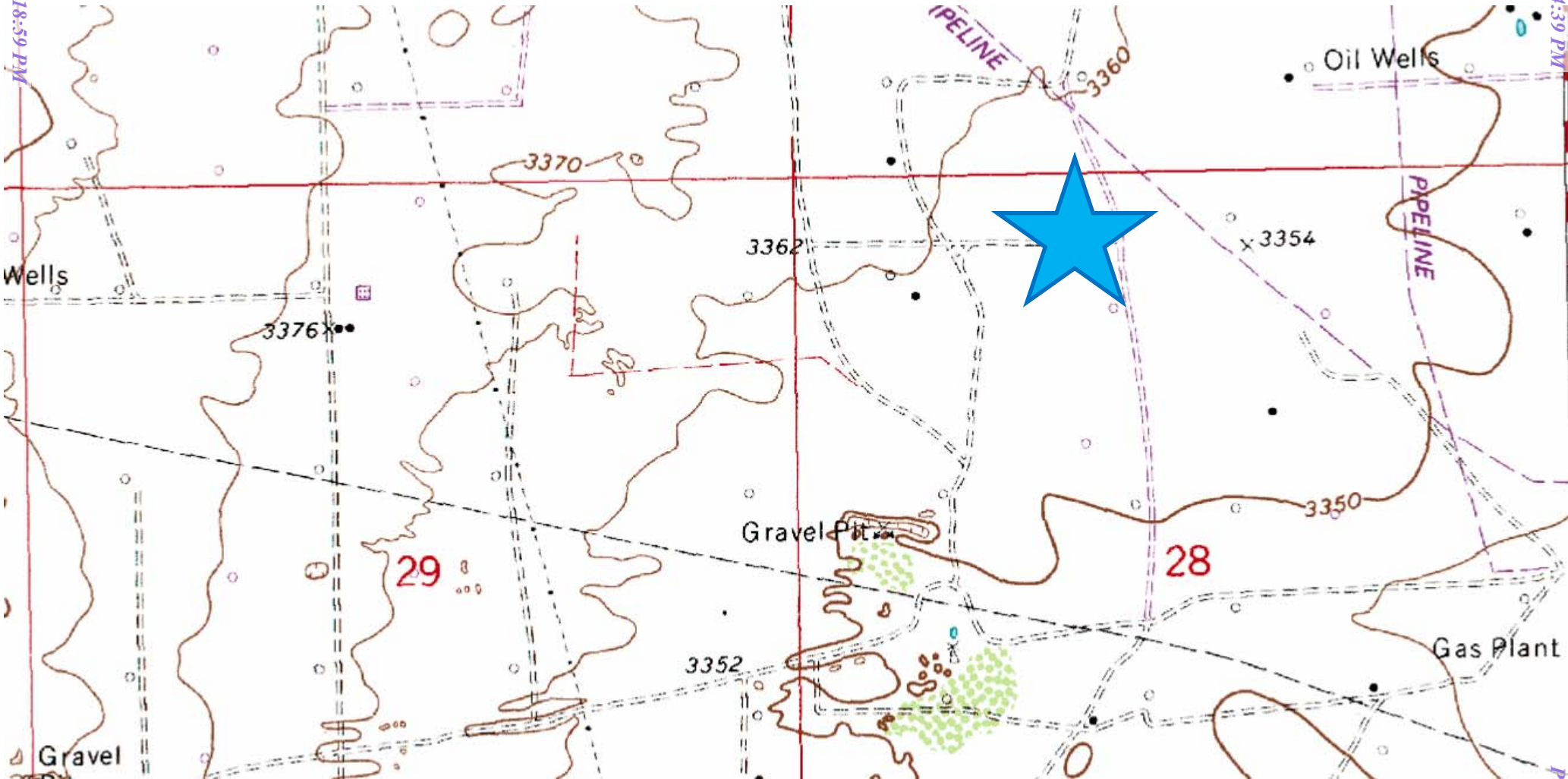
Location OCD USGS SEO All Databases

Manda B Tract C TB



Oxy

Manda B Tract C Tank Battery



**Laboratory Analytical Results Summary
Manda B Tract C Tank Battery**

		Sample	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'	SP1 @ 5'
Analyte	Method	Date	4/15/14	4/15/14	4/15/14	4/15/14
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		32	368	640	160
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0

		Sample	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'	SP2 @ 6'	SP2 @ 9'
Analyte	Method	Date	4/15/14	4/15/14	4/15/14	4/17/14	4/17/14
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.100	<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.100	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		0.113	<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		0.506	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		0.62	<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		96	320	528	752	288
GRO	TPH 8015M		14.8	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		492	35.8	<10.0	<10.0	<10.0

		Sample	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'	SP3 @ 6'	SP3 @ 8'
Analyte	Method	Date	4/17/14	4/17/14	4/17/14	4/17/14	4/17/14
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		256	736	704	304	192
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	37	<10.0	30.4	<10.0

		Sample	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'	SP4 @ 5'	SP4 @ 7'
Analyte	Method	Date	4/17/14	4/17/14	4/17/14	4/17/14	4/17/14
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		5760	9120	8500	240	288
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	<10.0

Laboratory Analytical Results Summary
Manda B Tract C Tank Battery

		Sample	SP1 @ 1'	SP1 @ 3'	SP1 @ 5'	SP1 @ 6'
Analyte	Method	Date	5/22/14	5/22/14	5/22/14	8/28/14
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500CI-B		7920	1020	608	240

		Sample	SP2 @ 1'	SP2 @ 3'	SP2 @ 4'	SP2 @ 5'
Analyte	Method	Date	5/22/14	5/22/14	5/22/14	8/28/14
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500CI-B		544	592	368	288

		Sample	SP3 @ 1'	SP3 @ 3'	SP3 @ 5'	SP3 @ 7'	SP3 @ 9'	SP3 @ 10'
Analyte	Method	Date	5/22/14	5/22/14	5/22/14	5/22/14	5/22/14	8/28/14
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500CI-B		752	528	544	704	336	336



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 28, 2014

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: MANDA B TRACT C

Enclosed are the results of analyses for samples received by the laboratory on 04/21/14 16:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	04/21/2014	Sampling Date:	04/15/2014
Reported:	04/28/2014	Sampling Type:	Soil
Project Name:	MANDA B TRACT C	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	EUNICE, NM		

Sample ID: SP 1 @ 1 (H401194-01)

BTX 8021B			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2014	ND	2.29	115	2.00	2.53	
Toluene*	<0.050	0.050	04/22/2014	ND	2.16	108	2.00	2.19	
Ethylbenzene*	<0.050	0.050	04/22/2014	ND	2.14	107	2.00	2.07	
Total Xylenes*	<0.150	0.150	04/22/2014	ND	6.22	104	6.00	1.49	
Total BTX	<0.300	0.300	04/22/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/24/2014	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/22/2014	ND	184	91.9	200	5.44	
DRO >C10-C28	<10.0	10.0	04/22/2014	ND	195	97.7	200	3.58	

Surrogate: 1-Chlorooctane 114 % 65.2-140

Surrogate: 1-Chlorooctadecane 111 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/15/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 1 @ 2 (H401194-02)

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/22/2014	ND	2.29	115	2.00	2.53		
Toluene*	<0.050	0.050	04/22/2014	ND	2.16	108	2.00	2.19		
Ethylbenzene*	<0.050	0.050	04/22/2014	ND	2.14	107	2.00	2.07		
Total Xylenes*	<0.150	0.150	04/22/2014	ND	6.22	104	6.00	1.49		
Total BTEx	<0.300	0.300	04/22/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 124 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	04/24/2014	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/22/2014	ND	184	91.9	200	5.44	
DRO >C10-C28	<10.0	10.0	04/22/2014	ND	195	97.7	200	3.58	

Surrogate: 1-Chlorooctane 106 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/15/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 1 @ 3 (H401194-03)

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/22/2014	ND	2.29	115	2.00	2.53		
Toluene*	<0.050	0.050	04/22/2014	ND	2.16	108	2.00	2.19		
Ethylbenzene*	<0.050	0.050	04/22/2014	ND	2.14	107	2.00	2.07		
Total Xylenes*	<0.150	0.150	04/22/2014	ND	6.22	104	6.00	1.49		
Total BTEX	<0.300	0.300	04/22/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 126 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	640	16.0	04/24/2014	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/22/2014	ND	184	91.9	200	5.44	
DRO >C10-C28	<10.0	10.0	04/22/2014	ND	195	97.7	200	3.58	

Surrogate: 1-Chlorooctane 83.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 91.6 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/15/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 1 @ 5 (H401194-04)

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2014	ND	2.29	115	2.00	2.53	
Toluene*	<0.050	0.050	04/22/2014	ND	2.16	108	2.00	2.19	
Ethylbenzene*	<0.050	0.050	04/22/2014	ND	2.14	107	2.00	2.07	
Total Xylenes*	<0.150	0.150	04/22/2014	ND	6.22	104	6.00	1.49	
Total BTEx	<0.300	0.300	04/22/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 126 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	04/24/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/22/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	<10.0	10.0	04/22/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 93.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 90.6 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	04/21/2014	Sampling Date:	04/15/2014
Reported:	04/28/2014	Sampling Type:	Soil
Project Name:	MANDA B TRACT C	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	EUNICE, NM		

Sample ID: SP 2 @ 1 (H401194-05)

BTEx 8021B		mg/kg	Analyzed By: CK					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	04/22/2014	ND	2.29	115	2.00	2.53	
Toluene*	<0.100	0.100	04/22/2014	ND	2.16	108	2.00	2.19	
Ethylbenzene*	0.113	0.100	04/22/2014	ND	2.14	107	2.00	2.07	
Total Xylenes*	0.506	0.300	04/22/2014	ND	6.22	104	6.00	1.49	
Total BTEx	0.620	0.600	04/22/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 149 % 89.4-126

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/24/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	14.8	10.0	04/22/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	492	10.0	04/22/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 120 % 65.2-140

Surrogate: 1-Chlorooctadecane 121 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/15/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 2 @ 2 (H401194-06)

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2014	ND	2.29	115	2.00	2.53	
Toluene*	<0.050	0.050	04/22/2014	ND	2.16	108	2.00	2.19	
Ethylbenzene*	<0.050	0.050	04/22/2014	ND	2.14	107	2.00	2.07	
Total Xylenes*	<0.150	0.150	04/22/2014	ND	6.22	104	6.00	1.49	
Total BTEx	<0.300	0.300	04/22/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 126 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	04/24/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/22/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	35.8	10.0	04/22/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 112 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/15/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 2 @ 3 (H401194-07)

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/22/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/22/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/22/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/22/2014	ND	5.08	84.7	6.00	3.50		
Total BTEX	<0.300	0.300	04/22/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 124 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	04/24/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/22/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	<10.0	10.0	04/22/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 97.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.0 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/17/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 2 @ 6 (H401194-08)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/23/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/23/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/23/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/23/2014	ND	5.08	84.7	6.00	3.50		
Total BTX	<0.300	0.300	04/23/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	04/24/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 79.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 83.4 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/17/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 2 @ 9 (H401194-09)

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.08	84.7	6.00	3.50		
Total BTEX	<0.300	0.300	04/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	04/24/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 100 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.9 % 63.6-154

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Analytical Results For:

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 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/17/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 3 @ 1 (H401194-10)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.08	84.7	6.00	3.50		
Total BTX	<0.300	0.300	04/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	04/24/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 110 % 63.6-154

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Analytical Results For:

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 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/17/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 3 @ 2 (H401194-11)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.08	84.7	6.00	3.50		
Total BTX	<0.300	0.300	04/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	736	16.0	04/24/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	37.0	10.0	04/23/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.7 % 63.6-154

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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/17/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 3 @ 3 (H401194-12)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.08	84.7	6.00	3.50		
Total BTX	<0.300	0.300	04/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	04/24/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 104 % 65.2-140

Surrogate: 1-Chlorooctadecane 100 % 63.6-154

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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/17/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 3 @ 6 (H401194-13)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.08	84.7	6.00	3.50		
Total BTX	<0.300	0.300	04/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	04/24/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	30.4	10.0	04/23/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 114 % 65.2-140

Surrogate: 1-Chlorooctadecane 112 % 63.6-154

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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/17/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 3 @ 8 (H401194-14)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.08	84.7	6.00	3.50		
Total BTX	<0.300	0.300	04/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	04/24/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 96.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 95.2 % 63.6-154

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Analytical Results For:

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 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/17/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 4 @ 1 (H401194-15)

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.08	84.7	6.00	3.50		
Total BTEX	<0.300	0.300	04/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5760	16.0	04/24/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 110 % 65.2-140

Surrogate: 1-Chlorooctadecane 109 % 63.6-154

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Analytical Results For:

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 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/17/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 4 @ 2 (H401194-16)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.08	84.7	6.00	3.50		
Total BTX	<0.300	0.300	04/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9120	16.0	04/24/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 105 % 65.2-140

Surrogate: 1-Chlorooctadecane 104 % 63.6-154

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 Cliff Brunson
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 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/17/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 4 @ 3 (H401194-17)

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.08	84.7	6.00	3.50		
Total BTEX	<0.300	0.300	04/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8500	16.0	04/24/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 04/21/2014
 Reported: 04/28/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 04/17/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 4 @ 5 (H401194-18)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.08	84.7	6.00	3.50		
Total BTX	<0.300	0.300	04/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	04/24/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	216	108	200	7.28	

Surrogate: 1-Chlorooctane 98.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 92.0 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	04/21/2014	Sampling Date:	04/17/2014
Reported:	04/28/2014	Sampling Type:	Soil
Project Name:	MANDA B TRACT C	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	EUNICE, NM		

Sample ID: SP 4 @ 7 (H401194-19)

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	2.47		
Toluene*	<0.050	0.050	04/24/2014	ND	1.71	85.4	2.00	3.28		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.70	85.1	2.00	2.80		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.08	84.7	6.00	3.50		
Total BTEX	<0.300	0.300	04/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	04/24/2014	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	04/23/2014	ND	198	98.8	200	5.58		
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	216	108	200	7.28		

Surrogate: 1-Chlorooctane 94.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 90.5 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



ORDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.				BILL TO				ANALYSIS REQUEST			
Project Manager: Cliff Brunson				P.O. #:				Company:			
Address: P.O. Box 805				Attn:				Address:			
City: Hobbs				State: NM Zip: 88241				City:			
Phone #: 575-397-6388				Fax #: 575-397-0397				State:			
Project #:				Project Owner: OKY				Zip:			
Project Name: Manda-B Tract - C				Project Location: Eunice, NM				Phone #:			
Project Location:				Fax #:				State:			
Sample Name: DEPT ORNIELAS				Matrix:				Sampling:			
FOR LAB USE ONLY				(G)RAB OR (C)OMP.				DATE			
Lab I.D.				Sample I.D.				TIME			
H401194				SP101				TPH			
1.				C-1				X			
2.				C-1				X			
3.				C-1				X			
4.				C-1				X			
5.				C-1				X			
6.				C-1				X			
7.				C-1				X			
8.				C-1				X			
9.				C-1				X			
10.				C-1				X			
SP301				C-1				X			
SP201				C-1				X			
SP202				C-1				X			
SP203				C-1				X			
SP204				C-1				X			
SP205				C-1				X			
SP206				C-1				X			
SP207				C-1				X			
SP208				C-1				X			
SP209				C-1				X			
SP210				C-1				X			
SP211				C-1				X			
SP212				C-1				X			
SP213				C-1				X			
SP214				C-1				X			
SP215				C-1				X			
SP216				C-1				X			
SP217				C-1				X			
SP218				C-1				X			
SP219				C-1				X			
SP220				C-1				X			
SP221				C-1				X			
SP222				C-1				X			
SP223				C-1				X			
SP224				C-1				X			
SP225				C-1				X			
SP226				C-1				X			
SP227				C-1				X			
SP228				C-1				X			
SP229				C-1				X			
SP230				C-1				X			
SP231				C-1				X			
SP232				C-1				X			
SP233				C-1				X			
SP234				C-1				X			
SP235				C-1				X			
SP236				C-1				X			
SP237				C-1				X			
SP238				C-1				X			
SP239				C-1				X			
SP240				C-1				X			
SP241				C-1				X			
SP242				C-1				X			
SP243				C-1				X			
SP244				C-1				X			
SP245				C-1				X			
SP246				C-1				X			
SP247				C-1				X			
SP248				C-1				X			
SP249				C-1				X			
SP250				C-1							



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2017

Page 23 of 23



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

May 29, 2014

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: MANDA B TRACT C TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 05/23/14 16:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	05/23/2014	Sampling Date:	05/22/2014
Reported:	05/29/2014	Sampling Type:	Soil
Project Name:	MANDA B TRACT C TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	EUNICE, NM		

Sample ID: SP 1 @ 1 (H401599-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7920	16.0	05/29/2014	ND	400	100	400	3.92	

Sample ID: SP 1 @ 3 (H401599-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1020	16.0	05/29/2014	ND	400	100	400	3.92	

Sample ID: SP 1 @ 5 (H401599-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	05/29/2014	ND	400	100	400	3.92	

Sample ID: SP 2 @ 1 (H401599-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	05/29/2014	ND	400	100	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	05/23/2014	Sampling Date:	05/22/2014
Reported:	05/29/2014	Sampling Type:	Soil
Project Name:	MANDA B TRACT C TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	EUNICE, NM		

Sample ID: SP 2 @ 3 (H401599-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	592	16.0	05/29/2014	ND	400	100	400	3.92		

Sample ID: SP 2 @ 4 (H401599-06)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	05/29/2014	ND	400	100	400	3.92	

Sample ID: SP 3 @ 1 (H401599-07)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	05/29/2014	ND	400	100	400	3.92	

Sample ID: SP 3 @ 3 (H401599-08)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	05/29/2014	ND	400	100	400	3.92	

Sample ID: SP 3 @ 5 (H401599-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	05/29/2014	ND	400	100	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	05/23/2014	Sampling Date:	05/22/2014
Reported:	05/29/2014	Sampling Type:	Soil
Project Name:	MANDA B TRACT C TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	EUNICE, NM		

Sample ID: SP 3 @ 7 (H401599-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	05/29/2014	ND	400	100	400	3.92	

Sample ID: SP 3 @ 9 (H401599-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	05/28/2014	ND	416	104	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.

Project Manager: Cliff Brunson

Address: P.O. Box 805

City: Hobbs

Phone #: 575-397-6388

State: NM

Zip: 88241

Fax #: 575-397-0397

Project Owner: OXY

State: Zip:

P.O. #:

Company:

Attn:

Address: *Same*

City:

Phone #:

Project Name: *Marble-3 Tract - C Tract Bldg*

Project Location: *Emvic*

Sample Name: *JEFF DEWELAS*

FOR LAB USE ONLY

Lab I.D. *H40594*

Sample I.D.

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER:

ACID/BASE:

ICE / COOL

OTHER:

DATE

TIME

1 *Sp101*

2 *Sp101*

3 *5-*

4 *Sp201*

5 *3*

6 *Sp301*

7 *3*

8 *5*

9 *7*

10 *7*

C

1

1

1

1

1

1

1

1

1

X

X

X

X

X

X

X

X

X

X

5-22

1610

1111

1216

1419

235

256

303

325

341

401

X

X

X

X

X

X

X

X

X

X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: *[Signature]*

Date: *5-23-14*

Time: *4:40*

Received By: *[Signature]*

Date:

Time:

Relinquished By:

Date:

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Sample Condition

Cool ☒ Intact ☒

Yes ☒ No ☐

Yes ☒ No ☐

CHECKED BY: (Initials)

[Signature]

REMARKS:

Phone Result: ☐ Yes ☐ No

Fax Result: ☐ Yes ☐ No

Add'l Phone #:

Add'l Fax #:

353-2320 FAX 353-2320

BILL TO

ANALYSIS REQUEST



ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 05, 2014

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: MANDA B TRACT C

Enclosed are the results of analyses for samples received by the laboratory on 08/28/14 16:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 08/28/2014
 Reported: 09/05/2014
 Project Name: MANDA B TRACT C
 Project Number: NONE GIVEN
 Project Location: EUNICE, NM

Sampling Date: 08/28/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP 1 @ 6 (H402670-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/04/2014	ND	432	108	400	3.77	

Sample ID: SP 2 @ 5 (H402670-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	09/04/2014	ND	432	108	400	3.77	

Sample ID: SP 3 @ 10 (H402670-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	09/04/2014	ND	432	108	400	3.77	

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



ORDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.

Project Manager: Cliff Brunson

Address: P.O. Box 805

City: Hobbs

Phone #: 575-397-6388

State: NM

Zip: 88241

Fax #: 575-397-0397

P.O. #:

Company:

Attn:

Address:

City:

State:

Zip:

Project Name: Manda B Trust (5-2014)

Project Location: Eureka

Project Owner: OIT

Sampler Name: Cliff Brunson

Lab I.D. 4402470

Sample I.D. 5P106

5P105

5P3210

FOR LAB USE ONLY

Matrix

Preserv

Sampling

Relinquished By: M. Brunson

Relinquished Date: 8/28/14

Relinquished Time: 2:50

Received By: Cliff Brunson

Received Date: 8/28/14

Received Time: 8:50

Delivered By: (Circle One)

Sample Condition

Cool

Intact

Yes

No

Checked By: CB

Phone Result: Yes No

Fax Result: Yes No

Additional Phone #:

Additional Fax #:

Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

Kathy Purvis

From: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Sent: Wednesday, October 22, 2014 7:44 AM
To: Cliff P. Brunson
Cc: C J Summers; Ken Swinney; Jennifer Gilkey; Kathy Purvis
Subject: RE: OXY - Manda B Tract C Tank Battery - Remediation Plan

Aloha Cliff et all,

Thank you for the meeting yesterday.

Based on the documentation provided OCD approves the remediation plan as written.

I appreciate you help in maintaining a clear paper trail of our logic for others to follow.

Have a great day and be safe out there everyone.

Mahalo

-Doc

Tomás 'Doc' Oberding, PhD
Environmental Specialist – New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240
(O): (575) 393-6161 ext 111
(C): 575-370-3180
(F): (575) 393-0720
E-Mail: tomas.oberding@state.nm.us
Website: <http://www.emnrd.state.nm.us/oecd/>

From: Cliff P. Brunson [mailto:cbrunson@bbcinternational.com]
Sent: Tuesday, October 21, 2014 5:50 PM
To: Oberding, Tomas, EMNRD
Cc: C J Summers; Ken Swinney; Jennifer Gilkey; Kathy Purvis
Subject: Re: OXY - Manda B Tract C Tank Battery - Remediation Plan

Tomas,

After our meeting this morning, I have altered the remediation plan to reflect our discussion and agreement. Please find attached a revised remediation plan and site drawing that depicts the changes.

If you would please e-mail your concurrence with this remediation plan, it would be greatly appreciated.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS
President
BBC International, Inc.
World-Wide Environmental Specialists
Mailing Address:
P. O. Box 805
Hobbs, NM 88241-0805 USA
Shipping Address:
1324 W. Marland St.

Hobbs, NM 88240 USA
Phone: (575) 397-6388
Fax: (575) 397-0397
E-Mail: cbrunson@bbcinternational.com

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From: "Tomas J. Oberding" <tomas.oberding@state.nm.us>
Date: Monday, October 20, 2014 at 1:40 PM
To: Cliff Brunson <cbrunson@bbcinternational.com>
Cc: C J Summers <Chancey_Summers@oxy.com>, Ken Swinney <kswinney@bbcinternational.com>, Jennifer Gilkey <jgilkey@bbcinternational.com>, Kathy Purvis <kathy@bbcinternational.com>
Subject: RE: OXY - Manda B Tract C Tank Battery - Remediation Plan

Aloha Mr Brunson et al,

Thank you for sending in this document.

There are serious concerns with the impact and impact at depth. Particularly on the west side- the high contaminant levels are not even addressed in the first 2 feet. In addition no mention of a liner to account for deeper contamination is mentioned.

As written the OCD does NOT approve the full plan proposed.

The southern section, does appear to begin to address the contaminants at depth, though SP3 in the second set remains above allowable limits even at 7'. (Depth to groundwater according to our source is 50'-100' in this area). Please address these concerns. Feel free to contact me for further discussion.
I appreciate your help with this.
-Doc

Tomáš 'Doc' Oberding, PhD
Environmental Specialist – New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240
(O): (575) 393-6161 ext 111
(C): 575-370-3180
(F): (575) 393-0720
E-Mail: tomas.oberding@state.nm.us
Website: <http://www.emnrd.state.nm.us/oecd/>

From: Cliff P. Brunson [<mailto:cbrunson@bbcinternational.com>]
Sent: Monday, October 20, 2014 12:01 PM
To: Oberding, Tomas, EMNRD
Cc: C J Summers; Ken Swinney; Jennifer Gilkey; Kathy Purvis
Subject: OXY - Manda B Tract C Tank Battery - Remediation Plan

Tomas,

This e-mail is to confirm our conversation on September 22, 2014 about the remediation plan for the above referenced site. I have attached the materials that we used in our discussion. The agreed upon remediation plan is on the first page of the attachment along with the RP number per your previous request. This site is a State only jurisdiction location.

If you would please e-mail your concurrence with this remediation plan, it would be greatly appreciated.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS
President
BBC International, Inc.
World-Wide Environmental Specialists
Mailing Address:
P. O. Box 805
Hobbs, NM 88241-0805 USA
Shipping Address:
1324 W. Marland St.
Hobbs, NM 88240 USA
Phone: (575) 397-6388
Fax: (575) 397-0397
E-Mail: cbrunson@bbcinternational.com

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Appendix C

Site Characterization Documents



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National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:
Groundwater

Geographic Area:
United States

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Groundwater levels for the Nation

Important:

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Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 322219103094302

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 322219103094302 22S.37E.21.421434A

Lea County, New Mexico
Latitude 32°22'19", Longitude 103°09'43" NAD27
Land-surface elevation 3,351 feet above NAVD88
The depth of the well is 140 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency	Source of measuremen
1953-03		M	62610		3287.62	NGVD29	1	Z		
1953-03		M	62611		3289.00	NAVD88	1	Z		
1953-03		M	72019	62.00			1	Z		
1953-09		M	62610		3287.62	NGVD29	1	Z		
1953-09		M	62611		3289.00	NAVD88	1	Z		
1953-09		M	72019	62.00			1	Z		

Explanation

Section	Code	Description
Water-level date-time accuracy	M	Date is accurate to the Month
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929

https://nwis.waterdata.usgs.gov/nwis/gwlevels?site_no=322219103094302&agency_cd=USGS&format=html

1/2

Section	Code	Description
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Accessibility FOIA Privacy Policies and Notices

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)
Title: Groundwater for USA: Water Levels
URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)
Page Last Modified: 2023-11-03 12:04:59 EDT
0.31 0.28 nadww01



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National Water Information System: Web Interface


[USGS Water Resources](#)

Data Category:
Groundwater

Geographic Area:
United States

GO

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- [Full News](#) 

Groundwater levels for the Nation

 Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 322127103102201

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 322127103102201 22S.37E.28.31243

Lea County, New Mexico
Latitude 32°21'41", Longitude 103°10'23" NAD27
Land-surface elevation 3,342.50 feet above NGVD29
The depth of the well is 112 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1965-10-22		D	62610		3281.30	NGVD29	1	Z		
1965-10-22		D	62611		3282.69	NAVD88	1	Z		
1965-10-22		D	72019	61.20			1	Z		
1970-12-01		D	62610		3280.86	NGVD29	P	Z		
1970-12-01		D	62611		3282.25	NAVD88	P	Z		
1970-12-01		D	72019	61.64			P	Z		
1976-01-20		D	62610		3280.03	NGVD29	1	Z		
1976-01-20		D	62611		3281.42	NAVD88	1	Z		
1976-01-20		D	72019	62.47			1	Z		
1986-03-04		D	62610		3280.07	NGVD29	1	Z		
1986-03-04		D	62611		3281.46	NAVD88	1	Z		
1986-03-04		D	72019	62.43			1	Z		
1991-04-26		D	62610		3277.50	NGVD29	P	Z		
1991-04-26		D	62611		3278.89	NAVD88	P	Z		
1991-04-26		D	72019	65.00			P	Z		
1996-03-13		D	62610		3281.08	NGVD29	1	S		

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1996-03-13		D	62611		3282.47	NAVD88	1	S		
1996-03-13		D	72019	61.42			1	S		
2001-02-07		D	62610		3277.66	NGVD29	1	S		
2001-02-07		D	62611		3279.05	NAVD88	1	S		
2001-02-07		D	72019	64.84			1	S		
2006-02-22		D	62610		3281.32	NGVD29	1	S	USGS	
2006-02-22		D	62611		3282.71	NAVD88	1	S	USGS	
2006-02-22		D	72019	61.18			1	S	USGS	
2010-12-16	18:00 UTC	m	62610		3280.03	NGVD29	1	S	USGS	
2010-12-16	18:00 UTC	m	62611		3281.42	NAVD88	1	S	USGS	
2010-12-16	18:00 UTC	m	72019	62.47			1	S	USGS	
2016-01-06	18:48 UTC	m	62610		3281.90	NGVD29	1	S	USGS	
2016-01-06	18:48 UTC	m	62611		3283.29	NAVD88	1	S	USGS	
2016-01-06	18:48 UTC	m	72019	60.60			1	S	USGS	
2022-01-25	20:23 UTC	m	62610		3281.68	NGVD29	P	S	USGS	
2022-01-25	20:23 UTC	m	62611		3283.07	NAVD88	P	S	USGS	
2022-01-25	20:23 UTC	m	72019	60.82			P	S	USGS	
2023-02-09	19:24 UTC	m	62610		3282.04	NGVD29	1	S	USGS	
2023-02-09	19:24 UTC	m	62611		3283.43	NAVD88	1	S	USGS	
2023-02-09	19:24 UTC	m	72019	60.46			1	S	USGS	

Explanation

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

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URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

Page Contact Information: [USGS Water Data Support Team](#)


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0.35 0.29 nadww01



New Mexico Office of the State Engineer

Point of Diversion Summary

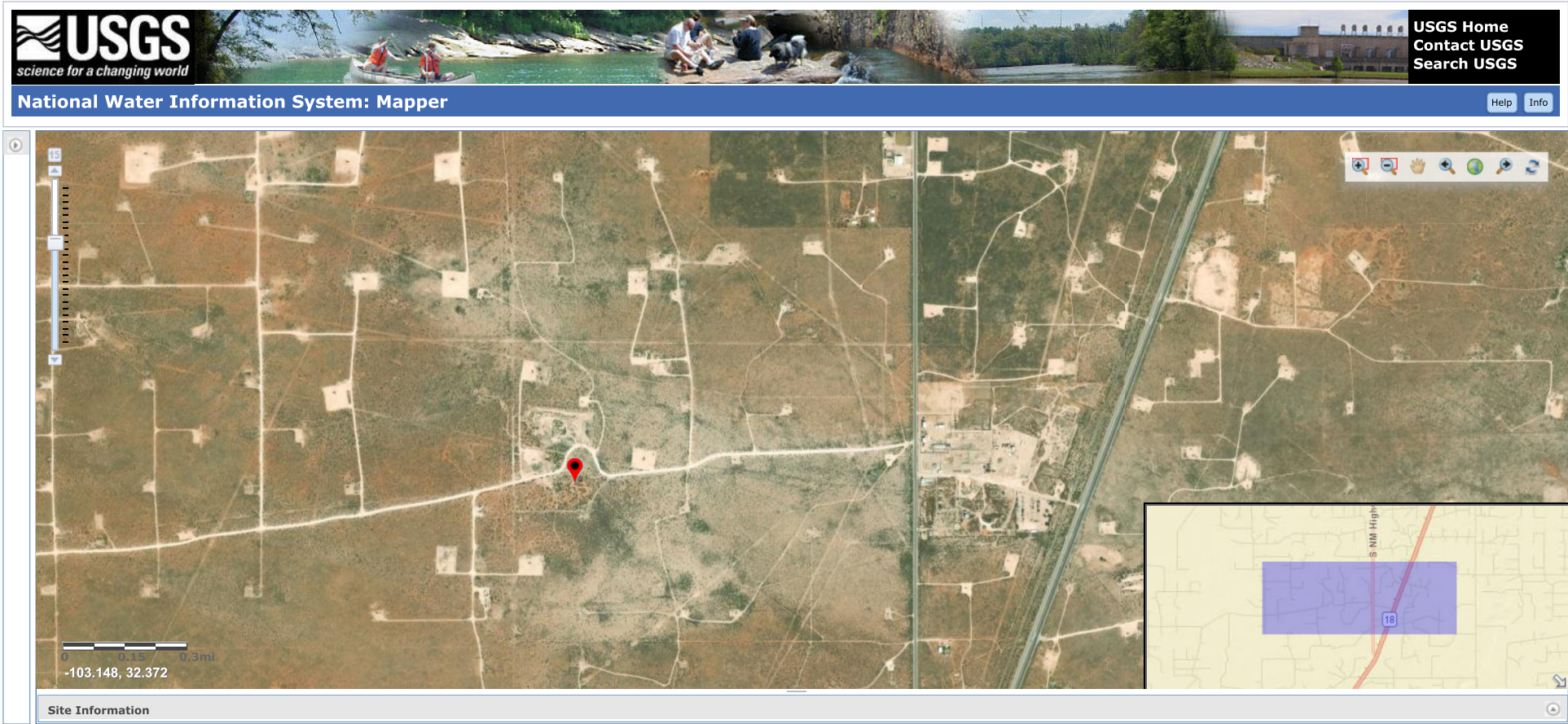
		(quarters are 1=NW 2=NE 3=SW 4=SE)				(quarters are smallest to largest)				(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y		
	CP 00503		4	4	21	22S	37E	672965	3583144*		
<hr/>											
Driller License:	208	Driller Company:				VAN NOY, W.L.					
Driller Name:	VAN NOY, W.L.										
Drill Start Date:	09/12/1972	Drill Finish Date:				09/15/1972		Plug Date:			
Log File Date:	09/25/1972	PCW Rcv Date:						Source:		Shallow	
Pump Type:		Pipe Discharge Size:						Estimated Yield:			
Casing Size:	5.00	Depth Well:				115 feet		Depth Water:		65 feet	
<hr/>											
Water Bearing Stratifications:					Top	Bottom	Description				
					70	110	Sandstone/Gravel/Conglomerate				
<hr/>											
Casing Perforations:					Top	Bottom					
					85	110					
<hr/>											

*UTM location was derived from PLSS - see Help

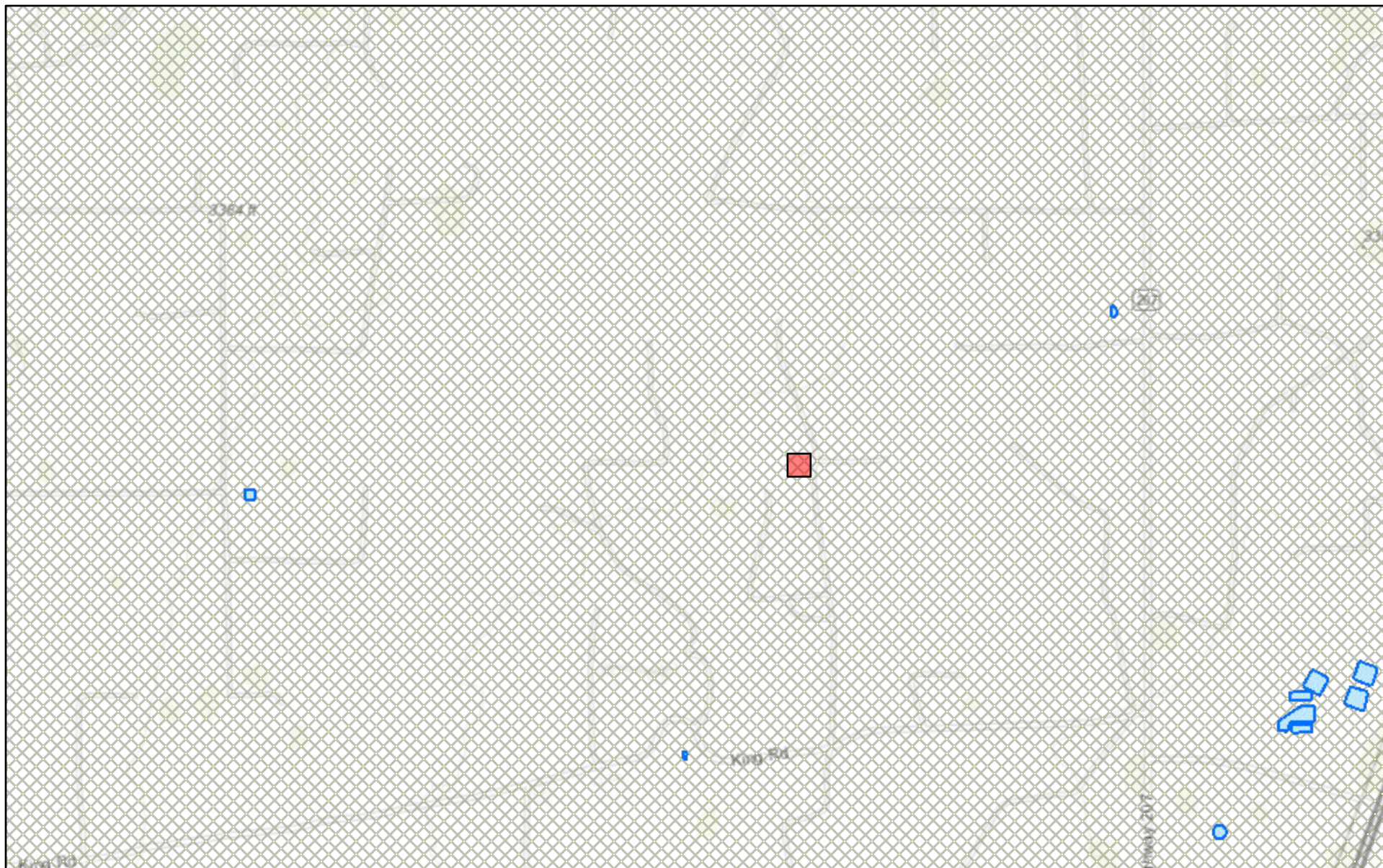
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

11/3/23 9:46 AM

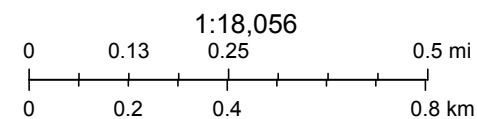
POINT OF DIVERSION SUMMARY



New Mexico NFHL Data



November 3, 2023



FEMA, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

nmflood.org is made possible through a collaboration with NMDHSEM,

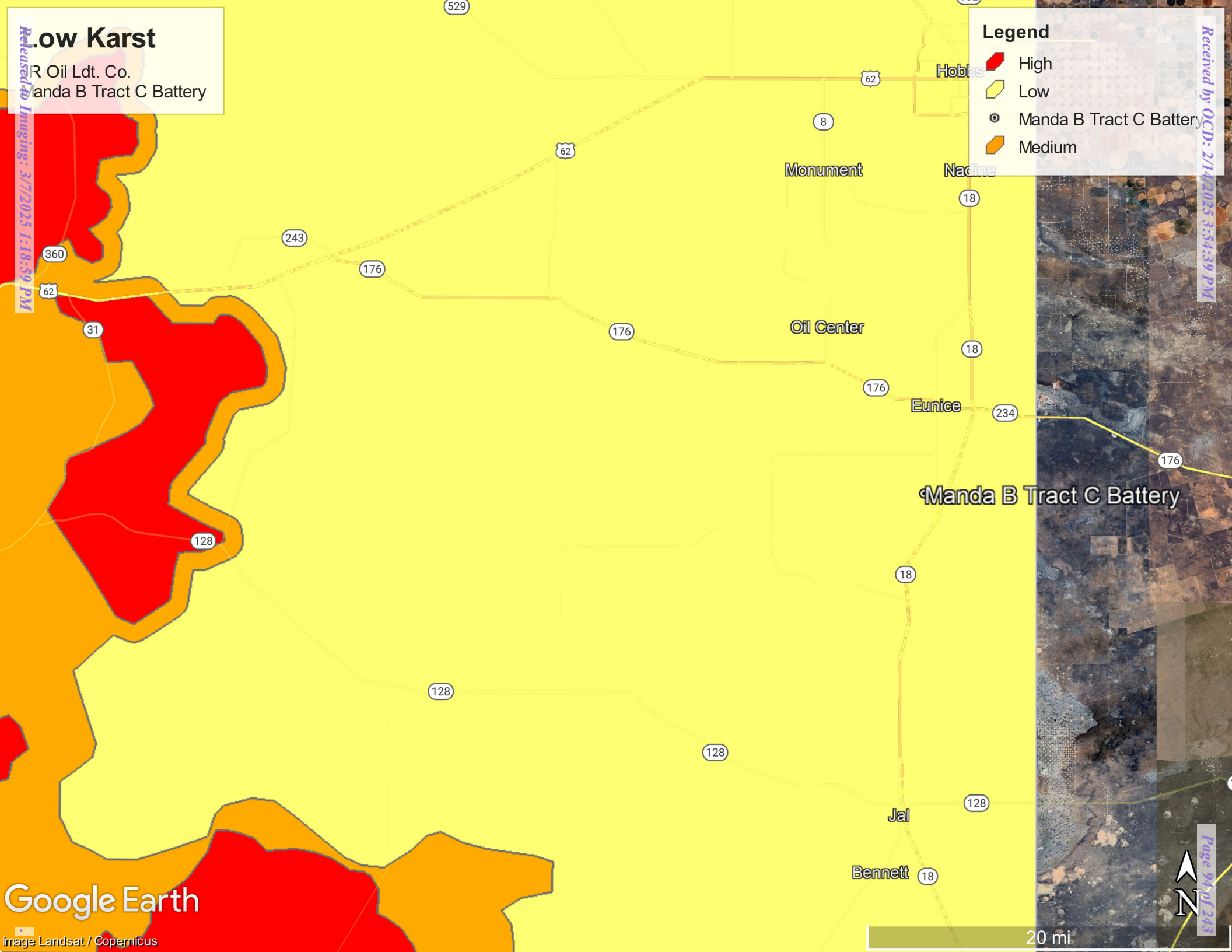
This is a non-regulatory product for informational use only. Please consult your local floodplain administrator for further information.

Low Karst
R Oil Ltd. Co.
Manda B Tract C Battery

Released to Imaging: 3/7/2025 1:18:39 PM

Legend

- High
- Low
- Manda B Tract C Battery
- Medium



Google Earth

Image Landsat / Copernicus

Received by OCD: 2/14/2025 3:54:39 PM

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20 mi



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(quarters are smallest to largest)				(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y		
	CP 00503		4	4	21	22S	37E	672965	3583144*		
<hr/>											
Driller License:	208	Driller Company:				VAN NOY, W.L.					
Driller Name:	VAN NOY, W.L.										
Drill Start Date:	09/12/1972	Drill Finish Date:				09/15/1972		Plug Date:			
Log File Date:	09/25/1972	PCW Rcv Date:						Source:		Shallow	
Pump Type:		Pipe Discharge Size:						Estimated Yield:			
Casing Size:	5.00	Depth Well:				115 feet		Depth Water:		65 feet	
<hr/>											
Water Bearing Stratifications:					Top	Bottom	Description				
					70	110	Sandstone/Gravel/Conglomerate				
<hr/>											
Casing Perforations:					Top	Bottom					
					85	110					
<hr/>											

*UTM location was derived from PLSS - see Help

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11/3/23 9:46 AM

POINT OF DIVERSION SUMMARY



Appendix D

Laboratory Reports



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Brittany Long
Tetra Tech, Inc.
901 W Wall
Ste 100
Midland, Texas 79701

Generated 10/31/2023 8:59:01 AM

JOB DESCRIPTION

JR Oil

JOB NUMBER

890-5488-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
10/31/2023 8:59:01 AM

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

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Laboratory Job ID: 890-5488-1

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Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Eurofins Carlsbad

Case Narrative

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Job ID: 890-5488-1**Laboratory: Eurofins Carlsbad****Narrative**

Job Narrative
890-5488-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 10/19/2023 1:16 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: H-1 (890-5488-1), H-2 (890-5488-2), H-3 (890-5488-3), H-4 (890-5488-4), H-5 (890-5488-5), H-6 (890-5488-6), H-7 (890-5488-7), H-8 (890-5488-8), AH-1 0-1 (890-5488-9), AH-1 1-1.5 (890-5488-10), AH-1 2-2.5 (890-5488-11), AH-1 3-3.5 (890-5488-12), AH-1 4-4.5 (890-5488-13), AH-2 0-1 (890-5488-14), AH-2 1-1.5 (890-5488-15), AH-2 2-2.5 (890-5488-16), AH-3 0-1 (890-5488-17), AH-3 1-1.5 (890-5488-18), AH-3 2-2.5 (890-5488-19), AH-4 0-1 (890-5488-20), AH-4 1-1.5 (890-5488-21), AH-4 2-2.5 (890-5488-22), AH-5 0-1 (890-5488-23), AH-5 1-1.5 (890-5488-24), AH-5 2-2.5 (890-5488-25), AH-5 3-3.5 (890-5488-26), AH-5 4-4.5 (890-5488-27), AH-6 0-1 (890-5488-28), AH-6 1-1.5 (890-5488-29), AH-6 2-2.5 (890-5488-30) and AH-6 3-3.5 (890-5488-31).

GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-65466 and analytical batch 880-65514 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-65487/5-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The following sample was diluted due to the nature of the sample matrix: AH-4 1-1.5 (890-5488-21). Elevated reporting limits (RLs) are provided.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-65489 and analytical batch 880-65593 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: AH-1 0-1 (890-5488-9), AH-1 1-1.5 (890-5488-10) and AH-1 2-2.5 (890-5488-11). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The following samples were diluted due to the nature of the sample matrix: AH-1 0-1 (890-5488-9), AH-1 1-1.5 (890-5488-10) and AH-1 2-2.5 (890-5488-11). 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 surrogate recovery for the blank associated with preparation batch 880-65361 and analytical batch 880-65296 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: H-4 (890-5488-4). Evidence of matrix

Case Narrative

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Job ID: 890-5488-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: AH-1 2-2.5 (890-5488-11), AH-1 4-4.5 (890-5488-13), AH-2 1-1.5 (890-5488-15), AH-3 2-2.5 (890-5488-19) and AH-4 0-1 (890-5488-20). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-65363 and analytical batch 880-65298 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: AH-5 2-2.5 (890-5488-25). 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: (CCV 880-65298/58). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-65363 and analytical batch 880-65298 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-65215 and analytical batch 880-65419 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: H-1

Lab Sample ID: 890-5488-1

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000384	mg/Kg		10/24/23 14:46	10/27/23 00:24	1
Toluene	<0.00200	U	0.00200	0.000455	mg/Kg		10/24/23 14:46	10/27/23 00:24	1
Ethylbenzene	<0.00200	U	0.00200	0.000564	mg/Kg		10/24/23 14:46	10/27/23 00:24	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:46	10/27/23 00:24	1
o-Xylene	0.000439	J	0.00200	0.000343	mg/Kg		10/24/23 14:46	10/27/23 00:24	1
Xylenes, Total	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:46	10/27/23 00:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		70 - 130	10/24/23 14:46	10/27/23 00:24	1
1,4-Difluorobenzene (Surr)	103		70 - 130	10/24/23 14:46	10/27/23 00:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	24.2	J	49.6	14.9	mg/Kg		10/23/23 12:12	10/23/23 20:51	1
Diesel Range Organics (Over C10-C28)	15.4	J	49.6	14.9	mg/Kg		10/23/23 12:12	10/23/23 20:51	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	14.9	mg/Kg		10/23/23 12:12	10/23/23 20:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130	10/23/23 12:12	10/23/23 20:51	1
o-Terphenyl	110		70 - 130	10/23/23 12:12	10/23/23 20:51	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	69.2		4.99	0.394	mg/Kg			10/25/23 05:08	1

Client Sample ID: H-2

Lab Sample ID: 890-5488-2

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		10/24/23 14:46	10/27/23 00:44	1
Toluene	<0.00201	U	0.00201	0.000458	mg/Kg		10/24/23 14:46	10/27/23 00:44	1
Ethylbenzene	<0.00201	U	0.00201	0.000567	mg/Kg		10/24/23 14:46	10/27/23 00:44	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00101	mg/Kg		10/24/23 14:46	10/27/23 00:44	1
o-Xylene	0.000659	J	0.00201	0.000345	mg/Kg		10/24/23 14:46	10/27/23 00:44	1
Xylenes, Total	<0.00402	U	0.00402	0.00101	mg/Kg		10/24/23 14:46	10/27/23 00:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	10/24/23 14:46	10/27/23 00:44	1
1,4-Difluorobenzene (Surr)	106		70 - 130	10/24/23 14:46	10/27/23 00:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	19.0	J	50.5	15.2	mg/Kg		10/23/23 12:12	10/23/23 21:55	1
Diesel Range Organics (Over C10-C28)	38.3	J	50.5	15.2	mg/Kg		10/23/23 12:12	10/23/23 21:55	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	15.2	mg/Kg		10/23/23 12:12	10/23/23 21:55	1

Eurofins Carlsbad

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: H-2

Lab Sample ID: 890-5488-2

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	119		70 - 130	10/23/23 12:12	10/23/23 21:55	1
o-Terphenyl	100		70 - 130	10/23/23 12:12	10/23/23 21:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38.3		4.98	0.393	mg/Kg			10/25/23 05:14	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Client Sample ID: H-3

Lab Sample ID: 890-5488-3

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		10/24/23 14:46	10/27/23 01:05	1
Toluene	<0.00199	U	0.00199	0.000454	mg/Kg		10/24/23 14:46	10/27/23 01:05	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		10/24/23 14:46	10/27/23 01:05	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00101	mg/Kg		10/24/23 14:46	10/27/23 01:05	1
o-Xylene	<0.00199	U	0.00199	0.000343	mg/Kg		10/24/23 14:46	10/27/23 01:05	1
Xylenes, Total	<0.00398	U	0.00398	0.00101	mg/Kg		10/24/23 14:46	10/27/23 01:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130	10/24/23 14:46	10/27/23 01:05	1
1,4-Difluorobenzene (Surr)	113		70 - 130	10/24/23 14:46	10/27/23 01:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	21.4	J	50.4	15.1	mg/Kg		10/23/23 12:12	10/23/23 22:17	1
Diesel Range Organics (Over C10-C28)	37.3	J	50.4	15.1	mg/Kg		10/23/23 12:12	10/23/23 22:17	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	15.1	mg/Kg		10/23/23 12:12	10/23/23 22:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	130		70 - 130	10/23/23 12:12	10/23/23 22:17	1
o-Terphenyl	113		70 - 130	10/23/23 12:12	10/23/23 22:17	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32.6		5.03	0.397	mg/Kg			10/25/23 06:33	1

Client Sample ID: H-4

Lab Sample ID: 890-5488-4

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		10/24/23 14:46	10/27/23 01:25	1
Toluene	<0.00199	U	0.00199	0.000453	mg/Kg		10/24/23 14:46	10/27/23 01:25	1
Ethylbenzene	<0.00199	U	0.00199	0.000562	mg/Kg		10/24/23 14:46	10/27/23 01:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00100	mg/Kg		10/24/23 14:46	10/27/23 01:25	1
o-Xylene	<0.00199	U	0.00199	0.000342	mg/Kg		10/24/23 14:46	10/27/23 01:25	1
Xylenes, Total	<0.00398	U	0.00398	0.00100	mg/Kg		10/24/23 14:46	10/27/23 01:25	1

Eurofins Carlsbad

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: H-4

Lab Sample ID: 890-5488-4

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	10/24/23 14:46	10/27/23 01:25	1
1,4-Difluorobenzene (Surr)	107		70 - 130	10/24/23 14:46	10/27/23 01:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	19.9	J	49.9	15.0	mg/Kg		10/23/23 12:12	10/23/23 22:38	1
Diesel Range Organics (Over C10-C28)	61.8		49.9	15.0	mg/Kg		10/23/23 12:12	10/23/23 22:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		10/23/23 12:12	10/23/23 22:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	133	S1+	70 - 130	10/23/23 12:12	10/23/23 22:38	1
o-Terphenyl	111		70 - 130	10/23/23 12:12	10/23/23 22:38	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36.3		5.05	0.399	mg/Kg			10/25/23 06:50	1

Client Sample ID: H-5

Lab Sample ID: 890-5488-5

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000384	mg/Kg		10/24/23 14:46	10/27/23 01:46	1
Toluene	<0.00200	U	0.00200	0.000455	mg/Kg		10/24/23 14:46	10/27/23 01:46	1
Ethylbenzene	<0.00200	U	0.00200	0.000564	mg/Kg		10/24/23 14:46	10/27/23 01:46	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:46	10/27/23 01:46	1
o-Xylene	<0.00200	U	0.00200	0.000343	mg/Kg		10/24/23 14:46	10/27/23 01:46	1
Xylenes, Total	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:46	10/27/23 01:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	10/24/23 14:46	10/27/23 01:46	1
1,4-Difluorobenzene (Surr)	111		70 - 130	10/24/23 14:46	10/27/23 01:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	21.6	J	49.6	14.9	mg/Kg		10/23/23 12:12	10/23/23 22:59	1
Diesel Range Organics (Over C10-C28)	21.2	J	49.6	14.9	mg/Kg		10/23/23 12:12	10/23/23 22:59	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	14.9	mg/Kg		10/23/23 12:12	10/23/23 22:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130	10/23/23 12:12	10/23/23 22:59	1
o-Terphenyl	105		70 - 130	10/23/23 12:12	10/23/23 22:59	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23.3		5.05	0.399	mg/Kg			10/25/23 06:55	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: H-6

Lab Sample ID: 890-5488-6

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		10/24/23 14:46	10/27/23 02:06	1
Toluene	<0.00201	U	0.00201	0.000459	mg/Kg		10/24/23 14:46	10/27/23 02:06	1
Ethylbenzene	<0.00201	U	0.00201	0.000568	mg/Kg		10/24/23 14:46	10/27/23 02:06	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00102	mg/Kg		10/24/23 14:46	10/27/23 02:06	1
o-Xylene	<0.00201	U	0.00201	0.000346	mg/Kg		10/24/23 14:46	10/27/23 02:06	1
Xylenes, Total	<0.00402	U	0.00402	0.00102	mg/Kg		10/24/23 14:46	10/27/23 02:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	10/24/23 14:46	10/27/23 02:06	1
1,4-Difluorobenzene (Surr)	113		70 - 130	10/24/23 14:46	10/27/23 02:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	22.8	J	49.7	14.9	mg/Kg		10/23/23 12:12	10/23/23 23:21	1
Diesel Range Organics (Over C10-C28)	15.5	J	49.7	14.9	mg/Kg		10/23/23 12:12	10/23/23 23:21	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	14.9	mg/Kg		10/23/23 12:12	10/23/23 23:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130	10/23/23 12:12	10/23/23 23:21	1
o-Terphenyl	102		70 - 130	10/23/23 12:12	10/23/23 23:21	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33.0		5.01	0.396	mg/Kg			10/25/23 07:01	1

Client Sample ID: H-7

Lab Sample ID: 890-5488-7

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000386	mg/Kg		10/24/23 14:46	10/27/23 02:26	1
Toluene	<0.00200	U	0.00200	0.000457	mg/Kg		10/24/23 14:46	10/27/23 02:26	1
Ethylbenzene	<0.00200	U	0.00200	0.000566	mg/Kg		10/24/23 14:46	10/27/23 02:26	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	0.00101	mg/Kg		10/24/23 14:46	10/27/23 02:26	1
o-Xylene	<0.00200	U	0.00200	0.000345	mg/Kg		10/24/23 14:46	10/27/23 02:26	1
Xylenes, Total	<0.00401	U	0.00401	0.00101	mg/Kg		10/24/23 14:46	10/27/23 02:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	10/24/23 14:46	10/27/23 02:26	1
1,4-Difluorobenzene (Surr)	111		70 - 130	10/24/23 14:46	10/27/23 02:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	21.3	J	50.0	15.0	mg/Kg		10/23/23 12:12	10/23/23 23:42	1
Diesel Range Organics (Over C10-C28)	74.6		50.0	15.0	mg/Kg		10/23/23 12:12	10/23/23 23:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		10/23/23 12:12	10/23/23 23:42	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: H-7

Lab Sample ID: 890-5488-7

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130	10/23/23 12:12	10/23/23 23:42	1
o-Terphenyl	105		70 - 130	10/23/23 12:12	10/23/23 23:42	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.9		5.03	0.397	mg/Kg			10/25/23 07:06	1

Client Sample ID: H-8

Lab Sample ID: 890-5488-8

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		10/24/23 14:46	10/27/23 02:47	1
Toluene	<0.00199	U	0.00199	0.000454	mg/Kg		10/24/23 14:46	10/27/23 02:47	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		10/24/23 14:46	10/27/23 02:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00101	mg/Kg		10/24/23 14:46	10/27/23 02:47	1
o-Xylene	<0.00199	U	0.00199	0.000343	mg/Kg		10/24/23 14:46	10/27/23 02:47	1
Xylenes, Total	<0.00398	U	0.00398	0.00101	mg/Kg		10/24/23 14:46	10/27/23 02:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130				10/24/23 14:46	10/27/23 02:47	1
1,4-Difluorobenzene (Surr)	110		70 - 130				10/24/23 14:46	10/27/23 02:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	18.8	J	50.2	15.0	mg/Kg		10/23/23 12:12	10/24/23 00:03	1
Diesel Range Organics (Over C10-C28)	63.8		50.2	15.0	mg/Kg		10/23/23 12:12	10/24/23 00:03	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2	15.0	mg/Kg		10/23/23 12:12	10/24/23 00:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130				10/23/23 12:12	10/24/23 00:03	1
o-Terphenyl	105		70 - 130				10/23/23 12:12	10/24/23 00:03	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	94.6		5.05	0.399	mg/Kg			10/25/23 07:23	1

Client Sample ID: AH-1 0-1

Lab Sample ID: 890-5488-9

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0199	U	0.0199	0.00383	mg/Kg		10/26/23 11:52	10/28/23 16:25	10
Toluene	<0.0199	U	0.0199	0.00454	mg/Kg		10/26/23 11:52	10/28/23 16:25	10
Ethylbenzene	<0.0199	U	0.0199	0.00563	mg/Kg		10/26/23 11:52	10/28/23 16:25	10
m-Xylene & p-Xylene	<0.0398	U	0.0398	0.0101	mg/Kg		10/26/23 11:52	10/28/23 16:25	10
o-Xylene	<0.0199	U	0.0199	0.00343	mg/Kg		10/26/23 11:52	10/28/23 16:25	10
Xylenes, Total	<0.0398	U	0.0398	0.0101	mg/Kg		10/26/23 11:52	10/28/23 16:25	10

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-1 0-1

Lab Sample ID: 890-5488-9

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130	10/26/23 11:52	10/28/23 16:25	10
1,4-Difluorobenzene (Surr)	137	S1+	70 - 130	10/26/23 11:52	10/28/23 16:25	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<252	U	252	75.6	mg/Kg		10/23/23 12:12	10/24/23 02:53	5
Diesel Range Organics (Over C10-C28)	10200		252	75.6	mg/Kg		10/23/23 12:12	10/24/23 02:53	5
Oil Range Organics (Over C28-C36)	<252	U	252	75.6	mg/Kg		10/23/23 12:12	10/24/23 02:53	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130				10/23/23 12:12	10/24/23 02:53	5
o-Terphenyl	103		70 - 130				10/23/23 12:12	10/24/23 02:53	5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	49.5		5.04	0.398	mg/Kg			10/25/23 07:29	1

Client Sample ID: AH-1 1-1.5

Lab Sample ID: 890-5488-10

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0199	U	0.0199	0.00383	mg/Kg		10/26/23 11:52	10/28/23 16:46	10
Toluene	<0.0199	U	0.0199	0.00453	mg/Kg		10/26/23 11:52	10/28/23 16:46	10
Ethylbenzene	<0.0199	U	0.0199	0.00562	mg/Kg		10/26/23 11:52	10/28/23 16:46	10
m-Xylene & p-Xylene	<0.0398	U	0.0398	0.0100	mg/Kg		10/26/23 11:52	10/28/23 16:46	10
o-Xylene	0.00701	J	0.0199	0.00342	mg/Kg		10/26/23 11:52	10/28/23 16:46	10
Xylenes, Total	<0.0398	U	0.0398	0.0100	mg/Kg		10/26/23 11:52	10/28/23 16:46	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	52	S1-	70 - 130				10/26/23 11:52	10/28/23 16:46	10
1,4-Difluorobenzene (Surr)	127		70 - 130				10/26/23 11:52	10/28/23 16:46	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	15.2	mg/Kg		10/23/23 12:12	10/24/23 01:50	1
Diesel Range Organics (Over C10-C28)	5090		50.5	15.2	mg/Kg		10/23/23 12:12	10/24/23 01:50	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	15.2	mg/Kg		10/23/23 12:12	10/24/23 01:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130				10/23/23 12:12	10/24/23 01:50	1
o-Terphenyl	105		70 - 130				10/23/23 12:12	10/24/23 01:50	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44.1		5.04	0.398	mg/Kg			10/25/23 07:35	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-1 2-2.5

Lab Sample ID: 890-5488-11

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0200	U	0.0200	0.00384	mg/Kg		10/26/23 11:52	10/28/23 17:06	10
Toluene	<0.0200	U	0.0200	0.00455	mg/Kg		10/26/23 11:52	10/28/23 17:06	10
Ethylbenzene	<0.0200	U	0.0200	0.00564	mg/Kg		10/26/23 11:52	10/28/23 17:06	10
m-Xylene & p-Xylene	<0.0399	U	0.0399	0.0101	mg/Kg		10/26/23 11:52	10/28/23 17:06	10
o-Xylene	<0.0200	U	0.0200	0.00343	mg/Kg		10/26/23 11:52	10/28/23 17:06	10
Xylenes, Total	<0.0399	U	0.0399	0.0101	mg/Kg		10/26/23 11:52	10/28/23 17:06	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130	10/26/23 11:52	10/28/23 17:06	10
1,4-Difluorobenzene (Surr)	137	S1+	70 - 130	10/26/23 11:52	10/28/23 17:06	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	15.0	mg/Kg		10/23/23 12:12	10/24/23 02:11	1
Diesel Range Organics (Over C10-C28)	4400		50.0	15.0	mg/Kg		10/23/23 12:12	10/24/23 02:11	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		10/23/23 12:12	10/24/23 02:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	137	S1+	70 - 130	10/23/23 12:12	10/24/23 02:11	1
o-Terphenyl	117		70 - 130	10/23/23 12:12	10/24/23 02:11	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	92.8		5.00	0.395	mg/Kg			10/25/23 07:40	1

Client Sample ID: AH-1 3-3.5

Lab Sample ID: 890-5488-12

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		10/24/23 14:46	10/27/23 05:18	1
Toluene	<0.00199	U	0.00199	0.000453	mg/Kg		10/24/23 14:46	10/27/23 05:18	1
Ethylbenzene	<0.00199	U	0.00199	0.000562	mg/Kg		10/24/23 14:46	10/27/23 05:18	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00100	mg/Kg		10/24/23 14:46	10/27/23 05:18	1
o-Xylene	<0.00199	U	0.00199	0.000342	mg/Kg		10/24/23 14:46	10/27/23 05:18	1
Xylenes, Total	<0.00398	U	0.00398	0.00100	mg/Kg		10/24/23 14:46	10/27/23 05:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	10/24/23 14:46	10/27/23 05:18	1
1,4-Difluorobenzene (Surr)	101		70 - 130	10/24/23 14:46	10/27/23 05:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	15.0	mg/Kg		10/23/23 12:12	10/24/23 00:25	1
Diesel Range Organics (Over C10-C28)	425		50.0	15.0	mg/Kg		10/23/23 12:12	10/24/23 00:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		10/23/23 12:12	10/24/23 00:25	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-1 3-3.5

Lab Sample ID: 890-5488-12

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	127		70 - 130	10/23/23 12:12	10/24/23 00:25	1
o-Terphenyl	110		70 - 130	10/23/23 12:12	10/24/23 00:25	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	249		5.01	0.396	mg/Kg			10/25/23 07:46	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Client Sample ID: AH-1 4-4.5

Lab Sample ID: 890-5488-13

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000384	mg/Kg		10/24/23 14:46	10/27/23 05:39	1
Toluene	<0.00200	U	0.00200	0.000455	mg/Kg		10/24/23 14:46	10/27/23 05:39	1
Ethylbenzene	<0.00200	U	0.00200	0.000564	mg/Kg		10/24/23 14:46	10/27/23 05:39	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:46	10/27/23 05:39	1
o-Xylene	0.000357	J	0.00200	0.000343	mg/Kg		10/24/23 14:46	10/27/23 05:39	1
Xylenes, Total	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:46	10/27/23 05:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	10/24/23 14:46	10/27/23 05:39	1
1,4-Difluorobenzene (Surr)	108		70 - 130	10/24/23 14:46	10/27/23 05:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	16.9	J	49.8	14.9	mg/Kg		10/23/23 12:12	10/24/23 00:46	1
Diesel Range Organics (Over C10-C28)	272		49.8	14.9	mg/Kg		10/23/23 12:12	10/24/23 00:46	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	14.9	mg/Kg		10/23/23 12:12	10/24/23 00:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	136	S1+	70 - 130	10/23/23 12:12	10/24/23 00:46	1
o-Terphenyl	118		70 - 130	10/23/23 12:12	10/24/23 00:46	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	241		4.98	0.393	mg/Kg			10/25/23 07:52	1

Client Sample ID: AH-2 0-1

Lab Sample ID: 890-5488-14

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		10/24/23 14:46	10/27/23 05:59	1
Toluene	<0.00201	U	0.00201	0.000459	mg/Kg		10/24/23 14:46	10/27/23 05:59	1
Ethylbenzene	<0.00201	U	0.00201	0.000568	mg/Kg		10/24/23 14:46	10/27/23 05:59	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00102	mg/Kg		10/24/23 14:46	10/27/23 05:59	1
o-Xylene	<0.00201	U	0.00201	0.000346	mg/Kg		10/24/23 14:46	10/27/23 05:59	1
Xylenes, Total	<0.00402	U	0.00402	0.00102	mg/Kg		10/24/23 14:46	10/27/23 05:59	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-2 0-1

Lab Sample ID: 890-5488-14

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	10/24/23 14:46	10/27/23 05:59	1
1,4-Difluorobenzene (Surr)	107		70 - 130	10/24/23 14:46	10/27/23 05:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<248	U	248	74.4	mg/Kg		10/23/23 12:12	10/24/23 03:14	5
Diesel Range Organics (Over C10-C28)	4420		248	74.4	mg/Kg		10/23/23 12:12	10/24/23 03:14	5
Oil Range Organics (Over C28-C36)	<248	U	248	74.4	mg/Kg		10/23/23 12:12	10/24/23 03:14	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	125		70 - 130				10/23/23 12:12	10/24/23 03:14	5
o-Terphenyl	112		70 - 130				10/23/23 12:12	10/24/23 03:14	5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	234		5.05	0.399	mg/Kg			10/25/23 08:08	1

Client Sample ID: AH-2 1-1.5

Lab Sample ID: 890-5488-15

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		10/24/23 14:46	10/27/23 06:20	1
Toluene	<0.00201	U	0.00201	0.000458	mg/Kg		10/24/23 14:46	10/27/23 06:20	1
Ethylbenzene	<0.00201	U	0.00201	0.000567	mg/Kg		10/24/23 14:46	10/27/23 06:20	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00101	mg/Kg		10/24/23 14:46	10/27/23 06:20	1
o-Xylene	<0.00201	U	0.00201	0.000345	mg/Kg		10/24/23 14:46	10/27/23 06:20	1
Xylenes, Total	<0.00402	U	0.00402	0.00101	mg/Kg		10/24/23 14:46	10/27/23 06:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130				10/24/23 14:46	10/27/23 06:20	1
1,4-Difluorobenzene (Surr)	105		70 - 130				10/24/23 14:46	10/27/23 06:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	82.2	J	252	75.7	mg/Kg		10/23/23 12:12	10/24/23 03:36	5
Diesel Range Organics (Over C10-C28)	5160		252	75.7	mg/Kg		10/23/23 12:12	10/24/23 03:36	5
Oil Range Organics (Over C28-C36)	<252	U	252	75.7	mg/Kg		10/23/23 12:12	10/24/23 03:36	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	140	S1+	70 - 130				10/23/23 12:12	10/24/23 03:36	5
o-Terphenyl	130		70 - 130				10/23/23 12:12	10/24/23 03:36	5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	229		5.04	0.398	mg/Kg			10/25/23 08:14	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-2 2-2.5

Lab Sample ID: 890-5488-16

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		10/24/23 14:46	10/27/23 06:40	1
Toluene	<0.00199	U	0.00199	0.000454	mg/Kg		10/24/23 14:46	10/27/23 06:40	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		10/24/23 14:46	10/27/23 06:40	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00101	mg/Kg		10/24/23 14:46	10/27/23 06:40	1
o-Xylene	<0.00199	U	0.00199	0.000343	mg/Kg		10/24/23 14:46	10/27/23 06:40	1
Xylenes, Total	<0.00398	U	0.00398	0.00101	mg/Kg		10/24/23 14:46	10/27/23 06:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	10/24/23 14:46	10/27/23 06:40	1
1,4-Difluorobenzene (Surr)	105		70 - 130	10/24/23 14:46	10/27/23 06:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3	15.1	mg/Kg		10/23/23 12:12	10/24/23 04:18	1
Diesel Range Organics (Over C10-C28)	724		50.3	15.1	mg/Kg		10/23/23 12:12	10/24/23 04:18	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3	15.1	mg/Kg		10/23/23 12:12	10/24/23 04:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130	10/23/23 12:12	10/24/23 04:18	1
o-Terphenyl	105		70 - 130	10/23/23 12:12	10/24/23 04:18	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	621		4.98	0.393	mg/Kg			10/25/23 08:31	1

Client Sample ID: AH-3 0-1

Lab Sample ID: 890-5488-17

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		10/24/23 14:46	10/27/23 07:00	1
Toluene	<0.00199	U	0.00199	0.000453	mg/Kg		10/24/23 14:46	10/27/23 07:00	1
Ethylbenzene	<0.00199	U	0.00199	0.000562	mg/Kg		10/24/23 14:46	10/27/23 07:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00100	mg/Kg		10/24/23 14:46	10/27/23 07:00	1
o-Xylene	<0.00199	U	0.00199	0.000342	mg/Kg		10/24/23 14:46	10/27/23 07:00	1
Xylenes, Total	<0.00398	U	0.00398	0.00100	mg/Kg		10/24/23 14:46	10/27/23 07:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	10/24/23 14:46	10/27/23 07:00	1
1,4-Difluorobenzene (Surr)	112		70 - 130	10/24/23 14:46	10/27/23 07:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	15.1	mg/Kg		10/23/23 12:12	10/24/23 01:29	1
Diesel Range Organics (Over C10-C28)	4290		50.5	15.1	mg/Kg		10/23/23 12:12	10/24/23 01:29	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5	15.1	mg/Kg		10/23/23 12:12	10/24/23 01:29	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-3 0-1

Lab Sample ID: 890-5488-17

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130	10/23/23 12:12	10/24/23 01:29	1
o-Terphenyl	105		70 - 130	10/23/23 12:12	10/24/23 01:29	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	94.9		5.03	0.397	mg/Kg			10/25/23 08:37	1

Client Sample ID: AH-3 1-1.5

Lab Sample ID: 890-5488-18

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000384	mg/Kg		10/24/23 14:46	10/27/23 07:21	1
Toluene	<0.00200	U	0.00200	0.000455	mg/Kg		10/24/23 14:46	10/27/23 07:21	1
Ethylbenzene	<0.00200	U	0.00200	0.000564	mg/Kg		10/24/23 14:46	10/27/23 07:21	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:46	10/27/23 07:21	1
o-Xylene	<0.00200	U	0.00200	0.000343	mg/Kg		10/24/23 14:46	10/27/23 07:21	1
Xylenes, Total	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:46	10/27/23 07:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130				10/24/23 14:46	10/27/23 07:21	1
1,4-Difluorobenzene (Surr)	107		70 - 130				10/24/23 14:46	10/27/23 07:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	14.9	mg/Kg		10/23/23 12:12	10/24/23 02:32	1
Diesel Range Organics (Over C10-C28)	2320		49.7	14.9	mg/Kg		10/23/23 12:12	10/24/23 02:32	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	14.9	mg/Kg		10/23/23 12:12	10/24/23 02:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130				10/23/23 12:12	10/24/23 02:32	1
o-Terphenyl	109		70 - 130				10/23/23 12:12	10/24/23 02:32	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	154		4.99	0.394	mg/Kg			10/25/23 08:42	1

Client Sample ID: AH-3 2-2.5

Lab Sample ID: 890-5488-19

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		10/24/23 14:46	10/27/23 07:41	1
Toluene	<0.00201	U	0.00201	0.000459	mg/Kg		10/24/23 14:46	10/27/23 07:41	1
Ethylbenzene	<0.00201	U	0.00201	0.000568	mg/Kg		10/24/23 14:46	10/27/23 07:41	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00102	mg/Kg		10/24/23 14:46	10/27/23 07:41	1
o-Xylene	0.000455	J	0.00201	0.000346	mg/Kg		10/24/23 14:46	10/27/23 07:41	1
Xylenes, Total	<0.00402	U	0.00402	0.00102	mg/Kg		10/24/23 14:46	10/27/23 07:41	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-3 2-2.5

Lab Sample ID: 890-5488-19

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	10/24/23 14:46	10/27/23 07:41	1
1,4-Difluorobenzene (Surr)	107		70 - 130	10/24/23 14:46	10/27/23 07:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	22.2	J	49.7	14.9	mg/Kg		10/23/23 12:12	10/24/23 04:39	1
Diesel Range Organics (Over C10-C28)	166		49.7	14.9	mg/Kg		10/23/23 12:12	10/24/23 04:39	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	14.9	mg/Kg		10/23/23 12:12	10/24/23 04:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	143	S1+	70 - 130				10/23/23 12:12	10/24/23 04:39	1
o-Terphenyl	127		70 - 130				10/23/23 12:12	10/24/23 04:39	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	385		5.03	0.397	mg/Kg			10/25/23 08:48	1

Client Sample ID: AH-4 0-1

Lab Sample ID: 890-5488-20

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000386	mg/Kg		10/24/23 14:46	10/27/23 08:02	1
Toluene	<0.00200	U	0.00200	0.000457	mg/Kg		10/24/23 14:46	10/27/23 08:02	1
Ethylbenzene	<0.00200	U	0.00200	0.000566	mg/Kg		10/24/23 14:46	10/27/23 08:02	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	0.00101	mg/Kg		10/24/23 14:46	10/27/23 08:02	1
o-Xylene	<0.00200	U	0.00200	0.000345	mg/Kg		10/24/23 14:46	10/27/23 08:02	1
Xylenes, Total	<0.00401	U	0.00401	0.00101	mg/Kg		10/24/23 14:46	10/27/23 08:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130				10/24/23 14:46	10/27/23 08:02	1
1,4-Difluorobenzene (Surr)	105		70 - 130				10/24/23 14:46	10/27/23 08:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<251	U	251	75.3	mg/Kg		10/23/23 12:12	10/24/23 03:57	5
Diesel Range Organics (Over C10-C28)	6940		251	75.3	mg/Kg		10/23/23 12:12	10/24/23 03:57	5
Oil Range Organics (Over C28-C36)	<251	U	251	75.3	mg/Kg		10/23/23 12:12	10/24/23 03:57	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	136	S1+	70 - 130				10/23/23 12:12	10/24/23 03:57	5
o-Terphenyl	125		70 - 130				10/23/23 12:12	10/24/23 03:57	5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.3		5.00	0.395	mg/Kg			10/25/23 08:53	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-4 1-1.5

Lab Sample ID: 890-5488-21

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U	0.0398	0.00765	mg/Kg		10/24/23 14:19	10/26/23 02:58	20
Toluene	<0.0398	U	0.0398	0.00907	mg/Kg		10/24/23 14:19	10/26/23 02:58	20
Ethylbenzene	<0.0398	U	0.0398	0.0112	mg/Kg		10/24/23 14:19	10/26/23 02:58	20
m-Xylene & p-Xylene	<0.0795	U	0.0795	0.0201	mg/Kg		10/24/23 14:19	10/26/23 02:58	20
o-Xylene	0.00701	J	0.0398	0.00684	mg/Kg		10/24/23 14:19	10/26/23 02:58	20
Xylenes, Total	<0.0795	U	0.0795	0.0201	mg/Kg		10/24/23 14:19	10/26/23 02:58	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	10/24/23 14:19	10/26/23 02:58	20
1,4-Difluorobenzene (Surr)	90		70 - 130	10/24/23 14:19	10/26/23 02:58	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	32.2	J B	50.2	15.1	mg/Kg		10/23/23 12:15	10/24/23 02:32	1
Diesel Range Organics (Over C10-C28)	4440		50.2	15.1	mg/Kg		10/23/23 12:15	10/24/23 02:32	1
Oil Range Organics (Over C28-C36)	311		50.2	15.1	mg/Kg		10/23/23 12:15	10/24/23 02:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	10/23/23 12:15	10/24/23 02:32	1
o-Terphenyl	121		70 - 130	10/23/23 12:15	10/24/23 02:32	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	64.2		4.96	0.392	mg/Kg			10/25/23 08:59	1

Client Sample ID: AH-4 2-2.5

Lab Sample ID: 890-5488-22

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000384	mg/Kg		10/24/23 14:19	10/26/23 01:16	1
Toluene	<0.00200	U	0.00200	0.000455	mg/Kg		10/24/23 14:19	10/26/23 01:16	1
Ethylbenzene	<0.00200	U	0.00200	0.000564	mg/Kg		10/24/23 14:19	10/26/23 01:16	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:19	10/26/23 01:16	1
o-Xylene	0.000398	J	0.00200	0.000343	mg/Kg		10/24/23 14:19	10/26/23 01:16	1
Xylenes, Total	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:19	10/26/23 01:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	10/24/23 14:19	10/26/23 01:16	1
1,4-Difluorobenzene (Surr)	111		70 - 130	10/24/23 14:19	10/26/23 01:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	38.0	J B	49.9	15.0	mg/Kg		10/23/23 12:15	10/24/23 04:39	1
Diesel Range Organics (Over C10-C28)	908		49.9	15.0	mg/Kg		10/23/23 12:15	10/24/23 04:39	1
Oil Range Organics (Over C28-C36)	67.5		49.9	15.0	mg/Kg		10/23/23 12:15	10/24/23 04:39	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-4 2-2.5

Lab Sample ID: 890-5488-22

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130	10/23/23 12:15	10/24/23 04:39	1
o-Terphenyl	124		70 - 130	10/23/23 12:15	10/24/23 04:39	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42.5		5.01	0.396	mg/Kg			10/25/23 09:05	1

Client Sample ID: AH-5 0-1

Lab Sample ID: 890-5488-23

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000386	mg/Kg		10/24/23 14:19	10/26/23 01:36	1
Toluene	<0.00200	U	0.00200	0.000457	mg/Kg		10/24/23 14:19	10/26/23 01:36	1
Ethylbenzene	<0.00200	U	0.00200	0.000566	mg/Kg		10/24/23 14:19	10/26/23 01:36	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	0.00101	mg/Kg		10/24/23 14:19	10/26/23 01:36	1
o-Xylene	<0.00200	U	0.00200	0.000345	mg/Kg		10/24/23 14:19	10/26/23 01:36	1
Xylenes, Total	<0.00401	U	0.00401	0.00101	mg/Kg		10/24/23 14:19	10/26/23 01:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	10/24/23 14:19	10/26/23 01:36	1
1,4-Difluorobenzene (Surr)	104		70 - 130	10/24/23 14:19	10/26/23 01:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	38.5	J B	49.7	14.9	mg/Kg		10/23/23 12:15	10/24/23 02:53	1
Diesel Range Organics (Over C10-C28)	1780		49.7	14.9	mg/Kg		10/23/23 12:15	10/24/23 02:53	1
Oil Range Organics (Over C28-C36)	241		49.7	14.9	mg/Kg		10/23/23 12:15	10/24/23 02:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	10/23/23 12:15	10/24/23 02:53	1
o-Terphenyl	118		70 - 130	10/23/23 12:15	10/24/23 02:53	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44.1	F1	5.02	0.397	mg/Kg			10/24/23 10:52	1

Client Sample ID: AH-5 1-1.5

Lab Sample ID: 890-5488-24

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		10/24/23 14:19	10/26/23 01:56	1
Toluene	<0.00199	U	0.00199	0.000454	mg/Kg		10/24/23 14:19	10/26/23 01:56	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		10/24/23 14:19	10/26/23 01:56	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00101	mg/Kg		10/24/23 14:19	10/26/23 01:56	1
o-Xylene	0.000768	J	0.00199	0.000343	mg/Kg		10/24/23 14:19	10/26/23 01:56	1
Xylenes, Total	<0.00398	U	0.00398	0.00101	mg/Kg		10/24/23 14:19	10/26/23 01:56	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-5 1-1.5

Lab Sample ID: 890-5488-24

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	10/24/23 14:19	10/26/23 01:56	1
1,4-Difluorobenzene (Surr)	114		70 - 130	10/24/23 14:19	10/26/23 01:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	22.3	J B	50.0	15.0	mg/Kg		10/23/23 12:15	10/24/23 01:50	1
Diesel Range Organics (Over C10-C28)	1360		50.0	15.0	mg/Kg		10/23/23 12:15	10/24/23 01:50	1
Oil Range Organics (Over C28-C36)	214		50.0	15.0	mg/Kg		10/23/23 12:15	10/24/23 01:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130				10/23/23 12:15	10/24/23 01:50	1
o-Terphenyl	104		70 - 130				10/23/23 12:15	10/24/23 01:50	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	77.2		5.05	0.399	mg/Kg			10/24/23 11:12	1

Client Sample ID: AH-5 2-2.5

Lab Sample ID: 890-5488-25

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	0.000381	mg/Kg		10/24/23 14:19	10/26/23 02:17	1
Toluene	<0.00198	U	0.00198	0.000451	mg/Kg		10/24/23 14:19	10/26/23 02:17	1
Ethylbenzene	<0.00198	U	0.00198	0.000559	mg/Kg		10/24/23 14:19	10/26/23 02:17	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	0.00100	mg/Kg		10/24/23 14:19	10/26/23 02:17	1
o-Xylene	<0.00198	U	0.00198	0.000341	mg/Kg		10/24/23 14:19	10/26/23 02:17	1
Xylenes, Total	<0.00396	U	0.00396	0.00100	mg/Kg		10/24/23 14:19	10/26/23 02:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130				10/24/23 14:19	10/26/23 02:17	1
1,4-Difluorobenzene (Surr)	110		70 - 130				10/24/23 14:19	10/26/23 02:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3	15.1	mg/Kg		10/23/23 12:15	10/24/23 03:36	1
Diesel Range Organics (Over C10-C28)	1350		50.3	15.1	mg/Kg		10/23/23 12:15	10/24/23 03:36	1
Oil Range Organics (Over C28-C36)	167		50.3	15.1	mg/Kg		10/23/23 12:15	10/24/23 03:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130				10/23/23 12:15	10/24/23 03:36	1
o-Terphenyl	133	S1+	70 - 130				10/23/23 12:15	10/24/23 03:36	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	255		4.97	0.393	mg/Kg			10/24/23 11:19	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-5 3-3.5

Lab Sample ID: 890-5488-26

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		10/24/23 14:19	10/26/23 02:37	1
Toluene	<0.00199	U	0.00199	0.000453	mg/Kg		10/24/23 14:19	10/26/23 02:37	1
Ethylbenzene	<0.00199	U	0.00199	0.000562	mg/Kg		10/24/23 14:19	10/26/23 02:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00100	mg/Kg		10/24/23 14:19	10/26/23 02:37	1
o-Xylene	<0.00199	U	0.00199	0.000342	mg/Kg		10/24/23 14:19	10/26/23 02:37	1
Xylenes, Total	<0.00398	U	0.00398	0.00100	mg/Kg		10/24/23 14:19	10/26/23 02:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	10/24/23 14:19	10/26/23 02:37	1
1,4-Difluorobenzene (Surr)	117		70 - 130	10/24/23 14:19	10/26/23 02:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	21.4	J B	50.4	15.1	mg/Kg		10/23/23 12:15	10/24/23 04:18	1
Diesel Range Organics (Over C10-C28)	1260		50.4	15.1	mg/Kg		10/23/23 12:15	10/24/23 04:18	1
Oil Range Organics (Over C28-C36)	127		50.4	15.1	mg/Kg		10/23/23 12:15	10/24/23 04:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	10/23/23 12:15	10/24/23 04:18	1
o-Terphenyl	105		70 - 130	10/23/23 12:15	10/24/23 04:18	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	516		5.01	0.396	mg/Kg			10/24/23 11:39	1

Client Sample ID: AH-5 4-4.5

Lab Sample ID: 890-5488-27

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000384	mg/Kg		10/24/23 14:19	10/26/23 04:47	1
Toluene	<0.00200	U	0.00200	0.000455	mg/Kg		10/24/23 14:19	10/26/23 04:47	1
Ethylbenzene	<0.00200	U	0.00200	0.000564	mg/Kg		10/24/23 14:19	10/26/23 04:47	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:19	10/26/23 04:47	1
o-Xylene	0.000692	J	0.00200	0.000343	mg/Kg		10/24/23 14:19	10/26/23 04:47	1
Xylenes, Total	<0.00399	U	0.00399	0.00101	mg/Kg		10/24/23 14:19	10/26/23 04:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		70 - 130	10/24/23 14:19	10/26/23 04:47	1
1,4-Difluorobenzene (Surr)	104		70 - 130	10/24/23 14:19	10/26/23 04:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	40.9	J B	49.7	14.9	mg/Kg		10/23/23 12:15	10/24/23 03:57	1
Diesel Range Organics (Over C10-C28)	3650		49.7	14.9	mg/Kg		10/23/23 12:15	10/24/23 03:57	1
Oil Range Organics (Over C28-C36)	219		49.7	14.9	mg/Kg		10/23/23 12:15	10/24/23 03:57	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-5 4-4.5

Lab Sample ID: 890-5488-27

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130	10/23/23 12:15	10/24/23 03:57	1
o-Terphenyl	125		70 - 130	10/23/23 12:15	10/24/23 03:57	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	540		5.01	0.396	mg/Kg			10/24/23 11:45	1

Client Sample ID: AH-6 0-1

Lab Sample ID: 890-5488-28

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		10/24/23 14:19	10/26/23 05:08	1
Toluene	<0.00201	U	0.00201	0.000459	mg/Kg		10/24/23 14:19	10/26/23 05:08	1
Ethylbenzene	0.000958	J	0.00201	0.000568	mg/Kg		10/24/23 14:19	10/26/23 05:08	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00102	mg/Kg		10/24/23 14:19	10/26/23 05:08	1
o-Xylene	<0.00201	U	0.00201	0.000346	mg/Kg		10/24/23 14:19	10/26/23 05:08	1
Xylenes, Total	<0.00402	U	0.00402	0.00102	mg/Kg		10/24/23 14:19	10/26/23 05:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130				10/24/23 14:19	10/26/23 05:08	1
1,4-Difluorobenzene (Surr)	114		70 - 130				10/24/23 14:19	10/26/23 05:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	33.4	J B	49.6	14.9	mg/Kg		10/23/23 12:15	10/24/23 01:29	1
Diesel Range Organics (Over C10-C28)	2100		49.6	14.9	mg/Kg		10/23/23 12:15	10/24/23 01:29	1
Oil Range Organics (Over C28-C36)	307		49.6	14.9	mg/Kg		10/23/23 12:15	10/24/23 01:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130				10/23/23 12:15	10/24/23 01:29	1
o-Terphenyl	111		70 - 130				10/23/23 12:15	10/24/23 01:29	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.7		5.00	0.395	mg/Kg			10/24/23 11:52	1

Client Sample ID: AH-6 1-1.5

Lab Sample ID: 890-5488-29

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	0.000387	mg/Kg		10/24/23 14:19	10/26/23 05:28	1
Toluene	<0.00201	U	0.00201	0.000458	mg/Kg		10/24/23 14:19	10/26/23 05:28	1
Ethylbenzene	<0.00201	U	0.00201	0.000567	mg/Kg		10/24/23 14:19	10/26/23 05:28	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	0.00101	mg/Kg		10/24/23 14:19	10/26/23 05:28	1
o-Xylene	<0.00201	U	0.00201	0.000345	mg/Kg		10/24/23 14:19	10/26/23 05:28	1
Xylenes, Total	<0.00402	U	0.00402	0.00101	mg/Kg		10/24/23 14:19	10/26/23 05:28	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-6 1-1.5

Lab Sample ID: 890-5488-29

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	10/24/23 14:19	10/26/23 05:28	1
1,4-Difluorobenzene (Surr)	115		70 - 130	10/24/23 14:19	10/26/23 05:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	31.5	J B	50.5	15.2	mg/Kg		10/23/23 12:15	10/24/23 02:11	1
Diesel Range Organics (Over C10-C28)	800		50.5	15.2	mg/Kg		10/23/23 12:15	10/24/23 02:11	1
Oil Range Organics (Over C28-C36)	143		50.5	15.2	mg/Kg		10/23/23 12:15	10/24/23 02:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130				10/23/23 12:15	10/24/23 02:11	1
o-Terphenyl	107		70 - 130				10/23/23 12:15	10/24/23 02:11	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	58.5		5.02	0.397	mg/Kg			10/24/23 11:59	1

Client Sample ID: AH-6 2-2.5

Lab Sample ID: 890-5488-30

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	0.000383	mg/Kg		10/24/23 14:19	10/26/23 05:48	1
Toluene	<0.00199	U	0.00199	0.000454	mg/Kg		10/24/23 14:19	10/26/23 05:48	1
Ethylbenzene	<0.00199	U	0.00199	0.000563	mg/Kg		10/24/23 14:19	10/26/23 05:48	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	0.00101	mg/Kg		10/24/23 14:19	10/26/23 05:48	1
o-Xylene	0.000495	J	0.00199	0.000343	mg/Kg		10/24/23 14:19	10/26/23 05:48	1
Xylenes, Total	<0.00398	U	0.00398	0.00101	mg/Kg		10/24/23 14:19	10/26/23 05:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				10/24/23 14:19	10/26/23 05:48	1
1,4-Difluorobenzene (Surr)	110		70 - 130				10/24/23 14:19	10/26/23 05:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	26.9	J B	50.4	15.1	mg/Kg		10/23/23 12:15	10/24/23 00:46	1
Diesel Range Organics (Over C10-C28)	67.0		50.4	15.1	mg/Kg		10/23/23 12:15	10/24/23 00:46	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	15.1	mg/Kg		10/23/23 12:15	10/24/23 00:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130				10/23/23 12:15	10/24/23 00:46	1
o-Terphenyl	115		70 - 130				10/23/23 12:15	10/24/23 00:46	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.1		5.04	0.398	mg/Kg			10/24/23 12:05	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-6 3-3.5

Lab Sample ID: 890-5488-31

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	0.000381	mg/Kg		10/24/23 14:19	10/26/23 06:09	1
Toluene	<0.00198	U	0.00198	0.000451	mg/Kg		10/24/23 14:19	10/26/23 06:09	1
Ethylbenzene	<0.00198	U	0.00198	0.000559	mg/Kg		10/24/23 14:19	10/26/23 06:09	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	0.00100	mg/Kg		10/24/23 14:19	10/26/23 06:09	1
o-Xylene	<0.00198	U	0.00198	0.000341	mg/Kg		10/24/23 14:19	10/26/23 06:09	1
Xylenes, Total	<0.00396	U	0.00396	0.00100	mg/Kg		10/24/23 14:19	10/26/23 06:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130	10/24/23 14:19	10/26/23 06:09	1
1,4-Difluorobenzene (Surr)	112		70 - 130	10/24/23 14:19	10/26/23 06:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	163	J B	250	74.9	mg/Kg		10/23/23 12:15	10/24/23 03:14	5
Diesel Range Organics (Over C10-C28)	12100		250	74.9	mg/Kg		10/23/23 12:15	10/24/23 03:14	5
Oil Range Organics (Over C28-C36)	1330		250	74.9	mg/Kg		10/23/23 12:15	10/24/23 03:14	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	10/23/23 12:15	10/24/23 03:14	5
o-Terphenyl	118		70 - 130	10/23/23 12:15	10/24/23 03:14	5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	189		5.02	0.397	mg/Kg			10/24/23 12:12	1

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Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Method: 8021B - Volatile Organic Compounds (GC)**Matrix: Solid****Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-5488-1	H-1	82	103
890-5488-1 MS	H-1	95	106
890-5488-1 MSD	H-1	103	102
890-5488-2	H-2	99	106
890-5488-3	H-3	89	113
890-5488-4	H-4	96	107
890-5488-5	H-5	99	111
890-5488-6	H-6	91	113
890-5488-7	H-7	101	111
890-5488-8	H-8	103	110
890-5488-9	AH-1 0-1	71	137 S1+
890-5488-10	AH-1 1-1.5	52 S1-	127
890-5488-11	AH-1 2-2.5	71	137 S1+
890-5488-12	AH-1 3-3.5	99	101
890-5488-13	AH-1 4-4.5	92	108
890-5488-14	AH-2 0-1	92	107
890-5488-15	AH-2 1-1.5	88	105
890-5488-16	AH-2 2-2.5	96	105
890-5488-17	AH-3 0-1	91	112
890-5488-18	AH-3 1-1.5	101	107
890-5488-19	AH-3 2-2.5	100	107
890-5488-20	AH-4 0-1	99	105
890-5488-21	AH-4 1-1.5	113	90
890-5488-22	AH-4 2-2.5	91	111
890-5488-23	AH-5 0-1	93	104
890-5488-24	AH-5 1-1.5	98	114
890-5488-25	AH-5 2-2.5	95	110
890-5488-26	AH-5 3-3.5	88	117
890-5488-27	AH-5 4-4.5	80	104
890-5488-28	AH-6 0-1	92	114
890-5488-29	AH-6 1-1.5	92	115
890-5488-30	AH-6 2-2.5	98	110
890-5488-31	AH-6 3-3.5	87	112
LCS 880-65487/1-A	Lab Control Sample	100	107
LCS 880-65489/1-A	Lab Control Sample	96	102
LCS 880-65644/1-A	Lab Control Sample	115	99
LCSD 880-65487/2-A	Lab Control Sample Dup	105	103
LCSD 880-65489/2-A	Lab Control Sample Dup	96	106
LCSD 880-65644/2-A	Lab Control Sample Dup	114	119
MB 880-65466/5-A	Method Blank	103	132 S1+
MB 880-65487/5-A	Method Blank	125	154 S1+
MB 880-65489/5-A	Method Blank	111	136 S1+
MB 880-65555/5-A	Method Blank	109	126
MB 880-65644/5-A	Method Blank	71	99
MB 880-65698/5-A	Method Blank	71	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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Surrogate Summary

Client: Tetra Tech, Inc.

Job ID: 890-5488-1

Project/Site: JR Oil

Method: 8015B NM - Diesel Range Organics (DRO) (GC)
Matrix: Solid
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-5488-1	H-1	121	110
890-5488-1 MS	H-1	127	102
890-5488-1 MSD	H-1	126	99
890-5488-2	H-2	119	100
890-5488-3	H-3	130	113
890-5488-4	H-4	133 S1+	111
890-5488-5	H-5	121	105
890-5488-6	H-6	117	102
890-5488-7	H-7	118	105
890-5488-8	H-8	123	105
890-5488-9	AH-1 0-1	114	103
890-5488-10	AH-1 1-1.5	124	105
890-5488-11	AH-1 2-2.5	137 S1+	117
890-5488-12	AH-1 3-3.5	127	110
890-5488-13	AH-1 4-4.5	136 S1+	118
890-5488-14	AH-2 0-1	125	112
890-5488-15	AH-2 1-1.5	140 S1+	130
890-5488-16	AH-2 2-2.5	121	105
890-5488-17	AH-3 0-1	118	105
890-5488-18	AH-3 1-1.5	121	109
890-5488-19	AH-3 2-2.5	143 S1+	127
890-5488-20	AH-4 0-1	136 S1+	125
890-5488-21	AH-4 1-1.5	113	121
890-5488-22	AH-4 2-2.5	118	124
890-5488-23	AH-5 0-1	114	118
890-5488-24	AH-5 1-1.5	101	104
890-5488-25	AH-5 2-2.5	123	133 S1+
890-5488-26	AH-5 3-3.5	101	105
890-5488-27	AH-5 4-4.5	116	125
890-5488-28	AH-6 0-1	112	111
890-5488-29	AH-6 1-1.5	105	107
890-5488-30	AH-6 2-2.5	110	115
890-5488-31	AH-6 3-3.5	105	118
LCS 880-65361/2-A	Lab Control Sample	102	112
LCS 880-65363/2-A	Lab Control Sample	91	93
LCSD 880-65361/3-A	Lab Control Sample Dup	119	117
LCSD 880-65363/3-A	Lab Control Sample Dup	84	90
MB 880-65361/1-A	Method Blank	189 S1+	175 S1+
MB 880-65363/1-A	Method Blank	187 S1+	210 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Carlsbad

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-65466/5-A

Matrix: Solid

Analysis Batch: 65514

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 65466

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	0.000381	mg/Kg		10/24/23 14:30	10/25/23 11:48	1
Toluene	<0.00198	U	0.00198	0.000451	mg/Kg		10/24/23 14:30	10/25/23 11:48	1
Ethylbenzene	<0.00198	U	0.00198	0.000559	mg/Kg		10/24/23 14:30	10/25/23 11:48	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	0.00100	mg/Kg		10/24/23 14:30	10/25/23 11:48	1
o-Xylene	<0.00198	U	0.00198	0.000341	mg/Kg		10/24/23 14:30	10/25/23 11:48	1
Xylenes, Total	<0.00396	U	0.00396	0.00100	mg/Kg		10/24/23 14:30	10/25/23 11:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	10/24/23 14:30	10/25/23 11:48	1
1,4-Difluorobenzene (Surr)	132	S1+	70 - 130	10/24/23 14:30	10/25/23 11:48	1

Lab Sample ID: MB 880-65487/5-A

Matrix: Solid

Analysis Batch: 65514

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 65487

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		10/24/23 14:19	10/25/23 23:25	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		10/24/23 14:19	10/25/23 23:25	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		10/24/23 14:19	10/25/23 23:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		10/24/23 14:19	10/25/23 23:25	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		10/24/23 14:19	10/25/23 23:25	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		10/24/23 14:19	10/25/23 23:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130	10/24/23 14:19	10/25/23 23:25	1
1,4-Difluorobenzene (Surr)	154	S1+	70 - 130	10/24/23 14:19	10/25/23 23:25	1

Lab Sample ID: LCS 880-65487/1-A

Matrix: Solid

Analysis Batch: 65514

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 65487

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1059		mg/Kg		106	70 - 130
Toluene	0.100	0.08809		mg/Kg		88	70 - 130
Ethylbenzene	0.100	0.08876		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	0.200	0.1747		mg/Kg		87	70 - 130
o-Xylene	0.100	0.08888		mg/Kg		89	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: LCSD 880-65487/2-A

Matrix: Solid

Analysis Batch: 65514

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 65487

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1064		mg/Kg		106	70 - 130	1	35

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QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

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

Lab Sample ID: LCSD 880-65487/2-A

Matrix: Solid

Analysis Batch: 65514

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 65487

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.08681		mg/Kg		87	70 - 130	1	35
Ethylbenzene	0.100	0.09136		mg/Kg		91	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1646		mg/Kg		82	70 - 130	6	35
o-Xylene	0.100	0.08687		mg/Kg		87	70 - 130	2	35

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

Lab Sample ID: MB 880-65489/5-A

Matrix: Solid

Analysis Batch: 65593

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 65489

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		10/24/23 14:46	10/26/23 23:55	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		10/24/23 14:46	10/26/23 23:55	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		10/24/23 14:46	10/26/23 23:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		10/24/23 14:46	10/26/23 23:55	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		10/24/23 14:46	10/26/23 23:55	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		10/24/23 14:46	10/26/23 23:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	10/24/23 14:46	10/26/23 23:55	1
1,4-Difluorobenzene (Surr)	136	S1+	70 - 130	10/24/23 14:46	10/26/23 23:55	1

Lab Sample ID: LCS 880-65489/1-A

Matrix: Solid

Analysis Batch: 65593

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 65489

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09589		mg/Kg		96	70 - 130
Toluene	0.100	0.08467		mg/Kg		85	70 - 130
Ethylbenzene	0.100	0.07949		mg/Kg		79	70 - 130
m-Xylene & p-Xylene	0.200	0.1834		mg/Kg		92	70 - 130
o-Xylene	0.100	0.09110		mg/Kg		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: LCSD 880-65489/2-A

Matrix: Solid

Analysis Batch: 65593

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 65489

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09683		mg/Kg		97	70 - 130	1	35
Toluene	0.100	0.08271		mg/Kg		83	70 - 130	2	35
Ethylbenzene	0.100	0.08072		mg/Kg		81	70 - 130	2	35

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QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

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

Lab Sample ID: LCSD 880-65489/2-A

Matrix: Solid

Analysis Batch: 65593

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 65489

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Xylene & p-Xylene	0.200	0.1861		mg/Kg		93	70 - 130	1	35
o-Xylene	0.100	0.09146		mg/Kg		91	70 - 130	0	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 890-5488-1 MS

Matrix: Solid

Analysis Batch: 65593

Client Sample ID: H-1

Prep Type: Total/NA

Prep Batch: 65489

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0996	0.08933		mg/Kg		90	70 - 130
Toluene	<0.00200	U	0.0996	0.07213		mg/Kg		72	70 - 130
Ethylbenzene	<0.00200	U	0.0996	0.07159		mg/Kg		72	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.199	0.1637		mg/Kg		82	70 - 130
o-Xylene	0.000439	J	0.0996	0.08158		mg/Kg		81	70 - 130

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

Lab Sample ID: 890-5488-1 MSD

Matrix: Solid

Analysis Batch: 65593

Client Sample ID: H-1

Prep Type: Total/NA

Prep Batch: 65489

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.09583		mg/Kg		96	70 - 130	7	35
Toluene	<0.00200	U	0.100	0.07470		mg/Kg		75	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.100	0.07206		mg/Kg		72	70 - 130	1	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1544		mg/Kg		77	70 - 130	6	35
o-Xylene	0.000439	J	0.100	0.08861		mg/Kg		88	70 - 130	8	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: MB 880-65555/5-A

Matrix: Solid

Analysis Batch: 65593

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 65555

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		10/25/23 11:27	10/26/23 11:22	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		10/25/23 11:27	10/26/23 11:22	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		10/25/23 11:27	10/26/23 11:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		10/25/23 11:27	10/26/23 11:22	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		10/25/23 11:27	10/26/23 11:22	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		10/25/23 11:27	10/26/23 11:22	1

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QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	10/25/23 11:27	10/26/23 11:22	1
1,4-Difluorobenzene (Surr)	126		70 - 130	10/25/23 11:27	10/26/23 11:22	1

Lab Sample ID: MB 880-65644/5-A

Matrix: Solid

Analysis Batch: 65680

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 65644

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		10/26/23 11:52	10/28/23 10:11	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		10/26/23 11:52	10/28/23 10:11	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		10/26/23 11:52	10/28/23 10:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		10/26/23 11:52	10/28/23 10:11	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		10/26/23 11:52	10/28/23 10:11	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		10/26/23 11:52	10/28/23 10:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130	10/26/23 11:52	10/28/23 10:11	1
1,4-Difluorobenzene (Surr)	99		70 - 130	10/26/23 11:52	10/28/23 10:11	1

Lab Sample ID: LCS 880-65644/1-A

Matrix: Solid

Analysis Batch: 65680

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 65644

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1074		mg/Kg		107	70 - 130
Toluene	0.100	0.1010		mg/Kg		101	70 - 130
Ethylbenzene	0.100	0.09836		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	0.200	0.2130		mg/Kg		107	70 - 130
o-Xylene	0.100	0.1040		mg/Kg		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: LCSD 880-65644/2-A

Matrix: Solid

Analysis Batch: 65680

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 65644

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1023		mg/Kg		102	70 - 130	5	35
Toluene	0.100	0.09513		mg/Kg		95	70 - 130	6	35
Ethylbenzene	0.100	0.09508		mg/Kg		95	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.2021		mg/Kg		101	70 - 130	5	35
o-Xylene	0.100	0.09812		mg/Kg		98	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	119		70 - 130

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QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

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

Lab Sample ID: MB 880-65698/5-A

Matrix: Solid

Analysis Batch: 65680

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 65698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		10/27/23 11:54	10/27/23 23:35	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		10/27/23 11:54	10/27/23 23:35	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		10/27/23 11:54	10/27/23 23:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		10/27/23 11:54	10/27/23 23:35	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		10/27/23 11:54	10/27/23 23:35	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		10/27/23 11:54	10/27/23 23:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130	10/27/23 11:54	10/27/23 23:35	1
1,4-Difluorobenzene (Surr)	93		70 - 130	10/27/23 11:54	10/27/23 23:35	1

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

Lab Sample ID: MB 880-65361/1-A

Matrix: Solid

Analysis Batch: 65296

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 65361

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	15.0	mg/Kg		10/23/23 12:12	10/23/23 19:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	15.0	mg/Kg		10/23/23 12:12	10/23/23 19:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		10/23/23 12:12	10/23/23 19:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	189	S1+	70 - 130	10/23/23 12:12	10/23/23 19:47	1
o-Terphenyl	175	S1+	70 - 130	10/23/23 12:12	10/23/23 19:47	1

Lab Sample ID: LCS 880-65361/2-A

Matrix: Solid

Analysis Batch: 65296

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 65361

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	877.6		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	1000	830.1		mg/Kg		83	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	112		70 - 130

Lab Sample ID: LCSD 880-65361/3-A

Matrix: Solid

Analysis Batch: 65296

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 65361

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	973.7		mg/Kg		97	70 - 130	10	20

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QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

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

Lab Sample ID: LCSD 880-65361/3-A

Matrix: Solid

Analysis Batch: 65296

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 65361

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics (Over C10-C28)	1000	993.0		mg/Kg		99	70 - 130	18	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	119		70 - 130						
o-Terphenyl	117		70 - 130						

Lab Sample ID: 890-5488-1 MS

Matrix: Solid

Analysis Batch: 65296

Client Sample ID: H-1

Prep Type: Total/NA

Prep Batch: 65361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	24.2	J	1010	945.8		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)	15.4	J	1010	1162		mg/Kg		114	70 - 130		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1-Chlorooctane	127		70 - 130								
o-Terphenyl	102		70 - 130								

Lab Sample ID: 890-5488-1 MSD

Matrix: Solid

Analysis Batch: 65296

Client Sample ID: H-1

Prep Type: Total/NA

Prep Batch: 65361

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	24.2	J	1010	937.1		mg/Kg		91	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	15.4	J	1010	1149		mg/Kg		113	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	126		70 - 130								
o-Terphenyl	99		70 - 130								

Lab Sample ID: MB 880-65363/1-A

Matrix: Solid

Analysis Batch: 65298

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 65363

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	16.21	J	50.0	15.0	mg/Kg		10/23/23 12:15	10/23/23 19:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	15.0	mg/Kg		10/23/23 12:15	10/23/23 19:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		10/23/23 12:15	10/23/23 19:47	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1-Chlorooctane	187	S1+	70 - 130	10/23/23 12:15	10/23/23 19:47	1			
o-Terphenyl	210	S1+	70 - 130	10/23/23 12:15	10/23/23 19:47	1			

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QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

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

Lab Sample ID: LCS 880-65363/2-A

Matrix: Solid

Analysis Batch: 65298

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 65363

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1000		mg/Kg		100	70 - 130
Diesel Range Organics (Over C10-C28)	1000	947.6		mg/Kg		95	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	91		70 - 130				
o-Terphenyl	93		70 - 130				

Lab Sample ID: LCSD 880-65363/3-A

Matrix: Solid

Analysis Batch: 65298

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 65363

Report Data - 06/20/2024											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	832.3		mg/Kg		83	70 - 130	18	20
Diesel Range Organics (Over C10-C28)			1000	783.2		mg/Kg		78	70 - 130	19	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
1-Chlorooctane	84		70 - 130								
o-Terphenyl	90		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-65215/1-A

Matrix: Solid

Analysis Batch: 65419

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	0.395	mg/Kg			10/24/23 09:00	1

Lab Sample ID: LCS 880-65215/2-A

Matrix: Solid

Analysis Batch: 65419

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	249.3		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-65215/3-A

Matrix: Solid

Analysis Batch: 65419

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	249.3		mg/Kg		100	90 - 110	0	20

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QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-5488-23 MS

Matrix: Solid

Analysis Batch: 65419

Client Sample ID: AH-5 0-1

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	44.1	F1	251	363.8	F1	mg/Kg		127	90 - 110

Lab Sample ID: 890-5488-23 MSD

Matrix: Solid

Analysis Batch: 65419

Client Sample ID: AH-5 0-1

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	44.1	F1	251	362.3	F1	mg/Kg		127	90 - 110	0	20

Lab Sample ID: MB 880-65212/1-A

Matrix: Solid

Analysis Batch: 65471

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	0.395	mg/Kg			10/25/23 03:15	1

Lab Sample ID: LCS 880-65212/2-A

Matrix: Solid

Analysis Batch: 65471

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	246.2		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-65212/3-A

Matrix: Solid

Analysis Batch: 65471

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	246.7		mg/Kg		99	90 - 110	0	20

Lab Sample ID: MB 880-65213/1-A

Matrix: Solid

Analysis Batch: 65480

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	0.395	mg/Kg			10/25/23 06:16	1

Lab Sample ID: LCS 880-65213/2-A

Matrix: Solid

Analysis Batch: 65480

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	246.1		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-65213/3-A

Matrix: Solid

Analysis Batch: 65480

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	247.7		mg/Kg		99	90 - 110	1	20

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QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-5488-3 MS

Matrix: Solid

Analysis Batch: 65480

Client Sample ID: H-3

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	32.6		252	285.0		mg/Kg		100	90 - 110		

Lab Sample ID: 890-5488-3 MSD

Matrix: Solid

Analysis Batch: 65480

Client Sample ID: H-3

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	32.6		252	285.7		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 890-5488-13 MS

Matrix: Solid

Analysis Batch: 65480

Client Sample ID: AH-1 4-4.5

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	241		249	510.7		mg/Kg		108	90 - 110		

Lab Sample ID: 890-5488-13 MSD

Matrix: Solid

Analysis Batch: 65480

Client Sample ID: AH-1 4-4.5

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	241		249	511.8		mg/Kg		109	90 - 110	0	20

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QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

GC VOA

Prep Batch: 65466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-65466/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 65487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-21	AH-4 1-1.5	Total/NA	Solid	5035	
890-5488-22	AH-4 2-2.5	Total/NA	Solid	5035	
890-5488-23	AH-5 0-1	Total/NA	Solid	5035	
890-5488-24	AH-5 1-1.5	Total/NA	Solid	5035	
890-5488-25	AH-5 2-2.5	Total/NA	Solid	5035	
890-5488-26	AH-5 3-3.5	Total/NA	Solid	5035	
890-5488-27	AH-5 4-4.5	Total/NA	Solid	5035	
890-5488-28	AH-6 0-1	Total/NA	Solid	5035	
890-5488-29	AH-6 1-1.5	Total/NA	Solid	5035	
890-5488-30	AH-6 2-2.5	Total/NA	Solid	5035	
890-5488-31	AH-6 3-3.5	Total/NA	Solid	5035	
MB 880-65487/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-65487/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-65487/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 65489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-1	H-1	Total/NA	Solid	5035	
890-5488-2	H-2	Total/NA	Solid	5035	
890-5488-3	H-3	Total/NA	Solid	5035	
890-5488-4	H-4	Total/NA	Solid	5035	
890-5488-5	H-5	Total/NA	Solid	5035	
890-5488-6	H-6	Total/NA	Solid	5035	
890-5488-7	H-7	Total/NA	Solid	5035	
890-5488-8	H-8	Total/NA	Solid	5035	
890-5488-12	AH-1 3-3.5	Total/NA	Solid	5035	
890-5488-13	AH-1 4-4.5	Total/NA	Solid	5035	
890-5488-14	AH-2 0-1	Total/NA	Solid	5035	
890-5488-15	AH-2 1-1.5	Total/NA	Solid	5035	
890-5488-16	AH-2 2-2.5	Total/NA	Solid	5035	
890-5488-17	AH-3 0-1	Total/NA	Solid	5035	
890-5488-18	AH-3 1-1.5	Total/NA	Solid	5035	
890-5488-19	AH-3 2-2.5	Total/NA	Solid	5035	
890-5488-20	AH-4 0-1	Total/NA	Solid	5035	
MB 880-65489/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-65489/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-65489/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5488-1 MS	H-1	Total/NA	Solid	5035	
890-5488-1 MSD	H-1	Total/NA	Solid	5035	

Analysis Batch: 65514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-21	AH-4 1-1.5	Total/NA	Solid	8021B	65487
890-5488-22	AH-4 2-2.5	Total/NA	Solid	8021B	65487
890-5488-23	AH-5 0-1	Total/NA	Solid	8021B	65487
890-5488-24	AH-5 1-1.5	Total/NA	Solid	8021B	65487
890-5488-25	AH-5 2-2.5	Total/NA	Solid	8021B	65487

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QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

GC VOA (Continued)

Analysis Batch: 65514 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-26	AH-5 3-3.5	Total/NA	Solid	8021B	65487
890-5488-27	AH-5 4-4.5	Total/NA	Solid	8021B	65487
890-5488-28	AH-6 0-1	Total/NA	Solid	8021B	65487
890-5488-29	AH-6 1-1.5	Total/NA	Solid	8021B	65487
890-5488-30	AH-6 2-2.5	Total/NA	Solid	8021B	65487
890-5488-31	AH-6 3-3.5	Total/NA	Solid	8021B	65487
MB 880-65466/5-A	Method Blank	Total/NA	Solid	8021B	65466
MB 880-65487/5-A	Method Blank	Total/NA	Solid	8021B	65487
LCS 880-65487/1-A	Lab Control Sample	Total/NA	Solid	8021B	65487
LCSD 880-65487/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	65487

Prep Batch: 65555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-65555/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 65593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-1	H-1	Total/NA	Solid	8021B	65489
890-5488-2	H-2	Total/NA	Solid	8021B	65489
890-5488-3	H-3	Total/NA	Solid	8021B	65489
890-5488-4	H-4	Total/NA	Solid	8021B	65489
890-5488-5	H-5	Total/NA	Solid	8021B	65489
890-5488-6	H-6	Total/NA	Solid	8021B	65489
890-5488-7	H-7	Total/NA	Solid	8021B	65489
890-5488-8	H-8	Total/NA	Solid	8021B	65489
890-5488-12	AH-1 3-3.5	Total/NA	Solid	8021B	65489
890-5488-13	AH-1 4-4.5	Total/NA	Solid	8021B	65489
890-5488-14	AH-2 0-1	Total/NA	Solid	8021B	65489
890-5488-15	AH-2 1-1.5	Total/NA	Solid	8021B	65489
890-5488-16	AH-2 2-2.5	Total/NA	Solid	8021B	65489
890-5488-17	AH-3 0-1	Total/NA	Solid	8021B	65489
890-5488-18	AH-3 1-1.5	Total/NA	Solid	8021B	65489
890-5488-19	AH-3 2-2.5	Total/NA	Solid	8021B	65489
890-5488-20	AH-4 0-1	Total/NA	Solid	8021B	65489
MB 880-65489/5-A	Method Blank	Total/NA	Solid	8021B	65489
MB 880-65555/5-A	Method Blank	Total/NA	Solid	8021B	65555
LCS 880-65489/1-A	Lab Control Sample	Total/NA	Solid	8021B	65489
LCSD 880-65489/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	65489
890-5488-1 MS	H-1	Total/NA	Solid	8021B	65489
890-5488-1 MSD	H-1	Total/NA	Solid	8021B	65489

Prep Batch: 65644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-9	AH-1 0-1	Total/NA	Solid	5035	
890-5488-10	AH-1 1-1.5	Total/NA	Solid	5035	
890-5488-11	AH-1 2-2.5	Total/NA	Solid	5035	
MB 880-65644/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-65644/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-65644/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

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QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

GC VOA

Analysis Batch: 65680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-9	AH-1 0-1	Total/NA	Solid	8021B	65644
890-5488-10	AH-1 1-1.5	Total/NA	Solid	8021B	65644
890-5488-11	AH-1 2-2.5	Total/NA	Solid	8021B	65644
MB 880-65644/5-A	Method Blank	Total/NA	Solid	8021B	65644
MB 880-65698/5-A	Method Blank	Total/NA	Solid	8021B	65698
LCS 880-65644/1-A	Lab Control Sample	Total/NA	Solid	8021B	65644
LCSD 880-65644/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	65644

Prep Batch: 65698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-65698/5-A	Method Blank	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 65296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-1	H-1	Total/NA	Solid	8015B NM	65361
890-5488-2	H-2	Total/NA	Solid	8015B NM	65361
890-5488-3	H-3	Total/NA	Solid	8015B NM	65361
890-5488-4	H-4	Total/NA	Solid	8015B NM	65361
890-5488-5	H-5	Total/NA	Solid	8015B NM	65361
890-5488-6	H-6	Total/NA	Solid	8015B NM	65361
890-5488-7	H-7	Total/NA	Solid	8015B NM	65361
890-5488-8	H-8	Total/NA	Solid	8015B NM	65361
890-5488-9	AH-1 0-1	Total/NA	Solid	8015B NM	65361
890-5488-10	AH-1 1-1.5	Total/NA	Solid	8015B NM	65361
890-5488-11	AH-1 2-2.5	Total/NA	Solid	8015B NM	65361
890-5488-12	AH-1 3-3.5	Total/NA	Solid	8015B NM	65361
890-5488-13	AH-1 4-4.5	Total/NA	Solid	8015B NM	65361
890-5488-14	AH-2 0-1	Total/NA	Solid	8015B NM	65361
890-5488-15	AH-2 1-1.5	Total/NA	Solid	8015B NM	65361
890-5488-16	AH-2 2-2.5	Total/NA	Solid	8015B NM	65361
890-5488-17	AH-3 0-1	Total/NA	Solid	8015B NM	65361
890-5488-18	AH-3 1-1.5	Total/NA	Solid	8015B NM	65361
890-5488-19	AH-3 2-2.5	Total/NA	Solid	8015B NM	65361
890-5488-20	AH-4 0-1	Total/NA	Solid	8015B NM	65361
MB 880-65361/1-A	Method Blank	Total/NA	Solid	8015B NM	65361
LCS 880-65361/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	65361
LCSD 880-65361/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	65361
890-5488-1 MS	H-1	Total/NA	Solid	8015B NM	65361
890-5488-1 MSD	H-1	Total/NA	Solid	8015B NM	65361

Analysis Batch: 65298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-21	AH-4 1-1.5	Total/NA	Solid	8015B NM	65363
890-5488-22	AH-4 2-2.5	Total/NA	Solid	8015B NM	65363
890-5488-23	AH-5 0-1	Total/NA	Solid	8015B NM	65363
890-5488-24	AH-5 1-1.5	Total/NA	Solid	8015B NM	65363
890-5488-25	AH-5 2-2.5	Total/NA	Solid	8015B NM	65363
890-5488-26	AH-5 3-3.5	Total/NA	Solid	8015B NM	65363
890-5488-27	AH-5 4-4.5	Total/NA	Solid	8015B NM	65363

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QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

GC Semi VOA (Continued)

Analysis Batch: 65298 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-28	AH-6 0-1	Total/NA	Solid	8015B NM	65363
890-5488-29	AH-6 1-1.5	Total/NA	Solid	8015B NM	65363
890-5488-30	AH-6 2-2.5	Total/NA	Solid	8015B NM	65363
890-5488-31	AH-6 3-3.5	Total/NA	Solid	8015B NM	65363
MB 880-65363/1-A	Method Blank	Total/NA	Solid	8015B NM	65363
LCS 880-65363/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	65363
LCSD 880-65363/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	65363

Prep Batch: 65361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-1	H-1	Total/NA	Solid	8015NM Prep	
890-5488-2	H-2	Total/NA	Solid	8015NM Prep	
890-5488-3	H-3	Total/NA	Solid	8015NM Prep	
890-5488-4	H-4	Total/NA	Solid	8015NM Prep	
890-5488-5	H-5	Total/NA	Solid	8015NM Prep	
890-5488-6	H-6	Total/NA	Solid	8015NM Prep	
890-5488-7	H-7	Total/NA	Solid	8015NM Prep	
890-5488-8	H-8	Total/NA	Solid	8015NM Prep	
890-5488-9	AH-1 0-1	Total/NA	Solid	8015NM Prep	
890-5488-10	AH-1 1-1.5	Total/NA	Solid	8015NM Prep	
890-5488-11	AH-1 2-2.5	Total/NA	Solid	8015NM Prep	
890-5488-12	AH-1 3-3.5	Total/NA	Solid	8015NM Prep	
890-5488-13	AH-1 4-4.5	Total/NA	Solid	8015NM Prep	
890-5488-14	AH-2 0-1	Total/NA	Solid	8015NM Prep	
890-5488-15	AH-2 1-1.5	Total/NA	Solid	8015NM Prep	
890-5488-16	AH-2 2-2.5	Total/NA	Solid	8015NM Prep	
890-5488-17	AH-3 0-1	Total/NA	Solid	8015NM Prep	
890-5488-18	AH-3 1-1.5	Total/NA	Solid	8015NM Prep	
890-5488-19	AH-3 2-2.5	Total/NA	Solid	8015NM Prep	
890-5488-20	AH-4 0-1	Total/NA	Solid	8015NM Prep	
MB 880-65361/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-65361/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-65361/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5488-1 MS	H-1	Total/NA	Solid	8015NM Prep	
890-5488-1 MSD	H-1	Total/NA	Solid	8015NM Prep	

Prep Batch: 65363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-21	AH-4 1-1.5	Total/NA	Solid	8015NM Prep	
890-5488-22	AH-4 2-2.5	Total/NA	Solid	8015NM Prep	
890-5488-23	AH-5 0-1	Total/NA	Solid	8015NM Prep	
890-5488-24	AH-5 1-1.5	Total/NA	Solid	8015NM Prep	
890-5488-25	AH-5 2-2.5	Total/NA	Solid	8015NM Prep	
890-5488-26	AH-5 3-3.5	Total/NA	Solid	8015NM Prep	
890-5488-27	AH-5 4-4.5	Total/NA	Solid	8015NM Prep	
890-5488-28	AH-6 0-1	Total/NA	Solid	8015NM Prep	
890-5488-29	AH-6 1-1.5	Total/NA	Solid	8015NM Prep	
890-5488-30	AH-6 2-2.5	Total/NA	Solid	8015NM Prep	
890-5488-31	AH-6 3-3.5	Total/NA	Solid	8015NM Prep	
MB 880-65363/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-65363/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

GC Semi VOA (Continued)

Prep Batch: 65363 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-65363/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 65212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-1	H-1	Soluble	Solid	DI Leach	
890-5488-2	H-2	Soluble	Solid	DI Leach	
MB 880-65212/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-65212/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-65212/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 65213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-3	H-3	Soluble	Solid	DI Leach	
890-5488-4	H-4	Soluble	Solid	DI Leach	
890-5488-5	H-5	Soluble	Solid	DI Leach	
890-5488-6	H-6	Soluble	Solid	DI Leach	
890-5488-7	H-7	Soluble	Solid	DI Leach	
890-5488-8	H-8	Soluble	Solid	DI Leach	
890-5488-9	AH-1 0-1	Soluble	Solid	DI Leach	
890-5488-10	AH-1 1-1.5	Soluble	Solid	DI Leach	
890-5488-11	AH-1 2-2.5	Soluble	Solid	DI Leach	
890-5488-12	AH-1 3-3.5	Soluble	Solid	DI Leach	
890-5488-13	AH-1 4-4.5	Soluble	Solid	DI Leach	
890-5488-14	AH-2 0-1	Soluble	Solid	DI Leach	
890-5488-15	AH-2 1-1.5	Soluble	Solid	DI Leach	
890-5488-16	AH-2 2-2.5	Soluble	Solid	DI Leach	
890-5488-17	AH-3 0-1	Soluble	Solid	DI Leach	
890-5488-18	AH-3 1-1.5	Soluble	Solid	DI Leach	
890-5488-19	AH-3 2-2.5	Soluble	Solid	DI Leach	
890-5488-20	AH-4 0-1	Soluble	Solid	DI Leach	
890-5488-21	AH-4 1-1.5	Soluble	Solid	DI Leach	
890-5488-22	AH-4 2-2.5	Soluble	Solid	DI Leach	
MB 880-65213/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-65213/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-65213/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5488-3 MS	H-3	Soluble	Solid	DI Leach	
890-5488-3 MSD	H-3	Soluble	Solid	DI Leach	
890-5488-13 MS	AH-1 4-4.5	Soluble	Solid	DI Leach	
890-5488-13 MSD	AH-1 4-4.5	Soluble	Solid	DI Leach	

Leach Batch: 65215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-23	AH-5 0-1	Soluble	Solid	DI Leach	
890-5488-24	AH-5 1-1.5	Soluble	Solid	DI Leach	
890-5488-25	AH-5 2-2.5	Soluble	Solid	DI Leach	
890-5488-26	AH-5 3-3.5	Soluble	Solid	DI Leach	
890-5488-27	AH-5 4-4.5	Soluble	Solid	DI Leach	
890-5488-28	AH-6 0-1	Soluble	Solid	DI Leach	
890-5488-29	AH-6 1-1.5	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

HPLC/IC (Continued)

Leach Batch: 65215 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-30	AH-6 2-2.5	Soluble	Solid	DI Leach	
890-5488-31	AH-6 3-3.5	Soluble	Solid	DI Leach	
MB 880-65215/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-65215/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-65215/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5488-23 MS	AH-5 0-1	Soluble	Solid	DI Leach	
890-5488-23 MSD	AH-5 0-1	Soluble	Solid	DI Leach	

Analysis Batch: 65419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-23	AH-5 0-1	Soluble	Solid	300.0	65215
890-5488-24	AH-5 1-1.5	Soluble	Solid	300.0	65215
890-5488-25	AH-5 2-2.5	Soluble	Solid	300.0	65215
890-5488-26	AH-5 3-3.5	Soluble	Solid	300.0	65215
890-5488-27	AH-5 4-4.5	Soluble	Solid	300.0	65215
890-5488-28	AH-6 0-1	Soluble	Solid	300.0	65215
890-5488-29	AH-6 1-1.5	Soluble	Solid	300.0	65215
890-5488-30	AH-6 2-2.5	Soluble	Solid	300.0	65215
890-5488-31	AH-6 3-3.5	Soluble	Solid	300.0	65215
MB 880-65215/1-A	Method Blank	Soluble	Solid	300.0	65215
LCS 880-65215/2-A	Lab Control Sample	Soluble	Solid	300.0	65215
LCSD 880-65215/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	65215
890-5488-23 MS	AH-5 0-1	Soluble	Solid	300.0	65215
890-5488-23 MSD	AH-5 0-1	Soluble	Solid	300.0	65215

Analysis Batch: 65471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-1	H-1	Soluble	Solid	300.0	65212
890-5488-2	H-2	Soluble	Solid	300.0	65212
MB 880-65212/1-A	Method Blank	Soluble	Solid	300.0	65212
LCS 880-65212/2-A	Lab Control Sample	Soluble	Solid	300.0	65212
LCSD 880-65212/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	65212

Analysis Batch: 65480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-3	H-3	Soluble	Solid	300.0	65213
890-5488-4	H-4	Soluble	Solid	300.0	65213
890-5488-5	H-5	Soluble	Solid	300.0	65213
890-5488-6	H-6	Soluble	Solid	300.0	65213
890-5488-7	H-7	Soluble	Solid	300.0	65213
890-5488-8	H-8	Soluble	Solid	300.0	65213
890-5488-9	AH-1 0-1	Soluble	Solid	300.0	65213
890-5488-10	AH-1 1-1.5	Soluble	Solid	300.0	65213
890-5488-11	AH-1 2-2.5	Soluble	Solid	300.0	65213
890-5488-12	AH-1 3-3.5	Soluble	Solid	300.0	65213
890-5488-13	AH-1 4-4.5	Soluble	Solid	300.0	65213
890-5488-14	AH-2 0-1	Soluble	Solid	300.0	65213
890-5488-15	AH-2 1-1.5	Soluble	Solid	300.0	65213
890-5488-16	AH-2 2-2.5	Soluble	Solid	300.0	65213
890-5488-17	AH-3 0-1	Soluble	Solid	300.0	65213
890-5488-18	AH-3 1-1.5	Soluble	Solid	300.0	65213

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QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

HPLC/IC (Continued)

Analysis Batch: 65480 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5488-19	AH-3 2-2.5	Soluble	Solid	300.0	65213
890-5488-20	AH-4 0-1	Soluble	Solid	300.0	65213
890-5488-21	AH-4 1-1.5	Soluble	Solid	300.0	65213
890-5488-22	AH-4 2-2.5	Soluble	Solid	300.0	65213
MB 880-65213/1-A	Method Blank	Soluble	Solid	300.0	65213
LCS 880-65213/2-A	Lab Control Sample	Soluble	Solid	300.0	65213
LCSD 880-65213/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	65213
890-5488-3 MS	H-3	Soluble	Solid	300.0	65213
890-5488-3 MSD	H-3	Soluble	Solid	300.0	65213
890-5488-13 MS	AH-1 4-4.5	Soluble	Solid	300.0	65213
890-5488-13 MSD	AH-1 4-4.5	Soluble	Solid	300.0	65213

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Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: H-1

Lab Sample ID: 890-5488-1

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 00:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/23/23 20:51	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	65212	10/20/23 11:56	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65471	10/25/23 05:08	CH	EET MID

Client Sample ID: H-2

Lab Sample ID: 890-5488-2

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 00:44	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/23/23 21:55	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	65212	10/20/23 11:56	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65471	10/25/23 05:14	CH	EET MID

Client Sample ID: H-3

Lab Sample ID: 890-5488-3

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 01:05	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/23/23 22:17	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 06:33	CH	EET MID

Client Sample ID: H-4

Lab Sample ID: 890-5488-4

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 01:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/23/23 22:38	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 06:50	CH	EET MID

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Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: H-5**Lab Sample ID: 890-5488-5****Date Collected: 10/18/23 00:00****Matrix: Solid****Date Received: 10/19/23 13:16**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 01:46	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/23/23 22:59	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 06:55	CH	EET MID

Client Sample ID: H-6**Lab Sample ID: 890-5488-6****Date Collected: 10/18/23 00:00****Matrix: Solid****Date Received: 10/19/23 13:16**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 02:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/23/23 23:21	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 07:01	CH	EET MID

Client Sample ID: H-7**Lab Sample ID: 890-5488-7****Date Collected: 10/18/23 00:00****Matrix: Solid****Date Received: 10/19/23 13:16**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 02:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/23/23 23:42	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 07:06	CH	EET MID

Client Sample ID: H-8**Lab Sample ID: 890-5488-8****Date Collected: 10/18/23 00:00****Matrix: Solid****Date Received: 10/19/23 13:16**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 02:47	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/24/23 00:03	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 07:23	CH	EET MID

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Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-1 0-1

Lab Sample ID: 890-5488-9

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	65644	10/26/23 11:52	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	65680	10/28/23 16:25	MNR	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	65296	10/24/23 02:53	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 07:29	CH	EET MID

Client Sample ID: AH-1 1-1.5

Lab Sample ID: 890-5488-10

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	65644	10/26/23 11:52	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	65680	10/28/23 16:46	MNR	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/24/23 01:50	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 07:35	CH	EET MID

Client Sample ID: AH-1 2-2.5

Lab Sample ID: 890-5488-11

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	65644	10/26/23 11:52	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	65680	10/28/23 17:06	MNR	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/24/23 02:11	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 07:40	CH	EET MID

Client Sample ID: AH-1 3-3.5

Lab Sample ID: 890-5488-12

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 05:18	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/24/23 00:25	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 07:46	CH	EET MID

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Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-1 4-4.5

Lab Sample ID: 890-5488-13

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 05:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/24/23 00:46	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 07:52	CH	EET MID

Client Sample ID: AH-2 0-1

Lab Sample ID: 890-5488-14

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 05:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	65296	10/24/23 03:14	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 08:08	CH	EET MID

Client Sample ID: AH-2 1-1.5

Lab Sample ID: 890-5488-15

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 06:20	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	65296	10/24/23 03:36	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 08:14	CH	EET MID

Client Sample ID: AH-2 2-2.5

Lab Sample ID: 890-5488-16

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 06:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/24/23 04:18	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 08:31	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-3 0-1

Lab Sample ID: 890-5488-17

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 07:00	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/24/23 01:29	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 08:37	CH	EET MID

Client Sample ID: AH-3 1-1.5

Lab Sample ID: 890-5488-18

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 07:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/24/23 02:32	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 08:42	CH	EET MID

Client Sample ID: AH-3 2-2.5

Lab Sample ID: 890-5488-19

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 07:41	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65296	10/24/23 04:39	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 08:48	CH	EET MID

Client Sample ID: AH-4 0-1

Lab Sample ID: 890-5488-20

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	65489	10/24/23 14:46	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65593	10/27/23 08:02	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	65361	10/23/23 12:12	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	65296	10/24/23 03:57	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 08:53	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-4 1-1.5

Lab Sample ID: 890-5488-21

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	65487	10/24/23 14:19	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	65514	10/26/23 02:58	MNR	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	65363	10/23/23 12:15	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65298	10/24/23 02:32	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 08:59	CH	EET MID

Client Sample ID: AH-4 2-2.5

Lab Sample ID: 890-5488-22

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	65487	10/24/23 14:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65514	10/26/23 01:16	MNR	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	65363	10/23/23 12:15	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65298	10/24/23 04:39	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	65213	10/20/23 11:58	SMC	EET MID
Soluble	Analysis	300.0		1			65480	10/25/23 09:05	CH	EET MID

Client Sample ID: AH-5 0-1

Lab Sample ID: 890-5488-23

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	65487	10/24/23 14:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65514	10/26/23 01:36	MNR	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	65363	10/23/23 12:15	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65298	10/24/23 02:53	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	65215	10/23/23 14:00	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65419	10/24/23 10:52	CH	EET MID

Client Sample ID: AH-5 1-1.5

Lab Sample ID: 890-5488-24

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	65487	10/24/23 14:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65514	10/26/23 01:56	MNR	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	65363	10/23/23 12:15	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65298	10/24/23 01:50	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	65215	10/23/23 14:00	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65419	10/24/23 11:12	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-5 2-2.5

Lab Sample ID: 890-5488-25

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	65487	10/24/23 14:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65514	10/26/23 02:17	MNR	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	65363	10/23/23 12:15	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65298	10/24/23 03:36	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	65215	10/23/23 14:00	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65419	10/24/23 11:19	CH	EET MID

Client Sample ID: AH-5 3-3.5

Lab Sample ID: 890-5488-26

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	65487	10/24/23 14:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65514	10/26/23 02:37	MNR	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	65363	10/23/23 12:15	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65298	10/24/23 04:18	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	65215	10/23/23 14:00	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65419	10/24/23 11:39	CH	EET MID

Client Sample ID: AH-5 4-4.5

Lab Sample ID: 890-5488-27

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	65487	10/24/23 14:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65514	10/26/23 04:47	MNR	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	65363	10/23/23 12:15	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65298	10/24/23 03:57	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	65215	10/23/23 14:00	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65419	10/24/23 11:45	CH	EET MID

Client Sample ID: AH-6 0-1

Lab Sample ID: 890-5488-28

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	65487	10/24/23 14:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65514	10/26/23 05:08	MNR	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	65363	10/23/23 12:15	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65298	10/24/23 01:29	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	65215	10/23/23 14:00	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65419	10/24/23 11:52	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Client Sample ID: AH-6 1-1.5

Lab Sample ID: 890-5488-29

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	65487	10/24/23 14:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65514	10/26/23 05:28	MNR	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	65363	10/23/23 12:15	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65298	10/24/23 02:11	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	65215	10/23/23 14:00	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65419	10/24/23 11:59	CH	EET MID

Client Sample ID: AH-6 2-2.5

Lab Sample ID: 890-5488-30

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	65487	10/24/23 14:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65514	10/26/23 05:48	MNR	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	65363	10/23/23 12:15	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65298	10/24/23 00:46	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	65215	10/23/23 14:00	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65419	10/24/23 12:05	CH	EET MID

Client Sample ID: AH-6 3-3.5

Lab Sample ID: 890-5488-31

Date Collected: 10/18/23 00:00

Matrix: Solid

Date Received: 10/19/23 13:16

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	65487	10/24/23 14:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65514	10/26/23 06:09	MNR	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	65363	10/23/23 12:15	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	65298	10/24/23 03:14	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	65215	10/23/23 14:00	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65419	10/24/23 12:12	CH	EET MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Laboratory: Eurofins Midland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

Method Summary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

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

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: JR Oil

Job ID: 890-5488-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-5488-1	H-1	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-2	H-2	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-3	H-3	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-4	H-4	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-5	H-5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-6	H-6	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-7	H-7	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-8	H-8	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-9	AH-1 0-1	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-10	AH-1 1-1.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-11	AH-1 2-2.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-12	AH-1 3-3.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-13	AH-1 4-4.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-14	AH-2 0-1	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-15	AH-2 1-1.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-16	AH-2 2-2.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-17	AH-3 0-1	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-18	AH-3 1-1.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-19	AH-3 2-2.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-20	AH-4 0-1	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-21	AH-4 1-1.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-22	AH-4 2-2.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-23	AH-5 0-1	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-24	AH-5 1-1.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-25	AH-5 2-2.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-26	AH-5 3-3.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-27	AH-5 4-4.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-28	AH-6 0-1	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-29	AH-6 1-1.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-30	AH-6 2-2.5	Solid	10/18/23 00:00	10/19/23 13:16
890-5488-31	AH-6 3-3.5	Solid	10/18/23 00:00	10/19/23 13:16

Analysis Request of Chain of Custody Record

Page 2 of 4



Tetra Tech, Inc.

 901 W. Wall Street, Ste. 100
 Midland, Texas 79705
 Tel: (432) 682-4559
 Fax: (432) 682-3946

Client Name: JR Oil		Site Manager: Brittany Long	
Project Name: Manda B Trac C Battery		Project #: brittany.long@tetratech.com	
Project Location: Lea County, NM		212C-MD-XXXXX	
Invoice to: ATTN: JR Oil Rex Tippy		Sampler Signature: Miguel Flores	
Receiving Laboratory: Eurofins Xenco		Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION		SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	
	DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE	None					
									YEAR 2020				
1	AH-1 (2-2.5)	10/18/2023		X			X	X					
1	AH-1 (3-3.5)	10/18/2023		X			X	X					
1	AH-1 (4-4.5)	10/18/2023		X			X	X					
1	AH-2 (0-1)	10/18/2023		X			X	X					
1	AH-2 (1-1.5)	10/18/2023		X			X	X					
1	AH-2 (2-2.5)	10/18/2023		X			X	X					
1	AH-3 (0-1)	10/18/2023		X			X	X					
1	AH-3 (1-1.5)	10/18/2023		X			X	X					
1	AH-3 (2-2.5)	10/18/2023		X			X	X					
1	AH-4 (0-1)	10/18/2023		X			X	X					

LAB USE ONLY	REMARKS:
<input checked="" type="checkbox"/> STANDARD	
<input type="checkbox"/> RUSH: Same Day 24 hr 48 hr 72 hr	
<input type="checkbox"/> Rush Charges Authorized	
<input type="checkbox"/> Special Report Limits or TRRP Report	

ANALYSIS REQUEST (Circle or Specify Method No.)
BTEX 8021B BTEX 8260B
TPH TX1005 (Ext to C35)
TPH 8015M (GRO - DRO - ORO)
PAH 8270C
Total Metals Ag As Ba Cd Cr Pb Se Hg
TCLP Metals Ag As Ba Cd Cr Pb Se Hg
TCLP Volatiles
TCLP Semi Volatiles
RCI
GC/MS Vol. 8260B / 624
GC/MS Semi. Vol. 8270C/625
PCB's 8082 / 608
NORM
PLM (Asbestos)
Chloride
Chloride Sulfate TDS
General Water Chemistry (see attached list)
Anion/Cation Balance
Hold

ORIGINAL COPY

Analysis Request of Chain of Custody Record

Page 3 of 4



Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: JR Oil		Site Manager: Brittany Long	
Project Name: Manda B Trac C Battery		Project #: 212C-MD-XXXXX	
Project Location: Lea County, NM		Project #: 212C-MD-XXXXX	
Invoice to: ATTN: JR Oil Rex Tippy		Sampler Signature: Miguel Flores	
Receiving Laboratory: Eurofins Xenco		Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	ANALYSIS REQUEST (Circle or Specify Method No.)	
		DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE	None				
													YEAR 2020
1	AH-4 (1-1.5)	10/18/2023		X		X	X					X	BTEX 8021B BTEX 8260B
1	AH-4 (2-2.5)	10/18/2023		X		X	X					X	TPH TX1005 (Ext to C35)
1	AH-5 (0-1)	10/18/2023		X		X	X					X	TPH 8015M (GRO - DRO - ORO)
1	AH-5 (1-1.5)	10/18/2023		X		X	X					X	PAH 8270C
1	AH-5 (2-2.5)	10/18/2023		X		X	X					X	Total Metals Ag As Ba Cd Cr Pb Se Hg
1	AH-5 (3-3.5)	10/18/2023		X		X	X					X	TCLP Metals Ag As Ba Cd Cr Pb Se Hg
1	AH-5 (4-4.5)	10/18/2023		X		X	X					X	TCLP Volatiles
1	AH-6 (0-1)	10/18/2023		X		X	X					X	TCLP Semi Volatiles
1	AH-6 (1-1.5)	10/18/2023		X		X	X					X	RCI
1	AH-6 (2-2.5)	10/18/2023		X		X	X					X	GC/MS Vol. 8260B / 624
1	AH-6 (3-3.5)	10/18/2023		X		X	X					X	GC/MS Semi. Vol. 8270C/625
1	AH-6 (4-4.5)	10/18/2023		X		X	X					X	PCB's 8082 / 608
1	AH-6 (5-5.5)	10/18/2023		X		X	X					X	NORM
1	AH-6 (6-6.5)	10/18/2023		X		X	X					X	PLM (Asbestos)
1	AH-6 (7-7.5)	10/18/2023		X		X	X					X	Chloride
1	AH-6 (8-8.5)	10/18/2023		X		X	X					X	Chloride Sulfate TDS
1	AH-6 (9-9.5)	10/18/2023		X		X	X					X	General Water Chemistry (see attached list)
1	AH-6 (10-10.5)	10/18/2023		X		X	X					X	Anion/Cation Balance
1	AH-6 (11-11.5)	10/18/2023		X		X	X					X	Hold

Reinquired by: <i>Sheryl J. Bell</i>	Date: 10/18/23	Time:	Received by: <i>cdk</i>	Date: 10/19	Time: 9:27
Reinquired by:	Date:	Time:	Received by:	Date:	Time:
Reinquired by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY	REMARKS:
<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> RUSH: Same Day 24 hr 48 hr 72 hr <input type="checkbox"/> Rush Charges Authorized <input type="checkbox"/> Special Report Limits or TRRP Report	

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: JR Oil

Site Manager: Britany Long

Project Name: Manda B Trac C Battery

britany.long@tetratech.com

Project Location: Lea County, NM

Project #: 212C-MD-XXXXX

Invoice to:

ATTN: JR Oil Rex Tippy

Receiving Laboratory: Eurofins Xenco

Sampler Signature: Miguel Flores

Comments:

LAB #
LAB USE ONLY

SAMPLE IDENTIFICATION

SAMPLING
YEAR: 2020
DATE
TIME

MATRIX
WATER
SOIL
HCL
HNO₃
ICE
None

CONTAINERS
FILTERED (Y/N)

AH-6 (3-3,5)

10/18/2023

X

X

X

X

BTEX 8021B BTEX 8260B

TPH TX1005 (Ext to C35)

TPH 8015M (GRO - DRO - ORO)

PAH 8270C

Total Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8260B / 624

GC/MS Semi. Vol. 8270C/625

PCB's 8082 / 608

NORM

PLM (Asbestos)

Chloride

Chloride Sulfate TDS

General Water Chemistry (see attached list)

Anion/Cation Balance

Hold

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by: *Miguel Flores* Date: 10/18/23

Relinquished by: Date: Time:

Relinquished by: Date: Time:

Received by:

Received by: Date: Time:

Received by: Date: Time:

LAB USE ONLY

Sample Temperature

REMARKS: ☒ STANDARD

☐ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

OTC/ADA HAND DELIVERED - EFNEX - IFS Tracking #

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 890-5488-1

Login Number: 5488

List Number: 1

Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Did not receive all required containers.
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: Tetra Tech, Inc.

Job Number: 890-5488-1

Login Number: 5488

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 10/20/23 11:02 AM

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



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 06, 2024

BRITTANY LONG

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MANDA B TRACT C BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/01/24 8:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 1 - (0-1') (H240456-01)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.03	
Toluene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.04	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.09	104	2.00	3.09	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.32	105	6.00	3.32	
Total BTX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	02/01/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	200	100	200	6.47	
DRO >C10-C28*	2350	10.0	02/01/2024	ND	196	97.9	200	2.96	
EXT DRO >C28-C36	440	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 188 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 1 - (1-2') (H240456-02)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.03	
Toluene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.04	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.09	104	2.00	3.09	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.32	105	6.00	3.32	
Total BTEx	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	02/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	200	100	200	6.47	
DRO >C10-C28*	1930	10.0	02/01/2024	ND	196	97.9	200	2.96	
EXT DRO >C28-C36	713	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 95.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 140 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 02/01/2024
 Reported: 02/06/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: T 1 - (2-3') (H240456-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.03	
Toluene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.04	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.09	104	2.00	3.09	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.32	105	6.00	3.32	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	02/01/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	1880	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	904	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 90.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 135 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 02/01/2024
 Reported: 02/06/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: T 1 - (3-4') (H240456-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.03	
Toluene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.04	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.09	104	2.00	3.09	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.32	105	6.00	3.32	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	944	16.0	02/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	296	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	158	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 72.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 2 - (0-1') (H240456-05)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.03	
Toluene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.04	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.09	104	2.00	3.09	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.32	105	6.00	3.32	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	02/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/02/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	1180	10.0	02/02/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	495	10.0	02/02/2024	ND					

Surrogate: 1-Chlorooctane 62.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.3 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 02/01/2024
 Reported: 02/06/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: T 2 - (1-2') (H240456-06)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.03	
Toluene*	<0.050	0.050	02/01/2024	ND	2.11	105	2.00	3.04	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.09	104	2.00	3.09	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.32	105	6.00	3.32	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	02/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	893	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	382	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 88.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 2 - (2-3') (H240456-07)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829		
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75		
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86		
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15		
Total BTEX	<0.300	0.300	02/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	02/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	990	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	358	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 64.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 02/01/2024
 Reported: 02/06/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: T 2 - (3-4') (H240456-08)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829		
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75		
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86		
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15		
Total BTEX	<0.300	0.300	02/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/01/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/06/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	<10.0	10.0	02/06/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	<10.0	10.0	02/06/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 02/01/2024
 Reported: 02/06/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: T 3 - (0-1') (H240456-09)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829	
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/01/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	1730	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	673	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 78.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 3 - (1-2') (H240456-10)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829		
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75		
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86		
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15		
Total BTEX	<0.300	0.300	02/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	02/01/2024	ND	448	112	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	45.4	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	39.8	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 54.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 53.4 % 49.1-148

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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 3 - (2-3') (H240456-11)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829		
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75		
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86		
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15		
Total BTEX	<0.300	0.300	02/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	02/01/2024	ND	448	112	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	294	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	222	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 81.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 3 - (3-4') (H240456-12)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829		
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75		
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86		
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15		
Total BTEX	<0.300	0.300	02/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	02/01/2024	ND	448	112	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	683	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	257	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 53.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 02/01/2024
 Reported: 02/06/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: T 4 - (0-1') (H240456-13)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829	
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/01/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	140	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	67.0	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 69.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 4 - (1-2') (H240456-14)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829	
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/01/2024	ND	448	112	400	7.41	

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	48.1	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	27.8	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 67.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 66.5 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 4 - (2-3') (H240456-15)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829	
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	02/01/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	361	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	234	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 51.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 57.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 4 - (3-4') (H240456-16)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829	
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	02/01/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	123	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	62.1	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 71.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 5 - (0-1') (H240456-17)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829		
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75		
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86		
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15		
Total BTEX	<0.300	0.300	02/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/01/2024	ND	448	112	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	58.6	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	20.4	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 56.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 55.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 5 - (1-2') (H240456-18)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829	
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/01/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	91.7	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	39.8	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 64.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 67.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 5 - (2-3') (H240456-19)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829		
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75		
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86		
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15		
Total BTEX	<0.300	0.300	02/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/01/2024	ND	448	112	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	191	95.3	200	5.96	
DRO >C10-C28*	51.3	10.0	02/01/2024	ND	190	94.9	200	6.90	
EXT DRO >C28-C36	26.4	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 68.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 68.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 02/01/2024
Reported: 02/06/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 01/31/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: T 5 - (3-4') (H240456-20)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/01/2024	ND	1.96	98.1	2.00	0.829		
Toluene*	<0.050	0.050	02/01/2024	ND	2.03	102	2.00	1.75		
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.01	100	2.00	1.86		
Total Xylenes*	<0.150	0.150	02/01/2024	ND	6.06	101	6.00	2.15		
Total BTEX	<0.300	0.300	02/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/01/2024	ND	448	112	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/01/2024	ND	190	95.1	200	4.50	
DRO >C10-C28*	<10.0	10.0	02/01/2024	ND	211	106	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane 77.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



Released to Imaging: 3/7/2025 1:18:59 PM

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: JR Oil Site Manager: Brittany Long

Project Name: Manda B Tract C Battery 432-741-5813

Project Location: Lea County, NM Project #: Brittany.Long@tetratech.com

Invoice to: Tetra Tech inc. 212C-MD-03262

Receiving Laboratory: Cardinal Labs Sampler Signature: Jorge Fernandez

Comments:

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX				PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)
		DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE					

11	T3- (2-3)	1/31/24		X				X					
12	T3- (3-4)			X				X					
13	T4- (0-1)			X				X					
14	T4- (1-2)			X				X					
15	T4- (2-3)			X				X					
16	T4- (3-4)			X				X					
17	T5- (0-1)			X				X					
18	T5- (1-2)			X				X					
19	T5- (2-3)			X				X					
20	T5- (3-4)			X				X					

Relinquished by: [Signature] Date: 1/31-24 Time: 1900
Received by: [Signature] Date: 1-31-24 Time: 1900
Relinquished by: [Signature] Date: 2/1/24 Time: 0805
Received by: [Signature] Date: 2-1-24 Time: 0805

ANALYSIS REQUEST
(Circle or Specify Method No.)

BTEX 8021B	BTEX 8260B
TPH TX1005 (Ext to C35)	
TPH 8015M (GRO - DRO - ORO - MRO)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
RCI	
GC/MS Vol. 8260B / 624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082 / 608	
NORM	
PLM (Asbestos)	
Chloride	
Chloride Sulfate TDS	
General Water Chemistry (see attached list)	
Anion/Cation Balance	
Hold	

LAB USE ONLY
REMARKS: Standard TAP
Sample Temperature
-5.4
#140

- ☐ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 13, 2024

BRITTANY LONG

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MANDA B TRACT C BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/08/24 9:47.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH - 1 (4.0') (H241178-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2024	ND	2.08	104	2.00	0.254	
Toluene*	<0.050	0.050	03/12/2024	ND	2.08	104	2.00	0.0862	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	2.04	102	2.00	0.113	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.12	102	6.00	0.577	
Total BTEX	<0.300	0.300	03/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	03/11/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	190	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	35.2	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 69.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH - 7 (4.0') (H241178-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	2.08	104	2.00	0.254	
Toluene*	<0.050	0.050	03/11/2024	ND	2.08	104	2.00	0.0862	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.04	102	2.00	0.113	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.12	102	6.00	0.577	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/11/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 75.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.8 % 49.1-148

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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH - 8 (4.0') (H241178-03)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	2.08	104	2.00	0.254	
Toluene*	<0.050	0.050	03/11/2024	ND	2.08	104	2.00	0.0862	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.04	102	2.00	0.113	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.12	102	6.00	0.577	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/11/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	226	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	152	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 92.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.3 % 49.1-148

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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH - 9 (4.0') (H241178-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	2.08	104	2.00	0.254	
Toluene*	<0.050	0.050	03/11/2024	ND	2.08	104	2.00	0.0862	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.04	102	2.00	0.113	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.12	102	6.00	0.577	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	03/11/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	669	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	162	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 88.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH - 10 (4.0') (H241178-05)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	2.08	104	2.00	0.254	
Toluene*	<0.050	0.050	03/11/2024	ND	2.08	104	2.00	0.0862	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.04	102	2.00	0.113	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.12	102	6.00	0.577	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	03/11/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	892	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	209	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.8 % 49.1-148

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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH - 11 (4.0') (H241178-06)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41	
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/11/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 77.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.1 % 49.1-148

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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH - 12 (4.0') (H241178-07)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41	
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/11/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 79.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH - 13 (4.0') (H241178-08)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41		
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20		
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88		
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91		
Total BTEX	<0.300	0.300	03/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	03/11/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	282	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	53.4	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 76.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.8 % 49.1-148

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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 2 (H241178-09)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41		
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20		
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88		
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91		
Total BTEX	<0.300	0.300	03/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	03/11/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 83.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 20 (H241178-10)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41	
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/11/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 80.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 14 (H241178-11)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41		
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20		
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88		
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91		
Total BTEX	<0.300	0.300	03/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	03/11/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 83.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.9 % 49.1-148

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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 15 (H241178-12)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41		
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20		
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88		
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91		
Total BTEX	<0.300	0.300	03/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	03/11/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 80.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 16 (H241178-13)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41		
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20		
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88		
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91		
Total BTEX	<0.300	0.300	03/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	03/11/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	1140	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	269	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 78.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.0 % 49.1-148

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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 17 (H241178-14)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41	
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	03/11/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	1390	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	336	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 85.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.1 % 49.1-148

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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 18 (H241178-15)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41	
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	03/11/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	1130	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	276	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 79.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.8 % 49.1-148

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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH - 2 (4.0') (H241178-16)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41	
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	03/11/2024	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	901	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	199	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 80.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH - 3 (4.0') (H241178-17)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41		
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20		
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88		
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91		
Total BTEX	<0.300	0.300	03/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	761	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	167	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 71.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.4 % 49.1-148

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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	03/08/2024	Sampling Date:	03/06/2024
Reported:	03/13/2024	Sampling Type:	Soil
Project Name:	MANDA B TRACT C BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03262	Sample Received By:	Tamara Oldaker
Project Location:	JR OIL - LEA COUNTY, NM		

Sample ID: BH - 4 (4.0') (H241178-18)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41		
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20		
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88		
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91		
Total BTEX	<0.300	0.300	03/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1790	16.0	03/11/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26		
DRO >C10-C28*	906	10.0	03/11/2024	ND	190	94.9	200	5.67		
EXT DRO >C28-C36	198	10.0	03/11/2024	ND						

Surrogate: 1-Chlorooctane 78.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH - 5 (4.0') (H241178-19)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41	
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	202	101	200	4.26	
DRO >C10-C28*	143	10.0	03/11/2024	ND	190	94.9	200	5.67	
EXT DRO >C28-C36	90.5	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 75.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH - 6 (4.0') (H241178-20)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41	
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	164	10.0	03/11/2024	ND	208	104	200	0.307	QM-07
EXT DRO >C28-C36	92.1	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 88.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 4 (H241178-21)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41	
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	2270	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	484	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 82.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 5 (H241178-22)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41	
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	3060	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	731	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.5 % 49.1-148

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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 6 (H241178-23)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41		
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20		
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88		
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91		
Total BTEX	<0.300	0.300	03/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	03/11/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	270	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	75.6	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 84.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 7 (H241178-24)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41		
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20		
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88		
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91		
Total BTEX	<0.300	0.300	03/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	03/11/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	93.6	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 80.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 8 (H241178-25)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	1.87	93.6	2.00	4.41	
Toluene*	<0.050	0.050	03/11/2024	ND	1.88	94.0	2.00	4.20	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	1.87	93.5	2.00	3.88	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	5.56	92.7	6.00	3.91	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	66.7	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 81.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 9 (H241178-26)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	2.28	114	2.00	0.351	
Toluene*	<0.050	0.050	03/11/2024	ND	2.27	113	2.00	4.26	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.33	117	2.00	6.82	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.98	116	6.00	7.22	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	23.8	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 86.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 10 (H241178-27)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2024	ND	2.28	114	2.00	0.351		
Toluene*	<0.050	0.050	03/11/2024	ND	2.27	113	2.00	4.26		
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.33	117	2.00	6.82		
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.98	116	6.00	7.22		
Total BTEX	<0.300	0.300	03/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/11/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	68.7	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 82.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 11 (H241178-28)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	2.28	114	2.00	0.351	
Toluene*	<0.050	0.050	03/11/2024	ND	2.27	113	2.00	4.26	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.33	117	2.00	6.82	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.98	116	6.00	7.22	
Total BTX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 87.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 12 (H241178-29)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	2.28	114	2.00	0.351	
Toluene*	<0.050	0.050	03/11/2024	ND	2.27	113	2.00	4.26	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.33	117	2.00	6.82	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.98	116	6.00	7.22	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 85.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 13 (H241178-30)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	2.28	114	2.00	0.351	
Toluene*	<0.050	0.050	03/11/2024	ND	2.27	113	2.00	4.26	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.33	117	2.00	6.82	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.98	116	6.00	7.22	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	29.0	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 83.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 1 (H241178-31)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2024	ND	2.28	114	2.00	0.351		
Toluene*	<0.050	0.050	03/11/2024	ND	2.27	113	2.00	4.26		
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.33	117	2.00	6.82		
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.98	116	6.00	7.22		
Total BTEx	<0.300	0.300	03/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/11/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 80.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 03/08/2024
 Reported: 03/13/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 3 (H241178-32)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	2.28	114	2.00	0.351	
Toluene*	<0.050	0.050	03/11/2024	ND	2.27	113	2.00	4.26	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.33	117	2.00	6.82	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.98	116	6.00	7.22	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 73.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 69.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 03/08/2024
Reported: 03/13/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/06/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 19 (H241178-33)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2024	ND	2.28	114	2.00	0.351	
Toluene*	<0.050	0.050	03/11/2024	ND	2.27	113	2.00	4.26	
Ethylbenzene*	<0.050	0.050	03/11/2024	ND	2.33	117	2.00	6.82	
Total Xylenes*	<0.150	0.150	03/11/2024	ND	6.98	116	6.00	7.22	
Total BTEX	<0.300	0.300	03/11/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/11/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2024	ND	206	103	200	2.09	
DRO >C10-C28*	<10.0	10.0	03/11/2024	ND	208	104	200	0.307	
EXT DRO >C28-C36	<10.0	10.0	03/11/2024	ND					

Surrogate: 1-Chlorooctane 84.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

90 W Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: JR Oil Site Manager: Brittany Long 432-741-5813

Project Name: Manda B Trac C Battery Project #: Brittany.Long@tetratech.com

Project Location: Lea County, NM Project #: 212C-MD-03262

Invoice to: ATTN: Tetra tech Inc.

Receiving Laboratory: Cardinal Labs Sampler Signature: Jorge Fernandez

Comments:

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION		SAMPLING		MATRIX				PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	TPH TX1005 (Ext to)	TPH 8015M (GRO)	PAH 8270C	Total Metals Ag As	TCLP Metals Ag As	TCLP Volatiles	TCLP Semi Volatile	RCI	GC/MS Vol. 8260B	GC/MS Semi. Vol.	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate	General Water Ch	Anion/Cation Bal																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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ANALYSIS REQUEST
(Circle or Specify Method No.)

BTEX 8021B	BTEX 8260B
TPH TX1005 (Ext to C35)	
TPH 8015M (GRO - DRO - ORO - MRO)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
RCI	
GC/MS Vol. 8260B / 624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082 / 608	
NORM	
PLM (Asbestos)	
Chloride	
Chloride Sulfate TDS	
General Water Chemistry (see attached list)	
Anion/Cation Balance	
Hold	

LAB USE ONLY

Sample Temperature: 0.3°

REMARKS: Standard TAT

☐ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

ORIGINAL COPY

Analysis Request of Custody Record



Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 662-4559
Fax (432) 662-3946

Client Name: JR Oil Site Manager: Brittany Long 432-741-5813

Project Name: Manda B Trac C Battery Project #: Brittany.Long@tetratech.com

Project Location: Lea County, NM Project #: 212C-MD-03262

Invoice to:

ATTN: ATTN: Tetra tech Inc.

Receiving Laboratory: Cardinal Labs Sampler Signature: Jorge Fernandez

Comments:

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	
		DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE	FILTERED (Y/N)
		YEAR: 2023							

11	SW-14	3/6/2024		X				X	
12	SW-15	3/6/2024		X				X	
13	SW-16	3/6/2024		X				X	
14	SW-17	3/6/2024		X				X	
15	SW-18	3/6/2024		X				X	
16	BH-2 (4.0')	3/6/2024		X				X	
17	BH-3 (4.0')	3/6/2024		X				X	
18	BH-4 (4.0')	3/6/2024		X				X	
19	BH-5 (4.0')	3/6/2024		X				X	
20	BH-6 (4.0')	3/6/2024		X				X	

Relinquished by: Date: 3-8-24 Time: 9:47

Relinquished by: Date: 3-8-24 Time: 3:58

Relinquished by: Date: Time:

Received by: Date: Time:

ANALYSIS REQUEST
(Circle or Specify Method No.)

BTEX 8021B	BTEX 8260B
TPH TX1005 (Ext to C35)	
TPH 8015M (GRO - DRO - ORO - MRO)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
RCI	
GC/MS Vol. 8260B / 624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082 / 608	
NORM	
PLM (Asbestos)	
Chloride	
Chloride Sulfate TDS	
General Water Chemistry (see attached list)	
Anion/Cation Balance	

Hold

REMARKS: Standard TAT

LAB USE ONLY

Sample Temperature

0.36

#140

- ☐ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

Analysis Request of Chain of Custody Record



901 W Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: JR Oil Site Manager: Brittany Long 432-741-5813

Project Name: Manda B Trac C Battery Project #: Brittany.Long@tetratech.com

Project Location: Lea County, NM Project #: 212C-MD-03262

Invoice to: ATTN: ATTN: Tetra tech Inc.

Receiving Laboratory: Cardinal Labs Sampler Signature: Jorge Fernandez

Comments:

LAB # LAB USE ONLY	H241178	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)	
			DATE	TIME	WATER	SOIL	HCL	HNO ₃			ICE

31	SW-4	3/6/2024		X				X			
32	SW-5	3/6/2024		X				X			
33	SW-6	3/6/2024		X				X			
34	SW-7	3/6/2024		X				X			
35	SW-8	3/6/2024		X				X			
36	SW-9	3/6/2024		X				X			
37	SW-10	3/6/2024		X				X			
38	SW-11	3/6/2024		X				X			
39	SW-12	3/6/2024		X				X			
30	SW-13	3/6/2024		X				X			

Relinquished by: [Signature] Date: 3-8-24 Time: 0947
Received by: [Signature] Date: 3-8-24 Time: 0947
Relinquished by: [Signature] Date: 3-8-24 Time: 0947
Received by: [Signature] Date: 3-8-24 Time: 0947

ANALYSIS REQUEST
(Circle or Specify Method No.)

BTEX 8021B	BTEX 8260B
TPH TX1005 (Ext to C35)	
TPH 8015M (GRO - DRO - ORO - MRO)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
RCI	
GC/MS Vol. 8260B / 624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082 / 608	
NORM	
PLM (Asbestos)	
Chloride	
Chloride Sulfate TDS	
General Water Chemistry (see attached list)	
Anion/Cation Balance	
Hold	

LAB USE ONLY
REMARKS: Standard TAT
Sample Temperature: 0.3°C
☐ RUSH: Same Day 24 hr 48 hr 72 hr
☐ Rush Charges Authorized
☐ Special Report Limits or TRRP Report
#1440
(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

Analysis Request of Custody Record



Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name:

JR Oil

Site Manager:

Brittany Long

Project Name:

Manda B Trac C Battery

432-741-5813

Project Location:
(county, state)

Lea County, NM

Project #:

Brittany.Long@tetratech.com

212C-MD-03262

Invoice to:

ATTN: ATTN: Tetra tech Inc.

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

LAB #
LAB USE ONLY

SAMPLE IDENTIFICATION

YEAR: 2023	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)
	DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE			

31

SW-1

3/6/2024

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ANALYSIS REQUEST

(Circle or Specify Method No.)

BTEX 8021B	BTEX 8260B
TPH TX1005 (Ext to C35)	
TPH 8015M (GRO - DRO - ORO - MRO)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
RCI	
GC/MS Vol. 8260B / 624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082 / 608	
NORM	
PLM (Asbestos)	
Chloride	
Chloride Sulfate TDS	
General Water Chemistry (see attached list)	
Anion/Cation Balance	

Hold

LAB USE ONLY

REMARKS:

Standard TAT

Sample Temperature

0.32

#140

☐ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 05, 2024

BRITTANY LONG

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MANDA B TRACT C BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 04/01/24 8:59.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	04/01/2024	Sampling Date:	03/29/2024
Reported:	04/05/2024	Sampling Type:	Soil
Project Name:	MANDA B TRACT C BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03262	Sample Received By:	Tamara Oldaker
Project Location:	JR OIL - LEA COUNTY, NM		

Sample ID: SW - 4 (H241657-01)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2024	ND	2.02	101	2.00	8.02	
Toluene*	<0.050	0.050	04/03/2024	ND	2.12	106	2.00	6.89	
Ethylbenzene*	<0.050	0.050	04/03/2024	ND	2.17	109	2.00	9.23	
Total Xylenes*	<0.150	0.150	04/03/2024	ND	6.80	113	6.00	12.3	
Total BTX	<0.300	0.300	04/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	04/03/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/02/2024	ND	198	99.2	200	2.87	
DRO >C10-C28*	34.8	10.0	04/02/2024	ND	186	93.2	200	3.70	
EXT DRO >C28-C36	<10.0	10.0	04/02/2024	ND					

Surrogate: 1-Chlorooctane 83.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.4 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/01/2024
Reported: 04/05/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/29/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 5 (H241657-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2024	ND	2.02	101	2.00	8.02		
Toluene*	<0.050	0.050	04/03/2024	ND	2.12	106	2.00	6.89		
Ethylbenzene*	<0.050	0.050	04/03/2024	ND	2.17	109	2.00	9.23		
Total Xylenes*	<0.150	0.150	04/03/2024	ND	6.80	113	6.00	12.3		
Total BTEx	<0.300	0.300	04/03/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	04/03/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/02/2024	ND	198	99.2	200	2.87	
DRO >C10-C28*	36.9	10.0	04/02/2024	ND	186	93.2	200	3.70	
EXT DRO >C28-C36	11.7	10.0	04/02/2024	ND					

Surrogate: 1-Chlorooctane 93.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/01/2024
Reported: 04/05/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/29/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 6 (H241657-03)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2024	ND	2.02	101	2.00	8.02	
Toluene*	<0.050	0.050	04/03/2024	ND	2.12	106	2.00	6.89	
Ethylbenzene*	<0.050	0.050	04/03/2024	ND	2.17	109	2.00	9.23	
Total Xylenes*	<0.150	0.150	04/03/2024	ND	6.80	113	6.00	12.3	
Total BTEX	<0.300	0.300	04/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	04/03/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/03/2024	ND	198	99.2	200	2.87	
DRO >C10-C28*	17.2	10.0	04/03/2024	ND	186	93.2	200	3.70	
EXT DRO >C28-C36	<10.0	10.0	04/03/2024	ND					

Surrogate: 1-Chlorooctane 91.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 04/01/2024
 Reported: 04/05/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/29/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 16 (H241657-04)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2024	ND	2.02	101	2.00	8.02	
Toluene*	<0.050	0.050	04/03/2024	ND	2.12	106	2.00	6.89	
Ethylbenzene*	<0.050	0.050	04/03/2024	ND	2.17	109	2.00	9.23	
Total Xylenes*	<0.150	0.150	04/03/2024	ND	6.80	113	6.00	12.3	
Total BTEX	<0.300	0.300	04/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/03/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/03/2024	ND	195	97.7	200	2.11	
DRO >C10-C28*	<10.0	10.0	04/03/2024	ND	191	95.7	200	3.80	
EXT DRO >C28-C36	<10.0	10.0	04/03/2024	ND					

Surrogate: 1-Chlorooctane 89.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.7 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
BRITTANY LONG
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received: 04/01/2024
Reported: 04/05/2024
Project Name: MANDA B TRACT C BATTERY
Project Number: 212C-MD-03262
Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/29/2024
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 17 (H241657-05)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/03/2024	ND	2.02	101	2.00	8.02		
Toluene*	<0.050	0.050	04/03/2024	ND	2.12	106	2.00	6.89		
Ethylbenzene*	<0.050	0.050	04/03/2024	ND	2.17	109	2.00	9.23		
Total Xylenes*	<0.150	0.150	04/03/2024	ND	6.80	113	6.00	12.3		
Total BTEX	<0.300	0.300	04/03/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	04/03/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/03/2024	ND	195	97.7	200	2.11	
DRO >C10-C28*	<10.0	10.0	04/03/2024	ND	191	95.7	200	3.80	
EXT DRO >C28-C36	<10.0	10.0	04/03/2024	ND					

Surrogate: 1-Chlorooctane 97.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TETRA TECH
 BRITTANY LONG
 901 WEST WALL STREET , STE 100
 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received: 04/01/2024
 Reported: 04/05/2024
 Project Name: MANDA B TRACT C BATTERY
 Project Number: 212C-MD-03262
 Project Location: JR OIL - LEA COUNTY, NM

Sampling Date: 03/29/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 18 (H241657-06)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2024	ND	2.02	101	2.00	8.02	
Toluene*	<0.050	0.050	04/03/2024	ND	2.12	106	2.00	6.89	
Ethylbenzene*	<0.050	0.050	04/03/2024	ND	2.17	109	2.00	9.23	
Total Xylenes*	<0.150	0.150	04/03/2024	ND	6.80	113	6.00	12.3	
Total BTEX	<0.300	0.300	04/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/03/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/03/2024	ND	195	97.7	200	2.11	
DRO >C10-C28*	<10.0	10.0	04/03/2024	ND	191	95.7	200	3.80	
EXT DRO >C28-C36	<10.0	10.0	04/03/2024	ND					

Surrogate: 1-Chlorooctane 96.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.9 % 49.1-148

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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene", written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

901 W Wall Str. 4L Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name:

JR Oil

Site Manager:

Brittany Long

Project Name:

Manda B Trac C Battery

432-741-5813

Project Location:

(county, state)
Lea County, NM

Project #:

Brittany.Long@tetratech.com

Invoice to:

212C-MD-03262

Receiving Laboratory:

ATTN: Tetra tech Inc.

Sampler Signature:

Jorge Fernandez

Comments:

Cardinal Labs

ANALYSIS REQUEST

(Circle or Specify Method No.)

- BTEX 8021B BTEX 8260B
- TPH TX1005 (Ext to C35)
- TPH 8015M (GRO - DRO - ORO - MRO)
- PAH 8270C
- Total Metals Ag As Ba Cd Cr Pb Se Hg
- TCLP Metals Ag As Ba Cd Cr Pb Se Hg
- TCLP Volatiles
- TCLP Semi Volatiles
- RCI
- GC/MS Vol. 8260B / 624
- GC/MS Semi. Vol. 8270C/625
- PCB's 8082 / 608
- NORM
- PLM (Asbestos)
- Chloride
- Chloride Sulfate TDS
- General Water Chemistry (see attached list)
- Anion/Cation Balance

Hold

SAMPLE IDENTIFICATION

LAB #

(LAB USE ONLY)

SAMPLING

MATRIX

PRESERVATIVE METHOD

CONTAINERS
FILTERED (Y/N)

BTEX 8021B BTEX 8260B

TPH TX1005 (Ext to C35)

TPH 8015M (GRO - DRO - ORO - MRO)

PAH 8270C

Total Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8260B / 624

GC/MS Semi. Vol. 8270C/625

PCB's 8082 / 608

NORM

PLM (Asbestos)

Chloride

Chloride Sulfate TDS

General Water Chemistry (see attached list)

Anion/Cation Balance

LAB #	DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE	# CONTAINERS	FILTERED (Y/N)	LAB USE ONLY
1	3/29/2024		X							X
2	3/29/2024		X							X
3	3/29/2024		X							X
4	3/29/2024		X							X
5	3/29/2024		X							X
6	3/29/2024		X							X

Hold

Inquired by: *[Signature]* Date: *858*

Received by: *[Signature]* Date: *0859*

LAB USE ONLY

REMARKS:

Standard TAT

Inquired by: *[Signature]* Date: *4-1-24*

Received by: *[Signature]* Date: *4-1-24*

Sample Temperature
3.1°C

- ☐ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

#140



Appendix E

Soil Survey Data

Soil Map—Lea County, New Mexico



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

7/17/2024
Page 1 of 3

Soil Map—Lea County, New Mexico

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lea County, New Mexico

Survey Area Data: Version 20, Sep 6, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 18, 2020—Feb 17, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BE	Berino-Cacique loamy fine sands association	1.4	100.0%
Totals for Area of Interest		1.4	100.0%

Map Unit Description: Berino-Cacique loamy fine sands association---Lea County, New Mexico

Lea County, New Mexico

BE—Berino-Cacique loamy fine sands association

Map Unit Setting

National map unit symbol: dmpd

Elevation: 3,000 to 3,900 feet

Mean annual precipitation: 10 to 13 inches

Mean annual air temperature: 60 to 62 degrees F

Frost-free period: 190 to 205 days

Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 50 percent

Cacique and similar soils: 40 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

Landform: Plains

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy eolian deposits derived from sedimentary rock over calcareous sandy alluvium derived from sedimentary rock

Typical profile

A - 0 to 6 inches: loamy fine sand

Btk - 6 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Map Unit Description: Berino-Cacique loamy fine sands association---Lea County, New Mexico

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7c

Hydrologic Soil Group: B

Ecological site: R070BD003NM - Loamy Sand

Hydric soil rating: No

Description of Cacique**Setting**

Landform: Plains

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Calcareous eolian deposits derived from
sedimentary rock

Typical profile

A - 0 to 12 inches: loamy fine sand

Bt - 12 to 28 inches: sandy clay loam

Bkm - 28 to 38 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 20 to 40 inches to petrocalcic

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low
to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0
mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7c

Hydrologic Soil Group: C

Ecological site: R070BD004NM - Sandy

Hydric soil rating: No

Minor Components**Maljamar**

Percent of map unit: 6 percent

Ecological site: R077CY028TX - Limy Upland 16-21" PZ

Hydric soil rating: No

Map Unit Description: Berino-Cacique loamy fine sands association---Lea County, New Mexico

Palomas

Percent of map unit: 4 percent

Ecological site: R070BD003NM - Loamy Sand

Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico

Survey Area Data: Version 20, Sep 6, 2023

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS

Action 432372

QUESTIONS

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID: 256073
	Action Number: 432372
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nOY1712541751
Incident Name	NOY1712541751 MANDA B TRACT C BATTERY @ 30-025-25438
Incident Type	Oil Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-025-25438] MANDA #001

Location of Release Source

Please answer all the questions in this group.

Site Name	Manda B Tract C Battery
Date Release Discovered	04/26/2017
Surface Owner	Private

Incident Details

Please answer all the questions in this group.

Incident Type	Oil Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.

Crude Oil Released (bbls) Details	Cause: Equipment Failure Pipeline (Any) Crude Oil Released: 4 BBL Recovered: 0 BBL Lost: 4 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure Pipeline (Any) Produced Water Released: 10 BBL Recovered: 5 BBL Lost: 5 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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Phone: (505) 476-3441

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

QUESTIONS, Page 2

Action 432372

QUESTIONS (continued)

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID: 256073
	Action Number: 432372
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	Unavailable.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: Brittany Long Title: Consultant Email: brittany.long@tetrattech.com Date: 02/14/2025
--	---

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS, Page 3

Action 432372

QUESTIONS (continued)

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID: 256073
	Action Number: 432372
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
<i>Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	621
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	13593
GRO+DRO (EPA SW-846 Method 8015M)	12100
BTEX (EPA SW-846 Method 8021B or 8260B)	0.1
Benzene (EPA SW-846 Method 8021B or 8260B)	0.1
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
On what estimated date will the remediation commence	01/31/2024
On what date will (or did) the final sampling or liner inspection occur	01/31/2024
On what date will (or was) the remediation complete(d)	03/29/2024
What is the estimated surface area (in square feet) that will be reclaimed	4800
What is the estimated volume (in cubic yards) that will be reclaimed	631
What is the estimated surface area (in square feet) that will be remediated	4800
What is the estimated volume (in cubic yards) that will be remediated	631
<i>These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.</i>	
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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

QUESTIONS, Page 4

Action 432372

QUESTIONS (continued)

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID: 256073
	Action Number: 432372
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	J&L LANDFARM [FEEM0112339187]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
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.	
I hereby agree and sign off to the above statement	Name: Brittany Long Title: Consultant Email: brittany.long@tetrattech.com Date: 02/14/2025
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 432372

QUESTIONS (continued)

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID: 256073
	Action Number: 432372
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 432372

QUESTIONS (continued)

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID: 256073
	Action Number: 432372
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	327202
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	03/29/2024
What was the (estimated) number of samples that were to be gathered	8
What was the sampling surface area in square feet	1600

Remediation Closure Request	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	4800
What was the total volume (cubic yards) remediated	631
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	4800
What was the total volume (in cubic yards) reclaimed	631
Summarize any additional remediation activities not included by answers (above)	No additional comments
<i>The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.	
I hereby agree and sign off to the above statement	Name: Brittany Long Title: Consultant Email: brittany.long@tetrattech.com Date: 02/14/2025

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QUESTIONS, Page 7

Action 432372

QUESTIONS (continued)

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID: 256073
	Action Number: 432372
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 432372

CONDITIONS

Operator: J R OIL, LTD. CO. P.O. Box 53657 Lubbock, TX 79453	OGRID:
	256073
	Action Number:
	432372
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation closure approved.	3/7/2025
amaxwell	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	3/7/2025
amaxwell	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	3/7/2025
amaxwell	Since a second release occurred where the historical release had a liner in place, this area is now subject to 19.15.29.13 NMAC and will need to be addressed during reclamation activities.	3/7/2025