

**JR OIL LTD. CO.
ENVIRONMENTAL SITE SUMMARY & SPILL REMEDIATION PLAN**

Company: JR Oil Ltd. Co. **Address:** P.O. Box 2975 Hobbs, NM 88241 **Telephone #:** (575) 390-1380

Site Name: Eaton B AC #1 **NM OCD Reference #:** 1RP-4591

Surface Owner: Private **Mineral Owner:** Private

Unit Letter: "G" (SW/NE) **Section:** 12 **Township:** 25S **Range:** 37E **County:** Lea

GPS Coordinates: 32.147477 N -103.115228 W **Depth to Ground Water:** 90'

NM OCD Ranking Score: 0 **Soil Remediation Levels (mg/kg) Benzene:** 10 **BTEX:** 50 **Chloride:** 250

Date/Time of Release: 1/15/2017, 5:00 AM **Type of Release:** Produced water & crude oil

Approximate Volume of Release: See below

Background Information:

On January 15, 2017, JR Oil, Ltd. Co. (JR Oil), discovered a release at the Eaton B AC #1 tank battery. Lightning struck the tank battery, which resulted in a fire and the release of approximately 202 barrels (bbls) of crude oil and 43 bbls of produced water. The release impacted an area of the tank battery pad and adjacent pasture measuring approximately 100 yards. The majority of the crude oil was consumed by the fire.

The release was reported to the New Mexico Oil Conservation Division's (NMOCD) Hobbs District office on January 16, 2017. The NMOCD "Release Notification & Corrective Action" (Form C-141) is provided as Appendix A. General photographs of the release site are provided in Attachment B. A "Sample Location Map" is provided as Figure 1.

Summary of Field Activities:

This summary is a subsequent account of activities performed after the June 29, 2018 meeting with Olivia Yu at the OCD office.

On July 2, 2018, per the meeting with Olivia Yu, the additional requested samples were taken and the results are shown in the updated lab report and map.

Proposed Activities:

After the findings of the subsequent samples, JR Oil requests approval from the NM OCD to line, cover, and complete remediation as was discussed in the June 29, 2018 meeting with Olivia Yu at the NM OCD office.

Enclosures:

Figure 1: Updated Sample Location Map and list of coordinates
Table 1: Concentrations of BTEX, Chloride and TPH in soil
Appendix A: Laboratory Analytical Results

APPROVED

By Olivia Yu at 12:26 pm, Jul 31, 2018

NMOCD approves of the remediation completed for 1RP-4591. Backfill approval and liner placement granted.

FIGURE 1
Updated Sample Location Map
and List of Coordinates



LEGEND	
<div></div>	4' excavation approximately 27x270 ft
<div></div>	2' excavation-approximately 45x100 ft
<div></div>	1' excavation-approximately 15x150 ft

Figure 1 Sample Location Map
Updated To Reflect Required action from 6-29/2018 meeting

GPS COORDINATES OF SAMPLE POINTS FROM FIGURE 1

7-2 #1	32° 08.845'N	-103° 06.876'W
7-2 #2	32° 08.851'N	-103° 06.869' W
7-2 #3	32° 08.845'N	-103° 06.863' W
7-2 #4	32° 08.837'N	-103° 06.868' W
7-2 #5	32° 08.834'N	-103° 06.899' W
7-2 #6	32° 08.837'N	-103° 06.880' W
7-2 #7	32° 08.835'N	-103° 06.891' W

TABLE 1

Updated Sample Table

TABLE 1
CONCENTRATION OF BTEX, CHLORIDE & TPH IN SOIL

JR OIL LTD. CO.
EATON B AC #1
LEA COUNTY, NEW MEXICO
NMOCD REF. #: 1RP-4591

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	METHOD: EPA 8021B					METHOD: EPA 300	METHOD: SW8015 MOD			
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	CHLORIDE (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	ORO (mg/Kg)	TOTAL TPH (mg/Kg)
7-2 #1	1'	7/2/2018	<.0100	<.0100	<.0100	<.0100	<.0100	<4.91	16.4	57.1	<15.0	73.5
7-2 #2	1'	7/2/2018						55.4				
7-2 #3	1'	7/2/2018						<4.97				
7-2 #4	1'	7/2/2018						<4.99	16.3	<15	<15	16.3
7-2 #5	1'	7/2/2018						<4.94				
7-2 #6	1'	7/2/2018						<4.91				
7-2 #7	1'	7/2/2018						<4.95				

APPENDIX A
LABORATORY ANALYTICAL
REPORTS



Certificate of Analysis Summary 591180

J R Oil Ltd., Hobbs, NM

Project Name: Eaton B AC



Project Id:

Contact: Joe Tippy

Project Location:

Date Received in Lab: Tue Jul-03-18 10:52 am

Report Date: 13-JUL-18

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	591180-001	591180-002	591180-003	591180-004	591180-005	591180-006
	<i>Field Id:</i>	7-2-#1 "Rsf Sp-4"	7-2-#2	7-2-#3	7-2-#4 "Rsf Sp-8"	7-2-#5 "Rsf floor #1"	7-2-#6 "Rsf Sp-7"
	<i>Depth:</i>	1- ft	1- ft	1- ft	1- ft	1- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-02-18 11:45	Jul-02-18 11:50	Jul-02-18 11:50	Jul-02-18 11:50	Jul-02-18 11:55	Jul-02-18 12:20
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-09-18 07:40					
	<i>Analyzed:</i>	Jul-10-18 07:32					
	<i>Units/RL:</i>	mg/kg RL					
Benzene		<0.0100 0.0100					
Toluene		<0.0100 0.0100					
Ethylbenzene		<0.0100 0.0100					
m,p-Xylenes		<0.0200 0.0200					
o-Xylene		<0.0100 0.0100					
Total Xylenes		<0.0100 0.0100					
Total BTEX		<0.0100 0.0100					
Chloride by EPA 300	<i>Extracted:</i>	Jul-11-18 10:45	Jul-11-18 10:45	Jul-11-18 10:45	Jul-11-18 10:45	Jul-11-18 10:45	Jul-11-18 10:45
	<i>Analyzed:</i>	Jul-11-18 11:34	Jul-11-18 11:50	Jul-11-18 11:56	Jul-11-18 12:01	Jul-11-18 12:06	Jul-11-18 12:23
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<4.91 4.91	55.4 4.98	<4.97 4.97	<4.99 4.99	<4.94 4.94	<4.91 4.91
TPH By SW8015 Mod	<i>Extracted:</i>	Jul-09-18 07:00			Jul-09-18 07:00		
	<i>Analyzed:</i>	Jul-09-18 12:03			Jul-09-18 12:23		
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		16.4 15.0			16.3 15.0		
Diesel Range Organics (DRO)		57.1 15.0			<15.0 15.0		
Oil Range Hydrocarbons (ORO)		<15.0 15.0			<15.0 15.0		
Total TPH		73.5 15.0			16.3 15.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Holly Taylor
Project Manager



Certificate of Analysis Summary 591180

J R Oil Ltd., Hobbs, NM

Project Name: Eaton B AC



Project Id:

Contact: Joe Tippy

Project Location:

Date Received in Lab: Tue Jul-03-18 10:52 am

Report Date: 13-JUL-18

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	591180-007					
	<i>Field Id:</i>	7-2-#7					
	<i>Depth:</i>	1- ft					
	<i>Matrix:</i>	SOIL					
	<i>Sampled:</i>	Jul-02-18 12:20					
Chloride by EPA 300	<i>Extracted:</i>	Jul-11-18 10:45					
	<i>Analyzed:</i>	Jul-11-18 12:28					
	<i>Units/RL:</i>	mg/kg RL					
Chloride		<4.95 4.95					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Holly Taylor
Project Manager

Analytical Report 591180

for
J R Oil Ltd.

Project Manager: Joe Tippy

Eaton B AC

13-JUL-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



13-JUL-18

Project Manager: **Joe Tippy**

J R Oil Ltd.

PO Box 2975

Hobbs, NM 88241

Reference: XENCO Report No(s): **591180**

Eaton B AC

Project Address:

Joe Tippy:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 591180. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 591180 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Holly Taylor

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 591180



J R Oil Ltd., Hobbs, NM

Eaton B AC

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
7-2-#1 "Rsf Sp-4"	S	07-02-18 11:45	1 ft	591180-001
7-2-#2	S	07-02-18 11:50	1 ft	591180-002
7-2-#3	S	07-02-18 11:50	1 ft	591180-003
7-2-#4 "Rsf Sp-8"	S	07-02-18 11:50	1 ft	591180-004
7-2-#5 "Rsf floor #1"	S	07-02-18 11:55	1 ft	591180-005
7-2-#6 "Rsf Sp-7"	S	07-02-18 12:20	1 ft	591180-006
7-2-#7	S	07-02-18 12:20	1 ft	591180-007



CASE NARRATIVE

Client Name: J R Oil Ltd.

Project Name: Eaton B AC

Project ID:

Work Order Number(s): 591180

Report Date: 13-JUL-18

Date Received: 07/03/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3056046 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analytical Results 591180



J R Oil Ltd., Hobbs, NM

Eaton B AC

Sample Id: 7-2-#1 "Rsf Sp-4"

Lab Sample Id: 591180-001

Matrix: Soil

Date Collected: 07.02.18 11.45

Date Received: 07.03.18 10.52

Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3056218

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 07.11.18 10.45

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.91	4.91	mg/kg	07.11.18 11.34	U	1

Analytical Method: TPH By SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3055934

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Date Prep: 07.09.18 07.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	16.4	15.0	mg/kg	07.09.18 12.03		1
Diesel Range Organics (DRO)	C10C28DRO	57.1	15.0	mg/kg	07.09.18 12.03		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.09.18 12.03	U	1
Total TPH	PHC635	73.5	15.0	mg/kg	07.09.18 12.03		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	92	%	70-135	07.09.18 12.03		
o-Terphenyl	84-15-1	91	%	70-135	07.09.18 12.03		



Certificate of Analytical Results 591180



J R Oil Ltd., Hobbs, NM

Eaton B AC

Sample Id: 7-2-#1 "Rsf Sp-4"

Lab Sample Id: 591180-001

Matrix: Soil

Date Collected: 07.02.18 11.45

Date Received: 07.03.18 10.52

Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3056046

Prep Method: SW5030B

% Moisture:

Date Prep: 07.09.18 07.40

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	07.10.18 07.32	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	07.10.18 07.32	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	07.10.18 07.32	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	07.10.18 07.32	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	07.10.18 07.32	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	07.10.18 07.32	U	1
Total BTEX		<0.0100	0.0100	mg/kg	07.10.18 07.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	07.10.18 07.32		
1,4-Difluorobenzene	540-36-3	128	%	70-130	07.10.18 07.32		



Certificate of Analytical Results 591180



J R Oil Ltd., Hobbs, NM
Eaton B AC

Sample Id: 7-2-#2
Lab Sample Id: 591180-002

Matrix: Soil
Date Collected: 07.02.18 11.50

Date Received: 07.03.18 10.52
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3056218

Date Prep: 07.11.18 10.45

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	55.4	4.98	mg/kg	07.11.18 11.50		1



Certificate of Analytical Results 591180



J R Oil Ltd., Hobbs, NM

Eaton B AC

Sample Id: 7-2-#3
Lab Sample Id: 591180-003

Matrix: Soil
Date Collected: 07.02.18 11.50

Date Received: 07.03.18 10.52
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3056218

Prep Method: E300P
% Moisture:
Date Prep: 07.11.18 10.45
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	07.11.18 11.56	U	1



Certificate of Analytical Results 591180



J R Oil Ltd., Hobbs, NM Eaton B AC

Sample Id: 7-2-#4 "Rsf Sp-8"
Lab Sample Id: 591180-004

Matrix: Soil
Date Collected: 07.02.18 11.50

Date Received: 07.03.18 10.52
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3056218

Date Prep: 07.11.18 10.45

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	07.11.18 12.01	U	1

Analytical Method: TPH By SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055934

Date Prep: 07.09.18 07.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	16.3	15.0	mg/kg	07.09.18 12.23		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.09.18 12.23	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.09.18 12.23	U	1
Total TPH	PHC635	16.3	15.0	mg/kg	07.09.18 12.23		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	91	%	70-135	07.09.18 12.23		
o-Terphenyl	84-15-1	87	%	70-135	07.09.18 12.23		



Certificate of Analytical Results 591180



J R Oil Ltd., Hobbs, NM

Eaton B AC

Sample Id: 7-2-#5 "Rsf floor #1"

Lab Sample Id: 591180-005

Matrix: Soil

Date Collected: 07.02.18 11.55

Date Received: 07.03.18 10.52

Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3056218

Prep Method: E300P

% Moisture:

Date Prep: 07.11.18 10.45

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.94	4.94	mg/kg	07.11.18 12.06	U	1



Certificate of Analytical Results 591180



J R Oil Ltd., Hobbs, NM

Eaton B AC

Sample Id: 7-2-#6 "Rsf Sp-7"

Lab Sample Id: 591180-006

Matrix: Soil

Date Collected: 07.02.18 12.20

Date Received: 07.03.18 10.52

Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3056218

Date Prep: 07.11.18 10.45

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.91	4.91	mg/kg	07.11.18 12.23	U	1



Certificate of Analytical Results 591180



J R Oil Ltd., Hobbs, NM
Eaton B AC

Sample Id: 7-2-#7
Lab Sample Id: 591180-007

Matrix: Soil
Date Collected: 07.02.18 12.20

Date Received: 07.03.18 10.52
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3056218

Date Prep: 07.11.18 10.45

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	07.11.18 12.28	U	1

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



QC Summary 591180

J R Oil Ltd.
Eaton B AC

Analytical Method: Chloride by EPA 300

Seq Number: 3056218

MB Sample Id: 7658208-1-BLK

Matrix: Solid

LCS Sample Id: 7658208-1-BKS

Prep Method: E300P

Date Prep: 07.11.18

LCSD Sample Id: 7658208-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	257	103	270	108	90-110	5	20	mg/kg	07.11.18 11:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3056218

Parent Sample Id: 591180-001

Matrix: Soil

MS Sample Id: 591180-001 S

Prep Method: E300P

Date Prep: 07.11.18

MSD Sample Id: 591180-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.91	246	247	100	257	104	90-110	4	20	mg/kg	07.11.18 11:39	

Analytical Method: Chloride by EPA 300

Seq Number: 3056218

Parent Sample Id: 591241-003

Matrix: Soil

MS Sample Id: 591241-003 S

Prep Method: E300P

Date Prep: 07.11.18

MSD Sample Id: 591241-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.91	249	255	100	257	101	90-110	1	20	mg/kg	07.11.18 12:55	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3055934

MB Sample Id: 7658090-1-BLK

Matrix: Solid

LCS Sample Id: 7658090-1-BKS

Prep Method: TX1005P

Date Prep: 07.09.18

LCSD Sample Id: 7658090-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	970	97	961	96	70-135	1	20	mg/kg	07.09.18 08:29	
Diesel Range Organics (DRO)	<15.0	1000	989	99	979	98	70-135	1	20	mg/kg	07.09.18 08:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		127		122		70-135	%	07.09.18 08:29
o-Terphenyl	104		116		112		70-135	%	07.09.18 08:29

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 591180

J R Oil Ltd.
Eaton B AC

Analytical Method: TPH By SW8015 Mod

Seq Number: 3055934

Parent Sample Id: 591176-001

Matrix: Soil

MS Sample Id: 591176-001 S

Prep Method: TX1005P

Date Prep: 07.09.18

MSD Sample Id: 591176-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	966	97	963	96	70-135	0	20	mg/kg	07.09.18 09:27	
Diesel Range Organics (DRO)	<15.0	999	985	99	998	100	70-135	1	20	mg/kg	07.09.18 09:27	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane			121		120		70-135			%	07.09.18 09:27	
o-Terphenyl			107		103		70-135			%	07.09.18 09:27	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3056046

MB Sample Id: 7658167-1-BLK

Matrix: Solid

LCS Sample Id: 7658167-1-BKS

Prep Method: SW5030B

Date Prep: 07.09.18

LCSD Sample Id: 7658167-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0100	0.500	0.459	92	0.484	97	70-130	5	35	mg/kg	07.10.18 05:08	
Toluene	<0.0100	0.500	0.499	100	0.497	99	70-130	0	35	mg/kg	07.10.18 05:08	
Ethylbenzene	<0.0100	0.500	0.462	92	0.502	100	70-130	8	35	mg/kg	07.10.18 05:08	
m,p-Xylenes	<0.0200	1.00	0.950	95	1.05	105	70-130	10	35	mg/kg	07.10.18 05:08	
o-Xylene	<0.0100	0.500	0.451	90	0.486	97	70-130	7	35	mg/kg	07.10.18 05:08	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene	94		95		98		70-130			%	07.10.18 05:08	
4-Bromofluorobenzene	95		92		91		70-130			%	07.10.18 05:08	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3056046

Parent Sample Id: 591451-001

Matrix: Soil

MS Sample Id: 591451-001 S

Prep Method: SW5030B

Date Prep: 07.09.18

MSD Sample Id: 591451-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0100	0.500	0.291	58	0.354	71	70-130	20	35	mg/kg	07.10.18 05:44	X
Toluene	<0.0100	0.500	0.229	46	0.330	66	70-130	36	35	mg/kg	07.10.18 05:44	XF
Ethylbenzene	<0.0100	0.500	0.167	33	0.287	57	70-130	53	35	mg/kg	07.10.18 05:44	XF
m,p-Xylenes	<0.0200	1.00	0.331	33	0.560	56	70-130	51	35	mg/kg	07.10.18 05:44	XF
o-Xylene	<0.0100	0.500	0.157	31	0.287	57	70-130	59	35	mg/kg	07.10.18 05:44	XF
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene			124		99		70-130			%	07.10.18 05:44	
4-Bromofluorobenzene			88		91		70-130			%	07.10.18 05:44	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

5105

XENCO
Laboratories

10x8x8

Tracking# 66063917837

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

☐ 4143 Greenbriar Drive, Stafford, TX 77477 281-240-4200
☐ 5332, Blackberry Drive, San Antonio, TX 78238 210-509-3334

☐ 9701 Harry Hines Blvd., Dallas, TX 75220 214-902-0300
☐ 12600 West I-20 East, Odessa, TX 79765 432-563-1800

Serial #: 330880 Page of

Company-City JR Oil Ltd Hobbs N.M. Phone 575-390-1380										Lab Only: 591180																				
Project Name-Location Eaton B A C <input checked="" type="checkbox"/> Previously done at XENCO Project ID										TAT: ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d Standard TAT is project specific. It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.																				
Proj. State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other										Proj. Manager (PM) Joe Tippy																				
E-mail Results to Joe.tippy@va-lor.net.com <input type="checkbox"/> PM and <input type="checkbox"/> Other Fax No:																														
Invoice to <input type="checkbox"/> Accounting <input type="checkbox"/> Inc. Invoice with Final Report <input type="checkbox"/> Invoice must have a P.O. Bill to: Pay w card																														
Quote/Pricing: P.O. No: <input type="checkbox"/> Call for P.O.																														
Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP																														
QAPP Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER:																														
Special DLs (GW DW QAPP MDLs RLs See Lab PM Included Call PM)																														
Sampler Name Joe Tippy Signature [Signature]																														
Sample ID	Sampling Date	Time	Depth ft in m	Matrix	Composite	Grab	# Containers	Container Size	Container Type	Preservatives	VOA: Full-List BTEX-MTBE EtOH Oxyg VOAs	VOA: PP TCL DW Appdx-1 Appdx-2 CALL Other:	PAHs SIM 8310 8270	TX-1005 DRO GRO MA EPH MA VPH	SVOCs: Full-List DW BN&AE TCLP PP Appdx-2 CALL	OC Pesticides PCBs Herbicides OP Pesticides	Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx 2	SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)	EDB / DBCP	TATASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d	Addn: PAH above mg/L W, mg/Kg S Highest Hit	Hold Samples (Surcharges will apply and are pre-approved)	Sample Clean-ups are pre-approved as needed	Addn:	Date	Rcv. by:	From:			
1 7-2*1 "Ref SP-4"	7/2/18	11:45 AM	1'				1																							
2 7-2*2	7/2/18	11:50 AM	1'																											
3 7-2*3	7/2/18	11:50 AM	1'																											
4 7-2*4 "Ref SP-2"	7/2/18	11:50 AM	1'																											
5 7-2*5 "Ref Floor #1"	7/2/18	11:55 AM	1'																											
6 7-2*6 "Ref SP-7"	7/2/18	12:20 PM	1'																											
7 7-2*7	7/2/18	12:20 PM	1'																											
8																														
9																														
10																														
Relinquished by (Initials and Sign) [Signature]										Date & Time 7/2/18 4:44 PM																				
Relinquished to (Initials and Sign) [Signature]										Date & Time 7/2/18 4:47																				
Total Containers per COC: 4										Cooler Temp: 4.3 °C																				
1) [Signature]										2) [Signature]																				
3) [Signature]										4) [Signature]																				
5) [Signature]										6) [Signature]																				

Preservatives: Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Asbc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool, <4C) (C), None (NA), See Label (L), Other (O)
 Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other _____ Cont. Type: Glass Amb (A), Glass Clear (C), Plastic (P), Various (V)

Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L)

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Notice: Signature of this document and relinquishment of these samples constitutes a valid purchase order from client company to Xenco Laboratories and its affiliates, subcontractors and assigns under Xenco's standard terms and conditions of service unless previously negotiated under a fully executed client contract.



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: J R Oil Ltd.

Date/ Time Received: 07/03/2018 10:52:00 AM

Work Order #: 591180

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	4.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Brianna Teel

Date: 07/03/2018

Checklist reviewed by:

Holly Taylor

Holly Taylor

Date: 07/03/2018