Armando Martinez
Operations Lead, Portfolio Operations Central

INFORMATION ONLY

April 19, 2021

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

Re: 2020 Soil Assessment Report – WVU-35
Case No. 1RP-1794
Lea County, New Mexico

Dear Bradford Billings:

Chevron Environmental Management Company (CEMC) submits herein the *2020 Soil Assessment Report* for 1RP-1794, WVU-35. The Site is located approximately 2.85 miles southwest of Buckeye, in Unit N, Section 34, Township 17 South, Range 34 East, Lea County, New Mexico. The Report was prepared by Arcadis U.S., Inc. (Arcadis), on behalf of CEMREC. Based on the 2020 soil investigation data, additional assessment activities will be evaluated, and a proposed scope will be included in a Work Plan for review and approval to further delineate chloride impact in soil.

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 – WVU-35

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

Chevron Environmental Management Company

2020 Soil Assessment Report

WVU-35
Case No. 1RP-1794

April 2021

2020 Soil Assessment Report

WVU-35
Case No. 1RP-1794

April 2021

Prepared By:
Arcadis U.S., Inc.
10205 Westheimer Road, Suite 800
Houston
Texas 77042
Phone: 713 953 4800
Fax: 713 977 4620

Prepared For:
Armando Martinez
Operations Lead Central
Chevron Environmental Management Company
P.O. Box 469
Questa, New Mexico 87556

Our Ref:
30065078

Morgan Jordan
Task Manager I

Scott Foord, PG
Certified Project Manager

Contents

Tables

Figures

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 WVU-35 (Site).

2 Project Summary

The Site is located approximately 2.85 miles southwest of Buckeye, in Unit N, Section 34, Township 17 South, Range 34 East, Lea County, New Mexico. A site location map is included as **Figure 1**.

On February 26, 2008, a 6-inch diameter poly produced water transfer line developed a split releasing 80 barrels (bbls) of produced water. The Initial C-141 Form stated the line was isolated and a vac truck removed the pooled liquid, recovering approximately 50 bbls of produced water. According to the New Mexico Office of the State Engineers (NMOSE) database, there is a water well approximately 0.15 miles east of the Site with a depth to groundwater of 95 feet below ground surface (bgs). The Site is located within 200 feet of a seasonal playa lake. Therefore, soil analytical results for this assessment detailed in the following report were compared to the revised New Mexico Administration Code (NMAC) screening levels for depth to groundwater less than 50 feet bgs (revised Rule 19.15.29). The Initial C-141 Form for this release was approved by the New Mexico Oil Conservation Division (NMOCD) on February 27, 2008. The release was assigned remediation permit number 1RP-1794. The Initial C-141 Form for this release is included in **Appendix A**.

3 2020 Soil Assessment

On December 7-8, 2020, Arcadis personnel collected soil samples from twelve locations (SB-1 through SB-12) within the release area. The sample locations were determined based on information obtained by Arcadis from the Initial C-141 Form and from Chevron personnel familiar with the release location associated with remediation permit number 1RP-1794. The soil samples were collected with a hand auger at depths ranging from the surface to approximately 6 feet bgs. Hand auger refusal was encountered within boring locations (SB-1 through SB-9 and SB-11). Each boring location was backfilled with the remaining soil. Soils were characterized and logged by a field geologist based on the Unified Soil Classification System (USCS), including texture, structure, and consistence at each sample location from surface to refusal depths encountered within each boring. Boring logs for borings installed deeper than 2 feet bgs are included in **Appendix B**. Soil sample locations are presented on **Figure 2**. The samples were collected and placed on ice for delivery to Eurofins Xenco Laboratories in Midland, Texas for analysis.

The soil samples were analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) by United States 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 USEPA Method 300.

4 Soil Analytical Results

The soil analytical results were compared to the revised NMAC screening levels for BTEX, TPH, and chloride for depth to groundwater less than 50 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 Xenco Laboratories are presented in **Appendix C**. 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

- Total TPH concentrations exceeded the NMAC standard of 100 mg/kg at two sample locations (SB-1 and SB-4).
    - SB-1
        - (0 – 0.5 ft) at 1,147 mg/kg
        - (1 – 2 ft) at 902 mg/kg
    - SB-4
        - (0 – 0.5 ft) at 523 mg/kg

4.3 Chloride

- Chloride concentrations exceeded the revised Rule 19.15.29 restoration screening limit of 600 mg/kg at seven sample locations (SB-1, SB-5, SB-6, SB-7, SB-8, SB-10, and SB-12).
    - SB-1
        - (0 – 0.5 ft) at 1,140 mg/kg
        - (1 – 2 ft) at 1,280 mg/kg
    - SB-5
        - (1 – 2 ft) at 1,270 mg/kg
        - (3 – 4 ft) at 1,460 mg/kg
        - (5 – 5.25 ft) at 3,440 mg/kg
    - SB-6
        - (1 – 2 ft) at 1,000 mg/kg
        - (2.5 – 3 ft) at 1,350 mg/kg
    - SB-7
        - (2.5 – 3 ft) at 754 mg/kg
    - SB-8

- (3 – 4 ft) at 1,390 mg/kg
- SB-10
  - (1 – 2 ft) at 1,560 mg/kg
  - (3 – 4 ft) at 2,210 mg/kg
  - (5 – 6 ft) at 1,780 mg/kg
- SB-12
  - (1 – 2 ft) at 624 mg/kg
  - (3 – 4 ft) at 1,440 mg/kg
  - (5 – 6 ft) at 1,250 mg/kg

5 Conclusion

The Site is located within 200 feet of a seasonal playa lake. Therefore, the soil analytical results were compared to the revised NMAC screening levels for depth to groundwater less than 50 feet bgs (revised Rule 19.15.29). Analytical results associated with the recent assessment activities indicate that concentrations of TPH and chloride above the NMAC standards for depth to groundwater less than 50 feet bgs are present in surface and shallow soil in the vicinity of SB-1, SB-4, SB-5, SB-6, SB-7, SB-8, SB-10, and SB-12. Based upon the findings presented in this report, additional soil assessment activities are recommended to further delineate TPH and chloride impacts in soil at the Site. The revised C-141 Form is presented in **Appendix E**.

Tables

Table 1
2020 Soil Analytical Results
Chevron Environmental Management Company
WVU-35
Lea County, New Mexico

Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Total GRO + DRO	Motor Oil Range Organics (ORO)	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	--	--	--	--	100	600*
SB-1	0-0.5	12/07/20	<0.000382	<0.000452	<0.000560	<0.0003420	<0.0003420	<15.0	798	798	349	***1,147***	***1,140***
	1-2	12/07/20	<0.000385	<0.000456	<0.000565	<0.0003440	<0.0003440	<15.0	681	681	221	***902***	***1,280***
SB-2	0-0.5	12/07/20	<0.000388	<0.000459	<0.000569	<0.0003470	<0.0003470	<15.0	<15.0	<15.0	<15.0	<15.00	10.8
	1-2	12/07/20	<0.000385	<0.000456	<0.000565	<0.0003440	<0.0003440	<15.0	<15.0	<15.0	<15.0	<15.00	19.5
SB-3	0-0.5	12/07/20	<0.000384	<0.000455	<0.000564	<0.0003440	<0.0003440	<14.9	<14.9	<14.9	<14.9	<14.90	12.9
	1-2	12/07/20	<0.000386	<0.000457	<0.000567	<0.0003460	<0.0003460	<14.9	<14.9	<14.9	<14.9	<14.90	8.47
	3-3.75	12/07/20	<0.000389	<0.000460	<0.000570	<0.0003480	<0.0003480	<15.0	<15.0	<15.0	<15.0	<15.00	25.4
SB-4	0-0.5	12/07/20	0.00187 J	0.00199 B J	<0.000566	<0.0003450	0.003860	<15.0	361	361	162	***523***	213
	1-2	12/07/20	<0.000388	<0.000459	<0.000569	<0.0003470	<0.0003470	<14.9	59.6	59.6	<14.9	59.60	566
SB-5	0-0.5	12/07/20	<0.000384	<0.000455	<0.000564	<0.0003440	<0.0003440	<15.0	<15.0	<15.0	<15.0	<15.00	216
	1-2	12/07/20	<0.000385	<0.000456	<0.000565	<0.0003440	<0.0003440	<15.0	<15.0	<15.0	<15.0	<15.00	***1,270***
	3-4	12/07/20	<0.000389	<0.000460	<0.000570	<0.0003480	<0.0003480	<15.0	<15.0	<15.0	<15.0	<15.00	***1,460***
	5-5.25	12/07/20	<0.000383	<0.000453	<0.000561	<0.0003420	<0.0003420	<15.0	<15.0	<15.0	<15.0	<15.00	***3,440***
SB-6	0-0.5	12/07/20	<0.000386	<0.000457	<0.000566	<0.0003450	<0.0003450	<15.0	<15.0	<15.0	<15.0	<15.00	150
	1-2	12/07/20	<0.000388	<0.000459	<0.000569	<0.0003470	<0.0003470	<14.9	<14.9	<14.9	<14.9	<14.90	***1,000***
	2.5-3	12/07/20	<0.000388	<0.000459	<0.000569	<0.0003470	<0.0003470	<15.0	<15.0	<15.0	<15.0	<15.00	***1,350***
SB-7	0-0.5	12/08/20	<0.000381	<0.000451	<0.000559	<0.000341	<0.000341	<15.0	<15.0	<15.0	<15.0	<15.0	70.1
	1-2	12/08/20	<0.000382	<0.000452	<0.000560	<0.000342	<0.000342	<15.0	<15.0	<15.0	<15.0	<15.0	422
	2.5-3	12/08/20	<0.000383	<0.000454	<0.000563	<0.000343	<0.000343	<15.0	<15.0	<15.0	<15.0	<15.0	***754***
SB-8	0-0.5	12/08/20	<0.000386	<0.000457	<0.000567	<0.000346	<0.000346	<15.0	<15.0	<15.0	<15.0	<15.0	59.1
	1-2	12/08/20	<0.000388	<0.000459	<0.000569	<0.000347	<0.000347	16.5 J	<14.9	16.5 J	<14.9	16.5 J	564
	3-4	12/08/20	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	<15.0	<15.0	<15.0	<15.0	<15.0	***1,390***
SB-9	0-0.5	12/08/20	<0.000382	<0.000452	<0.000560	<0.000342	<0.000342	<15.0	<15.0	<15.0	<15.0	<15.0	164
	1-1.5	12/08/20	<0.000383	<0.000453	<0.000561	<0.000342	<0.000342	<15.0	<15.0	<15.0	<15.0	<15.0	370
SB-10	0-0.5	12/08/20	<0.000385	<0.000456	<0.000565	<0.000344	<0.000344	<15.0	<15.0	<15.0	<15.0	<15.0	418
	1-2	12/08/20	<0.000389	<0.000460	<0.000570	<0.000348	<0.000348	15.2 J	<15.0	15.2 J	<15.0	15.2 J	***1,560***
	3-4	12/08/20	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	16.5 J	<14.9	16.5 J	<14.9	16.5 J	***2,210***
	5-6	12/08/20	<0.000388	<0.000459	<0.000569	<0.000347	<0.000347	16.8 J	<15.0	16.8 J	<15.0	16.8 J	***1,780***
SB-11	0-0.5	12/08/20	<0.000386	<0.000457	<0.000567	<0.000346	<0.000346	18.9 J	<15.0	18.9 J	<15.0	18.9 J	12.1
	1-2	12/08/20	<0.000385	<0.000456	<0.000565	<0.000344	<0.000344	17.7 J	<14.9	17.7 J	<14.9	17.7 J	9.33
	3-4	12/08/20	<0.000388	<0.000459	<0.000569	<0.000347	<0.000347	18.8 J	<15.0	18.8 J	<15.0	18.8 J	7.75
SB-12	0-0.5	12/08/20	<0.000389	<0.000460	<0.000570	<0.000348	<0.000348	<15.0	<15.0	<15.0	<15.0	<15.0	162
	1-2	12/08/20	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	<15.0	<15.0	<15.0	<15.0	<15.0	***624***
	3-4	12/08/20	<0.000383	<0.000454	<0.000563	<0.000343	<0.000343	19.6 J	<15.0	19.6 J	<15.0	19.6 J	***1,440***
	5-6	12/08/20	<0.000385	<0.000456	<0.000565	<0.000344	<0.000344	18.2 J	<15.0	18.2 J	<15.0	18.2 J	***1,250***

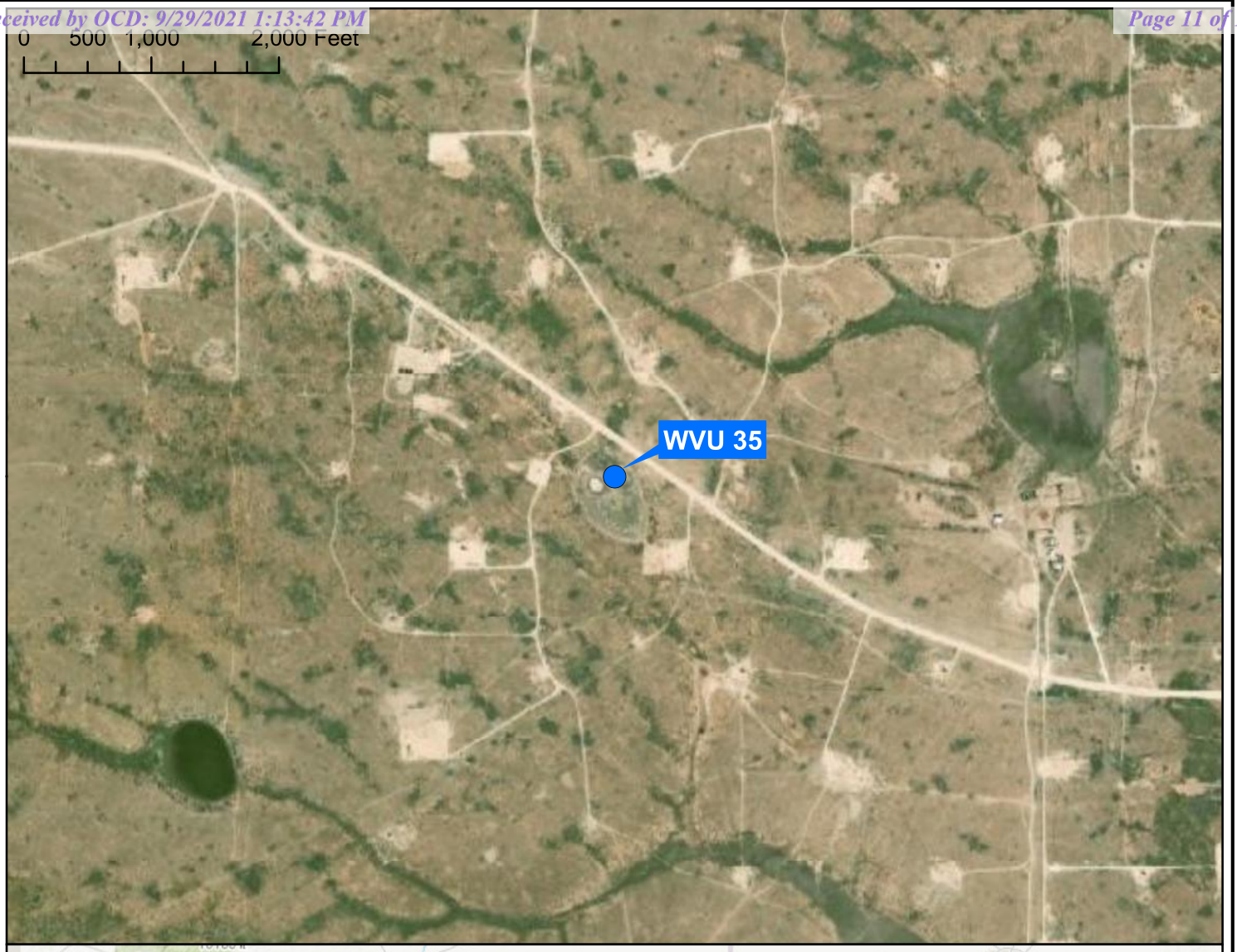
Legend:
BOLD = Analytes exceeding NMAC standards
'<' indicates the analyte was not detected at or above the Method Detection Limit (MDL)
J = The target analyte was positively identified below the quantitation limit and above the detection limit.
B = A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
F = RPD exceeded lab control limits.

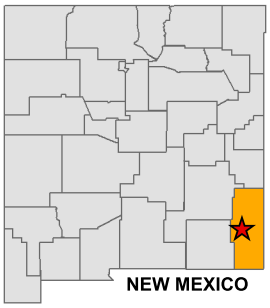
X = In our quality control review of the data a QC deficiency was observed and flagged as noted. Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

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 MRO: Total Petroleum Hydrocarbons Motor 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
DUP : Duplicate sample

Notes:
1. Chloride analyzed by United States Environmental Protection Agency (USEPA) Method 300.0
2. TPH analyzed by USEPA Method SW8015 Mod DRO/ORO
3. BTEX analyzed by USEPA Method 8012B
4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)

Figures





N

NOTES:
1. Datum: D_WGS_1984
2. Site Location: 32.785800, -103.548900

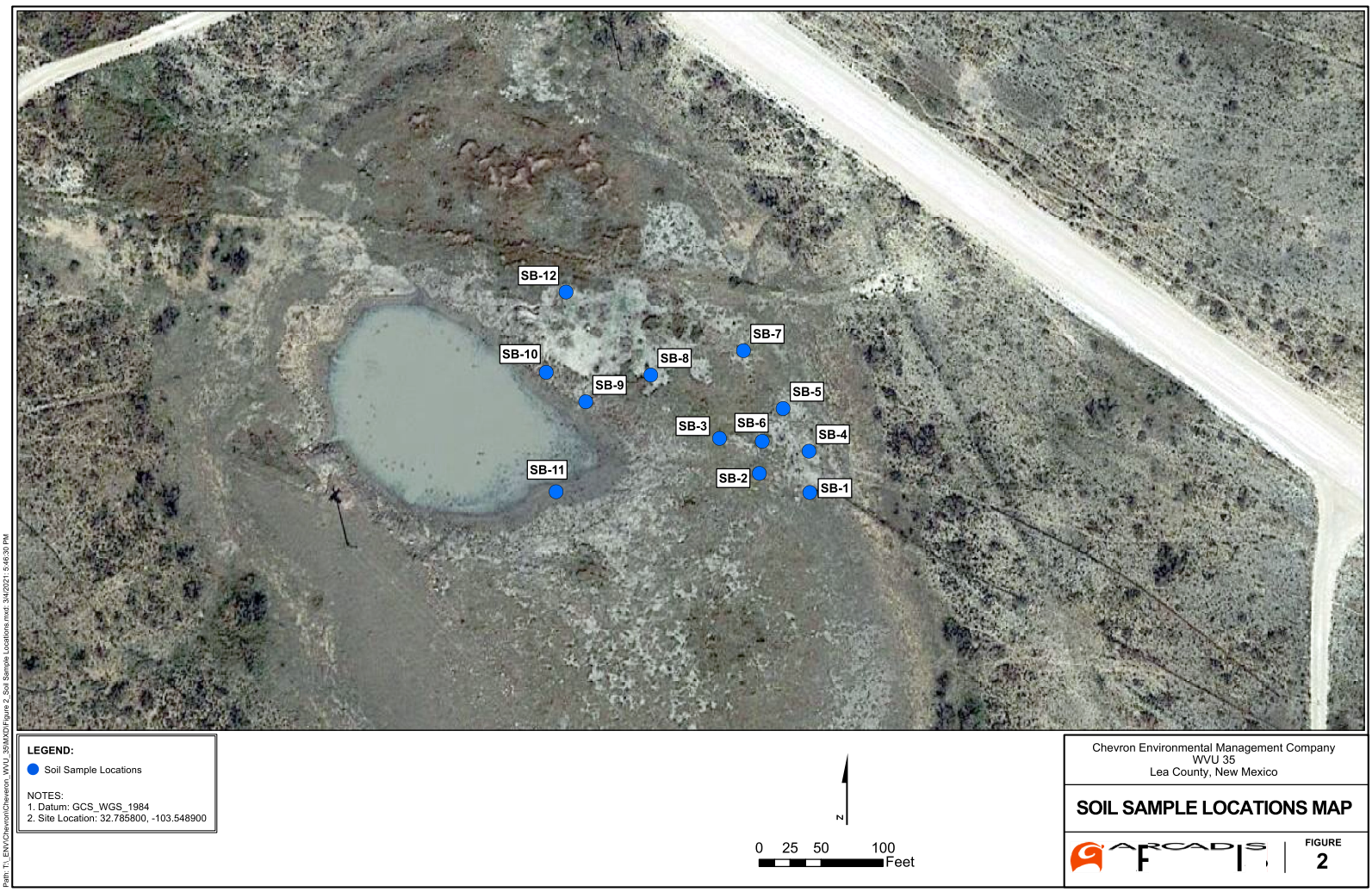
Chevron Environmental Management Company
WVU 35
Lea County, New Mexico

SITE LOCATION MAP

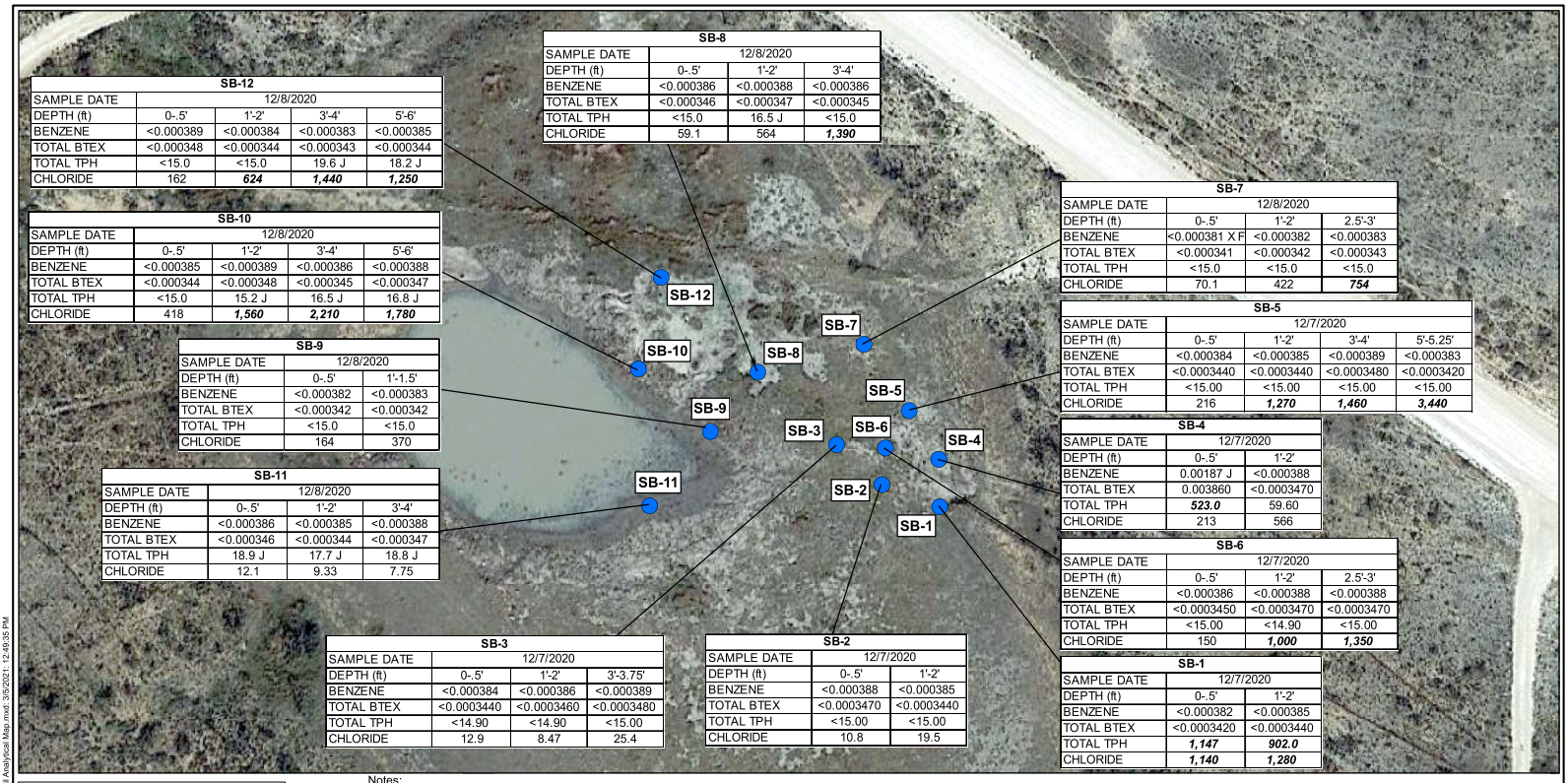
ARCADIS

FIGURE
1

P:\...T:_ENV\Chevron\Cheveron_WVU_35\MXD\Figure 1_Site Location Map.mxd: 3/4/2021: 5:48:55 PM



Path: T:_ENV\Chevron\Chevron_WVU_35\MXD\Figure 2_Soil Sample Locations.mxd, 3/4/2021, 5:46:30 PM



SB-12

SAMPLE DATE	12/8/2020			
DEPTH (ft)	0-.5'	1'-2'	3'-4'	5'-6'
BENZENE	<0.000389	<0.000384	<0.000383	<0.000385
TOTAL BTEX	<0.000348	<0.000344	<0.000343	<0.000344
TOTAL TPH	<15.0	<15.0	19.6 J	18.2 J
CHLORIDE	162	***624***	***1,440***	***1,250***

SB-10

SAMPLE DATE	12/8/2020			
DEPTH (ft)	0-.5'	1'-2'	3'-4'	5'-6'
BENZENE	<0.000385	<0.000389	<0.000386	<0.000388
TOTAL BTEX	<0.000344	<0.000348	<0.000345	<0.000347
TOTAL TPH	<15.0	15.2 J	16.5 J	16.8 J
CHLORIDE	418	***1,560***	***2,210***	***1,780***

SB-9

SAMPLE DATE	12/8/2020	
DEPTH (ft)	0-.5'	1'-1.5'
BENZENE	<0.000382	<0.000383
TOTAL BTEX	<0.000342	<0.000342
TOTAL TPH	<15.0	<15.0
CHLORIDE	164	370

SB-11

SAMPLE DATE	12/8/2020		
DEPTH (ft)	0-.5'	1'-2'	3'-4'
BENZENE	<0.000386	<0.000385	<0.000388
TOTAL BTEX	<0.000346	<0.000344	<0.000347
TOTAL TPH	18.9 J	17.7 J	18.8 J
CHLORIDE	12.1	9.33	7.75

SB-3

SAMPLE DATE	12/7/2020		
DEPTH (ft)	0-.5'	1'-2'	3'-3.75'
BENZENE	<0.000384	<0.000386	<0.000389
TOTAL BTEX	<0.0003440	<0.0003460	<0.0003480
TOTAL TPH	<14.90	<14.90	<15.00
CHLORIDE	12.9	8.47	25.4

SB-2

SAMPLE DATE	12/7/2020	
DEPTH (ft)	0-.5'	1'-2'
BENZENE	<0.000388	<0.000385
TOTAL BTEX	<0.0003470	<0.0003440
TOTAL TPH	<15.00	<15.00
CHLORIDE	10.8	19.5

SB-8

SAMPLE DATE	12/8/2020		
DEPTH (ft)	0-.5'	1'-2'	3'-4'
BENZENE	<0.000386	<0.000388	<0.000386
TOTAL BTEX	<0.000346	<0.000347	<0.000345
TOTAL TPH	<15.0	16.5 J	<15.0
CHLORIDE	59.1	564	***1,390***

SB-7

SAMPLE DATE	12/8/2020		
DEPTH (ft)	0-.5'	1'-2'	2.5'-3'
BENZENE	<0.000381 X F	<0.000382	<0.000383
TOTAL BTEX	<0.000341	<0.000342	<0.000343
TOTAL TPH	<15.0	<15.0	<15.0
CHLORIDE	70.1	422	***754***

SB-5

SAMPLE DATE	12/7/2020			
DEPTH (ft)	0-.5'	1'-2'	3'-4'	5'-5.25'
BENZENE	<0.000384	<0.000385	<0.000389	<0.000383
TOTAL BTEX	<0.0003440	<0.0003440	<0.0003480	<0.0003420
TOTAL TPH	<15.00	<15.00	<15.00	<15.00
CHLORIDE	216	***1,270***	***1,460***	***3,440***

SB-4

SAMPLE DATE	12/7/2020	
DEPTH (ft)	0-.5'	1'-2'
BENZENE	0.00187 J	<0.000388
TOTAL BTEX	0.003860	<0.0003470
TOTAL TPH	***523.0***	59.60
CHLORIDE	213	566

SB-6

SAMPLE DATE	12/7/2020		
DEPTH (ft)	0-.5'	1'-2'	2.5'-3'
BENZENE	<0.000386	<0.000388	<0.000388
TOTAL BTEX	<0.0003450	<0.0003470	<0.0003470
TOTAL TPH	<15.00	<14.90	<15.00
CHLORIDE	150	***1,000***	***1,350***

SB-1

SAMPLE DATE	12/7/2020	
DEPTH (ft)	0-.5'	1'-2'
BENZENE	<0.000382	<0.000385
TOTAL BTEX	<0.0003420	<0.0003440
TOTAL TPH	***1,147***	***902.0***
CHLORIDE	***1,140***	***1,280***

LEGEND:

- Soil Sample Locations

NOTES:
1. Datum: GCS_WGS_1984
2. Site Location: 32.785800, -103.548900

Notes:
1. ***BOLD*** = *Analytes exceeding NMAC standards.*
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. 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.
5. F = RPD exceeded lab control limits.
6. NMAC Indicates New Mexico Administration Code.
7. All values are in mg/kg (Milligram per Kilogram).
8. " ' " Indicates one foot.
9. BTEX Indicates Benzene, Toluene, Ethylbenzene, and Total Xylenes.
10. TPH GRO Indicates Total Petroleum Hydrocarbons Gasoline Range Organics.
11. TPH MRO Indicates Total Petroleum Hydrocarbons Motor Oil Range Organics.
12. TPH DRO Indicates Total Petroleum Hydrocarbon Diesel Range Organics.
13. *Revised screening limit and restoration criteria within the first 4 feet below ground surface per Rule 19.15.29 effective August
14. Chloride analyzed by United States Environmental Protection Agency (USEPA) Method 300.0.
15. TPH analyzed by DRO/ORO Method SW8015.
16. BTEX analyzed by USEPA Method 8021B.
17. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2).

N

0 25 50 100 Feet

Chevron Environmental Management Company
WVU 35
Lea County, New Mexico

SOIL ANALYTICAL RESULTS MAP

FIGURE 3

Path: T:_ENV\Chevron\Chevron_WVU_35\MXD\Figure 3_Soil Analytical Map.mxd; 3/5/2021; 12:49:35 PM

Appendix A

Initial C-141 Form 1RP-1794

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 101
Facility Name WEST VACUUM UNIT # 35	Facility Type WATER TRANSFER LINE

Surface Owner STATE OF NEW MEXICO	Mineral Owner State of NM	~~Lease No.~~ API 30 025 02208

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	South Line	Feet from the	West Line	County
N	34	17.0S	34E	660 FSL		1980 FWL		Lea

Latitude 32.7858 **Longitude** -103.5489

NOTE 120'

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 80 BBLS PRODUCED WATER	Volume Recovered 50 BBLS PW fluids
Source of Release LOW PRESSURE WATER TRANSFER LINE	Date and Hour of Occurrence 02/26/08 7:30 AM	Date and Hour of Discovery 02/26/08 08 00 AM
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom? GARK WINK	
By Whom? TEJAY SIMPSON	Date and Hour 02/26/2007 4:09 P.M.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
FEB 27 2008
HOBBS OCD

If a Watercourse was Impacted, Describe Fully *

Describe Cause of Problem and Remedial Action Taken.*

A 6" SDR 7 POLY PRODUCED WATER TRANSFER LINE THAT SERVES THE WEST VACUUM UNIT BATTERY DEVELOPED A SPLIT RUNNING ALONG THE LENGTH OF THE BODY OF THE PIPE RESULTING IN A RELEASE OF APPROXIMATELY 80 BARRELS OF PRODUCED WATER. EMERGENCY RESPONSE WAS INITIATED AND THE LINE ISOLATED. VACUUM TRUCK WAS DISPATCHED TO THE SCENE AND BEGAN RECOVERY OF FLUID. VISUAL INSPECTION IDENTIFIED APPROXIMATELY 40' OF PIPE HAD GROOVES ETCHED IN THE BODY. THE DAMAGED SECTION OF PIPE WAS REMOVED AND REPLACED WITH NEW PIPE. THE TRANSFER LINE WAS RETURNED TO SERVICE AT APPROXIMATELY 3:30 PM.

SPILL EVENT AND IMMEDIATE ACTIONS WERE DISCUSSED WITH RANCH TENET FOREMAN – DANNY VEGIL. GENERAL DISCUSSION ON THE EVENT AND NOTIFICATION REQUIREMENTS WAS DISCUSSED WITH MYRA MYERS – STATE LAND OFFICE AT APPROXIMATELY 9:30 AM.

Chlorides 38,000 Oil Gravity 38

Describe Area Affected and Cleanup Action Taken.*

PASTURE LAND WITH HEAVY GRASS VEGETATION ADJACENT TO A DRY BUFFALO WALLOW. DISPATCHED VACUUM TRUCK TO RECOVER FREE STANDING FLUID. INVESTIGATION WILL FOLLOW TO DETERMINE AREA AND DEPTH OF IMPACT. SOIL BORINGS MAY BE REQUIRED TO DELINEATE.

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.

2-27-08

Signature

Printed Name: TEJAY SIMPSON

OIL CONSERVATION DIVISION

Approved by District Supervisor: ENVIRONMENTAL ENGINEER

fCOH0805931519

Appendix B

Boring Logs

Date Start/Finish: 12/07/2020 **Drilling Company:** Arcadis **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger Grab	**Borehole Depth:** 3.75' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** SB-3 **Client:** Chevron **Location:** WVU - 35

DEPTH	Sample Interval	Geologic Column	Stratigraphic Description
0	0-0.5'		Silty sand 10YR 4/2 dark grayish brown, fine sand, moderately sorted, silty, with little medium to coarse grains, loose, dry, trace roots USCS - SM
1	1-2'		
2			Clayey sand 10YR 4/2 dark grayish brown, as above with little to some clay, pliable, non-plastic, blocky, dry, slight hydrocarbon odor, firm to hard USCS - SC
3	3-3.75'		
			End of boring 3.75' bgs. Refusal at calic

ARCADIS

Remarks: Total Depth: 3.75' Below Ground Surface (bgs)

Project: 30065078 Template: LPTEMPLATE_HA_Final *Page: 1 of 1*
Data File: SB-3 Date: 2/12/2021 Created/Edited by: AD

Date Start/Finish: 12/07/2020 **Drilling Company:** Arcadis **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger Grab	**Borehole Depth:** 5.25' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** SB-5 **Client:** Chevron **Location:** WVU - 35

DEPTH	Sample Interval	Geologic Column	Stratigraphic Description
0			Silty sand 10YR 4/2 dark grayish brown, fine sand, moderately to well sorted, silty, loose, dry. USCS - SM
	0-0.5'		Clayey sand 10YR 4/2 dark grayish brown, pliable, non-plastic, fine sand, moderately sorted, loose to firm, dry, blocky. USCS - SC
1	1-2'		
3	3-4'		sandy clay, 5YR 6/8 reddish yellow, pliable, non-plastic, firm, blocky, with fine sand, moderately sorted throughout, dry. @ 3' becoming slightly moist, black streaks/stain appearing. USCS - CL
5	5-5.25'		End of boring 5.25' bgs. Refusal at caliche

ARCADIS

Remarks: Total Depth: 5.25' Below Ground Surface (bgs)

Project: 30065078 Template: LPTEMPLATE_HA_Final Page: 1 of 1
Data File: SB-5 Date: 2/12/2021 Created/Edited by: AD

Date Start/Finish: 12/07/2020 **Drilling Company:** Arcadis **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger Grab	**Borehole Depth:** 3' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** SB-6 **Client:** Chevron **Location:** WVU - 35

DEPTH	Sample Interval	Geologic Column	Stratigraphic Description
0	0-0.5'		Silty sand 10YR 4/2 dark grayish brown, very fine to fine sand, moderately sorted, silty, loose to blocky, dry. USCS - SM
1	1-2'		Sandy clay 10YR 3/3 dark brown, pliable, non-plastic, blocky, dry, moderate organic odor. USCS - CL
2.5	2.5-3'		
3			End of boring 3' bgs. Refusal at caliche

ARCADIS

Remarks: Total Depth: 3' Below Ground Surface (bgs)

Project: 30065078 Template: LPTEMPLATE_HA_Final Page: 1 of 1
Data File: SB-6 Date: 2/12/2021 Created/Edited by: AD

Date Start/Finish: 12/08/2020 **Drilling Company:** Arcadis **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger Grab	**Borehole Depth:** 3' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** SB-7 **Client:** Chevron **Location:** WVU - 35

DEPTH	Sample Interval	Geologic Column	Stratigraphic Description
	0-0.5'		Silty sand 10YR 4/2 dark grayish brown, very fine to fine sand, moderately to well sorted, silty, loose, dry, slight organic odor. USCS - SM
	1-2'		
	2.5-3'		Sandy clay, slightly pliable, non-plastic, firm, blocky, with fine sand throughout, dry, at 2.75' color change to 10YR 6/3 pale brown with 7.5YR 6/8 reddish yellow streaks. USCS - CL
			End of boring 3' bgs. Refusal at caliche

ARCADIS

Remarks: Total Depth: 3' Below Ground Surface (bgs)

Project: 30065078 Template: LPTEMPLATE_HA_Final *Page: 1 of 1*
Data File: SB-7 Date: 2/12/2021 Created/Edited by: AD

Date Start/Finish: 12/08/2020 **Drilling Company:** Arcadis **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger Grab	**Borehole Depth:** 4' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** SB-8 **Client:** Chevron **Location:** WVU - 35

DEPTH	Sample Interval	Geologic Column	Stratigraphic Description
0	0-0.5'		Silty sand 10YR 4/2 dark grayish brown, very fine to fine sand, moderately sorted, silty, loose to blocky, dry, slight organic odor. USCS - SM
1	1-2'		
2			
3	3-4'		Sandy clay, 10YR 4/2 dark grayish brown, pliable, non-plastic, firm to hard, with fine sand throughout, dry, at 3.75' color change to 10YR 6/3 pale brown with 7.5YR 6/8 reddish yellow streaks. USCS - CL
4			End of boring 4' bgs. Refusal

ARCADIS

Remarks: Total Depth: 4' Below Ground Surface (bgs)

Project: 30065078 Template: LPTEMPLATE_HA_Final

Data File: SB-8 Date: 2/12/2021 Created/Edited by: AD

Date Start/Finish: 12/08/2020 **Drilling Company:** Arcadis **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger Grab	**Borehole Depth:** 6' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** SB-10 **Client:** Chevron **Location:** WVU - 35

DEPTH	Sample Interval	Geologic Column	Stratigraphic Description
0	0-0.5'		Silty sand 10YR 4/2 dark grayish brown, very fine to fine sand, moderately to well sorted, silty, loose, dry. USCS - SM
1	1-2'		Sandy clay, 10YR 4/2 dark grayish brown, slightly pliable, non-plastic, firm to hard, blocky, dry, at 4' becoming moderately pliable, slightly moist, blocky. USCS - CL
3	3-4'		
5	5-6'		End of boring 6' bgs.

Remarks: Total Depth: 6' Below Ground Surface (bgs)

Project: 30065078 Template: LPTEMPLATE_HA_Final

Data File: SB-10 Date: 2/11/2021 Created/Edited by: AD

Date Start/Finish: 12/08/2020 **Drilling Company:** Arcadis **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger Grab	**Borehole Depth:** 4' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** SB-11 **Client:** Chevron **Location:** WVU - 35

DEPTH	Sample Interval	Geologic Column	Stratigraphic Description
	0-0.5'		Silty sand 10YR 4/2 dark grayish brown, very fine to fine sand, moderately to well sorted, loose to blocky, dry. USCS - SM
	1-2'		Sandy clay, 10YR 4/2 dark grayish brown, slightly pliable, non-plastic, with very fine to fine sand throughout, firm, blocky, dry, becoming hard at 3', dry. USCS - CL
	3-4'		
			End of boring 4' bgs. refusal at hard clay bottom

ARCADIS

Remarks: Total Depth: 4' Below Ground Surface (bgs)

Project: 30065078 Template: LPTEMPLATE_HA_Final

Data File: SB-11 Date: 2/11/2021 Created/Edited by: AD

Date Start/Finish: 12/08/2020 **Drilling Company:** Arcadis **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger Grab	**Borehole Depth:** 6' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** SB-12 **Client:** Chevron **Location:** WVU - 35

DEPTH	Sample Interval	Geologic Column	Stratigraphic Description
0	0-0.5'		Silty sand 10YR 4/2 dark grayish brown, very fine to fine sand, moderately to well sorted, loose to blocky, dry. USCS - SM
	1-2'		
	3-4'		Sandy clay, 10YR 4/2 dark grayish brown, slightly pliable, non-plastic, firm to hard, blocky, dry at 5' color change to 2.5YR 4/3 reddish brown. USCS - CL
5	5-6'		
			End of boring 6' bgs.

ARCADIS

Remarks: Total Depth: 6' Below Ground Surface (bgs)

Project: 30065078 Template: LPTEMPLATE_HA_Final Page: 1 of 1
Data File: SB-12 Date: 2/11/2021 Created/Edited by: AD

Appendix C

Laboratory Reports

eurofins | Environment Testing Xenco

Analytical Report 680153

for

ARCADIS

Project Manager: Justin Nixon

WVU-35

60012136

12.30.2020

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)

eurofins | Environment Testing Xenco

12.30.2020

Project Manager: **Justin Nixon**
ARCADIS
1004 N. Big Spring St.
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **680153**
WVU-35
Project Address: 30065078 NM

Justin Nixon:

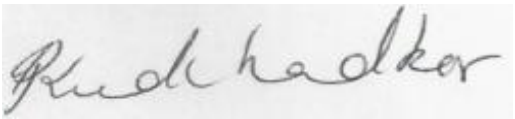
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 680153. All results being reported under this Report Number apply to the samples analyzed and properly identified 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. 680153 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

eurofins | Environment Testing Xenco

Sample Cross Reference 680153

ARCADIS, Midland, TX

WVU-35

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1-S-O-.5-201207	S	12.07.2020 12:10		680153-001
SB-1-S-1-2-201207	S	12.07.2020 12:15		680153-002
SB-2-S-O-.5-201207	S	12.07.2020 12:20		680153-003
SB-2-S-1-2-201207	S	12.07.2020 12:25		680153-004
SB-3-S-O-.5-201207	S	12.07.2020 12:34		680153-005
SB-3-S-1-2-201207	S	12.07.2020 12:39		680153-006
SB-3-S-3-3.75-201207	S	12.07.2020 12:48		680153-007
SB-4-S-O-.5-201207	S	12.07.2020 12:58		680153-008
SB-4-S-1-2-201207	S	12.07.2020 13:03		680153-009
SB-5-S-O-.5-201207	S	12.07.2020 13:57		680153-010
SB-5-S-1-2-201207	S	12.07.2020 14:00		680153-011
SB-5-S-3-4-201207	S	12.07.2020 14:10		680153-012
SB-5-S-5-5.25-201207	S	12.07.2020 14:18		680153-013
SB-6-S-O-.5-201207	S	12.07.2020 14:28		680153-014
SB-6-S-1-2-201207	S	12.07.2020 14:31		680153-015
SB-6-S-2.5-3-201207	S	12.07.2020 14:37		680153-016

CASE NARRATIVE

eurofins | Environment Testing Xenco

Client Name: ARCADIS

Project Name: WVU-35

Project ID: *60012136*
Work Order Number(s): *680153*

Report Date: *12.30.2020*
Date Received: *12.07.2020*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3144213 TPH By SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 680153-002,680153-008,680153-006,680153-004.

Batch: LBA-3144281 Chloride by EPA 300

Lab Sample ID 680153-012 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.
Samples in the analytical batch are: 680153-002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3144404 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Samples affected are: 7716787-1-BLK,7716787-1-BSD,680062-009 S,680062-009 SD.

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-1-S-O-.5-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-001 Date Collected: 12.07.2020 12:10

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 13:55 % Moisture:

Seq Number: 3144275 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1140**	24.8	4.26	mg/kg	12.08.2020 17:09		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.08.2020 15:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	**798**	50.0	15.0	mg/kg	12.08.2020 15:20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**349**	50.0	15.0	mg/kg	12.08.2020 15:20		1
Total TPH	PHC635	**1147**	50.00	15.00	mg/kg	12.08.2020 15:20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	12.08.2020 15:20	
o-Terphenyl	84-15-1	124	%	70-130	12.08.2020 15:20	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-1-S-O-.5-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-001	Date Collected:	12.07.2020 12:10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.09.2020 10:00	% Moisture:	
Seq Number:	3144404			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	12.09.2020 15:07	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	12.09.2020 15:07	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	12.09.2020 15:07	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	12.09.2020 15:07	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	12.09.2020 15:07	U	1
Total Xylenes	1330-20-7	<0.0003420	0.001980	0.0003420	mg/kg	12.09.2020 15:07	U	1
Total BTEX		<0.0003420	0.001980	0.0003420	mg/kg	12.09.2020 15:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	12.09.2020 15:07	
1,4-Difluorobenzene	540-36-3	87	%	70-130	12.09.2020 15:07	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-1-S-1-2-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-002 Date Collected: 12.07.2020 12:15

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1280**	25.3	4.34	mg/kg	12.08.2020 17:06		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.08.2020 15:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	**681**	50.0	15.0	mg/kg	12.08.2020 15:41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**221**	50.0	15.0	mg/kg	12.08.2020 15:41		1
Total TPH	PHC635	**902.0**	50.00	15.00	mg/kg	12.08.2020 15:41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-130	12.08.2020 15:41	
o-Terphenyl	84-15-1	136	%	70-130	12.08.2020 15:41	**

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-1-S-1-2-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-002	Date Collected:	12.07.2020 12:15		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.09.2020 10:00	% Moisture:	
Seq Number:	3144404			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	12.09.2020 15:28	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	12.09.2020 15:28	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	12.09.2020 15:28	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	12.09.2020 15:28	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	12.09.2020 15:28	U	1
Total Xylenes	1330-20-7	<0.0003440	0.002000	0.0003440	mg/kg	12.09.2020 15:28	U	1
Total BTEX		<0.0003440	0.002000	0.0003440	mg/kg	12.09.2020 15:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	12.09.2020 15:28	
1,4-Difluorobenzene	540-36-3	89	%	70-130	12.09.2020 15:28	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-2-S-O-.5-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-003 Date Collected: 12.07.2020 12:20

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.8**	4.99	0.857	mg/kg	12.08.2020 17:23		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.08.2020 12:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	12.08.2020 12:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	12.08.2020 12:47	U	1
Total TPH	PHC635	<15.00	50.00	15.00	mg/kg	12.08.2020 12:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	12.08.2020 12:47	
o-Terphenyl	84-15-1	118	%	70-130	12.08.2020 12:47	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-2-S-O-.5-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-003	Date Collected:	12.07.2020 12:20		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.09.2020 10:00	% Moisture:	
Seq Number:	3144404			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	12.09.2020 15:48	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	12.09.2020 15:48	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	12.09.2020 15:48	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	12.09.2020 15:48	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	12.09.2020 15:48	U	1
Total Xylenes	1330-20-7	<0.0003470	0.002020	0.0003470	mg/kg	12.09.2020 15:48	U	1
Total BTEX		<0.0003470	0.002020	0.0003470	mg/kg	12.09.2020 15:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	12.09.2020 15:48	
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.09.2020 15:48	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-2-S-1-2-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-004 Date Collected: 12.07.2020 12:25

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.5**	4.96	0.852	mg/kg	12.08.2020 17:28		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	12.08.2020 16:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	12.08.2020 16:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	12.08.2020 16:03	U	1
Total TPH	PHC635	<15.00	49.90	15.00	mg/kg	12.08.2020 16:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	12.08.2020 16:03	
o-Terphenyl	84-15-1	132	%	70-130	12.08.2020 16:03	**

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-2-S-1-2-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-004	Date Collected:	12.07.2020 12:25		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.09.2020 10:00	% Moisture:	
Seq Number:	3144404			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	12.09.2020 16:09	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	12.09.2020 16:09	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	12.09.2020 16:09	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	12.09.2020 16:09	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	12.09.2020 16:09	U	1
Total Xylenes	1330-20-7	<0.0003440	0.002000	0.0003440	mg/kg	12.09.2020 16:09	U	1
Total BTEX		<0.0003440	0.002000	0.0003440	mg/kg	12.09.2020 16:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	12.09.2020 16:09	
1,4-Difluorobenzene	540-36-3	90	%	70-130	12.09.2020 16:09	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-3-S-O-.5-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-005 Date Collected: 12.07.2020 12:34

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.9**	4.97	0.853	mg/kg	12.08.2020 17:34		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	12.08.2020 16:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	12.08.2020 16:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	12.08.2020 16:25	U	1
Total TPH	PHC635	<14.90	49.80	14.90	mg/kg	12.08.2020 16:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-130	12.08.2020 16:25	
o-Terphenyl	84-15-1	128	%	70-130	12.08.2020 16:25	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-3-S-O-.5-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-005	Date Collected:	12.07.2020 12:34		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.09.2020 10:00	% Moisture:	
Seq Number:	3144404			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	12.09.2020 16:30	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	12.09.2020 16:30	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	12.09.2020 16:30	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	12.09.2020 16:30	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	12.09.2020 16:30	U	1
Total Xylenes	1330-20-7	<0.0003440	0.002000	0.0003440	mg/kg	12.09.2020 16:30	U	1
Total BTEX		<0.0003440	0.002000	0.0003440	mg/kg	12.09.2020 16:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	12.09.2020 16:30	
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.09.2020 16:30	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-3-S-1-2-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-006 Date Collected: 12.07.2020 12:39

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.47**	5.00	0.858	mg/kg	12.08.2020 17:39		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	12.08.2020 16:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	12.08.2020 16:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	12.08.2020 16:47	U	1
Total TPH	PHC635	<14.90	49.80	14.90	mg/kg	12.08.2020 16:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	12.08.2020 16:47	
o-Terphenyl	84-15-1	135	%	70-130	12.08.2020 16:47	**

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-3-S-1-2-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-006	Date Collected:	12.07.2020 12:39		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.09.2020 10:00	% Moisture:	
Seq Number:	3144404			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	12.09.2020 16:50	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	12.09.2020 16:50	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	12.09.2020 16:50	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	12.09.2020 16:50	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	12.09.2020 16:50	U	1
Total Xylenes	1330-20-7	<0.0003460	0.002010	0.0003460	mg/kg	12.09.2020 16:50	U	1
Total BTEX		<0.0003460	0.002010	0.0003460	mg/kg	12.09.2020 16:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.09.2020 16:50	
1,4-Difluorobenzene	540-36-3	89	%	70-130	12.09.2020 16:50	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-3-S-3-3.75-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-007 Date Collected: 12.07.2020 12:48

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**25.4**	4.95	0.850	mg/kg	12.08.2020 17:56		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.08.2020 17:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	12.08.2020 17:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	12.08.2020 17:31	U	1
Total TPH	PHC635	<15.00	50.00	15.00	mg/kg	12.08.2020 17:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-130	12.08.2020 17:31	
o-Terphenyl	84-15-1	122	%	70-130	12.08.2020 17:31	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-3-S-3-3.75-201207**
Lab Sample Id: 680153-007

Matrix: Solid
Date Collected: 12.07.2020 12:48

Date Received: 12.07.2020 15:38

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3144404

Date Prep: 12.09.2020 10:00

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000389	0.00202	0.000389	mg/kg	12.09.2020 17:11	U	1
Toluene	108-88-3	<0.000460	0.00202	0.000460	mg/kg	12.09.2020 17:11	U	1
Ethylbenzene	100-41-4	<0.000570	0.00202	0.000570	mg/kg	12.09.2020 17:11	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00404	0.00102	mg/kg	12.09.2020 17:11	U	1
o-Xylene	95-47-6	<0.000348	0.00202	0.000348	mg/kg	12.09.2020 17:11	U	1
Total Xylenes	1330-20-7	<0.0003480	0.002020	0.0003480	mg/kg	12.09.2020 17:11	U	1
Total BTEX		<0.0003480	0.002020	0.0003480	mg/kg	12.09.2020 17:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.09.2020 17:11	
1,4-Difluorobenzene	540-36-3	90	%	70-130	12.09.2020 17:11	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-4-S-O-.5-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-008 Date Collected: 12.07.2020 12:58

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**213**	5.02	0.862	mg/kg	12.08.2020 18:01		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	12.08.2020 17:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**361**	49.9	15.0	mg/kg	12.08.2020 17:53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**162**	49.9	15.0	mg/kg	12.08.2020 17:53		1
Total TPH	PHC635	**523.0**	49.90	15.00	mg/kg	12.08.2020 17:53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	12.08.2020 17:53	
o-Terphenyl	84-15-1	131	%	70-130	12.08.2020 17:53	**

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-4-S-O-.5-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-008	Date Collected:	12.07.2020 12:58		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.09.2020 10:00	% Moisture:	
Seq Number:	3144404			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00187**	0.00200	0.000386	mg/kg	12.09.2020 17:32	J	1
Toluene	108-88-3	**0.00199**	0.00200	0.000457	mg/kg	12.09.2020 17:32	BJ	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	12.09.2020 17:32	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	12.09.2020 17:32	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	12.09.2020 17:32	U	1
Total Xylenes	1330-20-7	<0.0003450	0.002000	0.0003450	mg/kg	12.09.2020 17:32	U	1
Total BTEX		**0.003860**	0.002000	0.0003450	mg/kg	12.09.2020 17:32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	12.09.2020 17:32	
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.09.2020 17:32	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-4-S-1-2-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-009 Date Collected: 12.07.2020 13:03

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**566**	4.99	0.857	mg/kg	12.08.2020 18:07		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	12.08.2020 18:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	**59.6**	49.8	14.9	mg/kg	12.08.2020 18:14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	12.08.2020 18:14	U	1
Total TPH	PHC635	**59.60**	49.80	14.90	mg/kg	12.08.2020 18:14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-130	12.08.2020 18:14	
o-Terphenyl	84-15-1	125	%	70-130	12.08.2020 18:14	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-4-S-1-2-201207**
Matrix: Solid
Date Received:12.07.2020 15:38
Lab Sample Id: 680153-009
Date Collected: 12.07.2020 13:03

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5035A
Tech: KTL
Analyst: KTL
Date Prep: 12.10.2020 14:00
% Moisture:
Basis: Wet Weight
Seq Number: 3144553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	12.10.2020 19:19	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	12.10.2020 19:19	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	12.10.2020 19:19	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	12.10.2020 19:19	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	12.10.2020 19:19	U	1
Total Xylenes	1330-20-7	<0.0003470	0.002020	0.0003470	mg/kg	12.10.2020 19:19	U	1
Total BTEX		<0.0003470	0.002020	0.0003470	mg/kg	12.10.2020 19:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.10.2020 19:19	
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.10.2020 19:19	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-5-S-O-.5-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-010 Date Collected: 12.07.2020 13:57

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**216**	5.04	0.865	mg/kg	12.08.2020 18:13		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.08.2020 18:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	12.08.2020 18:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	12.08.2020 18:36	U	1
Total TPH	PHC635	<15.00	50.00	15.00	mg/kg	12.08.2020 18:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	12.08.2020 18:36	
o-Terphenyl	84-15-1	128	%	70-130	12.08.2020 18:36	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-5-S-O-.5-201207**
Matrix: Solid
Date Received:12.07.2020 15:38
Lab Sample Id: 680153-010
Date Collected: 12.07.2020 13:57

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5035A
Tech: KTL
Analyst: KTL
Date Prep: 12.10.2020 14:00
% Moisture:
Basis: Wet Weight
Seq Number: 3144553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	12.10.2020 19:40	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	12.10.2020 19:40	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	12.10.2020 19:40	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	12.10.2020 19:40	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	12.10.2020 19:40	U	1
Total Xylenes	1330-20-7	<0.0003440	0.002000	0.0003440	mg/kg	12.10.2020 19:40	U	1
Total BTEX		<0.0003440	0.002000	0.0003440	mg/kg	12.10.2020 19:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.10.2020 19:40	
4-Bromofluorobenzene	460-00-4	108	%	70-130	12.10.2020 19:40	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-5-S-1-2-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-011 Date Collected: 12.07.2020 14:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1270**	24.8	4.26	mg/kg	12.08.2020 18:18		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.08.2020 18:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	12.08.2020 18:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	12.08.2020 18:58	U	1
Total TPH	PHC635	<15.00	50.00	15.00	mg/kg	12.08.2020 18:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	12.08.2020 18:58	
o-Terphenyl	84-15-1	118	%	70-130	12.08.2020 18:58	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-5-S-1-2-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-011	Date Collected:	12.07.2020 14:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 14:00	% Moisture:	
Seq Number:	3144553			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	12.10.2020 20:00	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	12.10.2020 20:00	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	12.10.2020 20:00	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	12.10.2020 20:00	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	12.10.2020 20:00	U	1
Total Xylenes	1330-20-7	<0.0003440	0.002000	0.0003440	mg/kg	12.10.2020 20:00	U	1
Total BTEX		<0.0003440	0.002000	0.0003440	mg/kg	12.10.2020 20:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.10.2020 20:00	
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.10.2020 20:00	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-5-S-3-4-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-012 Date Collected: 12.07.2020 14:10

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1460**	25.0	4.29	mg/kg	12.08.2020 18:24	X	5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	12.08.2020 19:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	12.08.2020 19:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	12.08.2020 19:20	U	1
Total TPH	PHC635	<15.00	49.90	15.00	mg/kg	12.08.2020 19:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-130	12.08.2020 19:20	
o-Terphenyl	84-15-1	125	%	70-130	12.08.2020 19:20	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-5-S-3-4-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-012	Date Collected:	12.07.2020 14:10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 14:00	% Moisture:	
Seq Number:	3144553			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000389	0.00202	0.000389	mg/kg	12.10.2020 20:20	U	1
Toluene	108-88-3	<0.000460	0.00202	0.000460	mg/kg	12.10.2020 20:20	U	1
Ethylbenzene	100-41-4	<0.000570	0.00202	0.000570	mg/kg	12.10.2020 20:20	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00404	0.00102	mg/kg	12.10.2020 20:20	U	1
o-Xylene	95-47-6	<0.000348	0.00202	0.000348	mg/kg	12.10.2020 20:20	U	1
Total Xylenes	1330-20-7	<0.0003480	0.002020	0.0003480	mg/kg	12.10.2020 20:20	U	1
Total BTEX		<0.0003480	0.002020	0.0003480	mg/kg	12.10.2020 20:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.10.2020 20:20	
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.10.2020 20:20	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-5-S-5-5.25-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-013 Date Collected: 12.07.2020 14:18

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3440**	24.8	4.25	mg/kg	12.08.2020 18:40		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.08.2020 19:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	12.08.2020 19:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	12.08.2020 19:41	U	1
Total TPH	PHC635	<15.00	50.00	15.00	mg/kg	12.08.2020 19:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-130	12.08.2020 19:41	
o-Terphenyl	84-15-1	127	%	70-130	12.08.2020 19:41	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-5-S-5-5.25-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-013	Date Collected:	12.07.2020 14:18		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 14:00	% Moisture:	
Seq Number:	3144553			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	12.10.2020 21:43	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	12.10.2020 21:43	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	12.10.2020 21:43	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	12.10.2020 21:43	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	12.10.2020 21:43	U	1
Total Xylenes	1330-20-7	<0.0003420	0.001990	0.0003420	mg/kg	12.10.2020 21:43	U	1
Total BTEX		<0.0003420	0.001990	0.0003420	mg/kg	12.10.2020 21:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.10.2020 21:43	
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.10.2020 21:43	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-6-S-O-.5-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-014 Date Collected: 12.07.2020 14:28

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**150**	5.02	0.862	mg/kg	12.08.2020 18:46		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	12.08.2020 20:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	12.08.2020 20:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	12.08.2020 20:04	U	1
Total TPH	PHC635	<15.00	49.90	15.00	mg/kg	12.08.2020 20:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-130	12.08.2020 20:04	
o-Terphenyl	84-15-1	123	%	70-130	12.08.2020 20:04	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-6-S-O-.5-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-014	Date Collected:	12.07.2020 14:28		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 14:00	% Moisture:	
Seq Number:	3144553			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	12.10.2020 22:03	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	12.10.2020 22:03	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	12.10.2020 22:03	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	12.10.2020 22:03	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	12.10.2020 22:03	U	1
Total Xylenes	1330-20-7	<0.0003450	0.002000	0.0003450	mg/kg	12.10.2020 22:03	U	1
Total BTEX		<0.0003450	0.002000	0.0003450	mg/kg	12.10.2020 22:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.10.2020 22:03	
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.10.2020 22:03	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-6-S-1-2-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-015 Date Collected: 12.07.2020 14:31

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1000**	4.98	0.855	mg/kg	12.08.2020 19:03		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	12.08.2020 20:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	12.08.2020 20:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	12.08.2020 20:26	U	1
Total TPH	PHC635	<14.90	49.80	14.90	mg/kg	12.08.2020 20:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-130	12.08.2020 20:26	
o-Terphenyl	84-15-1	124	%	70-130	12.08.2020 20:26	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id:	**SB-6-S-1-2-201207**	Matrix:	Solid	Date Received:	12.07.2020 15:38
Lab Sample Id:	680153-015	Date Collected:	12.07.2020 14:31		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 14:00	% Moisture:	
Seq Number:	3144553			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	12.10.2020 22:24	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	12.10.2020 22:24	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	12.10.2020 22:24	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	12.10.2020 22:24	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	12.10.2020 22:24	U	1
Total Xylenes	1330-20-7	<0.0003470	0.002020	0.0003470	mg/kg	12.10.2020 22:24	U	1
Total BTEX		<0.0003470	0.002020	0.0003470	mg/kg	12.10.2020 22:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.10.2020 22:24	
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.10.2020 22:24	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-6-S-2.5-3-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-016 Date Collected: 12.07.2020 14:37

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30 % Moisture:

Seq Number: 3144281 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1350**	25.0	4.29	mg/kg	12.08.2020 19:08		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00 % Moisture:

Seq Number: 3144213 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	12.08.2020 20:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	12.08.2020 20:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	12.08.2020 20:47	U	1
Total TPH	PHC635	<15.00	50.00	15.00	mg/kg	12.08.2020 20:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-130	12.08.2020 20:47	
o-Terphenyl	84-15-1	129	%	70-130	12.08.2020 20:47	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **SB-6-S-2.5-3-201207** Matrix: Solid Date Received:12.07.2020 15:38

Lab Sample Id: 680153-016 Date Collected: 12.07.2020 14:37

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

Tech: KTL

Analyst: KTL Date Prep: 12.10.2020 14:00 % Moisture:

Seq Number: 3144553 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	12.10.2020 22:44	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	12.10.2020 22:44	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	12.10.2020 22:44	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	12.10.2020 22:44	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	12.10.2020 22:44	U	1
Total Xylenes	1330-20-7	<0.0003470	0.002020	0.0003470	mg/kg	12.10.2020 22:44	U	1
Total BTEX		<0.0003470	0.002020	0.0003470	mg/kg	12.10.2020 22:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.10.2020 22:44	
4-Bromofluorobenzene	460-00-4	112	%	70-130	12.10.2020 22:44	

eurofins | Environment Testing Xenco

Blank Summary 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **7716616-1-BLK** Matrix: SOLID

Lab Sample Id: **7716616-1-BLK**

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.08.2020 11:00

Seq Number: 3144213

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.00	50.00	15.00	mg/kg	12.08.2020 11:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.00	50.00	15.00	mg/kg	12.08.2020 11:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.00	50.00	15.00	mg/kg	12.08.2020 11:41	U	1

eurofins | Environment Testing Xenco

Blank Summary 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **7716633-1-BLK** Matrix: SOLID

Lab Sample Id: **7716633-1-BLK**

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

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 13:55

Seq Number: 3144275

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	12.08.2020 13:58	U	1

eurofins | Environment Testing Xenco

Blank Summary 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **7716649-1-BLK** Matrix: SOLID

Lab Sample Id: **7716649-1-BLK**

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

Tech: CHE

Analyst: CHE Date Prep: 12.08.2020 15:30

Seq Number: 3144281

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	12.08.2020 16:49	U	1

eurofins | Environment Testing Xenco

Blank Summary 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **7716787-1-BLK** Matrix: SOLID

Lab Sample Id: **7716787-1-BLK**

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

Tech: KTL

Analyst: KTL Date Prep: 12.09.2020 10:00

Seq Number: 3144404

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	12.09.2020 11:41	U	1
Toluene	108-88-3	0.00158	0.00200	0.000456	mg/kg	12.09.2020 11:41	BJ	1
Ethylbenzene	100-41-4	0.00148	0.00200	0.000565	mg/kg	12.09.2020 11:41	BJ	1
m,p-Xylenes	179601-23-1	0.00239	0.00400	0.00101	mg/kg	12.09.2020 11:41	BJ	1
o-Xylene	95-47-6	0.00163	0.00200	0.000344	mg/kg	12.09.2020 11:41	BJ	1

eurofins | Environment Testing Xenco

Blank Summary 680153

ARCADIS, Midland, TX

WVU-35

Sample Id: **7716873-1-BLK** Matrix: SOLID

Lab Sample Id: **7716873-1-BLK**

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

Tech: KTL

Analyst: KTL Date Prep: 12.10.2020 14:00

Seq Number: 3144553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	12.10.2020 16:55	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	12.10.2020 16:55	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	12.10.2020 16:55	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	12.10.2020 16:55	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	12.10.2020 16:55	U	1

eurofins | Environment Testing Xenco

Form 2 - Surrogate Recoveries

Project Name: WVU-35

Report Date: 12302020

Work Orders : 680153 **Project ID:** 60012136

Lab Batch #: 3144404 **Sample:** 7716787-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.09.2020 10:00 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0242	0.0300	81	70-130	
4-Bromofluorobenzene	0.0245	0.0300	82	70-130	

Lab Batch #: 3144404 **Sample:** 7716787-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.09.2020 10:20 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0247	0.0300	82	70-130	
4-Bromofluorobenzene	0.0203	0.0300	68	70-130	**

Lab Batch #: 3144404 **Sample:** 680062-009 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12.09.2020 10:41 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0242	0.0300	81	70-130	
4-Bromofluorobenzene	0.0182	0.0300	61	70-130	**

Lab Batch #: 3144404 **Sample:** 680062-009 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12.09.2020 11:01 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0241	0.0300	80	70-130	
4-Bromofluorobenzene	0.0149	0.0300	50	70-130	**

Lab Batch #: 3144404 **Sample:** 7716787-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.09.2020 11:41 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0256	0.0300	85	70-130	
4-Bromofluorobenzene	0.0198	0.0300	66	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.

eurofins | Environment Testing Xenco

Form 2 - Surrogate Recoveries

Project Name: WVU-35

Report Date: 12302020

Work Orders : 680153 **Project ID:** 60012136

Lab Batch #: 3144553 **Sample:** 7716873-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.10.2020 14:56 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	70-130	
4-Bromofluorobenzene	0.0304	0.0300	101	70-130	

Lab Batch #: 3144553 **Sample:** 7716873-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.10.2020 15:16 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0301	0.0300	100	70-130	

Lab Batch #: 3144553 **Sample:** 680540-001 S / MS **Batch:** 1 **Matrix:** Sludge

Units: mg/kg **Date Analyzed:** 12.10.2020 15:36 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0297	0.0300	99	70-130	

Lab Batch #: 3144553 **Sample:** 680540-001 SD / MSD **Batch:** 1 **Matrix:** Sludge

Units: mg/kg **Date Analyzed:** 12.10.2020 15:57 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	70-130	
4-Bromofluorobenzene	0.0314	0.0300	105	70-130	

Lab Batch #: 3144553 **Sample:** 7716873-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.10.2020 16:55 **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	0.0314	0.0300	105	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.

eurofins | Environment Testing Xenco

Form 2 - Surrogate Recoveries

Project Name: WVU-35

Report Date: 12302020

Work Orders : 680153 **Project ID:** 60012136

Lab Batch #: 3144213 **Sample:** 7716616-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.08.2020 11:41 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106.5	100.0	106	70-130	
o-Terphenyl	62.91	50.00	126	70-130	

Lab Batch #: 3144213 **Sample:** 7716616-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.08.2020 12:03 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126.5	100.0	126	70-130	
o-Terphenyl	64.13	50.00	128	70-130	

Lab Batch #: 3144213 **Sample:** 7716616-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.08.2020 12:25 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.89	100.0	96	70-130	
o-Terphenyl	50.29	50.00	101	70-130	

Lab Batch #: 3144213 **Sample:** 680153-003 S / MS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.08.2020 13:08 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103.5	99.70	104	70-130	
o-Terphenyl	55.06	49.90	110	70-130	

Lab Batch #: 3144213 **Sample:** 680153-003 SD / MSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.08.2020 13:30 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104.9	99.60	105	70-130	
o-Terphenyl	54.84	49.80	110	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.

QC Summary 680153

eurofins | Environment Testing Xenco

ARCADIS

WVU-35

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144275 — Matrix: Solid — Date Prep: 12.08.2020
MB Sample Id: 7716633-1-BLK — LCS Sample Id: 7716633-1-BKS — LCSD Sample Id: 7716633-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	257	103	258	103	90-110	0	20	mg/kg	12.08.2020 14:05	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144281 — Matrix: Solid — Date Prep: 12.08.2020
MB Sample Id: 7716649-1-BLK — LCS Sample Id: 7716649-1-BKS — LCSD Sample Id: 7716649-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	256	102	255	102	90-110	0	20	mg/kg	12.08.2020 16:55	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144275 — Matrix: Soil — Date Prep: 12.08.2020
Parent Sample Id: 680156-001 — MS Sample Id: 680156-001 S — MSD Sample Id: 680156-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4230	1240	5450	98	5580	109	90-110	2	20	mg/kg	12.08.2020 14:27	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144275 — Matrix: Soil — Date Prep: 12.08.2020
Parent Sample Id: 680159-007 — MS Sample Id: 680159-007 S — MSD Sample Id: 680159-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	66.3	250	322	102	319	101	90-110	1	20	mg/kg	12.08.2020 16:10	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144281 — Matrix: Solid — Date Prep: 12.08.2020
Parent Sample Id: 680153-002 — MS Sample Id: 680153-002 S — MSD Sample Id: 680153-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1280	1260	2620	106	2640	108	90-110	1	20	mg/kg	12.08.2020 17:11	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144281 — Matrix: Solid — Date Prep: 12.08.2020
Parent Sample Id: 680153-012 — MS Sample Id: 680153-012 S — MSD Sample Id: 680153-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1460	1250	2850	111	2800	107	90-110	2	20	mg/kg	12.08.2020 18:29	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

eurofins | Environment Testing Xenco

QC Summary 680153

ARCADIS

WVU-35

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3144213 — Matrix: Solid — Date Prep: 12.08.2020
MB Sample Id: 7716616-1-BLK — LCS Sample Id: 7716616-1-BKS — LCSD Sample Id: 7716616-1-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)	<15.00	1000	1132	113	923.6	92	70-130	20	20	mg/kg	12.08.2020 12:03	
Diesel Range Organics (DRO)	<15.00	1000	1154	115	1053	105	70-130	9	20	mg/kg	12.08.2020 12:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		126		96		70-130	%	12.08.2020 12:03
o-Terphenyl	126		128		101		70-130	%	12.08.2020 12:03

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3144213 — Matrix: Solid — Date Prep: 12.08.2020
MB Sample Id: 7716616-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.00	mg/kg	12.08.2020 11:41	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3144213 — Matrix: Solid — Date Prep: 12.08.2020
Parent Sample Id: 680153-003 — MS Sample Id: 680153-003 S — MSD Sample Id: 680153-003 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)	<14.96	997.0	962.8	97	923.0	93	70-130	4	20	mg/kg	12.08.2020 13:08	
Diesel Range Organics (DRO)	<14.96	997.0	1043	105	1067	107	70-130	2	20	mg/kg	12.08.2020 13:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		105		70-130	%	12.08.2020 13:08
o-Terphenyl	110		110		70-130	%	12.08.2020 13:08

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3144404 — Matrix: Solid — Date Prep: 12.09.2020
MB Sample Id: 7716787-1-BLK — LCS Sample Id: 7716787-1-BKS — LCSD Sample Id: 7716787-1-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	0.0810	81	0.0866	87	70-130	7	35	mg/kg	12.09.2020 10:00	
Toluene	<0.000456	0.100	0.0898	90	0.0959	96	70-130	7	35	mg/kg	12.09.2020 10:00	
Ethylbenzene	<0.000565	0.100	0.0858	86	0.0910	91	70-130	6	35	mg/kg	12.09.2020 10:00	
m,p-Xylenes	<0.00101	0.200	0.168	84	0.163	82	70-130	3	35	mg/kg	12.09.2020 10:00	
o-Xylene	<0.000344	0.100	0.0701	70	0.0707	71	70-130	1	35	mg/kg	12.09.2020 10:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		81		82		70-130	%	12.09.2020 10:00
4-Bromofluorobenzene	66	**	82		68	**	70-130	%	12.09.2020 10:00

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

QC Summary 680153

eurofins | Environment Testing Xenco

ARCADIS

WVU-35

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3144553 — Matrix: Solid — Date Prep: 12.10.2020
MB Sample Id: 7716873-1-BLK — LCS Sample Id: 7716873-1-BKS — LCSD Sample Id: 7716873-1-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	0.0929	93	0.101	101	70-130	8	35	mg/kg	12.10.2020 14:56	
Toluene	<0.000456	0.100	0.0885	89	0.0980	98	70-130	10	35	mg/kg	12.10.2020 14:56	
Ethylbenzene	<0.000565	0.100	0.0971	97	0.107	107	70-130	10	35	mg/kg	12.10.2020 14:56	
m,p-Xylenes	<0.00101	0.200	0.191	96	0.212	106	70-130	10	35	mg/kg	12.10.2020 14:56	
o-Xylene	<0.000344	0.100	0.0935	94	0.103	103	70-130	10	35	mg/kg	12.10.2020 14:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		101		103		70-130	%	12.10.2020 14:56
4-Bromofluorobenzene	105		101		100		70-130	%	12.10.2020 14:56

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3144404 — Matrix: Soil — Date Prep: 12.09.2020
Parent Sample Id: 680062-009 — MS Sample Id: 680062-009 S — MSD Sample Id: 680062-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000388	0.101	0.0954	94	0.0863	86	70-130	10	35	mg/kg	12.09.2020 10:41	
Toluene	<0.000459	0.101	0.103	102	0.0949	95	70-130	8	35	mg/kg	12.09.2020 10:41	
Ethylbenzene	<0.000569	0.101	0.0950	94	0.0870	87	70-130	9	35	mg/kg	12.09.2020 10:41	
m,p-Xylenes	<0.00102	0.202	0.171	85	0.149	75	70-130	14	35	mg/kg	12.09.2020 10:41	
o-Xylene	<0.000347	0.101	0.0756	75	0.0675	68	70-130	11	35	mg/kg	12.09.2020 10:41	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	81		80		70-130	%	12.09.2020 10:41
4-Bromofluorobenzene	61	**	50	**	70-130	%	12.09.2020 10:41

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3144553 — Matrix: Sludge — Date Prep: 12.10.2020
Parent Sample Id: 680540-001 — MS Sample Id: 680540-001 S — MSD Sample Id: 680540-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0793	79	0.0780	78	70-130	2	35	mg/kg	12.10.2020 15:36	
Toluene	<0.000457	0.100	0.0741	74	0.0725	73	70-130	2	35	mg/kg	12.10.2020 15:36	
Ethylbenzene	<0.000567	0.100	0.0776	78	0.0748	75	70-130	4	35	mg/kg	12.10.2020 15:36	
m,p-Xylenes	<0.00102	0.201	0.151	75	0.147	74	70-130	3	35	mg/kg	12.10.2020 15:36	
o-Xylene	<0.000346	0.100	0.0758	76	0.108	108	70-130	35	35	mg/kg	12.10.2020 15:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	12.10.2020 15:36
4-Bromofluorobenzene	99		105		70-130	%	12.10.2020 15:36

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

eurofins | Environment Testing Xenco

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 Xenco
4147 Green Briar Dr
Stafford TX 77477
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

eurofins | Environment Testing America

6900153

Client Information	Sampler: Carlos Grajeda / Justin Steinman	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-75751-20436.8
Client Contact: Justin Nixon	Phone: 619 85 8792	E-Mail: Sachin.Kudchadkar@Eurofinset.com	State of Origin: NM	Page: Page 1 of 2
Company: ARCADIS U.S., Inc.	PWSID:	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): Std			
State, Zip: TX, 79701	Compliance Project: Δ Yes Δ No			
Phone: 432-227-0266(Tel)	PO #:			Other:
Email: justin.nixon@arcadis.com	WO #:			
Project Name: WVU-35	Project #: 60012136			
Site: 30065038	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)	300_ Chloride	8015B_GRO/DRO/ORO	8021- BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N		
SB-1-S-0-.5-201207	12/07/20	1210	G	Solid							
SB-1-S-1-2-201207		1215		Solid							
SB-2-S-0-.5-201207		1220		Solid							
SB-2-S-1-2-201207		1225		Solid							
SB-3-S-0-.5-201207		1234		Solid							
SB-3-S-1-2-201207		1239		Solid							
SB-3-S-3-3.75-201207		1248		Solid							
SB-4-S-0-.5-201207		1258		Solid							
SB-4-S-1-2-201207		1303		Solid							
SB-5-S-0-.5-201207		1357		Solid							
SB-5-S-1-2-201207		1400		Solid							

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
	12/07/20 1800	Arcadis		12/07/20 1800	Arcadis
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	12/7/20 1538	Arcadis		12/07/20 1538	Xenco
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: 1.1 °C

Ver: 01/16/2019

Final 1.002

Page 49 of 51

Eurofins Xenco
4147 Green Briar Dr
Stafford TX 77477
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

6900153

eurofins | Environment Testing America

Client Information	Sampler: Justin Steinman	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-75751-20436.8
Client Contact: Justin Nixon	Phone: 619 851 8792	E-Mail: Sachin.Kudchadkar@Eurofinset.com	State of Origin: NM	Page: Page 2 of 3
Company: ARCADIS U.S., Inc.	PWSID:			Job #:
Address: 1004 North Big Spring Suite 121	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Midland	TAT Requested (days): std			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:
State, Zip: TX, 79701	Compliance Project: Δ Yes Δ No			
Phone: 432-227-0266(Tel)	PO #:			
Email: justin.nixon@arcadis.com	WO #:			
Project Name: WVU-05	Project #: 60012136			
Site: 30065038	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)	300_ Chloride	8015B_GRO/DRO/ORO	8021- BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N		
SB-5-S-3-4-201207	12/7/20	1418	G	Solid							
SB-5-S-5-5.25-201207		1418		Solid							
SB-6-S-0-.5-201207		1428		Solid							
SB-6-S-1-2-201207		1431		Solid							
SB-6-S-2.5-3-201207		1437		Solid							
				Solid							
				Solid							
QC	12/07/20			Solid							
				Solid							
				Solid							
				Solid							

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
	12/07/20 1500	Arcadis		12-7-20 1500	Arcadis
Carlos Cajeda	12/7/20 1538	Arcadis		12/07/20 1538	Xenco
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: 1.1°C

Ver: 01/16/2019

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: ARCADIS

Date/ Time Received: 12.07.2020 03.38.00 PM

Work Order #: 680153

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

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 12.08.2020
Brianna Teel

Checklist reviewed by: Sachin Kudchadkar Date: 12.08.2020
Sachin Kudchadkar

eurofins | Environment Testing Xenco

Analytical Report 680275

for

ARCADIS

Project Manager: Justin Nixon

WVV-35

60012136

12.14.2020

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)

eurofins | Environment Testing Xenco

12.14.2020

Project Manager: **Justin Nixon**
ARCADIS
1004 N. Big Spring St.
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **680275**
WVV-35
Project Address: NM 30065038

Justin Nixon:

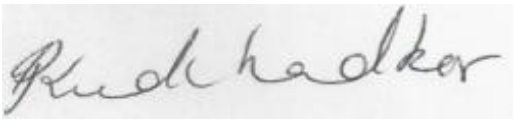
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 680275. All results being reported under this Report Number apply to the samples analyzed and properly identified 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. 680275 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

eurofins | Environment Testing Xenco

Sample Cross Reference 680275

ARCADIS, Midland, TX

WVV-35

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-7-S-O-.5-201208	S	12.08.2020 09:38		680275-001
SB-7-S-1-2-201208	S	12.08.2020 09:40		680275-002
SB-7-S-2.5-3-201208	S	12.08.2020 09:54		680275-003
SB-8-S-O-.5-201208	S	12.08.2020 09:59		680275-004
SB-8-S-1-2-201208	S	12.08.2020 10:03		680275-005
SB-8-S-3-4-201208	S	12.08.2020 10:14		680275-006
SB-9-S-O-.5-201208	S	12.08.2020 10:21		680275-007
SB-9-S-1-1.5-201208	S	12.08.2020 10:24		680275-008
SB-10-S-O-.5-201208	S	12.08.2020 10:30		680275-009
SB-10-S-1-2-201208	S	12.08.2020 10:32		680275-010
SB-10-S-3-4-201208	S	12.08.2020 10:50		680275-011
SB-10-S-5-6-201208	S	12.08.2020 10:57		680275-012
SB-11-S-O-.5-201208	S	12.08.2020 11:15		680275-013
SB-11-S-1-2-201208	S	12.08.2020 11:19		680275-014
SB-11-S-3-4-201208	S	12.08.2020 11:32		680275-015
SB-12-S-O-.5-201208	S	12.08.2020 11:40		680275-016
SB-12-S-1-2-201208	S	12.08.2020 11:50		680275-017
SB-12-S-3-4-201208	S	12.08.2020 12:02		680275-018
SB-12-S-5-6-201208	S	12.08.2020 12:11		680275-019

CASE NARRATIVE

eurofins | Environment Testing Xenco

Client Name: ARCADIS

Project Name: WVV-35

Project ID: *60012136*
Work Order Number(s): *680275*

Report Date: *12.14.2020*
Date Received: *12.08.2020*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3144412 TPH By SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7716759-1-BLK.

Batch: LBA-3144550 BTEX by EPA 8021B

Lab Sample ID 680275-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Benzene, Ethylbenzene, Toluene, m,p-Xylenes recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 680275-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013.

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

Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 680275-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-7-S-O-.5-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-001 Date Collected: 12.08.2020 09:38

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**70.1**	5.02	0.862	mg/kg	12.09.2020 16:00		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.09.2020 13:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.09.2020 13:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.09.2020 13:10	U	1
Total TPH	PHC635	<50.00	50.00	15.00	mg/kg	12.09.2020 13:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-130	12.09.2020 13:10	
o-Terphenyl	84-15-1	113	%	70-130	12.09.2020 13:10	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-7-S-O-.5-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-001	Date Collected:	12.08.2020 09:38		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	0.000381	mg/kg	12.10.2020 17:11	UXF	1
Toluene	108-88-3	<0.00198	0.00198	0.000451	mg/kg	12.10.2020 17:11	UXF	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000559	mg/kg	12.10.2020 17:11	UXF	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	0.00100	mg/kg	12.10.2020 17:11	UXF	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000341	mg/kg	12.10.2020 17:11	UXF	1
Total Xylenes	1330-20-7	<0.001980	0.001980	0.0003410	mg/kg	12.10.2020 17:11	U	1
Total BTEX		<0.001980	0.001980	0.0003410	mg/kg	12.10.2020 17:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	70-130	12.10.2020 17:11	
4-Bromofluorobenzene	460-00-4	88	%	70-130	12.10.2020 17:11	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-7-S-1-2-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-002 Date Collected: 12.08.2020 09:40

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**422**	4.98	0.855	mg/kg	12.09.2020 16:17		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.09.2020 14:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.09.2020 14:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.09.2020 14:16	U	1
Total TPH	PHC635	<49.90	49.90	15.00	mg/kg	12.09.2020 14:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	12.09.2020 14:16	
o-Terphenyl	84-15-1	114	%	70-130	12.09.2020 14:16	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-7-S-1-2-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-002	Date Collected:	12.08.2020 09:40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	0.000382	mg/kg	12.10.2020 17:32	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000452	mg/kg	12.10.2020 17:32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000560	mg/kg	12.10.2020 17:32	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	0.00101	mg/kg	12.10.2020 17:32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000342	mg/kg	12.10.2020 17:32	U	1
Total Xylenes	1330-20-7	<0.001980	0.001980	0.0003420	mg/kg	12.10.2020 17:32	U	1
Total BTEX		<0.001980	0.001980	0.0003420	mg/kg	12.10.2020 17:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	12.10.2020 17:32	
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.10.2020 17:32	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-7-S-2.5-3-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-003 Date Collected: 12.08.2020 09:54

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**754**	4.99	0.857	mg/kg	12.09.2020 16:23		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.09.2020 14:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.09.2020 14:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.09.2020 14:37	U	1
Total TPH	PHC635	<50.00	50.00	15.00	mg/kg	12.09.2020 14:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	12.09.2020 14:37	
o-Terphenyl	84-15-1	118	%	70-130	12.09.2020 14:37	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-7-S-2.5-3-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-003	Date Collected:	12.08.2020 09:54		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	12.10.2020 17:52	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	12.10.2020 17:52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	12.10.2020 17:52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	12.10.2020 17:52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	12.10.2020 17:52	U	1
Total Xylenes	1330-20-7	<0.001990	0.001990	0.0003430	mg/kg	12.10.2020 17:52	U	1
Total BTEX		<0.001990	0.001990	0.0003430	mg/kg	12.10.2020 17:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.10.2020 17:52	
1,4-Difluorobenzene	540-36-3	89	%	70-130	12.10.2020 17:52	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-8-S-O-.5-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-004 Date Collected: 12.08.2020 09:59

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**59.1**	5.05	0.867	mg/kg	12.09.2020 16:28		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.09.2020 14:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.09.2020 14:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.09.2020 14:59	U	1
Total TPH	PHC635	<49.90	49.90	15.00	mg/kg	12.09.2020 14:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	12.09.2020 14:59	
o-Terphenyl	84-15-1	118	%	70-130	12.09.2020 14:59	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-8-S-O-.5-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-004	Date Collected:	12.08.2020 09:59		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	0.000386	mg/kg	12.10.2020 21:42	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000457	mg/kg	12.10.2020 21:42	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000567	mg/kg	12.10.2020 21:42	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	12.10.2020 21:42	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	12.10.2020 21:42	U	1
Total Xylenes	1330-20-7	<0.002010	0.002010	0.0003460	mg/kg	12.10.2020 21:42	U	1
Total BTEX		<0.002010	0.002010	0.0003460	mg/kg	12.10.2020 21:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	12.10.2020 21:42	
4-Bromofluorobenzene	460-00-4	93	%	70-130	12.10.2020 21:42	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-8-S-1-2-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-005 Date Collected: 12.08.2020 10:03

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**564**	4.95	0.850	mg/kg	12.09.2020 16:34		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	12.09.2020 15:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	12.09.2020 15:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	12.09.2020 15:21	U	1
Total TPH	PHC635	<49.80	49.80	14.90	mg/kg	12.09.2020 15:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	12.09.2020 15:21	
o-Terphenyl	84-15-1	119	%	70-130	12.09.2020 15:21	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-8-S-1-2-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-005	Date Collected:	12.08.2020 10:03		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	12.10.2020 22:03	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	12.10.2020 22:03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	12.10.2020 22:03	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	12.10.2020 22:03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	12.10.2020 22:03	U	1
Total Xylenes	1330-20-7	<0.002020	0.002020	0.0003470	mg/kg	12.10.2020 22:03	U	1
Total BTEX		<0.002020	0.002020	0.0003470	mg/kg	12.10.2020 22:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	12.10.2020 22:03	
1,4-Difluorobenzene	540-36-3	86	%	70-130	12.10.2020 22:03	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-8-S-3-4-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-006 Date Collected: 12.08.2020 10:14

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1390**	4.95	0.850	mg/kg	12.09.2020 16:50		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.09.2020 15:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.09.2020 15:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.09.2020 15:45	U	1
Total TPH	PHC635	<49.90	49.90	15.00	mg/kg	12.09.2020 15:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-130	12.09.2020 15:45	
o-Terphenyl	84-15-1	110	%	70-130	12.09.2020 15:45	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-8-S-3-4-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-006	Date Collected:	12.08.2020 10:14		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	0.000386	mg/kg	12.10.2020 22:23	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000457	mg/kg	12.10.2020 22:23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000566	mg/kg	12.10.2020 22:23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	0.00102	mg/kg	12.10.2020 22:23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000345	mg/kg	12.10.2020 22:23	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	0.0003450	mg/kg	12.10.2020 22:23	U	1
Total BTEX		<0.002000	0.002000	0.0003450	mg/kg	12.10.2020 22:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.10.2020 22:23	
1,4-Difluorobenzene	540-36-3	90	%	70-130	12.10.2020 22:23	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-9-S-O-.5-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-007 Date Collected: 12.08.2020 10:21

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**164**	4.99	0.857	mg/kg	12.09.2020 16:56		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.09.2020 16:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.09.2020 16:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.09.2020 16:06	U	1
Total TPH	PHC635	<50.00	50.00	15.00	mg/kg	12.09.2020 16:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-130	12.09.2020 16:06	
o-Terphenyl	84-15-1	112	%	70-130	12.09.2020 16:06	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-9-S-O-.5-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-007	Date Collected:	12.08.2020 10:21		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	0.000382	mg/kg	12.10.2020 22:44	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000452	mg/kg	12.10.2020 22:44	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000560	mg/kg	12.10.2020 22:44	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	0.00101	mg/kg	12.10.2020 22:44	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000342	mg/kg	12.10.2020 22:44	U	1
Total Xylenes	1330-20-7	<0.001980	0.001980	0.0003420	mg/kg	12.10.2020 22:44	U	1
Total BTEX		<0.001980	0.001980	0.0003420	mg/kg	12.10.2020 22:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.10.2020 22:44	
1,4-Difluorobenzene	540-36-3	89	%	70-130	12.10.2020 22:44	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-9-S-1-1.5-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-008 Date Collected: 12.08.2020 10:24

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**370**	4.97	0.853	mg/kg	12.09.2020 17:01		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.09.2020 16:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.09.2020 16:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.09.2020 16:28	U	1
Total TPH	PHC635	<50.00	50.00	15.00	mg/kg	12.09.2020 16:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-130	12.09.2020 16:28	
o-Terphenyl	84-15-1	112	%	70-130	12.09.2020 16:28	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-9-S-1-1.5-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-008	Date Collected:	12.08.2020 10:24		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	12.10.2020 23:05	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000453	mg/kg	12.10.2020 23:05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000561	mg/kg	12.10.2020 23:05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	12.10.2020 23:05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000342	mg/kg	12.10.2020 23:05	U	1
Total Xylenes	1330-20-7	<0.001990	0.001990	0.0003420	mg/kg	12.10.2020 23:05	U	1
Total BTEX		<0.001990	0.001990	0.0003420	mg/kg	12.10.2020 23:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	70-130	12.10.2020 23:05	
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.10.2020 23:05	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-10-S-O-.5-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-009 Date Collected: 12.08.2020 10:30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**418**	5.03	0.864	mg/kg	12.09.2020 17:07		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.09.2020 16:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.09.2020 16:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.09.2020 16:50	U	1
Total TPH	PHC635	<49.90	49.90	15.00	mg/kg	12.09.2020 16:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-130	12.09.2020 16:50	
o-Terphenyl	84-15-1	110	%	70-130	12.09.2020 16:50	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-10-S-O-.5-201208**
Lab Sample Id: 680275-009

Matrix: Solid
Date Collected: 12.08.2020 10:30

Date Received: 12.08.2020 16:54

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3144550

Date Prep: 12.10.2020 13:00

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.10.2020 23:25	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.10.2020 23:25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.10.2020 23:25	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.10.2020 23:25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.10.2020 23:25	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	0.0003440	mg/kg	12.10.2020 23:25	U	1
Total BTEX		<0.002000	0.002000	0.0003440	mg/kg	12.10.2020 23:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.10.2020 23:25	
1,4-Difluorobenzene	540-36-3	87	%	70-130	12.10.2020 23:25	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-10-S-1-2-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-010 Date Collected: 12.08.2020 10:32

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1560**	25.0	4.29	mg/kg	12.09.2020 17:13		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.09.2020 17:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.09.2020 17:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.09.2020 17:12	U	1
Total TPH	PHC635	<49.90	49.90	15.00	mg/kg	12.09.2020 17:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	12.09.2020 17:12	
o-Terphenyl	84-15-1	111	%	70-130	12.09.2020 17:12	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-10-S-1-2-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-010	Date Collected:	12.08.2020 10:32		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	0.000389	mg/kg	12.10.2020 23:46	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000460	mg/kg	12.10.2020 23:46	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000570	mg/kg	12.10.2020 23:46	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	0.00102	mg/kg	12.10.2020 23:46	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000348	mg/kg	12.10.2020 23:46	U	1
Total Xylenes	1330-20-7	<0.002020	0.002020	0.0003480	mg/kg	12.10.2020 23:46	U	1
Total BTEX		<0.002020	0.002020	0.0003480	mg/kg	12.10.2020 23:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.10.2020 23:46	
1,4-Difluorobenzene	540-36-3	87	%	70-130	12.10.2020 23:46	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-10-S-3-4-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-011 Date Collected: 12.08.2020 10:50

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2210**	24.9	4.27	mg/kg	12.09.2020 17:18		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	12.09.2020 17:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	12.09.2020 17:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	12.09.2020 17:56	U	1
Total TPH	PHC635	<49.80	49.80	14.90	mg/kg	12.09.2020 17:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	12.09.2020 17:56	
o-Terphenyl	84-15-1	112	%	70-130	12.09.2020 17:56	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-10-S-3-4-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-011	Date Collected:	12.08.2020 10:50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	0.000386	mg/kg	12.11.2020 00:07	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000457	mg/kg	12.11.2020 00:07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000566	mg/kg	12.11.2020 00:07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	0.00102	mg/kg	12.11.2020 00:07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000345	mg/kg	12.11.2020 00:07	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	0.0003450	mg/kg	12.11.2020 00:07	U	1
Total BTEX		<0.002000	0.002000	0.0003450	mg/kg	12.11.2020 00:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.11.2020 00:07	
1,4-Difluorobenzene	540-36-3	88	%	70-130	12.11.2020 00:07	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-10-S-5-6-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-012 Date Collected: 12.08.2020 10:57

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1780**	25.1	4.31	mg/kg	12.09.2020 17:35		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.09.2020 18:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.09.2020 18:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.09.2020 18:17	U	1
Total TPH	PHC635	<50.00	50.00	15.00	mg/kg	12.09.2020 18:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	12.09.2020 18:17	
o-Terphenyl	84-15-1	108	%	70-130	12.09.2020 18:17	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-10-S-5-6-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-012	Date Collected:	12.08.2020 10:57		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	12.11.2020 00:27	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	12.11.2020 00:27	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	12.11.2020 00:27	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	12.11.2020 00:27	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	12.11.2020 00:27	U	1
Total Xylenes	1330-20-7	<0.002020	0.002020	0.0003470	mg/kg	12.11.2020 00:27	U	1
Total BTEX		<0.002020	0.002020	0.0003470	mg/kg	12.11.2020 00:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.11.2020 00:27	
1,4-Difluorobenzene	540-36-3	89	%	70-130	12.11.2020 00:27	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-11-S-O-.5-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-013 Date Collected: 12.08.2020 11:15

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.1**	4.99	0.857	mg/kg	12.09.2020 17:40		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.09.2020 18:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.09.2020 18:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.09.2020 18:39	U	1
Total TPH	PHC635	<49.90	49.90	15.00	mg/kg	12.09.2020 18:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-130	12.09.2020 18:39	
o-Terphenyl	84-15-1	116	%	70-130	12.09.2020 18:39	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-11-S-O-.5-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-013	Date Collected:	12.08.2020 11:15		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.10.2020 13:00	% Moisture:	
Seq Number:	3144550			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	0.000386	mg/kg	12.11.2020 00:48	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000457	mg/kg	12.11.2020 00:48	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000567	mg/kg	12.11.2020 00:48	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	12.11.2020 00:48	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	12.11.2020 00:48	U	1
Total Xylenes	1330-20-7	<0.002010	0.002010	0.0003460	mg/kg	12.11.2020 00:48	U	1
Total BTEX		<0.002010	0.002010	0.0003460	mg/kg	12.11.2020 00:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.11.2020 00:48	
1,4-Difluorobenzene	540-36-3	89	%	70-130	12.11.2020 00:48	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-11-S-1-2-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-014 Date Collected: 12.08.2020 11:19

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.33**	5.05	0.867	mg/kg	12.09.2020 17:57		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	12.09.2020 19:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	12.09.2020 19:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	12.09.2020 19:01	U	1
Total TPH	PHC635	<49.80	49.80	14.90	mg/kg	12.09.2020 19:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-130	12.09.2020 19:01	
o-Terphenyl	84-15-1	107	%	70-130	12.09.2020 19:01	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-11-S-1-2-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-014	Date Collected:	12.08.2020 11:19		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.11.2020 17:00	% Moisture:	
Seq Number:	3144696			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.12.2020 07:02	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.12.2020 07:02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.12.2020 07:02	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.12.2020 07:02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.12.2020 07:02	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	0.0003440	mg/kg	12.12.2020 07:02	U	1
Total BTEX		<0.002000	0.002000	0.0003440	mg/kg	12.12.2020 07:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.12.2020 07:02	
4-Bromofluorobenzene	460-00-4	124	%	70-130	12.12.2020 07:02	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-11-S-3-4-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-015 Date Collected: 12.08.2020 11:32

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.75**	5.05	0.867	mg/kg	12.09.2020 18:03		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.09.2020 19:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.09.2020 19:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.09.2020 19:23	U	1
Total TPH	PHC635	<50.00	50.00	15.00	mg/kg	12.09.2020 19:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	12.09.2020 19:23	
o-Terphenyl	84-15-1	114	%	70-130	12.09.2020 19:23	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-11-S-3-4-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-015	Date Collected:	12.08.2020 11:32		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.11.2020 17:00	% Moisture:	
Seq Number:	3144696			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	12.12.2020 07:22	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	12.12.2020 07:22	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	12.12.2020 07:22	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	12.12.2020 07:22	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	12.12.2020 07:22	U	1
Total Xylenes	1330-20-7	<0.002020	0.002020	0.0003470	mg/kg	12.12.2020 07:22	U	1
Total BTEX		<0.002020	0.002020	0.0003470	mg/kg	12.12.2020 07:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	12.12.2020 07:22	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.12.2020 07:22	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-12-S-O-.5-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-016 Date Collected: 12.08.2020 11:40

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**162**	4.95	0.850	mg/kg	12.09.2020 18:08		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.09.2020 19:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.09.2020 19:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.09.2020 19:44	U	1
Total TPH	PHC635	<50.00	50.00	15.00	mg/kg	12.09.2020 19:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	12.09.2020 19:44	
o-Terphenyl	84-15-1	116	%	70-130	12.09.2020 19:44	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-12-S-O-.5-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-016	Date Collected:	12.08.2020 11:40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.11.2020 17:00	% Moisture:	
Seq Number:	3144696			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	0.000389	mg/kg	12.12.2020 07:43	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000460	mg/kg	12.12.2020 07:43	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000570	mg/kg	12.12.2020 07:43	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	0.00102	mg/kg	12.12.2020 07:43	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000348	mg/kg	12.12.2020 07:43	U	1
Total Xylenes	1330-20-7	<0.002020	0.002020	0.0003480	mg/kg	12.12.2020 07:43	U	1
Total BTEX		<0.002020	0.002020	0.0003480	mg/kg	12.12.2020 07:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.12.2020 07:43	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.12.2020 07:43	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-12-S-1-2-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-017 Date Collected: 12.08.2020 11:50

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**624**	5.00	0.858	mg/kg	12.09.2020 18:14		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.09.2020 20:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.09.2020 20:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.09.2020 20:06	U	1
Total TPH	PHC635	<50.00	50.00	15.00	mg/kg	12.09.2020 20:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-130	12.09.2020 20:06	
o-Terphenyl	84-15-1	124	%	70-130	12.09.2020 20:06	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-12-S-1-2-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-017	Date Collected:	12.08.2020 11:50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.11.2020 17:00	% Moisture:	
Seq Number:	3144696			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	12.12.2020 09:05	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	12.12.2020 09:05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	12.12.2020 09:05	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	12.12.2020 09:05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.12.2020 09:05	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	0.0003440	mg/kg	12.12.2020 09:05	U	1
Total BTEX		<0.002000	0.002000	0.0003440	mg/kg	12.12.2020 09:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.12.2020 09:05	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.12.2020 09:05	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-12-S-3-4-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-018 Date Collected: 12.08.2020 12:02

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1440**	4.99	0.857	mg/kg	12.09.2020 18:19		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.09.2020 20:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.09.2020 20:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.09.2020 20:27	U	1
Total TPH	PHC635	<49.90	49.90	15.00	mg/kg	12.09.2020 20:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-130	12.09.2020 20:27	
o-Terphenyl	84-15-1	123	%	70-130	12.09.2020 20:27	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-12-S-3-4-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-018	Date Collected:	12.08.2020 12:02		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.11.2020 17:00	% Moisture:	
Seq Number:	3144696			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	12.12.2020 09:25	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	12.12.2020 09:25	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	12.12.2020 09:25	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	12.12.2020 09:25	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	12.12.2020 09:25	U	1
Total Xylenes	1330-20-7	<0.001990	0.001990	0.0003430	mg/kg	12.12.2020 09:25	U	1
Total BTEX		<0.001990	0.001990	0.0003430	mg/kg	12.12.2020 09:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.12.2020 09:25	
4-Bromofluorobenzene	460-00-4	112	%	70-130	12.12.2020 09:25	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **SB-12-S-5-6-201208** Matrix: Solid Date Received:12.08.2020 16:54

Lab Sample Id: 680275-019 Date Collected: 12.08.2020 12:11

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35 % Moisture:

Seq Number: 3144376 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1250**	5.04	0.865	mg/kg	12.09.2020 18:25		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00 % Moisture:

Seq Number: 3144412 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.09.2020 20:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.09.2020 20:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.09.2020 20:50	U	1
Total TPH	PHC635	<49.90	49.90	15.00	mg/kg	12.09.2020 20:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-130	12.09.2020 20:50	
o-Terphenyl	84-15-1	130	%	70-130	12.09.2020 20:50	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680275

ARCADIS, Midland, TX

WVV-35

Sample Id:	**SB-12-S-5-6-201208**	Matrix:	Solid	Date Received:	12.08.2020 16:54
Lab Sample Id:	680275-019	Date Collected:	12.08.2020 12:11		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.11.2020 17:00	% Moisture:	
Seq Number:	3144696			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.12.2020 09:46	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.12.2020 09:46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.12.2020 09:46	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.12.2020 09:46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.12.2020 09:46	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	0.0003440	mg/kg	12.12.2020 09:46	U	1
Total BTEX		<0.002000	0.002000	0.0003440	mg/kg	12.12.2020 09:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.12.2020 09:46	
4-Bromofluorobenzene	460-00-4	112	%	70-130	12.12.2020 09:46	

eurofins | Environment Testing Xenco

Blank Summary 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **7716733-1-BLK** Matrix: SOLID

Lab Sample Id: **7716733-1-BLK**

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

Tech: CHE

Analyst: CHE Date Prep: 12.09.2020 14:35

Seq Number: 3144376

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	12.09.2020 15:44	U	1

eurofins | Environment Testing Xenco

Blank Summary 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **7716759-1-BLK** Matrix: SOLID

Lab Sample Id: **7716759-1-BLK**

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.09.2020 10:00

Seq Number: 3144412

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.09.2020 12:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.09.2020 12:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.09.2020 12:05	U	1

eurofins | Environment Testing Xenco

Blank Summary 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **7716871-1-BLK** Matrix: SOLID

Lab Sample Id: **7716871-1-BLK**

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

Tech: KTL

Analyst: KTL Date Prep: 12.10.2020 13:00

Seq Number: 3144550

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.10.2020 16:49	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.10.2020 16:49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.10.2020 16:49	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.10.2020 16:49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.10.2020 16:49	U	1

eurofins | Environment Testing Xenco

Blank Summary 680275

ARCADIS, Midland, TX

WVV-35

Sample Id: **7716989-1-BLK** Matrix: SOLID

Lab Sample Id: **7716989-1-BLK**

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

Tech: KTL

Analyst: KTL Date Prep: 12.11.2020 17:00

Seq Number: 3144696

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.12.2020 04:18	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.12.2020 04:18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.12.2020 04:18	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.12.2020 04:18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.12.2020 04:18	U	1

eurofins | Environment Testing Xenco

Form 2 - Surrogate Recoveries

Project Name: WVV-35

Report Date: 12142020

Work Orders : 680275 **Project ID:** 60012136

Lab Batch #: 3144550 **Sample:** 7716871-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.10.2020 14:49 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	70-130	
4-Bromofluorobenzene	0.0291	0.0300	97	70-130	

Lab Batch #: 3144550 **Sample:** 7716871-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.10.2020 15:09 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	70-130	
4-Bromofluorobenzene	0.0292	0.0300	97	70-130	

Lab Batch #: 3144550 **Sample:** 680275-001 S / MS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.10.2020 15:30 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	70-130	
4-Bromofluorobenzene	0.0280	0.0300	93	70-130	

Lab Batch #: 3144550 **Sample:** 680275-001 SD / MSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.10.2020 15:51 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	70-130	
4-Bromofluorobenzene	0.0288	0.0300	96	70-130	

Lab Batch #: 3144550 **Sample:** 7716871-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.10.2020 16:49 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0239	0.0300	80	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	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.

eurofins | Environment Testing Xenco

Form 2 - Surrogate Recoveries

Project Name: WVV-35

Report Date: 12142020

Work Orders : 680275 **Project ID:** 60012136

Lab Batch #: 3144696 **Sample:** 7716989-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.12.2020 02:18 **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	0.0302	0.0300	101	70-130	

Lab Batch #: 3144696 **Sample:** 7716989-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.12.2020 02:39 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0301	0.0300	100	70-130	

Lab Batch #: 3144696 **Sample:** 680315-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12.12.2020 02:59 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	70-130	
4-Bromofluorobenzene	0.0319	0.0300	106	70-130	

Lab Batch #: 3144696 **Sample:** 680315-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12.12.2020 03:19 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0324	0.0300	108	70-130	

Lab Batch #: 3144696 **Sample:** 7716989-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.12.2020 04:18 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	70-130	
4-Bromofluorobenzene	0.0339	0.0300	113	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.

eurofins | Environment Testing Xenco

Form 2 - Surrogate Recoveries

Project Name: WVV-35

Report Date: 12142020

Work Orders : 680275 **Project ID:** 60012136

Lab Batch #: 3144412 **Sample:** 7716759-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.09.2020 12:05 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	100	123	70-130	
o-Terphenyl	71.7	50.0	143	70-130	**

Lab Batch #: 3144412 **Sample:** 7716759-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.09.2020 12:27 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-130	
o-Terphenyl	64.1	50.0	128	70-130	

Lab Batch #: 3144412 **Sample:** 7716759-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.09.2020 12:48 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-130	
o-Terphenyl	61.6	50.0	123	70-130	

Lab Batch #: 3144412 **Sample:** 680275-001 S / MS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.09.2020 13:32 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.8	115	70-130	
o-Terphenyl	56.9	49.9	114	70-130	

Lab Batch #: 3144412 **Sample:** 680275-001 SD / MSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12.09.2020 13:53 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	99.6	124	70-130	
o-Terphenyl	57.8	49.8	116	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.

eurofins | Environment Testing Xenco

QC Summary 680275

ARCADIS

WVV-35

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144376 — Matrix: Solid — Date Prep: 12.09.2020
MB Sample Id: 7716733-1-BLK — LCS Sample Id: 7716733-1-BKS — LCSD Sample Id: 7716733-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	254	102	256	102	90-110	1	20	mg/kg	12.09.2020 15:49	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144376 — Matrix: Solid — Date Prep: 12.09.2020
Parent Sample Id: 680275-001 — MS Sample Id: 680275-001 S — MSD Sample Id: 680275-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	70.1	251	320	100	322	100	90-110	1	20	mg/kg	12.09.2020 16:06	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3144376 — Matrix: Solid — Date Prep: 12.09.2020
Parent Sample Id: 680275-011 — MS Sample Id: 680275-011 S — MSD Sample Id: 680275-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2210	1250	3470	101	3370	93	90-110	3	20	mg/kg	12.09.2020 17:24	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3144412 — Matrix: Solid — Date Prep: 12.09.2020
MB Sample Id: 7716759-1-BLK — LCS Sample Id: 7716759-1-BKS — LCSD Sample Id: 7716759-1-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)	<50.0	1000	1150	115	1150	115	70-130	0	20	mg/kg	12.09.2020 12:27	
Diesel Range Organics (DRO)	<50.0	1000	1170	117	1180	118	70-130	1	20	mg/kg	12.09.2020 12:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		129		129		70-130	%	12.09.2020 12:27
o-Terphenyl	143	**	128		123		70-130	%	12.09.2020 12:27

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3144412 — Matrix: Solid — Date Prep: 12.09.2020
MB Sample Id: 7716759-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.09.2020 12:05	

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

eurofins | Environment Testing Xenco

QC Summary 680275

ARCADIS

WVV-35

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3144412 — Matrix: Solid — Date Prep: 12.09.2020
Parent Sample Id: 680275-001 — MS Sample Id: 680275-001 S — MSD Sample Id: 680275-001 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)	<49.9	998	1060	106	1090	109	70-130	3	20	mg/kg	12.09.2020 13:32	
Diesel Range Organics (DRO)	<49.9	998	1150	115	1180	118	70-130	3	20	mg/kg	12.09.2020 13:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		124		70-130	%	12.09.2020 13:32
o-Terphenyl	114		116		70-130	%	12.09.2020 13:32

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3144550 — Matrix: Solid — Date Prep: 12.10.2020
MB Sample Id: 7716871-1-BLK — LCS Sample Id: 7716871-1-BKS — LCSD Sample Id: 7716871-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0930	93	0.0989	99	70-130	6	35	mg/kg	12.10.2020 14:49	
Toluene	<0.00200	0.100	0.103	103	0.107	107	70-130	4	35	mg/kg	12.10.2020 14:49	
Ethylbenzene	<0.00200	0.100	0.0985	99	0.0993	99	70-130	1	35	mg/kg	12.10.2020 14:49	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.199	100	70-130	1	35	mg/kg	12.10.2020 14:49	
o-Xylene	<0.00200	0.100	0.0954	95	0.0966	97	70-130	1	35	mg/kg	12.10.2020 14:49	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	80		89		92		70-130	%	12.10.2020 14:49
4-Bromofluorobenzene	94		97		97		70-130	%	12.10.2020 14:49

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3144696 — Matrix: Solid — Date Prep: 12.11.2020
MB Sample Id: 7716989-1-BLK — LCS Sample Id: 7716989-1-BKS — LCSD Sample Id: 7716989-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0900	90	0.0979	98	70-130	8	35	mg/kg	12.12.2020 02:18	
Toluene	<0.00200	0.100	0.0871	87	0.0958	96	70-130	10	35	mg/kg	12.12.2020 02:18	
Ethylbenzene	<0.00200	0.100	0.0938	94	0.104	104	70-130	10	35	mg/kg	12.12.2020 02:18	
m,p-Xylenes	<0.00400	0.200	0.188	94	0.207	104	70-130	10	35	mg/kg	12.12.2020 02:18	
o-Xylene	<0.00200	0.100	0.0928	93	0.103	103	70-130	10	35	mg/kg	12.12.2020 02:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		102		102		70-130	%	12.12.2020 02:18
4-Bromofluorobenzene	113		101		100		70-130	%	12.12.2020 02:18

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

QC Summary 680275

eurofins | Environment Testing Xenco

ARCADIS

WVV-35

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3144550 Matrix: Solid Date Prep: 12.10.2020
Parent Sample Id: 680275-001 MS Sample Id: 680275-001 S MSD Sample Id: 680275-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.102	102	0.00598	6	70-130	178	35	mg/kg	12.10.2020 15:30	XF
Toluene	<0.00200	0.0998	0.0921	92	0.00597	6	70-130	176	35	mg/kg	12.10.2020 15:30	XF
Ethylbenzene	<0.00200	0.0998	0.0790	79	0.00422	4	70-130	180	35	mg/kg	12.10.2020 15:30	XF
m,p-Xylenes	<0.00399	0.200	0.144	72	0.00746	4	70-130	180	35	mg/kg	12.10.2020 15:30	XF
o-Xylene	<0.00200	0.0998	0.0663	66	0.00386	4	70-130	178	35	mg/kg	12.10.2020 15:30	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		90		70-130	%	12.10.2020 15:30
4-Bromofluorobenzene	93		96		70-130	%	12.10.2020 15:30

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3144696 Matrix: Soil Date Prep: 12.11.2020
Parent Sample Id: 680315-001 MS Sample Id: 680315-001 S MSD Sample Id: 680315-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00149	0.101	0.0620	60	0.0719	71	70-130	15	35	mg/kg	12.12.2020 02:59	X
Toluene	0.00289	0.101	0.0582	55	0.0707	68	70-130	19	35	mg/kg	12.12.2020 02:59	X
Ethylbenzene	0.00123	0.101	0.0574	56	0.0693	68	70-130	19	35	mg/kg	12.12.2020 02:59	X
m,p-Xylenes	0.00138	0.202	0.112	55	0.135	67	70-130	19	35	mg/kg	12.12.2020 02:59	X
o-Xylene	0.000667	0.101	0.0562	55	0.0810	81	70-130	36	35	mg/kg	12.12.2020 02:59	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		70-130	%	12.12.2020 02:59
4-Bromofluorobenzene	106		108		70-130	%	12.12.2020 02:59

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

eurofins | Environment Testing Xenco

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 Xenco
4147 Green Briar Dr
Stafford TX 77477
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

eurofins | Environment Testing America

6800275

Client Information	Sampler: J. Steinmann	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-75751-20436.8
Client Contact: Justin Nixon	Phone: 619 8518792	E-Mail: Sachin.Kudchadkar@Eurofinset.com	State of Origin: NM	Page: Page 1 a 2
Company: ARCADIS U.S., Inc.	PWSID:	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): Std			
State, Zip: TX, 79701	Compliance Project: Δ Yes Δ No			
Phone: 432-227-0266(Tel)	PO #:			Other:
Email: justin.nixon@arcadis.com	WO #:			
Project Name: WVU-35	Project #: 60012136			
Site: 30065038	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)	300_ Chloride	8015B_GRO/DRO/ORO	8021- BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N		
SB-7-S-0-.5-201208	12/08/20	0938	G	Solid						1	
SB-7-S-1-2-201208		0940		Solid							
SB-7-S-2.5-3-20128		0954		Solid							
SB-8-S-0-.5-201208		0959		Solid							
SB-8-S-1-2-201208		1003		Solid							
SB-8-S-3-4-201208		1014		Solid							
SB-9-S-0-.5-201208		1021		Solid							
SB-9-S-1-1.5-201208		1024		Solid							
SB-10-S-0-.5-201208		1030		Solid							
SB-10-S-1-2-201208		1032		Solid							
SB-10-S-3-4-201208		1050		Solid							

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
	12/08/20 1339	Arcadis		12-8-20 1340	Arcadis
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	12/8/20 1654	Arcadis		12/8/20 1654	Xenco
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: 2.2/2.7 IR8

Ver: 01/16/2019

Final 1.000

Page 54 of 56

Eurofins Xenco
4147 Green Briar Dr
Stafford TX 77477
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

680275

eurofins | Environment Testing America

Client Information	Sampler: J. Steinmann	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-75751-20436.8
Client Contact: Justin Nixon	Phone: 619 851 8792	E-Mail: Sachin.Kudchadkar@Eurofinset.com	State of Origin: NM	Page: Page 2 of 2
Company: ARCADIS U.S., Inc.	PWSID:	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): Std			
State, Zip: TX, 79701	Compliance Project: Δ Yes Δ No			
Phone: 432-227-0266(Tel)	PO #:			Other:
Email: justin.nixon@arcadis.com	WO #:			
Project Name: GWU-35	Project #: 60012136			
Site: 30065038	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)	300_ Chloride	8015B_GRO/DRO/ORO	8021- BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N		
SB-10-S-5-6-201208	12/8/20	1057	G	Solid						1	
SB-11-S-0-.5-201208		1115		Solid							
SB-11-S-1-2-201208		1119		Solid							
SB-11-S-3-4-201208		1132		Solid							
~~SB-11-S~~				Solid							
SB-12-S-0-.5-201208	12/8/20	1140	G	Solid							
SB-12-S-1-2-201208		1150		Solid							
SB-12-S-3-4-201208		1202		Solid							
SB-12-S-5-6-201208		1211		Solid							
	12/08			Solid							
				Solid							

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: 12/08/20 1339	Company: Arcadis	Received by: Carlos Grajeda	Date/Time: 12-8-20 1340	Company: Arcadis
Relinquished by: Carlos Grajeda	Date/Time: 12/8/20 1654	Company: Arcadis	Received by:	Date/Time: 12/8/20 1654	Company: XENCO
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: 2.2/2.7 IR8

Ver: 01/16/2019

Final 1.000

Page 55 of 56

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: ARCADIS

Date/ Time Received: 12.08.2020 04.54.00 PM

Work Order #: 680275

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

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.7
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 12.09.2020

Brianna Teel

Checklist reviewed by: Sachin Kudchadkar Date: 12.11.2020

Sachin Kudchadkar

Appendix D

Photographic Log

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WVU-35	Lea County, NM	1RP-1794

Photo No.	Date:
1	12/07/2020

Direction Photo Taken:

Facing West

Description:

Spill Area

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WVU-35	Lea County, NM	1RP-1794

Photo No.	Date:
2	12/07/2020

Direction Photo Taken:

Facing West

Description:

North side of spill area

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WVU-35	Lea County, NM	1RP-1794

Photo No.	Date:
3	12/07/2020

Direction Photo Taken:

Facing West

Description:

Steel line on east side

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WVU-35	Lea County, NM	1RP-1794

Photo No.	Date:
4	12/07/2020

Direction Photo Taken:

Facing Southwest

Description:

Valve box and buried line trace

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WVU-35	Lea County, NM	1RP-1794

Photo No.	Date:
5	12/07/2020

Direction Photo Taken:

Facing East

Description:

6” poly line

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WVU-35	Lea County, NM	1RP-1794

Photo No.	Date:
6	12/07/2020

Direction Photo Taken:

Facing West

Description:

Looking out from the wallow

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WVU-35	Lea County, NM	1RP-1794

Photo No.	Date:
7	12/07/2020

Direction Photo Taken:

Facing Southwest

Description:

Release area

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WVU-35	Lea County, NM	1RP-1794

Photo No.	Date:
8	12/07/2020

Direction Photo Taken:

Facing East

Description:

Wallow and spill area

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WVU-35	Lea County, NM	1RP-1794

Photo No.	Date:
9	12/07/2020

Direction Photo Taken:

Facing South

Description:

Sampling area

Appendix E

Revised C-141 Form 1RP-1794

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	NCOH0805931745
District RP	1RP-1794
Facility ID	fCOH0805931519
Application ID	NA

Release Notification

Responsible Party

Responsible Party: Chevron USA Inc	OGRID: 4323
Contact Name: Armando Martinez	Contact Telephone: 505-690-5408
Contact email: amarti@chevron.com	Incident # *(assigned by OCD)* NCOH0805931745
Contact mailing address:	

Location of Release Source

Latitude 32.785800 Longitude -103.548900
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: West Vacuum Unit #35	Site Type: Water Transfer Line
Date Release Discovered: 02/26/2008	API# *(if applicable):* 30-025-02208

Unit Letter	Section	Township	Range	County
N	34	17S	34E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private

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):	Volume Recovered (bbls):
☒ Produced Water	Volume Released (bbls): 80	Volume Recovered (bbls): 50
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release: A 6” poly produced water transfer line developed a split running along the length of the body on the pipe.		

State of New Mexico
Oil Conservation Division

Incident ID	NCOH0805931745
District RP	1RP-1794
Facility ID	fCOH0805931519
Application ID	NA

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 February 27, 2008.**	

Incident ID	NCOH0805931745
District RP	1RP-1794
Facility ID	fCOH0805931519
Application ID	NA

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?	95 (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: **0-50 feet bgs**
Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release: **None identified.**
Boring or excavation logs: Soil **boring logs attached.**
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	NCOH0805931745
District RP	1RP-1794
Facility ID	fCOH0805931519
Application ID	NA

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: Environmental Project Manager

Signature:_____ _____ Date: 04/19//21_____

email: ____ amarti@chevron.com _____ Telephone: 505-690-

5408_____

OCD Only

Received by: _____ Date: _____

Arcadis U.S., Inc.
10205 Westheimer Road, Suite 800
Houston
Texas 77042
Phone: 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 52934

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 52934
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Submitted report accepted as information only. Proceed with additional delineation and workplan development. Submit work plan via the OCD permitting portal by 6/9/2023.	3/8/2023