Armando Martinez
Operations Lead, Portfolio Operations Central

April 13, 2021

New Mexico Oil Conservation Division – District I
1625 N. French Drive
Hobbs, New Mexico 88240

Re: 2020 Soil Assessment Report - Deferral Request – LPU Central Battery
Case No. 1RP-2365
Lea County, New Mexico

Dear Bradford Billings:

Chevron Environmental Management Company (CEMC) submits herein the *2020 Soil Assessment Report* for 1RP-2365, LPU Central Battery. The Site is located approximately 5.6 miles south of Lovington, in Unit B, Section 1, Township 17 South, Range 36 East, Lea County, New Mexico. The Report was prepared by Arcadis U.S., Inc. (Arcadis), on behalf of CEMC. Based on the analytical results associated with the recent assessment activities, CEMC respectfully requests deferral of additional soil assessment and remediation activities associated with 1RP-2365 until the facility is shut down and reclamation activities are conducted.

If you have any questions regarding this submittal, please contact Scott Foord of Arcadis at (713) 953-4853 or me at (505) 690 5408.

Respectfully,

Armando Martinez

Encl. 2020 Soil Assessment Report - Deferral Request - LPU Central Battery

Armando Martinez
Operations Lead Central
Portfolio Operations - Central
354 State Highway 38, Questa, NM 87556-0469
Tel 575 586 7639 Mobile 505 690 5408 Fax 575 586 0811
amarti@chevron.com

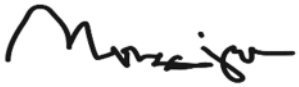
ARCADIS Design & Consultancy for natural and built assets

Chevron Environmental Management Company

2020 SOIL ASSESSMENT REPORT

LPU Central Battery
Case No. 1RP-2315 & 1RP-2365

April 2021



Morgan Jordan
Task Manager I

Scott Foord, PG
Certified Project Manager

2020 SOIL ASSESSMENT REPORT

LPU Central Battery
Case No. 1RP-2315 & 1RP-2365

Prepared for:

Armando Martinez

Operations Lead Central

Chevron Environmental Management Company

P.O. Box 469
Questa, New Mexico 87556

Tel 505 690 5408

Prepared by:

Arcadis U.S., Inc.

10205 Westheimer Road

Suite 800

Houston

Texas 77042

Tel 713 953 4800

Fax 713 977 4620

Our Ref:
30057203

Date:

April 2021

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APPENDICES

1 INTRODUCTION

Arcadis U.S., Inc. (Arcadis) prepared this Site Assessment Report (Report), on behalf of Chevron Environmental Management Company (CEMC), summarizing the soil assessment activities conducted for the LPU Central Battery (Site).

2 PROJECT SUMMARY

The Site is approximately 5.6 miles south of Lovington, in Unit B, Section 1, Township 17 South, Range 36 East, Lea County, New Mexico. A site location map is included as **Figure 1**.

Two C-141 Forms are on file associated with two separate releases at the Site. Remediation permit numbers 1RP-2315 and 1RP-2365 have been assigned to the releases by the New Mexico Oil Conservation Division (NMOCD).

On September 24, 2009, a high level, high pressure state caused the water dump valve to fail. According to the Initial C-141 Form associated with 1RP-2315, the relief valve opened to protect the vessel from over pressuring. Crude oil was carried with natural gas to the pressure relief stack located on the north side of the battery, causing a release of 2.62 barrels (bbls) of oil onto the caliche pad and adjacent pastureland. Per the Initial C-141 Form, a portable enviro-vac recovered 1.43 bbls of free-standing fluid. The Initial C-141 Form for this release was submitted to the NMOCD on October 1, 2009 and approved by NMOCD on October 2, 2009. The Initial C-141 Form for this release is included in **Appendix A.**

On December 5, 2009, a second release occurred at the Site. According to the Initial C-141 Form associated with 1RP-2365, a 2-inch diameter ball valve froze and parted, resulting in the release of 36.77 bbls of oil. The Initial C-141 Form reported 36.47 bbls of oil was contained within the unlined dike, with the remaining 0.30 bbls spilling onto the caliche road on the south side of the battery. 35.4 bbls of free-standing fluid were reportedly recovered with a portable enviro-vac and placed back into the on-site oil aboveground storage tank. The remaining 1.37 bbls were recovered along with impacted soil using a backhoe and placed in a roll-off box that was located at the Site. The Initial C-141 Form was submitted to the NMOCD on December 6, 2009 and approved by NMOCD on December 9, 2009. The Initial C-141 Form for this release is also included in **Appendix A.**

According to the New Mexico Office of the State Engineers (NMOSE) database, there is a water well approximately 0.20 miles south of the Site with a depth to groundwater of 101 feet below ground surface (bgs). There are also several monitoring wells located in the vicinity of the Site associated with the Chevron Lovington Water Plant Site (OGRID No. 4323 - Case No. 1R394) with depth to groundwater verified at greater than 100 feet bgs.

3 2020 SOIL ASSESSMENT

On October 14-15, 2020, Arcadis personnel collected soil samples from fifteen locations (SB-1 through SB-15) within the release areas. The sample locations were determined based on information obtained by Arcadis from the Initial C-141 Forms and from Chevron personnel familiar with the release locations associated with remediation permit numbers 1RP-2315 & 1RP-2365. The soil samples were collected with

a hand auger at depths ranging from the surface to approximately 0.5 feet bgs. Shallow refusal was encountered in all locations. Each boring location was backfilled with the remaining excavated soil. Soil sample locations are presented on **Figure 2**. After collecting the samples, they were packed in jars and placed on ice for delivery to Eurofins TestAmerica in Houston, Texas for analysis.

The soil samples were analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) by United States Environmental Protection Agency (USEPA) Method 8021B,
- Total Petroleum Hydrocarbons (TPH) as gasoline (TPH-GRO) by USEPA Method 8015,
- TPH as diesel (TPH-DRO) by USEPA Method 8015,
- TPH as oil (TPH-ORO) by USEPA Method 8015, and
- Chloride by Method 9056A.

4 SOIL ANALYTICAL RESULTS

The soil analytical results were compared to the revised New Mexico Administration Code (NMAC) screening levels for BTEX, TPH, and chloride for depth to groundwater greater than 100 feet bgs (revised Rule 19.15.29). A summary of the soil sample analytical results is presented in **Table 1**. Copies of the certified analytical reports and chain-of-custody documentation from Eurofins TestAmerica are presented in **Appendix B**. The soil analytical map is presented in **Figure 3**.

4.1 BTEX

- Benzene concentrations were reported below the NMAC standard of 10 milligrams per kilogram (mg/kg) at all sample locations.
- Total BTEX concentrations were reported below the NMAC standard of 50 mg/kg at all sample locations.

4.2 TPH

- TPH-GRO and DRO concentrations were reported below the NMAC standard of 1,000 mg/kg at all sample locations.
- Total TPH concentrations were reported below the NMAC standard of 2,500 mg/kg at all sample locations.

4.3 Chloride

- Chloride concentrations were reported below the revised Rule 19.15.29 screening limit of 20,000 mg/kg at all sample locations. However, concentrations did exceed the revised Rule (19.15.29.13) restoration screening criteria of 600 mg/kg at two sample location (SB-10 and SB-11).
    - SB-10 (0 – 0.5') at 882 mg/kg

- SB-11 (0 – 0.5') at 744 mg/kg

5 CONCLUSION

Analytical results associated with the recent assessment activities indicate that concentrations of chloride above the restoration screening criteria of 600 mg/kg within the top 4 feet bgs of the soil column are present in shallow soil in the vicinity of SB-10 and SB-11. The chloride impacts are within the documented chloride groundwater plume boundary of OGRID No. 4323/ Case No. 1R394 (an active groundwater remediation site and not believed associated with releases 1RP-2315 and 1RP-2365). The area of impacts will be addressed (excavated) during site restoration activities that will be conducted following abandonment of this facility at a future date. Based upon the findings presented in this report, no additional soil assessment activities are recommended at this time to further delineate the chloride impact in soil at the Site. Deferral for any additional assessment or remediation activities is requested for 1RP-2315 and 1RP-2365. The Final C-141s for both releases are attached in **Appendix D**.

TABLES

Table 1
2020 Soil Analytical Results
Chevron Environmental Management Company
LPU Central Battery
Lea County, New Mexico

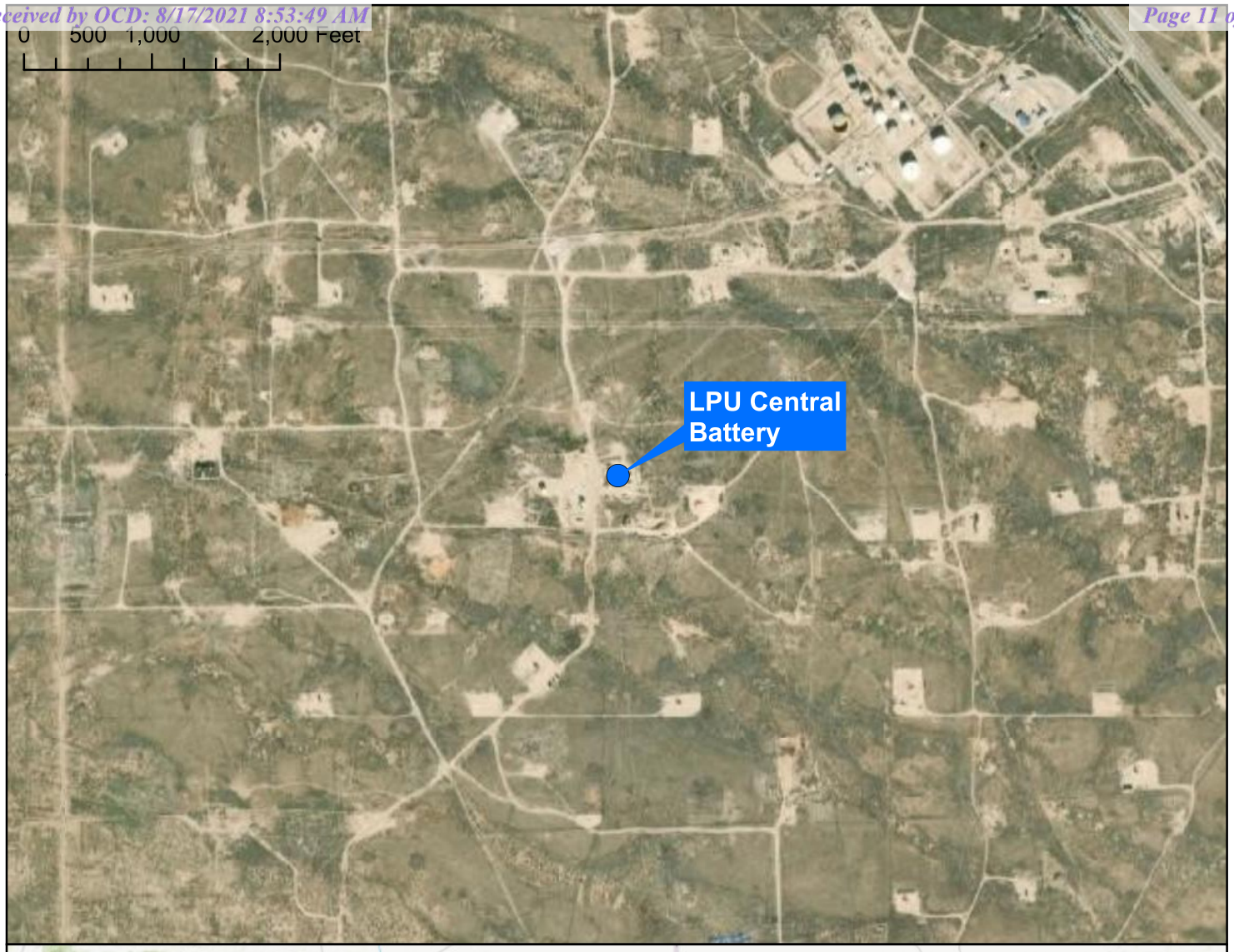
ARCADIS Design & Consultancy for natural and built assets

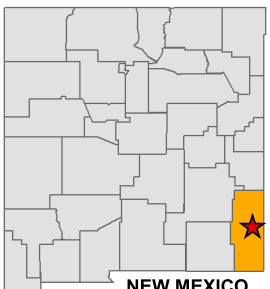
Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Gasoline Range Organics	Diesel Range Organics	Total GRO + DRO	Oil Range Organics	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			**10**	**--**	**--**	**--**	**50**	**--**	**--**	**1,000**	**--**	**2,500**	**20,000**
Restoration Requirements													**600***
SB-1	0-.5'	10/13/20	<0.000388	<0.000460	<0.000570	<0.000347	<0.000347	24.9 J	<15.1	24.9 J	<15.1	24.9 J	184
SB-2	0-.5'	10/13/20	<0.000389	<0.000461	<0.000571	<0.000348	<0.000348	<15.3	<15.3	<15.3	<15.3	<15.3	58.0
SB-3	0-.5'	10/13/20	<0.000393	<0.000465	<0.000576	<0.000351	<0.000351	22.2 J	26.6 J	48.8 J	20.8 J	69.6 J	7.54
SB-4	0-.5'	10/14/20	<0.000389	<0.000460	<0.000571	<0.000348	<0.000348	21.6 J	403	424.6 J	166	591 J	36.1
SB-5	0-.5'	10/14/20	<0.000387	<0.000458	0.00127 J	<0.000346	0.00127 J	22.7 J	30.8 J	53.5 J	17.0 J	70.5 J	9.75
SB-6	0-.5'	10/14/20	<0.000389	<0.000460	<0.000570	<0.000348	<0.000348	18.9 J	87.9	106.8 J	49.3 J	156 J	66.0
SB-7	0-.5'	10/14/20	<0.000397	<0.000470	<0.000583	<0.000356	<0.000356	24.8 J	163	187.8 J	81.2	269 J	531
SB-8	0-.5'	10/14/20	<0.000391	<0.000463	<0.000574	<0.000350	<0.000350	20.0 J	60.3	80.3 J	42.2 J	123 J	15.3
SB-9	0-.5'	10/14/20	0.000766 J	0.00119 J	0.000987 J	<0.000347	0.00294 J	25.5 J	179	204.5 J	95.0	300 J	10.1
SB-10	0-.5'	10/14/20	0.000903 J	0.000954 J	0.00115 J	0.00112 J	0.00413 J	<15.3	21.5 J	21.5 J	<15.3	21.5 J	***882***
SB-11	0-.5'	10/14/20	0.00134 J	<0.000459	0.00193 J	0.000816 J	0.00409 J	20.1 J	462	482.1 J	154	636 J	***744***
SB-12	0-.5'	10/14/20	0.00125 J	0.000893 J	0.000761J	0.000518 J	0.00342 J	15.9 J	26.9 J	42.8 J	<15.3	42.8 J	161
SB-13	0-.5'	10/14/20	<0.000387	<0.000458	<0.000568	<0.000346	<0.000346	22.4 J	164	186.4 J	77.4	264 J	97.6
SB-14	0-.5'	10/14/20	<0.000389	<0.000460	<0.000570	<0.000348	<0.000348	27.8 J	22.0 J	49.8 J	<15.2	49.8 J	128
SB-15	0-.5'	10/14/20	<0.000390	<0.000462	<0.000573	<0.000349	<0.000349	27.8 J	329	356.8 J	119	476 J	17.6

Legend:
BOLD: Analytes exceeding NMAC standards
J: The target analyte was positively identified below the quantitation limit and above the detection limit.
'<' indicates the analyte was not detected at or above the Method Detection Limit (MDL)
mg/kg: Milligram per Kilogram
BTEX : Benzene, Toluene, Ethylbenzene, and Total Xylenes
NMAC : New Mexico Administration Code
TPH GRO: Total Petroleum Hydrocarbons Gasoline Range Organics
TPH ORO: Total Petroluem Hydrocarbons Oil Range Organics
TPH DRO: Total Petroleum Hydrocarbon Diesel Range Organics
" ' " : Indicates one foot
*Revised screening limit and restoration criteria within the first 4 feet below ground surface per Rule 19.15.29 effective August 14, 2018

Notes:
1. Chloride analyzed by United States Environmental Protection Agency Method 300
2. TPH analyzed by Method SW8015 Mod DRO/ORO
3. BTEX analyzed by USEPA Method 8021B
4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)

FIGURES





N

NOTES:
1. Datum: D_WGS_1984
2. Site Location: 32.868535, -103.305126

Chevron Environmental Management Company
LPU Central Battery
Lea County, New Mexico

SITE LOCATION MAP

ARCADIS

FIGURE
1

P:\...T:_ENV\Chevron\Cheveron_LPU\MXD\Figure 1_Site Location Map.mxd: 12/8/2020: 12:09:11 PM

LEGEND:

- Soil Sample Locations

NOTES:
1. Datum: GCS_WGS_1984
2. Site Location: 32.868535, -103.305126

N

0 25 50 100 Feet

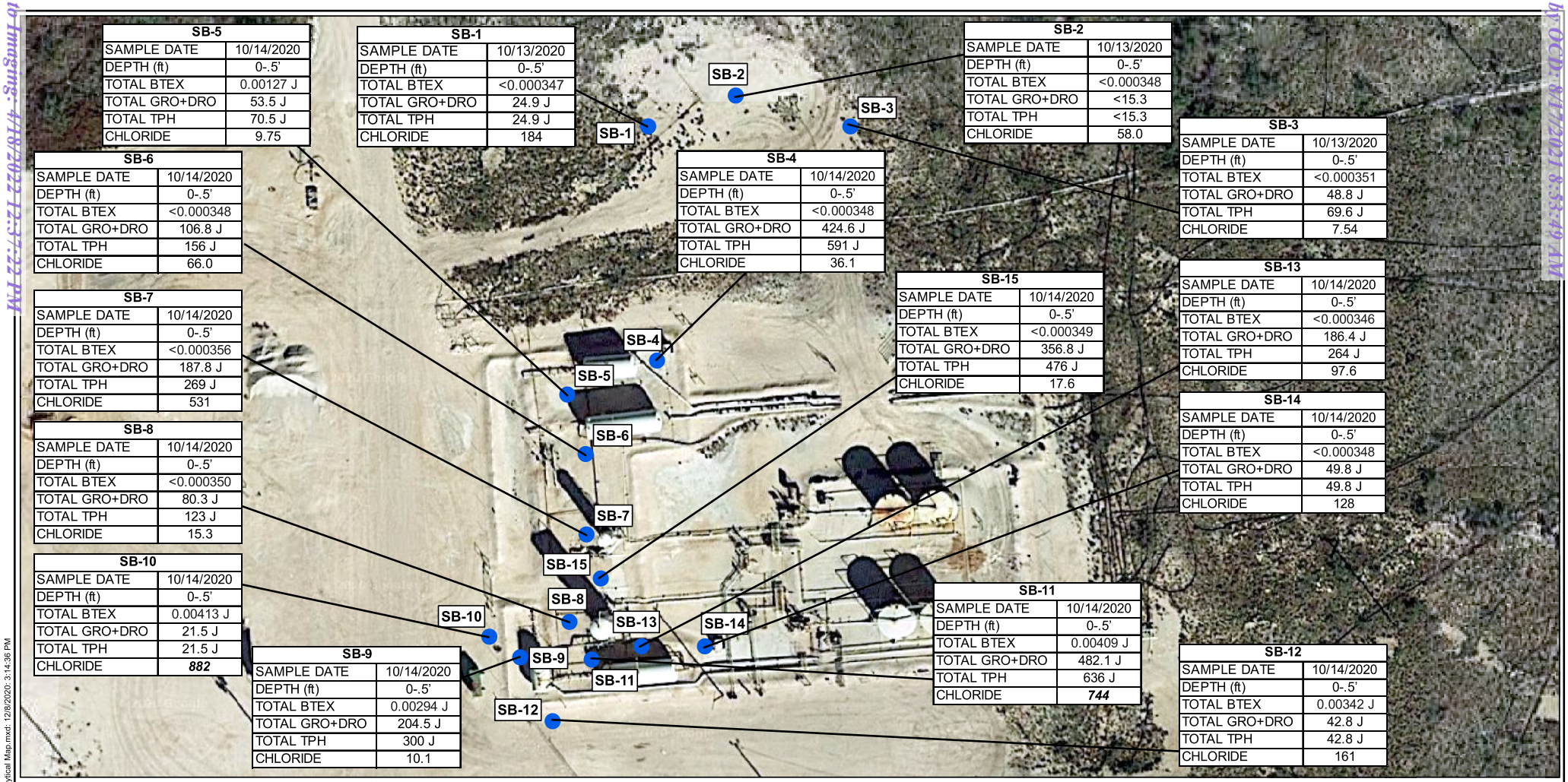
Chevron Environmental Management Company
LPU Central Battery
Lea County, New Mexico

SOIL SAMPLE LOCATIONS MAP

ARCADIS

FIGURE 2

Path: T:_ENV\Chevron\Cheveron_LPU\MXD\Figure 2_Soil Sample Locations.mxd: 12/8/2020: 1:44:10 PM



SB-5	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	0.00127 J
TOTAL GRO+DRO	53.5 J
TOTAL TPH	70.5 J
CHLORIDE	9.75

SB-1	
SAMPLE DATE	10/13/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000347
TOTAL GRO+DRO	24.9 J
TOTAL TPH	24.9 J
CHLORIDE	184

SB-2	
SAMPLE DATE	10/13/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000348
TOTAL GRO+DRO	<15.3
TOTAL TPH	<15.3
CHLORIDE	58.0

SB-3	
SAMPLE DATE	10/13/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000351
TOTAL GRO+DRO	48.8 J
TOTAL TPH	69.6 J
CHLORIDE	7.54

SB-6	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000348
TOTAL GRO+DRO	106.8 J
TOTAL TPH	156 J
CHLORIDE	66.0

SB-4	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000348
TOTAL GRO+DRO	424.6 J
TOTAL TPH	591 J
CHLORIDE	36.1

SB-15	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000349
TOTAL GRO+DRO	356.8 J
TOTAL TPH	476 J
CHLORIDE	17.6

SB-13	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000346
TOTAL GRO+DRO	186.4 J
TOTAL TPH	264 J
CHLORIDE	97.6

SB-7	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000356
TOTAL GRO+DRO	187.8 J
TOTAL TPH	269 J
CHLORIDE	531

SB-14	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000348
TOTAL GRO+DRO	49.8 J
TOTAL TPH	49.8 J
CHLORIDE	128

SB-8	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000350
TOTAL GRO+DRO	80.3 J
TOTAL TPH	123 J
CHLORIDE	15.3

SB-10	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	0.00413 J
TOTAL GRO+DRO	21.5 J
TOTAL TPH	21.5 J
CHLORIDE	***882***

SB-9	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	0.00294 J
TOTAL GRO+DRO	204.5 J
TOTAL TPH	300 J
CHLORIDE	10.1

SB-11	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	0.00409 J
TOTAL GRO+DRO	482.1 J
TOTAL TPH	636 J
CHLORIDE	***744***

SB-12	
SAMPLE DATE	10/14/2020
DEPTH (ft)	0-.5'
TOTAL BTEX	0.00342 J
TOTAL GRO+DRO	42.8 J
TOTAL TPH	42.8 J
CHLORIDE	161

LEGEND:

● Soil Sample Locations

NOTES:
1. Datum: GCS_WGS_1984
2. Site Location: 32.868535, -103.305126

Notes:
1. ***BOLD*** = *Analytes exceeding NMAC standards and restoration requirements for Chloride*
2. '<' Indicates the analyte was not detected at or above the Method Detection Limit (MDL).
3. J Indicates Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4. NMAC Indicates New Mexico Administration Code.
5. All values are in mg/kg (Milligram per Kilogram).
6. "' " Indicates one foot.
7. BTEX Indicates Benzene, Toluene, Ethylbenzene, and Total Xylenes.
8. TPH GRO Indicates Total Petroleum Hydrocarbons Gasoline Range Organics.
9. TPH MRO Indicates Total Petroluem Hydrocarbons Motor Oil Range Organics.
10. TPH DRO Indicates Total Petroleum Hydrocarbon Diesel Range Organics.
11. *Revised screening limit and restoration criteria within the first 4 feet below ground surface per Rule 19.15.29 effective August
12. Chloride analyzed by USEPA Method 300.0.
13. TPH analyzed by DRO/ORO Method SW8015.
14. BTEX analyzed by USEPA Method 8021B.
15. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2).

N

0 25 50 100 Feet

Chevron Environmental Management Company
LPU Central Battery
Lea County, New Mexico

SOIL ANALYTICAL RESULTS MAP

ARCADIS

FIGURE 3

APPENDIX A

Initial C-141 Form 1RP-2315 & 2563

District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

RECEIVED
OCT 01 2009
HOBBSOCD

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR X Initial Report Final Report

Name of Company Chevron USA	Contact Tejay Simpson
Address HCR 60 Box 423 Lovington, N.M. 88260	Telephone No. 505-396-4414 X 101
Facility Name LOVINGTON PADDOCK UNIT CENTRAL BATTERY	Facility Type PRODUCTION BATTERY

Surface Owner City of Lovington	Mineral Owner State of NM	Lease No. OGRID No. 241333

B-7485 B-7845

LOCATION OF RELEASE

NEARBY APU #48 30-025-03825-00-00

Unit Letter	Section	Township	Range	Feet from the	South Line	Feet from the	East Line	County
B	1	17	36					Lea

Latitude: 32 Degree 52' 8.13" N / Longitude: 103 Degree 18' 18.77" W

NATURE OF RELEASE

API #not assoc with a well

Type of Release Crude Oil	Volume of Release Oil 2.62 Barrels	Volume Recovered 1.43 Barrels
Source of Release FWKO High Pressure Release Vent Line	Date and Hour of Occurrence 09/24/2009 @ 17:00	Date and Hour of Discovery 09/24/2009 @ 17:00
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom? Geoffrey Leking	
By Whom?	Date and Hour 09/28/2009 @ 15:45	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

WATER @ 183'

Describe Cause of Problem and Remedial Action Taken *

At approximately 16:50 hours, CVX Field Specialist observed an abnormal declining tank level trend while checking the SCADA server prior to going home at the end of the day. Re went to the production battery to investigate. Upon arrival he found the FWKO was in high level and high pressure state and the emergency pressure relief valve was opening to protect the vessel from over pressure. Crude oil was being carried with gas to the pressure relief vent stack located on the north side of the battery. The field specialist to corrective action to eliminate the over pressure event and called for back-up assistance. It was discovered that the water dump valve had failed in the closed position resulting in the high level and high pressure event.

Describe Area Affected and Cleanup Action Taken

Caliche pad and adjacent pasture land. Portable Envirovac was used at time of release by contract personnel to recover all free standing fluid. Backhow will be dispatched to the area to recover contaminated soil for disposal at approved waste facility. Sampling will be conducted to determine extent of vertical penetration and scope of clean up proposal.

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: Tejay	OIL CONSERVATION DIVISION
Printed Name: Tejay Simpson	Approved by ~~District Supervisor~~: ENV. ENGINEER Geoffrey Leking
Title: Operations Supervisor	Approval Date: 10/02/09 Expiration Date: 12/02/09
E-mail Address tscq@chevron.com	Conditions of Approval: DELINEATE TO CLEAN + 1. SUBMIT FINAL C-141 BY 12/02/09. Attached ☐

IRP-09-11-2315

nAPP0927330122

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR X Initial Report Final Report

Name of Company Chevron USA	Contact Tejay Simpson
Address HCR 60 Box 423 Lovington, N.M. 88260	Telephone No. 505-396-4414 X 201
Facility Name LOVINGTON PADDOCK UNIT CENTRAL BATTERY	Facility Type PRODUCTION BATTERY

Surface Owner City of Lovington	Mineral Owner State of NM	Lease No. OGRID No. 241333 B-7845

LOCATION OF RELEASE

NEARBY WELL LPUC 048 API # 30.025.03825.00.00

Unit Letter	Section	Township	Range	Feet from the	South Line	Feet from the	East Line	County
B	1	17S	36E					Lea

Latitude: 32 Degree 52' 8.13" N / Longitude: 103 Degree 18' 18.77" W

NATURE OF RELEASE

API #not assoc with a well

Type of Release Crude Oil	Volume of Release Oil 36.77 Barrels	Volume Recovered 35.4 Barrels
Source of Release FWKO 2" threaded two piece ball valve on a dead leg gas line coming off of the top of the vessel.	Date and Hour of Occurrence 12/05/2009 @ 09:54	Date and Hour of Discovery 12/05/2009 @ 09:54
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mark Whitaker	
By Whom?	Date and Hour 12/05/2009 @ 11:36	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

WATER @ 80'

Describe Cause of Problem and Remedial Action Taken.*

At approximately 09:54, CVX Field Specialist Neil Abernathy observed an apparent gas leak on the south side of the LPU primary FWKO while driving back towards the central battery from the LPU Satellite No. 5. Upon arrival at the battery he observed oil starting to come out of what appeared to be a closed valve coming off of the top of the FWKO. The pressure on the system was checked to determine if the release was related to a high pressure event and the actuation of the PSV. Pressure was low. Field Specialist called for assistance. The Field Specialist opened the inlet valve to the secondary FWKO and then proceeded to the inlet header and switched the production out of the primary FWKO and into the secondary FWKO. The release of oil out of the FWKO began to subside (10:20). Notification to Operations Supervisor was made and emergency spill response was activated. The immediate cause of the event was a 2" two piece threaded ball valve that apparently froze and parted resulting in full open failure. Spill volume was measured and calculated at 36.77 barrels of oil with 36.47 barrels of oil being contained within the unlined dike. 0.40 barrel of oil splashed over the top of the dike and impacted the caliche roadway on the south side of the battery. 35.4 barrels of oil was recovered out of the dike and returned to the oil stock tank. The remaining 1.37 barrels of oil was recovered along with the contaminated soil that was impacted and disposed of in the CRI contaminated soil roll-off that is located at the battery. The failed valve and associated piping that resulted in a dead leg was eliminated and an isolation valve installed immediately adjacent to the top of the vessel. The vessel was returned to operation. Free standing fluid was recovered and returned to the stock tank within two hours of release. Contaminated soil cleanup was completed within five hours of release. Follow-up inspection of the facility and final pressure wash of vessel and piping will be completed prior to December 12th.

City of Lovington representative Kurt Porter was notified of the incident at 10:47 for initial notification and followed up at 13:09 with additional information.

fGRL0934355120

Describe Area Affected and Cleanup Action Taken.

Dirt and caliched diked area around the LPU FWKO. Minor impact on caliche roadway immediately adjacent to the FWKO on the south side of the location. Portable Envirovac was used at time of release by contract personnel to recover all free standing fluid. 35.4 barrels of the 36.77 barrel oil release was recovered and returned to the stock tank within two hours of the release. Backhoe was dispatched and assisted the gang in the cleanup of the contaminated soil. Contaminated soil was placed in the CRI contaminated soil roll off that is located at the battery. Final clean-up will be conducted and completed by December 12th.

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.

	OIL CONSERVATION DIVISION	
Signature: Tejay		
Printed Name: Tejay Simpson	Approved by ~~District Supervisor:~~ ENV ENGINEER. Geoffrey Leking	
Title: Operations Supervisor	Approval Date: 12/09/09	Expiration Date: 02/09/10
E-mail Address tscq@chevron.com	Conditions of Approval: DELINEATE TO CLEAN ft. SUBMIT FINAL C-141 BY 02/09/10	Attached ☐ IRP-09-12-2365
Date: 12/06/2009 Phone: 396-4414 X 201		

* Attach Additional Sheets If Necessary

APPENDIX B

Laboratory Report

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Analytical Report 675138

for

ARCADIS

Project Manager: Morgan Jordan

Chevron - LPU Central Battery Site

11.04.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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11.04.2020

Project Manager: **Morgan Jordan**
ARCADIS
1004 N. Big Spring St.
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **675138**
Chevron - LPU Central Battery Site
Project Address:

Morgan Jordan:

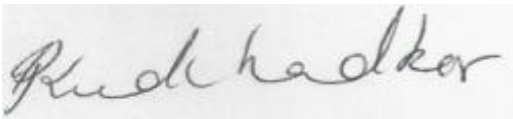
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 675138. All results being reported under this Report Number apply to the samples analyzed and properly identified 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 Eurofins Xenco, LLC. 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. 675138 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,



Sachin Kudchadkar
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1-0-.5-201013	S	10.13.2020 13:25		675138-001
SB-2-0-.5-201013	S	10.13.2020 13:31		675138-002
SB-3-0-.5-201013	S	10.13.2020 13:36		675138-003
SB-4-0-.5-201014	S	10.14.2020 08:52		675138-004
SB-5-0-.5-201014	S	10.14.2020 08:56		675138-005
SB-6-0-.5-201014	S	10.14.2020 09:02		675138-006
SB-7-0-.5-201014	S	10.14.2020 09:09		675138-007
SB-8-0-.5-201014	S	10.14.2020 09:20		675138-008
SB-9-0-.5-201014	S	10.14.2020 09:25		675138-009
SB-10-0-.5-201014	S	10.14.2020 09:37		675138-010
SB-11-0-.5-201014	S	10.14.2020 09:44		675138-011
SB-12-0-.5-201014	S	10.14.2020 09:53		675138-012
SB-13-0-.5-201014	S	10.14.2020 10:44		675138-013
SB-14-0-.5-201014	S	10.14.2020 10:49		675138-014
SB-15-0-.5-201014	S	10.14.2020 10:54		675138-015

CASE NARRATIVE

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Client Name: ARCADIS

Project Name: Chevron - LPU Central Battery Site

Project ID:
Work Order Number(s): *675138*

Report Date: *11.04.2020*
Date Received: *10.14.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3139952 Chloride by EPA 300

Lab Sample ID 675155-012 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 675138-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3139954 Chloride by EPA 300

Lab Sample ID 675266-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 675138-014, -015.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3139967 BTEX by EPA 8021B

Benzene, Ethylbenzene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 675138-002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012

Surrogate 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 675138-001 S.
Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 675138-001 S,675138-005.

Lab Sample ID 675138-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 675138-002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

CASE NARRATIVE

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Client Name: ARCADIS

Project Name: Chevron - LPU Central Battery Site

Project ID:
Work Order Number(s): *675138*

Report Date: *11.04.2020*
Date Received: *10.14.2020*

Batch: LBA-3139978 BTEX by EPA 8021B

Lab Sample ID 675138-013 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 675138-013, -014, -015.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-1-0-.5-201013** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-001 Date Collected: 10.13.2020 13:25

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: .86

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**184**	25.5	4.37	mg/kg	10.16.2020 17:02		5

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: .86

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**24.9**	50.4	15.1	mg/kg	10.19.2020 23:49	J	1
Diesel Range Organics (DRO)	C10C28DRO	<15.1	50.4	15.1	mg/kg	10.19.2020 23:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.1	50.4	15.1	mg/kg	10.19.2020 23:49	U	1
Total TPH	PHC635	**24.9**	50.4	15.1	mg/kg	10.19.2020 23:49	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-130	10.19.2020 23:49	
o-Terphenyl	84-15-1	88	%	70-130	10.19.2020 23:49	

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-1-0-.5-201013**
Lab Sample Id: 675138-001

Matrix: Soil
Date Collected: 10.13.2020 13:25

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: .86
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	10.19.2020 13:08	UXF	1
Toluene	108-88-3	<0.000460	0.00202	0.000460	mg/kg	10.19.2020 13:08	UX	1
Ethylbenzene	100-41-4	<0.000570	0.00202	0.000570	mg/kg	10.19.2020 13:08	UXF	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	10.19.2020 13:08	UX	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	10.19.2020 13:08	UX	1
Total Xylenes	1330-20-7	<0.000347	0.00202	0.000347	mg/kg	10.19.2020 13:08	U	1
Total BTEX		<0.000347	0.00202	0.000347	mg/kg	10.19.2020 13:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	10.19.2020 13:08	
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.19.2020 13:08	

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-2-0-.5-201013** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-002 Date Collected: 10.13.2020 13:31

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 1.85

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**58.0**	5.15	0.883	mg/kg	10.16.2020 17:09		1

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 1.85

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.3	50.9	15.3	mg/kg	10.20.2020 00:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.3	50.9	15.3	mg/kg	10.20.2020 00:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.3	50.9	15.3	mg/kg	10.20.2020 00:46	U	1
Total TPH	PHC635	<15.3	50.9	15.3	mg/kg	10.20.2020 00:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-130	10.20.2020 00:46	
o-Terphenyl	84-15-1	100	%	70-130	10.20.2020 00:46	

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-2-0-.5-201013**
Lab Sample Id: 675138-002

Matrix: Soil
Date Collected: 10.13.2020 13:31

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: 1.85
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000389	0.00202	0.000389	mg/kg	10.17.2020 10:43	U	1
Toluene	108-88-3	<0.000461	0.00202	0.000461	mg/kg	10.17.2020 10:43	U	1
Ethylbenzene	100-41-4	<0.000571	0.00202	0.000571	mg/kg	10.17.2020 10:43	U	1
m,p-Xylenes	179601-23-1	<0.00103	0.00404	0.00103	mg/kg	10.17.2020 10:43	U	1
o-Xylene	95-47-6	<0.000348	0.00202	0.000348	mg/kg	10.17.2020 10:43	U	1
Total Xylenes	1330-20-7	<0.000348	0.00202	0.000348	mg/kg	10.17.2020 10:43	U	1
Total BTEX		<0.000348	0.00202	0.000348	mg/kg	10.17.2020 10:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	10.17.2020 10:43	
4-Bromofluorobenzene	460-00-4	89	%	70-130	10.17.2020 10:43	

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-3-0-.5-201013** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-003 Date Collected: 10.13.2020 13:36

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 2.22

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.54**	5.17	0.887	mg/kg	10.16.2020 17:15		1

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 2.22

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**22.2**	51.1	15.3	mg/kg	10.20.2020 01:04	J	1
Diesel Range Organics (DRO)	C10C28DRO	**26.6**	51.1	15.3	mg/kg	10.20.2020 01:04	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**20.8**	51.1	15.3	mg/kg	10.20.2020 01:04	J	1
Total TPH	PHC635	**69.6**	51.1	15.3	mg/kg	10.20.2020 01:04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	10.20.2020 01:04	
o-Terphenyl	84-15-1	97	%	70-130	10.20.2020 01:04	

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-3-0-.5-201013**
Lab Sample Id: 675138-003

Matrix: Soil
Date Collected: 10.13.2020 13:36

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: 2.22
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000393	0.00204	0.000393	mg/kg	10.17.2020 11:04	U	1
Toluene	108-88-3	<0.000465	0.00204	0.000465	mg/kg	10.17.2020 11:04	U	1
Ethylbenzene	100-41-4	<0.000576	0.00204	0.000576	mg/kg	10.17.2020 11:04	U	1
m,p-Xylenes	179601-23-1	<0.00104	0.00408	0.00104	mg/kg	10.17.2020 11:04	U	1
o-Xylene	95-47-6	<0.000351	0.00204	0.000351	mg/kg	10.17.2020 11:04	U	1
Total Xylenes	1330-20-7	<0.000351	0.00204	0.000351	mg/kg	10.17.2020 11:04	U	1
Total BTEX		<0.000351	0.00204	0.000351	mg/kg	10.17.2020 11:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	10.17.2020 11:04	
4-Bromofluorobenzene	460-00-4	72	%	70-130	10.17.2020 11:04	

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-4-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-004 Date Collected: 10.14.2020 08:52

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 1.02

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.1**	5.01	0.860	mg/kg	10.16.2020 17:21	X	1

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 1.02

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**21.6**	50.4	15.1	mg/kg	10.20.2020 01:23	J	1
Diesel Range Organics (DRO)	C10C28DRO	**403**	50.4	15.1	mg/kg	10.20.2020 01:23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**166**	50.4	15.1	mg/kg	10.20.2020 01:23		1
Total TPH	PHC635	**591**	50.4	15.1	mg/kg	10.20.2020 01:23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-130	10.20.2020 01:23	
o-Terphenyl	84-15-1	92	%	70-130	10.20.2020 01:23	

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-4-0-.5-201014**
Lab Sample Id: 675138-004

Matrix: Soil
Date Collected: 10.14.2020 08:52

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: 1.02
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000389	0.00202	0.000389	mg/kg	10.17.2020 11:25	U	1
Toluene	108-88-3	<0.000460	0.00202	0.000460	mg/kg	10.17.2020 11:25	U	1
Ethylbenzene	100-41-4	<0.000571	0.00202	0.000571	mg/kg	10.17.2020 11:25	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00404	0.00102	mg/kg	10.17.2020 11:25	U	1
o-Xylene	95-47-6	<0.000348	0.00202	0.000348	mg/kg	10.17.2020 11:25	U	1
Total Xylenes	1330-20-7	<0.000348	0.00202	0.000348	mg/kg	10.17.2020 11:25	U	1
Total BTEX		<0.000348	0.00202	0.000348	mg/kg	10.17.2020 11:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	10.17.2020 11:25	
4-Bromofluorobenzene	460-00-4	97	%	70-130	10.17.2020 11:25	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-5-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-005 Date Collected: 10.14.2020 08:56

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 1.03

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.75**	5.09	0.874	mg/kg	10.16.2020 17:40		1

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 1.03

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**22.7**	50.4	15.1	mg/kg	10.20.2020 01:42	J	1
Diesel Range Organics (DRO)	C10C28DRO	**30.8**	50.4	15.1	mg/kg	10.20.2020 01:42	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**17.0**	50.4	15.1	mg/kg	10.20.2020 01:42	J	1
Total TPH	PHC635	**70.5**	50.4	15.1	mg/kg	10.20.2020 01:42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	10.20.2020 01:42	
o-Terphenyl	84-15-1	101	%	70-130	10.20.2020 01:42	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-5-0-.5-201014**
Lab Sample Id: 675138-005

Matrix: Soil
Date Collected: 10.14.2020 08:56

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: 1.03
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	10.17.2020 11:45	U	1
Toluene	108-88-3	<0.000458	0.00201	0.000458	mg/kg	10.17.2020 11:45	U	1
Ethylbenzene	100-41-4	**0.00127**	0.00201	0.000567	mg/kg	10.17.2020 11:45	J	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	10.17.2020 11:45	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	10.17.2020 11:45	U	1
Total Xylenes	1330-20-7	<0.000346	0.00201	0.000346	mg/kg	10.17.2020 11:45	U	1
Total BTEX		**0.00127**	0.00201	0.000346	mg/kg	10.17.2020 11:45	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	66	%	70-130	10.17.2020 11:45	**
1,4-Difluorobenzene	540-36-3	83	%	70-130	10.17.2020 11:45	

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Chevron - LPU Central Battery Site

Sample Id: **SB-6-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-006 Date Collected: 10.14.2020 09:02

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 1.19

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.0**	5.04	0.865	mg/kg	10.16.2020 17:47		1

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 1.19

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**18.9**	50.4	15.1	mg/kg	10.20.2020 02:01	J	1
Diesel Range Organics (DRO)	C10C28DRO	**87.9**	50.4	15.1	mg/kg	10.20.2020 02:01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**49.3**	50.4	15.1	mg/kg	10.20.2020 02:01	J	1
Total TPH	PHC635	**156**	50.4	15.1	mg/kg	10.20.2020 02:01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	10.20.2020 02:01	
o-Terphenyl	84-15-1	89	%	70-130	10.20.2020 02:01	

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Chevron - LPU Central Battery Site

Sample Id: **SB-6-0-.5-201014**
Lab Sample Id: 675138-006

Matrix: Soil
Date Collected: 10.14.2020 09:02

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: 1.19
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000389	0.00202	0.000389	mg/kg	10.17.2020 12:06	U	1
Toluene	108-88-3	<0.000460	0.00202	0.000460	mg/kg	10.17.2020 12:06	U	1
Ethylbenzene	100-41-4	<0.000570	0.00202	0.000570	mg/kg	10.17.2020 12:06	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00404	0.00102	mg/kg	10.17.2020 12:06	U	1
o-Xylene	95-47-6	<0.000348	0.00202	0.000348	mg/kg	10.17.2020 12:06	U	1
Total Xylenes	1330-20-7	<0.000348	0.00202	0.000348	mg/kg	10.17.2020 12:06	U	1
Total BTEX		<0.000348	0.00202	0.000348	mg/kg	10.17.2020 12:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	80	%	70-130	10.17.2020 12:06	
1,4-Difluorobenzene	540-36-3	106	%	70-130	10.17.2020 12:06	

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Chevron - LPU Central Battery Site

Sample Id: **SB-7-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-007 Date Collected: 10.14.2020 09:09

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 4.1

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**531**	52.1	8.95	mg/kg	10.16.2020 18:06		10

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 4.1

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**24.8**	52.1	15.6	mg/kg	10.20.2020 02:20	J	1
Diesel Range Organics (DRO)	C10C28DRO	**163**	52.1	15.6	mg/kg	10.20.2020 02:20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**81.2**	52.1	15.6	mg/kg	10.20.2020 02:20		1
Total TPH	PHC635	**269**	52.1	15.6	mg/kg	10.20.2020 02:20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	10.20.2020 02:20	
o-Terphenyl	84-15-1	96	%	70-130	10.20.2020 02:20	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-7-0-.5-201014**
Lab Sample Id: 675138-007

Matrix: Soil
Date Collected: 10.14.2020 09:09

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: 4.1
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000397	0.00206	0.000397	mg/kg	10.17.2020 12:27	U	1
Toluene	108-88-3	<0.000470	0.00206	0.000470	mg/kg	10.17.2020 12:27	U	1
Ethylbenzene	100-41-4	<0.000583	0.00206	0.000583	mg/kg	10.17.2020 12:27	U	1
m,p-Xylenes	179601-23-1	<0.00105	0.00413	0.00105	mg/kg	10.17.2020 12:27	U	1
o-Xylene	95-47-6	<0.000356	0.00206	0.000356	mg/kg	10.17.2020 12:27	U	1
Total Xylenes	1330-20-7	<0.000356	0.00206	0.000356	mg/kg	10.17.2020 12:27	U	1
Total BTEX		<0.000356	0.00206	0.000356	mg/kg	10.17.2020 12:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	10.17.2020 12:27	
4-Bromofluorobenzene	460-00-4	84	%	70-130	10.17.2020 12:27	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-8-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-008 Date Collected: 10.14.2020 09:20

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 1.96

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.3**	5.13	0.881	mg/kg	10.16.2020 18:12		1

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 1.96

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**20.0**	51.0	15.3	mg/kg	10.20.2020 02:39	J	1
Diesel Range Organics (DRO)	C10C28DRO	**60.3**	51.0	15.3	mg/kg	10.20.2020 02:39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**42.2**	51.0	15.3	mg/kg	10.20.2020 02:39	J	1
Total TPH	PHC635	**123**	51.0	15.3	mg/kg	10.20.2020 02:39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	10.20.2020 02:39	
o-Terphenyl	84-15-1	107	%	70-130	10.20.2020 02:39	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-8-0-.5-201014**
Lab Sample Id: 675138-008

Matrix: Soil
Date Collected: 10.14.2020 09:20

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: 1.96
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000391	0.00203	0.000391	mg/kg	10.17.2020 12:48	U	1
Toluene	108-88-3	<0.000463	0.00203	0.000463	mg/kg	10.17.2020 12:48	U	1
Ethylbenzene	100-41-4	<0.000574	0.00203	0.000574	mg/kg	10.17.2020 12:48	U	1
m,p-Xylenes	179601-23-1	<0.00103	0.00406	0.00103	mg/kg	10.17.2020 12:48	U	1
o-Xylene	95-47-6	<0.000350	0.00203	0.000350	mg/kg	10.17.2020 12:48	U	1
Total Xylenes	1330-20-7	<0.000350	0.00203	0.000350	mg/kg	10.17.2020 12:48	U	1
Total BTEX		<0.000350	0.00203	0.000350	mg/kg	10.17.2020 12:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	10.17.2020 12:48	
1,4-Difluorobenzene	540-36-3	95	%	70-130	10.17.2020 12:48	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-9-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-009 Date Collected: 10.14.2020 09:25

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 1.13

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.1**	5.05	0.866	mg/kg	10.16.2020 18:18		1

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 1.13

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**25.5**	50.4	15.1	mg/kg	10.20.2020 02:58	J	1
Diesel Range Organics (DRO)	C10C28DRO	**179**	50.4	15.1	mg/kg	10.20.2020 02:58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**95.0**	50.4	15.1	mg/kg	10.20.2020 02:58		1
Total TPH	PHC635	**300**	50.4	15.1	mg/kg	10.20.2020 02:58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	10.20.2020 02:58	
o-Terphenyl	84-15-1	94	%	70-130	10.20.2020 02:58	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-9-0-.5-201014**
Lab Sample Id: 675138-009

Matrix: Soil
Date Collected: 10.14.2020 09:25

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: 1.13
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.000766**	0.00201	0.000388	mg/kg	10.17.2020 13:08	J	1
Toluene	108-88-3	**0.00119**	0.00201	0.000459	mg/kg	10.17.2020 13:08	J	1
Ethylbenzene	100-41-4	**0.000987**	0.00201	0.000569	mg/kg	10.17.2020 13:08	J	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	10.17.2020 13:08	U	1
o-Xylene	95-47-6	<0.000347	0.00201	0.000347	mg/kg	10.17.2020 13:08	U	1
Total Xylenes	1330-20-7	<0.000347	0.00201	0.000347	mg/kg	10.17.2020 13:08	U	1
Total BTEX		**0.00294**	0.00201	0.000347	mg/kg	10.17.2020 13:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	10.17.2020 13:08	
4-Bromofluorobenzene	460-00-4	128	%	70-130	10.17.2020 13:08	

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Chevron - LPU Central Battery Site

Sample Id: **SB-10-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-010 Date Collected: 10.14.2020 09:37

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 2.23

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**882**	25.3	4.35	mg/kg	10.16.2020 18:25		5

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 2.23

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.3	50.9	15.3	mg/kg	10.20.2020 03:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	**21.5**	50.9	15.3	mg/kg	10.20.2020 03:17	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.3	50.9	15.3	mg/kg	10.20.2020 03:17	U	1
Total TPH	PHC635	**21.5**	50.9	15.3	mg/kg	10.20.2020 03:17	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-130	10.20.2020 03:17	
o-Terphenyl	84-15-1	101	%	70-130	10.20.2020 03:17	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-10-0-.5-201014**
Lab Sample Id: 675138-010

Matrix: Soil
Date Collected: 10.14.2020 09:37

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: 2.23
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.000903**	0.00203	0.000391	mg/kg	10.17.2020 13:29	J	1
Toluene	108-88-3	**0.000954**	0.00203	0.000462	mg/kg	10.17.2020 13:29	J	1
Ethylbenzene	100-41-4	**0.00115**	0.00203	0.000573	mg/kg	10.17.2020 13:29	J	1
m,p-Xylenes	179601-23-1	<0.00103	0.00406	0.00103	mg/kg	10.17.2020 13:29	U	1
o-Xylene	95-47-6	**0.00112**	0.00203	0.000349	mg/kg	10.17.2020 13:29	J	1
Total Xylenes	1330-20-7	**0.00112**	0.00203	0.000349	mg/kg	10.17.2020 13:29	J	1
Total BTEX		**0.00413**	0.00203	0.000349	mg/kg	10.17.2020 13:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	10.17.2020 13:29	
4-Bromofluorobenzene	460-00-4	124	%	70-130	10.17.2020 13:29	

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Chevron - LPU Central Battery Site

Sample Id: **SB-11-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-011 Date Collected: 10.14.2020 09:44

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 1.34

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**744**	25.1	4.31	mg/kg	10.16.2020 18:31		5

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 1.34

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**20.1**	50.5	15.2	mg/kg	10.20.2020 03:54	J	1
Diesel Range Organics (DRO)	C10C28DRO	**462**	50.5	15.2	mg/kg	10.20.2020 03:54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**154**	50.5	15.2	mg/kg	10.20.2020 03:54		1
Total TPH	PHC635	**636**	50.5	15.2	mg/kg	10.20.2020 03:54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-130	10.20.2020 03:54	
o-Terphenyl	84-15-1	93	%	70-130	10.20.2020 03:54	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-11-0-.5-201014**
Lab Sample Id: 675138-011

Matrix: Soil
Date Collected: 10.14.2020 09:44

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: 1.34
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00134**	0.00202	0.000388	mg/kg	10.17.2020 15:10	J	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	10.17.2020 15:10	U	1
Ethylbenzene	100-41-4	**0.00193**	0.00202	0.000569	mg/kg	10.17.2020 15:10	J	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	10.17.2020 15:10	U	1
o-Xylene	95-47-6	**0.000816**	0.00202	0.000347	mg/kg	10.17.2020 15:10	J	1
Total Xylenes	1330-20-7	**0.000816**	0.00202	0.000347	mg/kg	10.17.2020 15:10	J	1
Total BTEX		**0.00409**	0.00202	0.000347	mg/kg	10.17.2020 15:10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	10.17.2020 15:10	
1,4-Difluorobenzene	540-36-3	89	%	70-130	10.17.2020 15:10	

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-12-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-012 Date Collected: 10.14.2020 09:53

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 2.28

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**161**	5.07	0.870	mg/kg	10.16.2020 18:38		1

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 2.28

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.9**	51.1	15.3	mg/kg	10.20.2020 04:13	J	1
Diesel Range Organics (DRO)	C10C28DRO	**26.9**	51.1	15.3	mg/kg	10.20.2020 04:13	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.3	51.1	15.3	mg/kg	10.20.2020 04:13	U	1
Total TPH	PHC635	**42.8**	51.1	15.3	mg/kg	10.20.2020 04:13	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	10.20.2020 04:13	
o-Terphenyl	84-15-1	97	%	70-130	10.20.2020 04:13	

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-12-0-.5-201014**
Lab Sample Id: 675138-012

Matrix: Soil
Date Collected: 10.14.2020 09:53

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139967

Date Prep: 10.17.2020 08:00

Prep Method: SW5035A
% Moisture: 2.28
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00125**	0.00203	0.000391	mg/kg	10.17.2020 15:31	J	1
Toluene	108-88-3	**0.000893**	0.00203	0.000463	mg/kg	10.17.2020 15:31	J	1
Ethylbenzene	100-41-4	**0.000761**	0.00203	0.000573	mg/kg	10.17.2020 15:31	J	1
m,p-Xylenes	179601-23-1	<0.00103	0.00406	0.00103	mg/kg	10.17.2020 15:31	U	1
o-Xylene	95-47-6	**0.000518**	0.00203	0.000350	mg/kg	10.17.2020 15:31	J	1
Total Xylenes	1330-20-7	**0.000518**	0.00203	0.000350	mg/kg	10.17.2020 15:31	J	1
Total BTEX		**0.00342**	0.00203	0.000350	mg/kg	10.17.2020 15:31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	10.17.2020 15:31	
1,4-Difluorobenzene	540-36-3	89	%	70-130	10.17.2020 15:31	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-13-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-013 Date Collected: 10.14.2020 10:44

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45 % Moisture: 1.18

Seq Number: 3139952 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**97.6**	5.08	0.872	mg/kg	10.16.2020 18:44		1

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 1.18

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**22.4**	50.6	15.2	mg/kg	10.20.2020 04:32	J	1
Diesel Range Organics (DRO)	C10C28DRO	**164**	50.6	15.2	mg/kg	10.20.2020 04:32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**77.4**	50.6	15.2	mg/kg	10.20.2020 04:32		1
Total TPH	PHC635	**264**	50.6	15.2	mg/kg	10.20.2020 04:32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-130	10.20.2020 04:32	
o-Terphenyl	84-15-1	98	%	70-130	10.20.2020 04:32	

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-13-0-.5-201014**
Lab Sample Id: 675138-013

Matrix: Soil
Date Collected: 10.14.2020 10:44

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139978

Date Prep: 10.17.2020 12:15

Prep Method: SW5035A
% Moisture: 1.18
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	10.18.2020 10:36	U	1
Toluene	108-88-3	<0.000458	0.00201	0.000458	mg/kg	10.18.2020 10:36	UX	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	10.18.2020 10:36	UX	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	10.18.2020 10:36	UX	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	10.18.2020 10:36	UX	1
Total Xylenes	1330-20-7	<0.000346	0.00201	0.000346	mg/kg	10.18.2020 10:36	U	1
Total BTEX		<0.000346	0.00201	0.000346	mg/kg	10.18.2020 10:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	10.18.2020 10:36	
4-Bromofluorobenzene	460-00-4	111	%	70-130	10.18.2020 10:36	

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Certificate of Analytical Results 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-14-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-014 Date Collected: 10.14.2020 10:49

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 16:50 % Moisture: 1.34

Seq Number: 3139954 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**128**	5.11	0.877	mg/kg	10.16.2020 19:22	X	1

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 1.34

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**27.8**	50.6	15.2	mg/kg	10.20.2020 04:51	J	1
Diesel Range Organics (DRO)	C10C28DRO	**22.0**	50.6	15.2	mg/kg	10.20.2020 04:51	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.2	50.6	15.2	mg/kg	10.20.2020 04:51	U	1
Total TPH	PHC635	**49.8**	50.6	15.2	mg/kg	10.20.2020 04:51	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-130	10.20.2020 04:51	
o-Terphenyl	84-15-1	89	%	70-130	10.20.2020 04:51	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-14-0-.5-201014**
Lab Sample Id: 675138-014

Matrix: Soil
Date Collected: 10.14.2020 10:49

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139978

Date Prep: 10.17.2020 12:15

Prep Method: SW5035A
% Moisture: 1.34
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000389	0.00202	0.000389	mg/kg	10.18.2020 10:57	U	1
Toluene	108-88-3	<0.000460	0.00202	0.000460	mg/kg	10.18.2020 10:57	U	1
Ethylbenzene	100-41-4	<0.000570	0.00202	0.000570	mg/kg	10.18.2020 10:57	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00404	0.00102	mg/kg	10.18.2020 10:57	U	1
o-Xylene	95-47-6	<0.000348	0.00202	0.000348	mg/kg	10.18.2020 10:57	U	1
Total Xylenes	1330-20-7	<0.000348	0.00202	0.000348	mg/kg	10.18.2020 10:57	U	1
Total BTEX		<0.000348	0.00202	0.000348	mg/kg	10.18.2020 10:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	10.18.2020 10:57	
4-Bromofluorobenzene	460-00-4	108	%	70-130	10.18.2020 10:57	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-15-0-.5-201014** Matrix: Soil Date Received:10.14.2020 15:00

Lab Sample Id: 675138-015 Date Collected: 10.14.2020 10:54

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 16:50 % Moisture: 1.57

Seq Number: 3139954 Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.6**	5.04	0.865	mg/kg	10.16.2020 19:41		1

Analytical Method: TPH By SW8015 Mod DRO/ORO Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00 % Moisture: 1.57

Seq Number: 3140135 Basis: Dry Weight

SUB: T104704215-20-38

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**27.8**	50.7	15.2	mg/kg	10.20.2020 05:09	J	1
Diesel Range Organics (DRO)	C10C28DRO	**329**	50.7	15.2	mg/kg	10.20.2020 05:09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**119**	50.7	15.2	mg/kg	10.20.2020 05:09		1
Total TPH	PHC635	**476**	50.7	15.2	mg/kg	10.20.2020 05:09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	10.20.2020 05:09	
o-Terphenyl	84-15-1	93	%	70-130	10.20.2020 05:09	

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ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **SB-15-0-.5-201014**
Lab Sample Id: 675138-015

Matrix: Soil
Date Collected: 10.14.2020 10:54

Date Received: 10.14.2020 15:00

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3139978

Date Prep: 10.17.2020 12:15

Prep Method: SW5035A
% Moisture: 1.57
Basis: Dry Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000390	0.00203	0.000390	mg/kg	10.18.2020 11:17	U	1
Toluene	108-88-3	<0.000462	0.00203	0.000462	mg/kg	10.18.2020 11:17	U	1
Ethylbenzene	100-41-4	<0.000573	0.00203	0.000573	mg/kg	10.18.2020 11:17	U	1
m,p-Xylenes	179601-23-1	<0.00103	0.00406	0.00103	mg/kg	10.18.2020 11:17	U	1
o-Xylene	95-47-6	<0.000349	0.00203	0.000349	mg/kg	10.18.2020 11:17	U	1
Total Xylenes	1330-20-7	<0.000349	0.00203	0.000349	mg/kg	10.18.2020 11:17	U	1
Total BTEX		<0.000349	0.00203	0.000349	mg/kg	10.18.2020 11:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	10.18.2020 11:17	
4-Bromofluorobenzene	460-00-4	116	%	70-130	10.18.2020 11:17	

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Blank Summary 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **3139806-1-BLK** Matrix: SOLID

Lab Sample Id: **3139806-1-BLK**

Analytical Method: **Percent Moisture** Prep Method:

Tech: CHE

Analyst: CHE Date Prep:

Seq Number: 3139806

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Percent Moisture	MOIST	< MDL			%	10.15.2020 17:00	U	1

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Blank Summary 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **3139809-1-BLK** Matrix: SOLID

Lab Sample Id: **3139809-1-BLK**

Analytical Method: **Percent Moisture** Prep Method:

Tech: CHE

Analyst: CHE Date Prep:

Seq Number: 3139809

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Percent Moisture	MOIST	< MDL			%	10.15.2020 17:00	U	1

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Blank Summary 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **7713444-1-BLK** Matrix: SOLID

Lab Sample Id: **7713444-1-BLK**

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 15:45

Seq Number: 3139952

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00		mg/kg	10.16.2020 15:33	U	1

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Blank Summary 675138

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Chevron - LPU Central Battery Site

Sample Id: **7713445-1-BLK** Matrix: SOLID

Lab Sample Id: **7713445-1-BLK**

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.16.2020 16:50

Seq Number: 3139954

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00		mg/kg	10.16.2020 19:03	U	1

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Blank Summary 675138

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Chevron - LPU Central Battery Site

Sample Id: **7713470-1-BLK** Matrix: SOLID

Lab Sample Id: **7713470-1-BLK**

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 10.17.2020 08:00

Seq Number: 3139967

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200		mg/kg	10.17.2020 09:58	U	1
Toluene	108-88-3	<0.000456	0.00200		mg/kg	10.17.2020 09:58	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200		mg/kg	10.17.2020 09:58	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400		mg/kg	10.17.2020 09:58	U	1
o-Xylene	95-47-6	<0.000344	0.00200		mg/kg	10.17.2020 09:58	U	1

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Blank Summary 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **7713477-1-BLK** Matrix: SOLID

Lab Sample Id: **7713477-1-BLK**

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 10.17.2020 12:15

Seq Number: 3139978

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200		mg/kg	10.18.2020 10:15	U	1
Toluene	108-88-3	<0.000456	0.00200		mg/kg	10.18.2020 10:15	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200		mg/kg	10.18.2020 10:15	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400		mg/kg	10.18.2020 10:15	U	1
o-Xylene	95-47-6	<0.000344	0.00200		mg/kg	10.18.2020 10:15	U	1

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Blank Summary 675138

ARCADIS, Midland, TX

Chevron - LPU Central Battery Site

Sample Id: **7713546-1-BLK** Matrix: SOLID

Lab Sample Id: **7713546-1-BLK**

Analytical Method: **TPH By SW8015 Mod DRO/ORO** Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.19.2020 17:00

Seq Number: 3140135 **SUB: T104704215-20-38**

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0		mg/kg	10.19.2020 22:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0		mg/kg	10.19.2020 22:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0		mg/kg	10.19.2020 22:52	U	1

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Form 2 - Surrogate Recoveries

Project Name: Chevron - LPU Central Battery Site

Report Date: 11042020

Work Orders : 675138 **Project ID:**

Lab Batch #: 3139967 **Sample:** 7713470-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.17.2020 07:28 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	70-130	
4-Bromofluorobenzene	0.0354	0.0300	118	70-130	

Lab Batch #: 3139967 **Sample:** 7713470-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.17.2020 07:49 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	70-130	
4-Bromofluorobenzene	0.0344	0.0300	115	70-130	

Lab Batch #: 3139967 **Sample:** 675138-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.17.2020 08:10 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0102	0.0300	34	70-130	**
4-Bromofluorobenzene	0.00673	0.0300	22	70-130	**

Lab Batch #: 3139967 **Sample:** 675138-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.17.2020 08:31 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	70-130	
4-Bromofluorobenzene	0.0346	0.0300	115	70-130	

Lab Batch #: 3139967 **Sample:** 7713470-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.17.2020 09:58 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0254	0.0300	85	70-130	
4-Bromofluorobenzene	0.0278	0.0300	93	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

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Form 2 - Surrogate Recoveries

Project Name: Chevron - LPU Central Battery Site

Report Date: 11042020

Work Orders : 675138 **Project ID:**

Lab Batch #: 3139978 **Sample:** 7713477-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.18.2020 08:15 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	70-130	
4-Bromofluorobenzene	0.0298	0.0300	99	70-130	

Lab Batch #: 3139978 **Sample:** 7713477-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.18.2020 08:35 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0298	0.0300	99	70-130	

Lab Batch #: 3139978 **Sample:** 675138-013 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.18.2020 08:56 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0312	0.0300	104	70-130	

Lab Batch #: 3139978 **Sample:** 675138-013 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.18.2020 09:16 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	70-130	
4-Bromofluorobenzene	0.0305	0.0300	102	70-130	

Lab Batch #: 3139978 **Sample:** 7713477-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.18.2020 10:15 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0304	0.0300	101	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

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Form 2 - Surrogate Recoveries

Project Name: Chevron - LPU Central Battery Site

Report Date: 11042020

Work Orders : 675138 **Project ID:**

Lab Batch #: 3140135 **Sample:** 7713546-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.19.2020 22:52 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod DRO/ORO Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	100	93	70-130	
o-Terphenyl	55.8	50.0	112	70-130	

Lab Batch #: 3140135 **Sample:** 7713546-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.19.2020 23:11 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod DRO/ORO Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-130	
o-Terphenyl	59.2	50.0	118	70-130	

Lab Batch #: 3140135 **Sample:** 7713546-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10.19.2020 23:30 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod DRO/ORO Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-130	
o-Terphenyl	64.1	50.0	128	70-130	

Lab Batch #: 3140135 **Sample:** 675138-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.20.2020 00:08 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod DRO/ORO Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.5	99.7	96	70-130	
o-Terphenyl	46.7	49.9	94	70-130	

Lab Batch #: 3140135 **Sample:** 675138-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10.20.2020 00:27 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod DRO/ORO Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.8	99.6	99	70-130	
o-Terphenyl	53.0	49.8	106	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

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QC Summary 675138

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Chevron - LPU Central Battery Site

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3139952 — Matrix: Solid — Date Prep: 10.16.2020
MB Sample Id: 7713444-1-BLK — LCS Sample Id: 7713444-1-BKS — LCSD Sample Id: 7713444-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	249	100	250	100	90-110	0	20	mg/kg	10.16.2020 15:40	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3139954 — Matrix: Solid — Date Prep: 10.16.2020
MB Sample Id: 7713445-1-BLK — LCS Sample Id: 7713445-1-BKS — LCSD Sample Id: 7713445-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	251	100	251	100	90-110	0	20	mg/kg	10.16.2020 19:09	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3139952 — Matrix: Soil — Date Prep: 10.16.2020
Parent Sample Id: 675138-004 — MS Sample Id: 675138-004 S — MSD Sample Id: 675138-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	36.1	251	314	111	314	111	90-110	0	20	mg/kg	10.16.2020 17:28	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3139952 — Matrix: Soil — Date Prep: 10.16.2020
Parent Sample Id: 675155-012 — MS Sample Id: 675155-012 S — MSD Sample Id: 675155-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	36.6	252	299	104	298	104	90-110	0	20	mg/kg	10.16.2020 15:59	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3139954 — Matrix: Soil — Date Prep: 10.16.2020
Parent Sample Id: 675138-014 — MS Sample Id: 675138-014 S — MSD Sample Id: 675138-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	128	255	424	116	410	111	90-110	3	20	mg/kg	10.16.2020 19:28	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3139954 — Matrix: Soil — Date Prep: 10.16.2020
Parent Sample Id: 675266-003 — MS Sample Id: 675266-003 S — MSD Sample Id: 675266-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1170	2500	4030	114	3940	111	90-110	2	20	mg/kg	10.16.2020 20:57	X

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

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QC Summary 675138

ARCADIS

Chevron - LPU Central Battery Site

Analytical Method: **Percent Moisture**
Seq Number: 3139806 Matrix: Solid
MB Sample Id: 3139806-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Percent Moisture	< MDL	%	10.15.2020 17:00	

Analytical Method: **Percent Moisture**
Seq Number: 3139809 Matrix: Solid
MB Sample Id: 3139809-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Percent Moisture	< MDL	%	10.15.2020 17:00	

Analytical Method: **Percent Moisture**
Seq Number: 3139806 Matrix: Soil
Parent Sample Id: 675036-001 MD Sample Id: 675036-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	32.2	31.6	2	20	%	10.15.2020 17:00	

Analytical Method: **Percent Moisture**
Seq Number: 3139806 Matrix: Soil
Parent Sample Id: 675138-002 MD Sample Id: 675138-002 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	1.85	1.78	4	20	%	10.15.2020 17:00	

Analytical Method: **Percent Moisture**
Seq Number: 3139809 Matrix: Soil
Parent Sample Id: 675138-012 MD Sample Id: 675138-012 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	2.28	2.66	15	20	%	10.15.2020 17:00	

Analytical Method: **Percent Moisture**
Seq Number: 3139809 Matrix: Soil
Parent Sample Id: 675155-007 MD Sample Id: 675155-007 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	3.61	3.65	1	20	%	10.15.2020 17:00	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

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QC Summary 675138

ARCADIS

Chevron - LPU Central Battery Site

Analytical Method: TPH By SW8015 Mod DRO/ORO — Prep Method: SW8015P
Seq Number: 3140135 — Matrix: Solid — Date Prep: 10.19.2020
MB Sample Id: 7713546-1-BLK — LCS Sample Id: 7713546-1-BKS — LCSD Sample Id: 7713546-1-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	943	94	1060	106	70-130	12	20	mg/kg	10.19.2020 23:11	
Diesel Range Organics (DRO)	<15.0	1000	1000	100	1110	111	70-130	10	20	mg/kg	10.19.2020 23:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		122		127		70-130	%	10.19.2020 23:11
o-Terphenyl	112		118		128		70-130	%	10.19.2020 23:11

Analytical Method: TPH By SW8015 Mod DRO/ORO — Prep Method: SW8015P
Seq Number: 3140135 — Matrix: Solid — Date Prep: 10.19.2020
MB Sample Id: 7713546-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	10.19.2020 22:52	

Analytical Method: TPH By SW8015 Mod DRO/ORO — Prep Method: SW8015P
Seq Number: 3140135 — Matrix: Soil — Date Prep: 10.19.2020
Parent Sample Id: 675138-001 — MS Sample Id: 675138-001 S — MSD Sample Id: 675138-001 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)	24.9	1010	888	85	981	96	70-130	10	20	mg/kg	10.20.2020 00:08	
Diesel Range Organics (DRO)	<15.1	1010	965	96	1080	108	70-130	11	20	mg/kg	10.20.2020 00:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		99		70-130	%	10.20.2020 00:08
o-Terphenyl	94		106		70-130	%	10.20.2020 00:08

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3139967 — Matrix: Solid — Date Prep: 10.17.2020
MB Sample Id: 7713470-1-BLK — LCS Sample Id: 7713470-1-BKS — LCSD Sample Id: 7713470-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.103	103	0.105	105	70-130	2	35	mg/kg	10.17.2020 07:28	
Toluene	<0.000456	0.100	0.102	102	0.104	104	70-130	2	35	mg/kg	10.17.2020 07:28	
Ethylbenzene	<0.000565	0.100	0.0946	95	0.0957	96	70-130	1	35	mg/kg	10.17.2020 07:28	
m,p-Xylenes	<0.00101	0.200	0.204	102	0.209	105	70-130	2	35	mg/kg	10.17.2020 07:28	
o-Xylene	<0.000344	0.100	0.0985	99	0.0973	97	70-130	1	35	mg/kg	10.17.2020 07:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		91		90		70-130	%	10.17.2020 07:28
4-Bromofluorobenzene	93		118		115		70-130	%	10.17.2020 07:28

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

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QC Summary 675138

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Chevron - LPU Central Battery Site

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3139978 Matrix: Solid Date Prep: 10.17.2020
MB Sample Id: 7713477-1-BLK LCS Sample Id: 7713477-1-BKS LCSD Sample Id: 7713477-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.119	119	0.121	121	70-130	2	35	mg/kg	10.18.2020 08:15	
Toluene	<0.000456	0.100	0.103	103	0.104	104	70-130	1	35	mg/kg	10.18.2020 08:15	
Ethylbenzene	<0.000565	0.100	0.103	103	0.104	104	70-130	1	35	mg/kg	10.18.2020 08:15	
m,p-Xylenes	<0.00101	0.200	0.213	107	0.213	107	70-130	0	35	mg/kg	10.18.2020 08:15	
o-Xylene	<0.000344	0.100	0.105	105	0.106	106	70-130	1	35	mg/kg	10.18.2020 08:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		101		100		70-130	%	10.18.2020 08:15
4-Bromofluorobenzene	101		99		99		70-130	%	10.18.2020 08:15

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3139967 Matrix: Soil Date Prep: 10.17.2020
Parent Sample Id: 675138-001 MS Sample Id: 675138-001 S MSD Sample Id: 675138-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.0189	19	0.0341	34	70-130	57	35	mg/kg	10.17.2020 08:10	XF
Toluene	<0.000459	0.101	0.0413	41	0.0322	32	70-130	25	35	mg/kg	10.17.2020 08:10	X
Ethylbenzene	<0.000569	0.101	0.0557	55	0.0328	33	70-130	52	35	mg/kg	10.17.2020 08:10	XF
m,p-Xylenes	<0.00102	0.201	0.0769	38	0.0718	36	70-130	7	35	mg/kg	10.17.2020 08:10	X
o-Xylene	<0.000347	0.101	0.0531	53	0.0401	40	70-130	28	35	mg/kg	10.17.2020 08:10	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	34	**	91		70-130	%	10.17.2020 08:10
4-Bromofluorobenzene	22	**	115		70-130	%	10.17.2020 08:10

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3139978 Matrix: Soil Date Prep: 10.17.2020
Parent Sample Id: 675138-013 MS Sample Id: 675138-013 S MSD Sample Id: 675138-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.0719	71	0.0857	86	70-130	18	35	mg/kg	10.18.2020 08:56	
Toluene	<0.000458	0.101	0.0485	48	0.0582	58	70-130	18	35	mg/kg	10.18.2020 08:56	X
Ethylbenzene	<0.000568	0.101	0.0428	42	0.0521	52	70-130	20	35	mg/kg	10.18.2020 08:56	X
m,p-Xylenes	<0.00102	0.201	0.0860	43	0.104	52	70-130	19	35	mg/kg	10.18.2020 08:56	X
o-Xylene	<0.000346	0.101	0.0416	41	0.0484	48	70-130	15	35	mg/kg	10.18.2020 08:56	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		100		70-130	%	10.18.2020 08:56
4-Bromofluorobenzene	104		102		70-130	%	10.18.2020 08:56

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

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Flagging Criteria

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. **ND** Not Detected.

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

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

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675138

Client Information	Sampler: Chas Hobbs	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-79423-21424.6
Client Contact: Justin Nixon Morgan Jordan	Phone: 806-831-4801	E-Mail: Sachin.Kudchadkar@Eurofinset.com		Page: Page 1 of 2
Company: ARCADIS U.S., Inc.				Job #:
Address: 1004 North Big Spring Suite 121	Due Date Requested:			
City: Midland	TAT Requested (days): Standard			
State, Zip: TX, 79701				
Phone:	PO #: 30057225-0002B			
Email: Justin.Nixon@arcadis.com Douglas.Jordan@arcadis.com	WO #:			
Project Name: Chevron - LPU Central Battery Site	Project #: 60012743			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015D_DRO / ORO	8015D_GRO	8260C- BTEX	300 Chloride	moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N	N		
SB1-S-0-.5ft-201013	10-13	1325	G	Solid			X	X	X	X	X	2	
SB2-S-0-.5ft-201013	10-13	1331	G	Solid			X	X	X	X	X	2	
SB3-S-0-.5ft-201013	10-13	1336	G	Solid			X	X	X	X	X	2	
SB4-S-0-.5ft-201014	10-14	0852	G	Solid			X	X	X	X	X	2	
SB5-S-0-.5ft-201014	10-14	0856	G	Solid			X	X	X	X	X	2	
SB6-S-0-.5ft-201014	10-14	0902	G	Solid			X	X	X	X	X	2	
SB7-S-0-.5ft-201014	10-14	0909	G	Solid			X	X	X	X	X	2	
SB8-S-0-.5ft-201014	10-14	0920	G	S			X	X	X	X	X	2	
SB9-S-0-.5ft-201014	10-14	0925	G	S			X	X	X	X	X	2	
SB10-S-0-.5ft-201014	10-14	0937	G	S			X	X	X	X	X	2	
SB11-S-0-.5ft-201014	10-14	0944	G	S			X	X	X	X	X	2	

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Carlos Garfeela	10-14-20 1500	Arcadis	J KRAMER	10/14/20 1500	Xenco
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.0/5.5

Ver: 01/16/2019

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

eurofins | Environment Testing America

675138

Client Information	Sampler: Chas Holder	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-79423-21424.6
Client Contact: ~~Justin Nixon~~ Morgan Jordan	Phone: 806-831-9501	E-Mail: Sachin.Kudchadkar@Eurofinset.com		Page: Page 2 of 2
Company: ARCADIS U.S., Inc.		Analysis Requested		Job #:
Address: 1004 North Big Spring Suite 121	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Midland	TAT Requested (days): Standard			
State, Zip: TX, 79701				
Phone:	PO #: 30057225-0002B			Other:
Email: ~~Justin.Nixon@arcadis.com~~ Douglas.Jordan@arcadis.com	WO #:			
Project Name: Chevron - LPU Central Battery Site	Project #: 60012743			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015D_DRO / ORO	8015D_GRO	8260C- BTEX	300 Chloride	moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N	N		
SB12-S-0-.5ft-201014	10-14	0953	G	Solid			X	X	X	X	X	2	
SB13-S-0-.5ft-201014	10-14	1044	G	Solid			X	X	X	X	X	2	
SB14-S-0-.5ft-201014	10-14	1049	G	Solid			X	X	X	X	X	2	
SB15-S-0-.5ft-201014	10-14	1054	G	Solid			X	X	X	X	X	2	
				Solid									
				Solid									
				Solid									10-14-20 CH

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Carlos Gonzalez	10-14-20 1500	Arcadis	Alkamer	10/14/20 1500	Xenco
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 5.0/5.5

Ver: 01/16/2019

Inter-Office Shipment

IOS Number : 71844

Date/Time: 10.14.2020
Lab# From: **Midland**
Lab# To: **Houston**

Created by: Jessica Kramer
Delivery Priority:
Air Bill No.: 771801601301

Please send report to: Sachin Kudchadkar
Address: 1211 W. Florida Ave
E-Mail:

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
675138-001	S	SB-1-0-.5-2010136751	10.13.2020 13:25	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.27.2020	SGK	PHCC10C28 PHCC28C35	
675138-002	S	SB-2-0-.5-2010136751	10.13.2020 13:31	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.27.2020	SGK	PHCC10C28 PHCC28C35	
675138-003	S	SB-3-0-.5-2010136751	10.13.2020 13:36	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.27.2020	SGK	PHCC10C28 PHCC28C35	
675138-004	S	SB-4-0-.5-2010146751	10.14.2020 08:52	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	
675138-005	S	SB-5-0-.5-2010146751	10.14.2020 08:56	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	
675138-006	S	SB-6-0-.5-2010146751	10.14.2020 09:02	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	
675138-007	S	SB-7-0-.5-2010146751	10.14.2020 09:09	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	
675138-008	S	SB-8-0-.5-2010146751	10.14.2020 09:20	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	
675138-009	S	SB-9-0-.5-2010146751	10.14.2020 09:25	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	
675138-010	S	SB-10-0-.5-201014675	10.14.2020 09:37	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	
675138-011	S	SB-11-0-.5-201014675	10.14.2020 09:44	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	
675138-012	S	SB-12-0-.5-201014675	10.14.2020 09:53	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	
675138-013	S	SB-13-0-.5-201014675	10.14.2020 10:44	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	
675138-014	S	SB-14-0-.5-201014675	10.14.2020 10:49	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	
675138-015	S	SB-15-0-.5-201014675	10.14.2020 10:54	SW8015MOD_NM	TPH By SW8015 Mod	10.22.2020	10.28.2020	SGK	PHCC10C28 PHCC28C35	

Inter Office Shipment or Sample Comments:

Relinquished By: Jessica Kramer
Jessica Kramer

Date Relinquished: 10.14.2020

Received By: Hypatia Keys
Hypatia Keys

Date Received: 10.15.2020

Cooler Temperature: 4.1

Environment Testing Xenco

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 71844

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : hou-203

Sent By: Jessica Kramer **Date Sent:** 10.14.2020 03.29 PM

Received By: Hypatia Keys **Date Received:** 10.15.2020 04.25 PM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.1	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Hypatia Keys Date: 10.15.2020

Hypatia Keys

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: ARCADIS

Date/ Time Received: 10.14.2020 03.00.00 PM

Work Order #: 675138

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	5.5	
#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)?	**Yes**	Xenco Stafford
#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: Jessica Kramer Date: 10.14.2020
Jessica Kramer

Checklist reviewed by: John Cady Date: 10.19.2020
John Cady

APPENDIX C

Photographic Log

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
LPU Central Battery	Lea County, NM	1RP-2315

Photo No.	Date:
1	10/14/2020

Direction Photo Taken:

Facing West

Description:

Near SB-3, burn-off stack

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
LPU Central Battery	Lea County, NM	1RP-2315

Photo No.	Date:
2	10/14/2020

Direction Photo Taken:

Facing East

Description:

Near SB-1, burn-off stack and piping leading to it

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
LPU Central Battery	Lea County, NM	1RP-2365

Photo No.	Date:
3	10/14/2020

Direction Photo Taken:

Facing East

Description:

Near SB-10, heater treater visible

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
LPU Central Battery	Lea County, NM	1RP-2365

Photo No.	Date:
4	10/14/2020

Direction Photo Taken:

Facing North

Description:

Near SB-12

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
LPU Central Battery	Lea County, NM	1RP-2365

Photo No.	Date:
5	10/14/2020

Direction Photo Taken:

Facing East

Description:

Near SB-11

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
LPU Central Battery	Lea County, NM	1RP-2365

Photo No.	Date:
6	10/14/2020

Direction Photo Taken:

Facing North

Description:

Near SB-8

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
LPU Central Battery	Lea County, NM	1RP-2365

Photo No.	Date:
7	10/14/2020

Direction Photo Taken:

Facing West

Description:

Near SB-14

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
LPU Central Battery	Lea County, NM	1RP-2365

Photo No.	Date:
8	10/14/2020

Direction Photo Taken:

Facing East

Description:

Northwest corner of fenced pad

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
LPU Central Battery	Lea County, NM	1RP-2365

Photo No.	Date:
9	10/14/2020

Direction Photo Taken:

Facing South

Description:

Near SB-5

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
LPU Central Battery	Lea County, NM	1RP-2365

Photo No.	Date:
10	10/14/2020

Direction Photo Taken:

Facing Southeast

Description:

Near SB-4

APPENDIX D

Final C-141 Forms - 1RP-2315 & 2365

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NGRL0930831345
District RP	1RP-2315
Facility ID	NA
Application ID	NGRL0930830132

Release Notification

Responsible Party

Responsible Party: Chevron USA	OGRID: 241333
Contact Name: Armando Martinez	Contact Telephone: 505-690-5408
Contact email: amarti@chevron.com	Incident # (assigned by OCD) NGRL0930831345
Contact mailing address: P.O. Box 469, Questa, NM 87564	

Location of Release Source

Latitude 32.86854 Longitude -103.30513
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: LPU Central Battery	Site Type: Tank Battery
Date Release Discovered: 09/24/2009	API# (if applicable): Not associated with a well

Unit Letter	Section	Township	Range	County
B	1	17S	36E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name: City of Lovington*)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls): 2.62	Volume Recovered (bbls): 1.43
☐ Produced Water	Volume Released (bbls):	Volume Recovered (bbls):
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Unknown
☐ Condensate		
☐ Natural Gas	Volume Released (bbls)	Volume Recovered (bbls)
☐ Other (describe)	Volume Released (Mcf)	Volume Recovered (Mcf)
Cause of Release: A high level, high pressure state caused the water dump valve to fail, and the release valve opened to protect the vessel from over pressure. Crude oil was carried with gas to the pressure relief stack located on the north side of the battery.		

State of New Mexico
Oil Conservation Division

Incident ID	NGRL0930831345
District RP	1RP-2315
Facility ID	NA
Application ID	NGRL0930830132

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

State of New Mexico
Oil Conservation Division

Incident ID	NGRL0930831345
District RP	1RP-2315
Facility ID	NA
Application ID	NGRL0930830132

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?	106 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. **Attached.**
☒ Field data: **Attached.**
☒ Data table of soil contaminant concentration data: **Attached.**
☒ Depth to water determination: **Greater than 100 ft bgs.**
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release: **None identified.**
☒ Boring or excavation logs: **NA**
☒ Photographs including date and GIS information: **Photographic log attached.**
☒ Topographic/Aerial maps: **Topographic map attached.**
☒ Laboratory data including chain of custody: **Attached.**

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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NGRL0930831345
District RP	1RP-2315
Facility ID	NA
Application ID	NGRL0930830132

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: Armando Martinez _____Title: _____Operation Lead Central

Signature:  _____ Date: ___4/12/21_____

email: amarti@chevron.com_____ Telephone: ____(505) 690 5408_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NGRL0930831345
District RP	1RP-2315
Facility ID	NA
Application ID	NGRL0930830132

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☐ Detailed description of proposed remediation technique
☐ Scaled sitemap with GPS coordinates showing delineation points
☐ Estimated volume of material to be remediated
☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated. **The extent of the release is within the boundaries of a documented and currently monitored chloride groundwater plume (Case No. 1R394, OGRID No. 4323 – Chevron Lovington Water Plant Site).**

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater. **See statement above regarding risk to groundwater.**

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

Printed Name: Armando Martinez _____Title: _____Operation Lead Central

Signature: _____ Date: 4/12/21_____

email: amarti@chevron.com_____ Telephone: ____(505) 690 5408_____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NGRL0936352580
District RP	1RP-2365
Facility ID	NA
Application ID	NGRL0934355120

Release Notification

Responsible Party

Responsible Party: Chevron USA	OGRID: 241333
Contact Name: Armando Martinez	Contact Telephone: 505-690-5408
Contact email: amarti@chevron.com	Incident # (assigned by OCD) NGRL0936352580
Contact mailing address: P.O. Box 469, Questa, NM 87564	

Location of Release Source

Latitude 32.86854 Longitude -103.30513
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: LPU Central Battery	Site Type: Tank Battery
Date Release Discovered: 12/5/2009	API# (if applicable): Not associated with a well

Unit Letter	Section	Township	Range	County
B	1	17S	36E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name: City of Lovington*)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls): 36.77	Volume Recovered (bbls): 35.4
☐ Produced Water	Volume Released (bbls):	Volume Recovered (bbls):
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Unknown
☐ Condensate		
☐ Natural Gas	Volume Released (bbls)	Volume Recovered (bbls)
☐ Other (describe)	Volume Released (Mcf)	Volume Recovered (Mcf)
Cause of Release: A 2” diameter ball valve froze and parted, resulting in the release of 36.77 bbls of oil.		

State of New Mexico
Oil Conservation Division

Incident ID	NGRL0936352580
District RP	1RP-2365
Facility ID	NA
Application ID	NGRL0934355120

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? **Release was greater than 25 barrels.**
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? **Initial C-141 Form was submitted on December 6, 2009.**	

State of New Mexico
Oil Conservation Division

Incident ID	NGRL0936352580
District RP	1RP-2365
Facility ID	NA
Application ID	NGRL0934355120

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?	106 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. **Attached.**
☒ Field data: **Attached.**
☒ Data table of soil contaminant concentration data: **Attached.**
☒ Depth to water determination: **Greater than 100 ft bgs.**
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release: **None identified.**
☒ Boring or excavation logs: **NA**
☒ Photographs including date and GIS information: **Photographic log attached.**
☒ Topographic/Aerial maps: **Topographic map attached.**
☒ Laboratory data including chain of custody: **Attached.**

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

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State of New Mexico
Oil Conservation Division

Incident ID	NGRL0936352580
District RP	1RP-2365
Facility ID	NA
Application ID	NGRL0934355120

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: Armando Martinez _____Title: _____Operation Lead Central

Signature:  _____ Date: 4/12/21_____

email: amarti@chevron.com_____ Telephone: ____(505) 690 5408_____

OCD Only

Received by: _____ Date: _____

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	NGRL0936352580
District RP	1RP-2365
Facility ID	NA
Application ID	NGRL0934355120

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated. **The extent of the release is within the boundaries of a documented and currently monitored chloride groundwater plume (Case No. 1R394, OGRID No. 4323 – Chevron Lovington Water Plant Site).**

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater. **See statement above regarding risk to groundwater.**

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

Printed Name: Armando Martinez _____Title: _____Operation Lead Central

Signature: Armando Martinez _____ Date: 4/12/21 _____

email: amarti@chevron.com_____ Telephone: ____(505) 690 5408_____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved

Signature: Jennifer Nobui _____ Date: 04/18/2022

ARCADIS Design & Consultancy for natural and built assets

Arcadis U.S., Inc.

10205 Westheimer Road

Suite 800

Houston, Texas 77042

Tel 713 953 4800

Fax 713 977 4620

www.arcadis.com

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 42437

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 42437
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Deferral Request Approved with Conditions. Soils with TPH > 100 mg/kg must be included in assessment and deferral. Area on concern not limited to SB-10 and SB 11, but includes borings SB-4, SB-6, SB-7, SB-8, SB-9, SB-11, SB-13, and SB-15.	4/18/2022