Armando Martinez
Operations Lead, Portfolio Operations Central

July 27, 2021

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

Re: 2021 Soil Assessment Report – WDDU 46
Case No. 1RP-2163
Lea County, New Mexico

Dear Bradford Billings:

Chevron Environmental Management Company (CEMC) submits herein the *2021 Soil Assessment Report* for 1RP-2163, WDDU 46. The Site is located approximately 7.51 miles northeast of Jal, in Unit A, Section 31, Township 24 South, Range 38 East, Lea County, New Mexico. The Report was prepared by Arcadis U.S., Inc. (Arcadis), on behalf of CEMC. Based on the 2021 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 TPH and chloride impacts in soil at the Site.

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. 2021 Soil Assessment Report – WDDU 46

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

2021 Soil Assessment Report

WDDU 46
NMOCD Case No. 1RP-2163

July 2021

2021 Soil Assessment Report

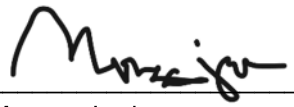
WDDU 46
NMOCD Case No. 1RP-2163

July 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:
30065054



Morgan Jordan
Task Manager

Scott Foord, PG
Certified Project Manager

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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 WDDU 46 (Site).

2 Project Summary

The Site is located approximately 7.51 miles northeast of Jal, in Unit A, Section 31, Township 24 South, Range 38 East, Lea County, New Mexico. A site location map is included as **Figure 1**.

On April 3, 2009, a 2-inch diameter IPC connection from the Water Injection Station failed releasing approximately 55 barrels (bbls) of produced water. The Initial C-141 Form stated that after isolating and repairing the leak a vacuum truck recovered approximately 10 bbls of produced water. According to the New Mexico Office of the State Engineers (NMOSE) database, there is a water well approximately 1.0 mile west of the Site with a depth to groundwater of approximately 82 feet below ground surface (bgs). The Initial C-141 Form for this release was submitted to the New Mexico Oil Conservation Division (NMOCD) on April 17, 2009 and approved by the NMOCD on April 21, 2009. The release was assigned remediation permit number 1RP-2163. The Initial C-141 Form for this release is included in **Appendix A**.

3 2021 Soil Assessment

On January 25 - 27, 2021, Arcadis personnel collected soil samples from 15 locations (SB-1 through SB-15) 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-2163. The soil samples were collected with a hand auger at depths ranging from the surface to approximately 4 feet (ft) below ground surface (bgs). Hand auger refusal was encountered within all boring locations. Each boring location was backfilled with the remaining soil cuttings. 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 advanced deeper than 2 ft bgs are included in **Appendix B**. Soil sample locations are presented on **Figure 2**. A photograph log is presented in **Appendix C**. Sample containers (4 oz. soil jars) were supplied by Eurofins Xenco Laboratories, and 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 range organic (TPH-GRO) by USEPA Method 8015;
- TPH as diesel range organic (TPH-DRO) by USEPA Method 8015;
- TPH as motor oil range organic (TPH-MRO) by USEPA Method 8015; and
- Chloride by USEPA Method 300.

4 Soil Analytical Results

The soil analytical results were compared to the revised New Mexico Administration Code (NMAC) screening levels for BTEX, TPH, and chloride for depth to groundwater between 51-100 ft 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 D**. The soil analytical map is presented in **Figure 3**.

4.1 BTEX

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

4.2 TPH

- TPH (GRO + DRO) concentrations were reported above the NMAC standard of 1,000 mg/kg at one sample location (SB-3):
    - SB-3
        - (3– 4 ft) at 5,720 mg/kg
- Total TPH (GRO + DRO + MRO) concentrations were reported above the NMAC standard of 2,500 mg/kg at one sample location (SB-3):
    - SB-3
        - (3– 4 ft) at 7,010 mg/kg

4.3 Chloride

- Chloride concentrations were reported below the revised Rule 19.15.29 screening limit of 10,000 mg/kg at all sample locations. However, concentrations did exceed the revised Rule (19.15.29.13) restoration screening criteria of 600 mg/kg at eight sample locations (SB-1, SB-3, SB-4, SB-5, SB-10, SB-12, SB-14, and SB-15).
    - SB-1
        - (0 – 0.5 ft) at 4,090 mg/kg
    - SB-3
        - (0 – 0.5 ft) at 5,250 mg/kg
        - (1 –2 ft) at 1,350 mg/kg
        - (3 – 4 ft) at 1,320 mg/kg
    - SB-4
        - (0 – 0.5 ft) at 8,300 mg/kg
        - (1 – 1.25 ft) at 1,360 mg/kg
    - SB-5

- (0 – 0.5 ft) at 7,300 mg/kg
- (1 – 1.25 ft) at 928 mg/kg

- SB-10
  - (0 – 0.5 ft) at 3,420 mg/kg
  - (1 – 1.5 ft) at 1,600 mg/kg
- SB-12
  - (0 – 0.5 ft) at 2,150 mg/kg
- SB-14
  - (1 – 1.25 ft) at 959 mg/kg
- SB-15
  - (1 – 1.75 ft) at 772 mg/kg

5 Conclusion

Analytical results associated with the recent assessment activities indicate that concentrations of TPH (GRO + DRO) above the NMAC standard of 1,000 mg/kg and Total TPH above the NMAC standard of 2,500 mg/kg for sites with depth to groundwater 51-100 ft bgs are present in the vicinity of SB-3, and concentrations of chloride are above the restoration screening criteria of 600 mg/kg within the top 4 ft bgs of the soil column are present in surface and shallow soil in the vicinity of SB-1, SB-3, SB-4, SB-5, SB-10, SB-12, SB-14, and SB-15. 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
2021 Soil Analytical Results
Chevron Environmental Management Company
WDDU 46
Lea County, New Mexico

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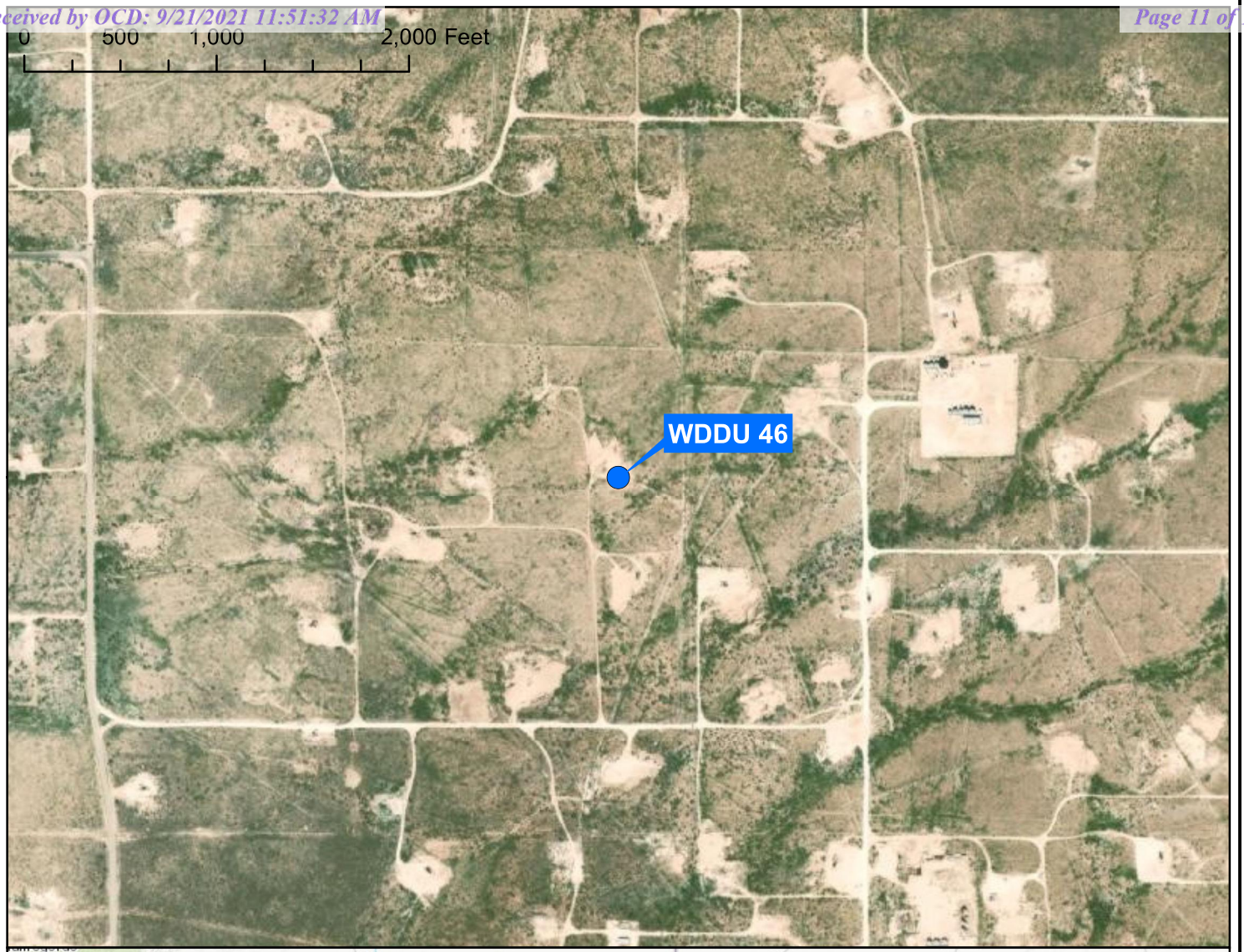
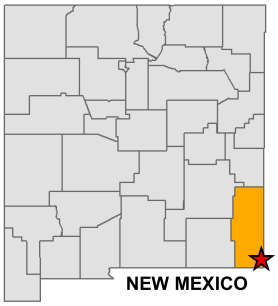
Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	TPH-GRO	TPH-DRO	Total GRO/DRO	TPH-MRO	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			**10**	**--**	**--**	**--**	**50**	**--**	**--**	**1,000**	**--**	**2,500**	**10,000**
Restoration Requirements													**600***
SB-1	0-0.5'	01/25/21	0.0598	0.0504	0.00372	0.0105	0.124	15.2 J	165	180.2 J	59.0	239	**4,090**
SB-2	0-0.5'	01/25/21	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	<15.0	29.3 J	29.3 J	<15.0	29.3 J	89.9
	1'-2'	01/25/21	<0.000383	<0.000454	<0.000563	<0.000343	<0.000343	<15.0	38.4 J	38.4 J	<15.0	38.4 J	404
SB-3	0-0.5'	01/25/21	0.0316	0.0324	0.0025	0.00724	0.0737	15.7 J	33.6 J	49.3 J	<15.0	49.3 J	**5,250**
	1'-2'	01/25/21	0.0171	0.0203	0.00162 J	0.0049	0.0439	<15.0	29.1 J	29.1 J	<15.0	29.1 J	**1,350**
	3'-4'	01/25/21	0.00898	0.00796	<0.000563	<0.000343	0.0169	<74.8	5,720	**5,720**	1,290	**7,010**	**1,320**
SB-4	0-0.5'	01/25/21	0.0148	0.0176	<0.000561	0.00431	0.0367	<14.9	97.0	97.0	51.2	148	**8,300**
	1'-1.25'	01/25/21	0.0154	0.0243	0.00263	0.00872	0.0511	<15.0	36.1 J	36.1 J	<15.0	36.1 J	**1,360**
SB-5	0-0.5'	01/26/21	0.00179 J	0.00465	0.00148 J	0.00723	0.0152	17.8 J	16.9 J	34.7 J	<15.0	34.7 J	**7,300**
	1'-1.25'	01/26/21	0.00156 J	0.00442	0.00266	0.0198	0.0285	17.6 J	<14.9	17.6 J	<14.9	17.6 J	**928**
SB-6	0-0.5'	01/26/21	0.00123 J	0.0021	0.000699 J	0.00227	0.0063	16.4 J	<15.0	16.4 J	<15.0	16.4 J	15.8
	1'-1.5'	01/26/21	0.00172 J	0.00537	0.00178 J	0.00927	0.0181	16.0 J	<14.9	16.0 J	<14.9	16.0 J	13.6
DUP 1 (SB-6)	1'-1.5'	01/26/21	0.00167 J	0.00548	0.00144 J	0.00668	0.0153	16.0 J	<15.0	16.0 J	<15.0	16.0 J	12.6
SB-7	0-0.5'	01/26/21	0.00190 J	0.00422	0.00242	0.00892	0.0175	18.3 J	<15.0	18.3 J	<15.0	18.3 J	20
SB-8	0-0.5'	01/26/21	0.00191 J	0.00382	0.00473	0.0377	0.0481	18.6 J	<14.9	18.6 J	<14.9	18.6 J	429
SB-9	0-0.5'	01/26/21	<0.000384	0.00173 J	<0.000564	0.00157 J	0.0033	15.5 J	389	404.5 J	129	534	12.7
	1'-1.25'	01/26/21	<0.000386	0.00212	<0.000566	0.00188 J	0.004	22.1 J	<15.0	22.1 J	<15.0	22.1 J	26.4
SB-10	0-0.5'	01/26/21	<0.000386	0.00218	<0.000567	0.00161 J	0.00379	18.3 J	42.5 J	60.8 J	18.7 J	79.5	**3,420**
	1'-1.5'	01/26/21	<0.000383	0.00214	0.000626 J	0.00201	0.00477	15.3 J	21.3 J	36.6 J	<15.0	36.6 J	**1,600**
SB-11	0-0.5'	01/27/21	<0.000384	<0.000455	<0.000564	0.00186 J	0.00186 J	<14.9	42.4 J	42.4 J	16.9 J	59.3	356
	1'-1.25'	01/27/21	<0.000386	0.000472 J	<0.000567	<0.000346	0.000472 J	<15.0	18.1 J	18.1 J	<15.0	18.1 J	459
SB-12	0-0.5'	01/27/21	<0.000387	<0.000458	<0.000568	<0.000346	<0.000346	<15.0	19.6 J	19.6 J	<15.0	19.6 J	**2,150**
SB-13	0-0.5'	01/27/21	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	<15.0	62.7	62.7	28.8 J	91.5	220
SB-14	0-0.5'	01/27/21	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	<15.0	16.9 J	16.9 J	<15.0	16.9 J	59.5
	1'-1.25'	01/27/21	<0.000386	<0.000457	<0.000567	<0.000346	<0.000346	<15.0	<15.0	<30.0	<15.0	<15.0	**959**
SB-15	0-0.5'	01/27/21	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	<15.0	<15.0	<30.0	<15.0	<15.0	45.8
	1'-1.75'	01/27/21	<0.000386	<0.000457	<0.000567	<0.000346	<0.000346	<14.9	<14.9	<29.8	<14.9	<14.9	**772**

Notes:
BOLD = Analytes exceeding NMAC Standards or Restoration Requirements for Chlorides
J: Result is less than the Reporting Limit but greater than or equal to the MDL and the concentration is an approximate value
'<' indicates the analyte was not detected at or above the Method Detection Limit (MDL)
" ' " : Indicates feet
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 DRO: Total Petroleum Hydrocarbon Diesel Range Organics
TPH MRO: Total Petroluem Hydrocarbons Motor Oil Range Organics
Total TPH: GRO + DRO + MRO
DUP : Duplicate sample
1. Chloride analyzed by United States Environmental Protection Agency Method 300
2. TPH analyzed by TPH by SW8015 Mod Method
3. BTEX analyzed by USEPA Method 8021B
4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)
5. *Revised screening limit and restoration criteria within the first 4 feet below ground surface per Rule 19.15.29 effective August 14, 2018

Figures





N

NOTES:
1. Datum: D_WGS_1984
2. Site Location: 32.178339, -103.092128

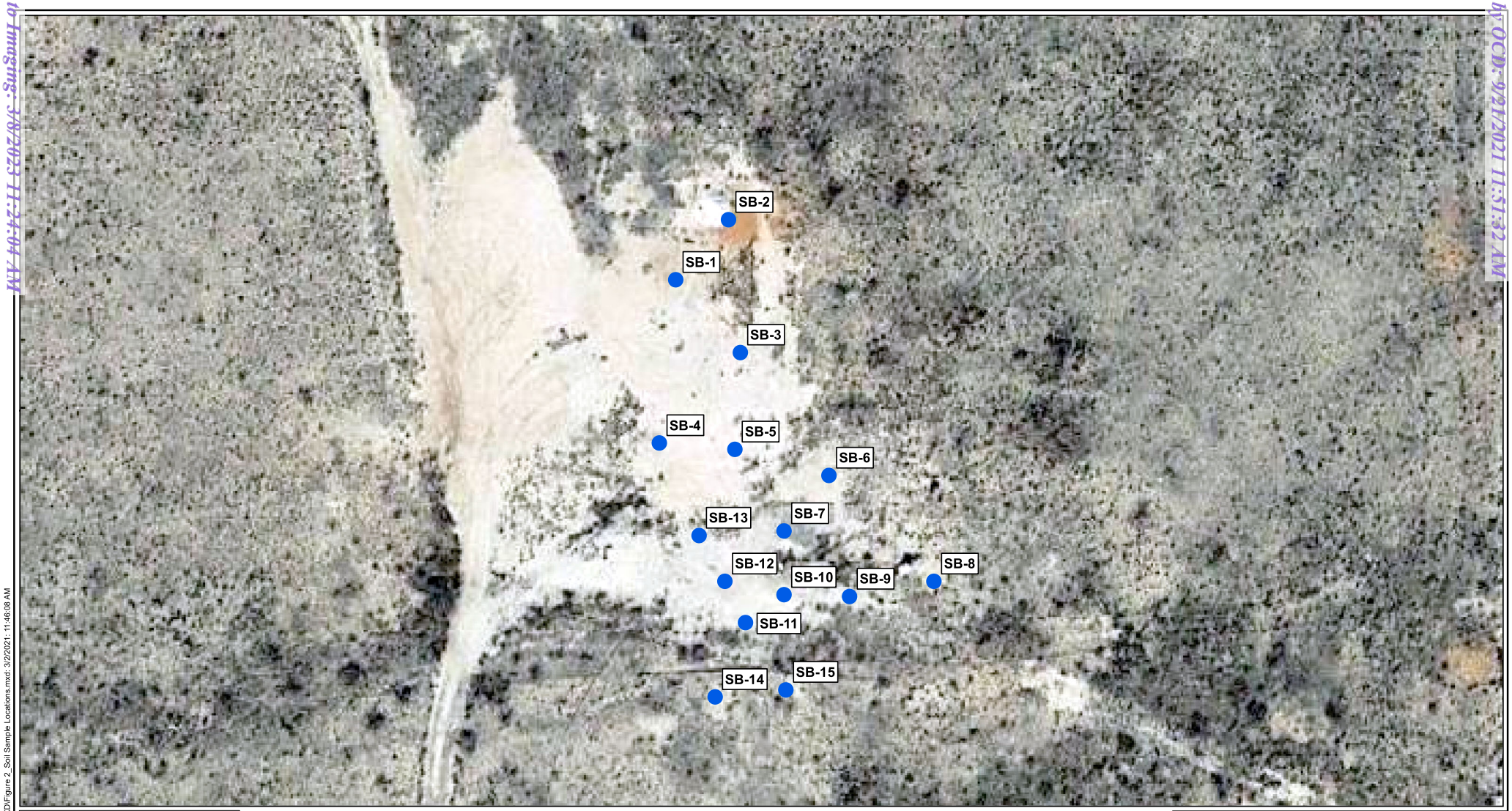
Chevron Environmental Management Company
WDDU 46
Lea County, New Mexico

SITE LOCATION MAP

ARCADIS

FIGURE
1

P:\...T:_ENV\Chevron\Chevron_WDDU 46\MXD\Figure 1_Site Location Map.mxd: 3/2/2021: 11:43:30 AM



LEGEND:

- Soil Sample Locations

NOTES:
1. Datum: GCS_WGS_1984
2. Site Location: 32.178339, -103.092128

N

0 25 50 100 Feet

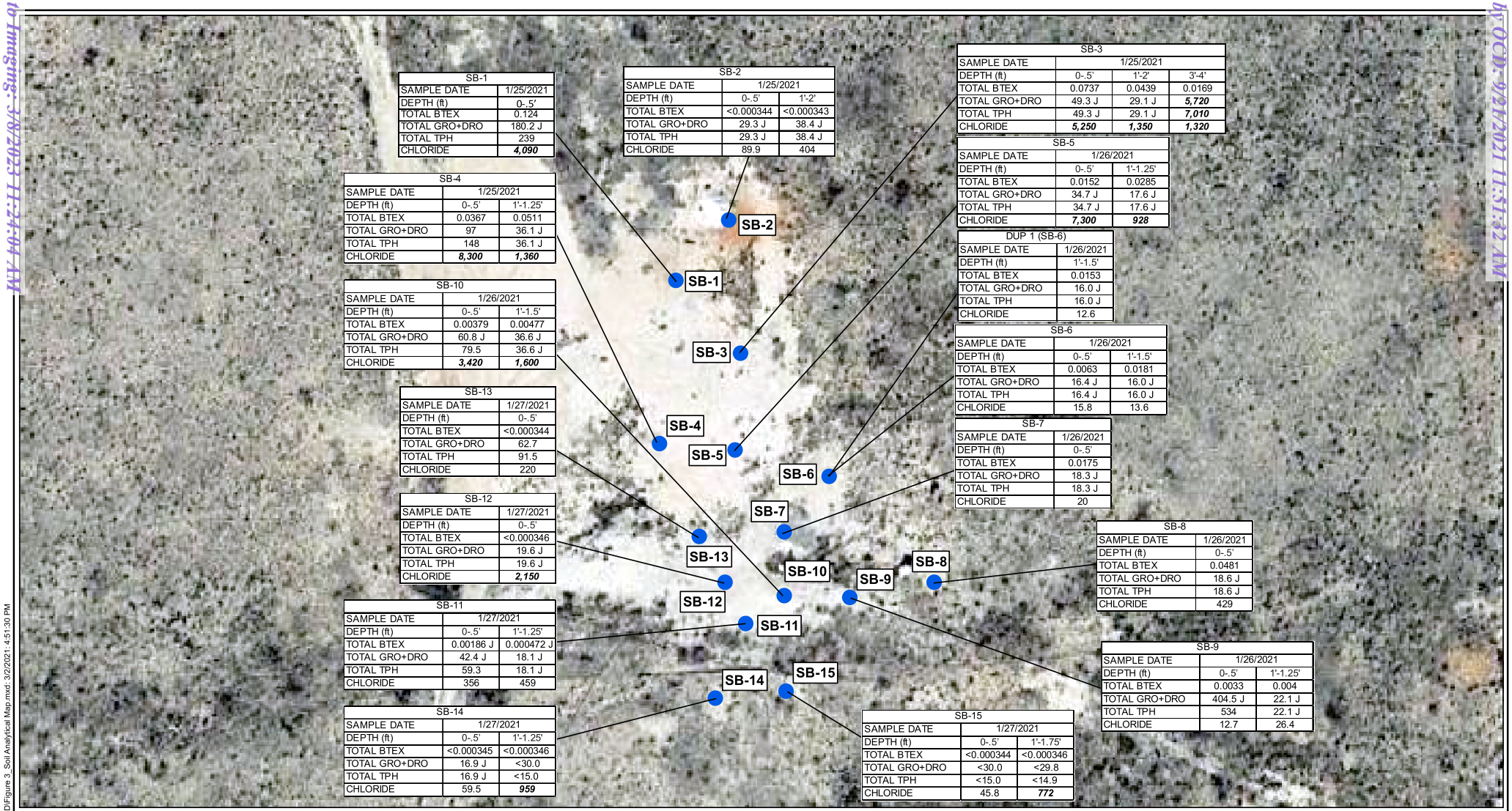
Chevron Environmental Management Company
WDDU 46
Lea County, New Mexico

SOIL SAMPLE LOCATIONS MAP

ARCADIS

FIGURE 2

Path: T:_ENV\Chevron\Chevron_WDDU 46\MXD\Figure 2_Soil Sample Locations.mxd: 3/2/2021: 11:46:08 AM



SB-1	
SAMPLE DATE	1/25/2021
DEPTH (ft)	0-.5'
TOTAL BTEX	0.124
TOTAL GRO+DRO	180.2 J
TOTAL TPH	239
CHLORIDE	***4,090***

SB-2		
SAMPLE DATE	1/25/2021	
DEPTH (ft)	0-.5'	1'-2'
TOTAL BTEX	<0.000344	<0.000343
TOTAL GRO+DRO	29.3 J	38.4 J
TOTAL TPH	29.3 J	38.4 J
CHLORIDE	89.9	404

SB-3			
SAMPLE DATE	1/25/2021		
DEPTH (ft)	0-.5'	1'-2'	3'-4'
TOTAL BTEX	0.0737	0.0439	0.0169
TOTAL GRO+DRO	49.3 J	29.1 J	***5,720***
TOTAL TPH	49.3 J	29.1 J	***7,010***
CHLORIDE	***5,250***	***1,350***	***1,320***

SB-4		
SAMPLE DATE	1/25/2021	
DEPTH (ft)	0-.5'	1'-1.25'
TOTAL BTEX	0.0367	0.0511
TOTAL GRO+DRO	97	36.1 J
TOTAL TPH	148	36.1 J
CHLORIDE	***8,300***	***1,360***

SB-5		
SAMPLE DATE	1/26/2021	
DEPTH (ft)	0-.5'	1'-1.25'
TOTAL BTEX	0.0152	0.0285
TOTAL GRO+DRO	34.7 J	17.6 J
TOTAL TPH	34.7 J	17.6 J
CHLORIDE	***7,300***	***928***

DUP 1 (SB-6)	
SAMPLE DATE	1/26/2021
DEPTH (ft)	1'-1.5'
TOTAL BTEX	0.0153
TOTAL GRO+DRO	16.0 J
TOTAL TPH	16.0 J
CHLORIDE	12.6

SB-10		
SAMPLE DATE	1/26/2021	
DEPTH (ft)	0-.5'	1'-1.5'
TOTAL BTEX	0.00379	0.00477
TOTAL GRO+DRO	60.8 J	36.6 J
TOTAL TPH	79.5	36.6 J
CHLORIDE	***3,420***	***1,600***

SB-6		
SAMPLE DATE	1/26/2021	
DEPTH (ft)	0-.5'	1'-1.5'
TOTAL BTEX	0.0063	0.0181
TOTAL GRO+DRO	16.4 J	16.0 J
TOTAL TPH	16.4 J	16.0 J
CHLORIDE	15.8	13.6

SB-13	
SAMPLE DATE	1/27/2021
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000344
TOTAL GRO+DRO	62.7
TOTAL TPH	91.5
CHLORIDE	220

SB-7	
SAMPLE DATE	1/26/2021
DEPTH (ft)	0-.5'
TOTAL BTEX	0.0175
TOTAL GRO+DRO	18.3 J
TOTAL TPH	18.3 J
CHLORIDE	20

SB-12	
SAMPLE DATE	1/27/2021
DEPTH (ft)	0-.5'
TOTAL BTEX	<0.000346
TOTAL GRO+DRO	19.6 J
TOTAL TPH	19.6 J
CHLORIDE	***2,150***

SB-8	
SAMPLE DATE	1/26/2021
DEPTH (ft)	0-.5'
TOTAL BTEX	0.0481
TOTAL GRO+DRO	18.6 J
TOTAL TPH	18.6 J
CHLORIDE	429

SB-11		
SAMPLE DATE	1/27/2021	
DEPTH (ft)	0-.5'	1'-1.25'
TOTAL BTEX	0.00186 J	0.000472 J
TOTAL GRO+DRO	42.4 J	18.1 J
TOTAL TPH	59.3	18.1 J
CHLORIDE	356	459

SB-9		
SAMPLE DATE	1/26/2021	
DEPTH (ft)	0-.5'	1'-1.25'
TOTAL BTEX	0.0033	0.004
TOTAL GRO+DRO	404.5 J	22.1 J
TOTAL TPH	534	22.1 J
CHLORIDE	12.7	26.4

SB-14		
SAMPLE DATE	1/27/2021	
DEPTH (ft)	0-.5'	1'-1.25'
TOTAL BTEX	<0.000345	<0.000346
TOTAL GRO+DRO	16.9 J	<30.0
TOTAL TPH	16.9 J	<15.0
CHLORIDE	59.5	***959***

SB-15		
SAMPLE DATE	1/27/2021	
DEPTH (ft)	0-.5'	1'-1.75'
TOTAL BTEX	<0.000344	<0.000346
TOTAL GRO+DRO	<30.0	<29.8
TOTAL TPH	<15.0	<14.9
CHLORIDE	45.8	***772***

LEGEND:

- Soil Sample Locations

NOTES:
1. Datum: GCS_WGS_1984
2. Site Location: 32.178339, -103.092128

Analyte	NMAC Standards	Restoration Requirements
TOTAL BTEX	50	--
TOTAL GRO+DRO	1,000	--
TOTAL TPH	2,500	--
CHLORIDE	10,000	600

Notes:
Bold = Analytes exceeding NMAC standards and restoration requirements for Chloride
Results are in Milligrams per Kilograms
NMAC = New Mexico Administration Code
BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
Total TPH = GRO + DRO + MRO

N

0 25 50 100 Feet

Chevron Environmental Management Company
WDDU 46
Lea County, New Mexico

SOIL ANALYTICAL RESULTS MAP

ARCADIS

FIGURE 3

Path: T:_ENV\Chevron\Chevron_WDDU 46\MXD\Figure 3_Soil Analytical Map.mxd: 3/2/2021; 4:51:30 PM

Appendix A

Initial C-141 Forms - 1RP-2163

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

RECEIVED
APR 20 2009
HOBBSOCD

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	Contact Ricky Heredia
Address PO Drawer 29 Andrews Tx 79714	Telephone No. 432-523-3655 ex-7603
Facility Name WDDU 46	Facility Type Water injection well

Surface Owner PRIVATE	Mineral Owner	Lease No.

LOCATION OF RELEASE

API# 30.025.12273.00.00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	31	24S	38 E					LEA

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release Water release	Volume of Release 55 bbls water	Volume Recovered 10 bbls water
Source of Release 2"injection line	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? [X] Yes [ ] No [ ] Not Required	If YES, To Whom? NMOCD	
By Whom? Ricky Heredia	Date and Hour 4/3/2009 20:00	
Was a Watercourse Reached? [ ] Yes [X] No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.* WATER @ 220'

Describe Cause of Problem and Remedial Action Taken.*
Internal corrosion on 2" IPC nipple from Water Injection Station failed releasing 55bbls produce water

Describe Area Affected and Cleanup Action Taken.*

Upon discovery mobilized one call brought in vacuum truck, Isolated and repaired leak, recovered 10 bbls produce water.
Called third party

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

Signature: Ricky Heredes

Printed Name: Ricky Heredia

Title: HES

E-mail Address: rhrc@chevron.com

Date: 4/17/2009 Phone: 432-523-365 ext 7603

OIL CONSERVATION DIVISION

Approved by District Supervisor: Geoffrey Leking

Approval Date: 04/21/09 Expiration Date: 06/22/09

Conditions of Approval: DELINEATE TO CLEANTI. SUBMIT FINAL C-141 BY 06/22/09

Attached [ ]

IRP-09-4-2663

* Attach Additional Sheets If Necessary

fGRL0912836556

Appendix B

Boring Logs

Date Start/Finish: 1/25/2021 **Drilling Company:** Arcadis **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger Grab	**Borehole Depth:** 5' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** SB-3 **Client:** Chevron **Location:** WDDU-46

DEPTH	Sample Interval	Geologic Column	Stratigraphic Description
0	0-0.5'		Silty sand 7.5YR 5/4 brown, very fine to fine sand, silty, moderately sorted, loose, with little granules/pebbles, caliche, hard, loose throughout. at 1.5' color change to 7.5YR 6/3 light brown at 3.5' as above with moderate hydrocarbon odor, trace clay appearing, moderate staining 7.5YR 3/2 dark brown becoming heavy staining and hydrocarbon odor at 4 - 4.25' at 4.25' some clay, dry, nonpliable, non-plastic, blocky, firm at 4.75' staining lessens to trace, color change to 10YR 5/4 yellowish brown, moderate odor. USCS - SM
1	1-2'		
2	2-3'		
4	4-5'		
5			End of boring 5' bgs. on firm sand

ARCADIS

Remarks: Total Depth: 5' Below Ground Surface (bgs)

Project: 30065054 Template: LPTEMPLATE_HA_Final Page: 1 of 1
Data File: SB-3 Date: 2/12/2021 Created/Edited by: AD

Appendix C

Photographic Log

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 46	Lea County, NM	1RP-2163

Photo No.	Date:
1	01/25/2021

Direction Photo Taken:

Facing southeast

Description:

Northwest of marked locations

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 46	Lea County, NM	1RP-2163

Photo No.	Date:
2	01/25/2021

Direction Photo Taken:

South

Description:

North of marked locations

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 46	Lea County, NM	1RP-2163

Photo No.	Date:
3	01/25/2021

Direction Photo Taken:

Facing north

Description:

Center of marked locations

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 46	Lea County, NM	1RP-2163

Photo No.	Date:
4	01/25/2021

Direction Photo Taken:

Facing southeast

Description:

Center of marked locations

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 46	Lea County, NM	1RP-2163

Photo No.	Date:
5	01/25/2021

Direction Photo Taken:

Facing southwest

Description:

Center of marked locations

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 46	Lea County, NM	1RP-2163

Photo No.	Date:
6	01/25/2021

Direction Photo Taken:

Facing north

Description:

South of marked locations near well

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 46	Lea County, NM	1RP-2163

Photo No.	Date:
7	01/25/2021

Direction Photo Taken:

Facing west

Description:

Location sign

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 46	Lea County, NM	1RP-2163

Photo No.	Date:
8	01/25/2021

Direction Photo Taken:

Facing west

Description:
East center of locations

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 46	Lea County, NM	1RP-2163

Photo No.	Date:
9	01/25/2021

Direction Photo Taken:

Facing southwest

Description:

East center of location

Appendix D

Laboratory Report

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Analytical Report 685938

for

Arcadis U.S., Inc

Project Manager: Morgan Jordan

WDDU 46

30065060-0002B

01.29.2021

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 (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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01.29.2021

Project Manager: **Morgan Jordan**
Arcadis U.S., Inc
1717 W 6th Street, Suite 210
Austin, TX 78703

Reference: Eurofins Xenco, LLC Report No(s): **685938**
WDDU 46
Project Address:

Morgan Jordan:

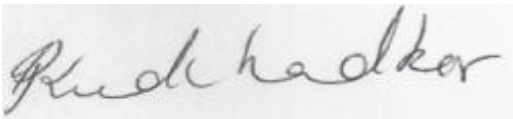
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 685938. All results being reported under this Report Number apply to the samples analyzed and properly identified 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. 685938 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Sachin Kudchadkar
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-2-S-0-.5-210125	S	01.25.2021 11:10		685938-001
SB-2-S-1-2-210125	S	01.25.2021 11:17		685938-002
SB-1-S-0-.5-210125	S	01.25.2021 11:24		685938-003
SB-3-S-0-.5-210125	S	01.25.2021 12:13		685938-004
SB-3-S-1-2-210125	S	01.25.2021 12:25		685938-005
SB-3-S-3-4-210125	S	01.25.2021 12:50		685938-006
SB-4-S-0-.5-210125	S	01.25.2021 14:21		685938-007
SB-4-S-1-.1.25-210125	S	01.25.2021 14:30		685938-008

CASE NARRATIVE

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Client Name: Arcadis U.S., Inc

Project Name: WDDU 46

Project ID: *30065060-0002B*
Work Order Number(s): *685938*

Report Date: *01.29.2021*
Date Received: *01.25.2021*

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-3149029 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected. Samples affected are: 685938-001.

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-2-S-0-.5-210125** Matrix: Solid Date Received:01.25.2021 16:55

Lab Sample Id: 685938-001 Date Collected: 01.25.2021 11:10

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 08:25 % Moisture:

Seq Number: 3149074 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**89.9**	49.5	8.50	mg/kg	01.27.2021 10:09		10

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.28.2021 17:00 % Moisture:

Seq Number: 3149382 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	01.29.2021 02:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	**29.3**	50.0	15.0	mg/kg	01.29.2021 02:51	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.29.2021 02:51	U	1
Total TPH	PHC635	**29.3**	50.0	15.0	mg/kg	01.29.2021 02:51	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	01.29.2021 02:51	
o-Terphenyl	84-15-1	117	%	70-130	01.29.2021 02:51	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-2-S-0-.5-210125**	Matrix:	Solid	Date Received:	01.25.2021 16:55
Lab Sample Id:	685938-001	Date Collected:	01.25.2021 11:10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.26.2021 15:00	% Moisture:	
Seq Number:	3149029			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	01.27.2021 13:55	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	01.27.2021 13:55	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	01.27.2021 13:55	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	01.27.2021 13:55	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.27.2021 13:55	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.27.2021 13:55	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.27.2021 13:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	147	%	70-130	01.27.2021 13:55	**
1,4-Difluorobenzene	540-36-3	98	%	70-130	01.27.2021 13:55	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-2-S-1-2-210125** Matrix: Solid Date Received:01.25.2021 16:55

Lab Sample Id: 685938-002 Date Collected: 01.25.2021 11:17

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 08:25 % Moisture:

Seq Number: 3149074 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**404**	50.0	8.58	mg/kg	01.27.2021 10:14		10

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.28.2021 17:00 % Moisture:

Seq Number: 3149382 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	01.29.2021 03:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**38.4**	49.9	15.0	mg/kg	01.29.2021 03:12	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.29.2021 03:12	U	1
Total TPH	PHC635	**38.4**	49.9	15.0	mg/kg	01.29.2021 03:12	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-130	01.29.2021 03:12	
o-Terphenyl	84-15-1	121	%	70-130	01.29.2021 03:12	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-2-S-1-2-210125**	Matrix:	Solid	Date Received:	01.25.2021 16:55
Lab Sample Id:	685938-002	Date Collected:	01.25.2021 11:17		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.26.2021 15:00	% Moisture:	
Seq Number:	3149029			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	01.27.2021 14:15	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	01.27.2021 14:15	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	01.27.2021 14:15	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	01.27.2021 14:15	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	01.27.2021 14:15	U	1
Total Xylenes	1330-20-7	<0.000343	0.00199	0.000343	mg/kg	01.27.2021 14:15	U	1
Total BTEX		<0.000343	0.00199	0.000343	mg/kg	01.27.2021 14:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.27.2021 14:15	
4-Bromofluorobenzene	460-00-4	120	%	70-130	01.27.2021 14:15	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-1-S-0-.5-210125** Matrix: Solid Date Received:01.25.2021 16:55

Lab Sample Id: 685938-003 Date Collected: 01.25.2021 11:24

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 08:25 % Moisture:

Seq Number: 3149074 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4090**	101	17.3	mg/kg	01.27.2021 10:19		20

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.28.2021 17:00 % Moisture:

Seq Number: 3149382 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.2**	49.8	14.9	mg/kg	01.29.2021 03:33	J	1
Diesel Range Organics (DRO)	C10C28DRO	**165**	49.8	14.9	mg/kg	01.29.2021 03:33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**59.0**	49.8	14.9	mg/kg	01.29.2021 03:33		1
Total TPH	PHC635	**239**	49.8	14.9	mg/kg	01.29.2021 03:33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-130	01.29.2021 03:33	
o-Terphenyl	84-15-1	116	%	70-130	01.29.2021 03:33	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-1-S-0-.5-210125**	Matrix:	Solid	Date Received:	01.25.2021 16:55
Lab Sample Id:	685938-003	Date Collected:	01.25.2021 11:24		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.27.2021 15:00	% Moisture:	
Seq Number:	3149158			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0598**	0.00198	0.000381	mg/kg	01.27.2021 21:00		1
Toluene	108-88-3	**0.0504**	0.00198	0.000451	mg/kg	01.27.2021 21:00		1
Ethylbenzene	100-41-4	**0.00372**	0.00198	0.000559	mg/kg	01.27.2021 21:00		1
m,p-Xylenes	179601-23-1	**0.00769**	0.00396	0.00100	mg/kg	01.27.2021 21:00		1
o-Xylene	95-47-6	**0.00283**	0.00198	0.000341	mg/kg	01.27.2021 21:00		1
Total Xylenes	1330-20-7	**0.0105**	0.00198	0.000341	mg/kg	01.27.2021 21:00		1
Total BTEX		**0.124**	0.00198	0.000341	mg/kg	01.27.2021 21:00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.27.2021 21:00	
1,4-Difluorobenzene	540-36-3	123	%	70-130	01.27.2021 21:00	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-3-S-0-.5-210125** Matrix: Solid Date Received:01.25.2021 16:55

Lab Sample Id: 685938-004 Date Collected: 01.25.2021 12:13

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 08:25 % Moisture:

Seq Number: 3149074 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5250**	99.6	17.1	mg/kg	01.27.2021 10:24		20

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.28.2021 17:00 % Moisture:

Seq Number: 3149382 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.7**	50.0	15.0	mg/kg	01.29.2021 03:54	J	1
Diesel Range Organics (DRO)	C10C28DRO	**33.6**	50.0	15.0	mg/kg	01.29.2021 03:54	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.29.2021 03:54	U	1
Total TPH	PHC635	**49.3**	50.0	15.0	mg/kg	01.29.2021 03:54	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	01.29.2021 03:54	
o-Terphenyl	84-15-1	118	%	70-130	01.29.2021 03:54	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-3-S-0-.5-210125**	Matrix:	Solid	Date Received:	01.25.2021 16:55
Lab Sample Id:	685938-004	Date Collected:	01.25.2021 12:13		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.27.2021 15:00	% Moisture:	
Seq Number:	3149158			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0316**	0.00198	0.000382	mg/kg	01.27.2021 21:21		1
Toluene	108-88-3	**0.0324**	0.00198	0.000452	mg/kg	01.27.2021 21:21		1
Ethylbenzene	100-41-4	**0.00250**	0.00198	0.000560	mg/kg	01.27.2021 21:21		1
m,p-Xylenes	179601-23-1	**0.00516**	0.00397	0.00101	mg/kg	01.27.2021 21:21		1
o-Xylene	95-47-6	**0.00208**	0.00198	0.000342	mg/kg	01.27.2021 21:21		1
Total Xylenes	1330-20-7	**0.00724**	0.00198	0.000342	mg/kg	01.27.2021 21:21		1
Total BTEX		**0.0737**	0.00198	0.000342	mg/kg	01.27.2021 21:21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	120	%	70-130	01.27.2021 21:21	
4-Bromofluorobenzene	460-00-4	116	%	70-130	01.27.2021 21:21	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-3-S-1-2-210125** Matrix: Solid Date Received:01.25.2021 16:55

Lab Sample Id: 685938-005 Date Collected: 01.25.2021 12:25

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 08:25 % Moisture:

Seq Number: 3149074 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1350**	50.0	8.58	mg/kg	01.27.2021 10:29		10

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.28.2021 17:00 % Moisture:

Seq Number: 3149382 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	01.29.2021 04:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	**29.1**	50.0	15.0	mg/kg	01.29.2021 04:15	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.29.2021 04:15	U	1
Total TPH	PHC635	**29.1**	50.0	15.0	mg/kg	01.29.2021 04:15	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-130	01.29.2021 04:15	
o-Terphenyl	84-15-1	120	%	70-130	01.29.2021 04:15	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-3-S-1-2-210125**	Matrix:	Solid	Date Received:	01.25.2021 16:55
Lab Sample Id:	685938-005	Date Collected:	01.25.2021 12:25		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.27.2021 15:00	% Moisture:	
Seq Number:	3149158			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0171**	0.00199	0.000383	mg/kg	01.27.2021 21:42		1
Toluene	108-88-3	**0.0203**	0.00199	0.000454	mg/kg	01.27.2021 21:42		1
Ethylbenzene	100-41-4	**0.00162**	0.00199	0.000563	mg/kg	01.27.2021 21:42	J	1
m,p-Xylenes	179601-23-1	**0.00330**	0.00398	0.00101	mg/kg	01.27.2021 21:42	J	1
o-Xylene	95-47-6	**0.00160**	0.00199	0.000343	mg/kg	01.27.2021 21:42	J	1
Total Xylenes	1330-20-7	**0.00490**	0.00199	0.000343	mg/kg	01.27.2021 21:42		1
Total BTEX		**0.0439**	0.00199	0.000343	mg/kg	01.27.2021 21:42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	01.27.2021 21:42	
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.27.2021 21:42	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-3-S-3-4-210125** Matrix: Solid Date Received:01.25.2021 16:55

Lab Sample Id: 685938-006 Date Collected: 01.25.2021 12:50

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 08:25 % Moisture:

Seq Number: 3149074 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1320**	50.4	8.65	mg/kg	01.27.2021 10:45		10

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.28.2021 17:00 % Moisture:

Seq Number: 3149382 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.8	249	74.8	mg/kg	01.29.2021 04:36	U	5
Diesel Range Organics (DRO)	C10C28DRO	**5720**	249	74.8	mg/kg	01.29.2021 04:36		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1290**	249	74.8	mg/kg	01.29.2021 04:36		5
Total TPH	PHC635	**7010**	249	74.8	mg/kg	01.29.2021 04:36		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-130	01.29.2021 04:36	
o-Terphenyl	84-15-1	112	%	70-130	01.29.2021 04:36	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-3-S-3-4-210125**	Matrix:	Solid	Date Received:	01.25.2021 16:55
Lab Sample Id:	685938-006	Date Collected:	01.25.2021 12:50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.27.2021 15:00	% Moisture:	
Seq Number:	3149158			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00898**	0.00199	0.000383	mg/kg	01.27.2021 23:05		1
Toluene	108-88-3	**0.00796**	0.00199	0.000454	mg/kg	01.27.2021 23:05		1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	01.27.2021 23:05	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	01.27.2021 23:05	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	01.27.2021 23:05	U	1
Total Xylenes	1330-20-7	<0.000343	0.00199	0.000343	mg/kg	01.27.2021 23:05	U	1
Total BTEX		**0.0169**	0.00199	0.000343	mg/kg	01.27.2021 23:05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	01.27.2021 23:05	
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.27.2021 23:05	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-4-S-0-.5-210125** Matrix: Solid Date Received:01.25.2021 16:55

Lab Sample Id: 685938-007 Date Collected: 01.25.2021 14:21

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 08:25 % Moisture:

Seq Number: 3149074 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8300**	99.6	17.1	mg/kg	01.27.2021 10:50		20

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.28.2021 17:00 % Moisture:

Seq Number: 3149382 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	01.29.2021 04:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**97.0**	49.8	14.9	mg/kg	01.29.2021 04:57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**51.2**	49.8	14.9	mg/kg	01.29.2021 04:57		1
Total TPH	PHC635	**148**	49.8	14.9	mg/kg	01.29.2021 04:57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-130	01.29.2021 04:57	
o-Terphenyl	84-15-1	111	%	70-130	01.29.2021 04:57	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-4-S-0-.5-210125**	Matrix:	Solid	Date Received:	01.25.2021 16:55
Lab Sample Id:	685938-007	Date Collected:	01.25.2021 14:21		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.27.2021 15:00	% Moisture:	
Seq Number:	3149158			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0148**	0.00199	0.000383	mg/kg	01.27.2021 23:26		1
Toluene	108-88-3	**0.0176**	0.00199	0.000453	mg/kg	01.27.2021 23:26		1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	01.27.2021 23:26	U	1
m,p-Xylenes	179601-23-1	**0.00431**	0.00398	0.00101	mg/kg	01.27.2021 23:26		1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	01.27.2021 23:26	U	1
Total Xylenes	1330-20-7	**0.00431**	0.00199	0.000342	mg/kg	01.27.2021 23:26		1
Total BTEX		**0.0367**	0.00199	0.000342	mg/kg	01.27.2021 23:26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.27.2021 23:26	
4-Bromofluorobenzene	460-00-4	112	%	70-130	01.27.2021 23:26	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-4-S-1-.1.25-210125**	Matrix:	Solid	Date Received:	01.25.2021 16:55
Lab Sample Id:	685938-008	Date Collected:	01.25.2021 14:30		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE				
Analyst:	CHE	Date Prep:	01.27.2021 08:25	% Moisture:	
Seq Number:	3149074			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1360**	24.8	4.26	mg/kg	01.27.2021 11:06		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM				
Analyst:	ARM	Date Prep:	01.28.2021 17:00	% Moisture:	
Seq Number:	3149382			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	01.29.2021 05:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	**36.1**	50.0	15.0	mg/kg	01.29.2021 05:18	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.29.2021 05:18	U	1
Total TPH	PHC635	**36.1**	50.0	15.0	mg/kg	01.29.2021 05:18	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-130	01.29.2021 05:18	
o-Terphenyl	84-15-1	120	%	70-130	01.29.2021 05:18	

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Certificate of Analytical Results 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-4-S-1-.1.25-210125**	Matrix:	Solid	Date Received:	01.25.2021 16:55
Lab Sample Id:	685938-008	Date Collected:	01.25.2021 14:30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.27.2021 15:00	% Moisture:	
Seq Number:	3149158			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0154**	0.00200	0.000386	mg/kg	01.27.2021 23:46		1
Toluene	108-88-3	**0.0243**	0.00200	0.000457	mg/kg	01.27.2021 23:46		1
Ethylbenzene	100-41-4	**0.00263**	0.00200	0.000566	mg/kg	01.27.2021 23:46		1
m,p-Xylenes	179601-23-1	**0.00587**	0.00401	0.00102	mg/kg	01.27.2021 23:46		1
o-Xylene	95-47-6	**0.00285**	0.00200	0.000345	mg/kg	01.27.2021 23:46		1
Total Xylenes	1330-20-7	**0.00872**	0.00200	0.000345	mg/kg	01.27.2021 23:46		1
Total BTEX		**0.0511**	0.00200	0.000345	mg/kg	01.27.2021 23:46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	01.27.2021 23:46	
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.27.2021 23:46	

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Blank Summary 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720076-1-BLK** Matrix: SOLID

Lab Sample Id: **7720076-1-BLK**

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

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 08:25

Seq Number: 3149074

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.27.2021 09:01	U	1

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Blank Summary 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720086-1-BLK** Matrix: SOLID

Lab Sample Id: **7720086-1-BLK**

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

Tech: KTL

Analyst: KTL Date Prep: 01.26.2021 15:00

Seq Number: 3149029

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.27.2021 04:34	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.27.2021 04:34	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.27.2021 04:34	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.27.2021 04:34	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.27.2021 04:34	U	1

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Blank Summary 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720185-1-BLK** Matrix: SOLID

Lab Sample Id: **7720185-1-BLK**

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

Tech: KTL

Analyst: KTL Date Prep: 01.27.2021 15:00

Seq Number: 3149158

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.27.2021 18:14	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.27.2021 18:14	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.27.2021 18:14	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.27.2021 18:14	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.27.2021 18:14	U	1

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Blank Summary 685938

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720306-1-BLK** Matrix: SOLID

Lab Sample Id: **7720306-1-BLK**

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

Tech: DVM

Analyst: ARM Date Prep: 01.28.2021 17:00

Seq Number: 3149382

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.28.2021 21:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.28.2021 21:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.28.2021 21:13	U	1

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Form 2 - Surrogate Recoveries

Project Name: WDDU 46

Report Date: 01292021

Work Orders : 685938 **Project ID:** 30065060-0002B

Lab Batch #: 3149029 **Sample:** 7720086-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.27.2021 02:33 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0318	0.0300	106	70-130	
4-Bromofluorobenzene	0.0307	0.0300	102	70-130	

Lab Batch #: 3149029 **Sample:** 7720086-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.27.2021 02:54 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	70-130	
4-Bromofluorobenzene	0.0301	0.0300	100	70-130	

Lab Batch #: 3149029 **Sample:** 685845-020 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.27.2021 03:14 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	70-130	
4-Bromofluorobenzene	0.0343	0.0300	114	70-130	

Lab Batch #: 3149029 **Sample:** 685845-020 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.27.2021 03:35 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0356	0.0300	119	70-130	

Lab Batch #: 3149029 **Sample:** 7720086-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.27.2021 04:34 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	70-130	
4-Bromofluorobenzene	0.0352	0.0300	117	70-130	

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

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Form 2 - Surrogate Recoveries

Project Name: WDDU 46

Report Date: 01292021

Work Orders : 685938 **Project ID:** 30065060-0002B

Lab Batch #: 3149158 **Sample:** 7720185-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.27.2021 16:14 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	70-130	
4-Bromofluorobenzene	0.0309	0.0300	103	70-130	

Lab Batch #: 3149158 **Sample:** 7720185-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.27.2021 16:35 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0321	0.0300	107	70-130	
4-Bromofluorobenzene	0.0312	0.0300	104	70-130	

Lab Batch #: 3149158 **Sample:** 685949-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.27.2021 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	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0353	0.0300	118	70-130	

Lab Batch #: 3149158 **Sample:** 685949-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.27.2021 17:16 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	70-130	
4-Bromofluorobenzene	0.0356	0.0300	119	70-130	

Lab Batch #: 3149158 **Sample:** 7720185-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.27.2021 18:14 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0358	0.0300	119	70-130	

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

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Form 2 - Surrogate Recoveries

Project Name: WDDU 46

Report Date: 01292021

Work Orders : 685938 **Project ID:** 30065060-0002B

Lab Batch #: 3149382 **Sample:** 7720306-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.28.2021 21:13 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-130	
o-Terphenyl	63.7	50.0	127	70-130	

Lab Batch #: 3149382 **Sample:** 7720306-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.28.2021 21:34 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	130	100	130	70-130	
o-Terphenyl	64.2	50.0	128	70-130	

Lab Batch #: 3149382 **Sample:** 7720306-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.28.2021 21:55 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-130	
o-Terphenyl	64.8	50.0	130	70-130	

Lab Batch #: 3149382 **Sample:** 686113-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.28.2021 22:38 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	99.7	122	70-130	
o-Terphenyl	58.9	49.9	118	70-130	

Lab Batch #: 3149382 **Sample:** 686113-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.28.2021 22:59 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.9	123	70-130	
o-Terphenyl	58.8	50.0	118	70-130	

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

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QC Summary 685938

Arcadis U.S., Inc

WDDU 46

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149074 — Matrix: Solid — Date Prep: 01.27.2021
MB Sample Id: 7720076-1-BLK — LCS Sample Id: 7720076-1-BKS — LCSD Sample Id: 7720076-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	261	104	261	104	90-110	0	20	mg/kg	01.27.2021 09:06	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149074 — Matrix: Solid — Date Prep: 01.27.2021
Parent Sample Id: 685938-005 — MS Sample Id: 685938-005 S — MSD Sample Id: 685938-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1350	2500	3920	103	3940	104	90-110	1	20	mg/kg	01.27.2021 10:35	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149074 — Matrix: Soil — Date Prep: 01.27.2021
Parent Sample Id: 685994-001 — MS Sample Id: 685994-001 S — MSD Sample Id: 685994-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11100	5050	16100	99	16500	107	90-110	2	20	mg/kg	01.27.2021 09:22	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149382 — Matrix: Solid — Date Prep: 01.28.2021
MB Sample Id: 7720306-1-BLK — LCS Sample Id: 7720306-1-BKS — LCSD Sample Id: 7720306-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1000	100	1010	101	70-130	1	20	mg/kg	01.28.2021 21:34	
Diesel Range Organics (DRO)	<15.0	1000	1120	112	1120	112	70-130	0	20	mg/kg	01.28.2021 21:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		130		128		70-130	%	01.28.2021 21:34
o-Terphenyl	127		128		130		70-130	%	01.28.2021 21:34

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149382 — Matrix: Solid — Date Prep: 01.28.2021
MB Sample Id: 7720306-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	01.28.2021 21:13	

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

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

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

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QC Summary 685938

Arcadis U.S., Inc

WDDU 46

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149382 — Matrix: Soil — Date Prep: 01.28.2021
Parent Sample Id: 686113-005 — MS Sample Id: 686113-005 S — MSD Sample Id: 686113-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	1000	100	1010	101	70-130	1	20	mg/kg	01.28.2021 22:38	
Diesel Range Organics (DRO)	210	997	1160	95	1180	97	70-130	2	20	mg/kg	01.28.2021 22:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		123		70-130	%	01.28.2021 22:38
o-Terphenyl	118		118		70-130	%	01.28.2021 22:38

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3149029 — Matrix: Solid — Date Prep: 01.26.2021
MB Sample Id: 7720086-1-BLK — LCS Sample Id: 7720086-1-BKS — LCSD Sample Id: 7720086-1-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	0.0885	89	0.0967	97	70-130	9	35	mg/kg	01.27.2021 02:33	
Toluene	<0.000456	0.100	0.0892	89	0.0911	91	70-130	2	35	mg/kg	01.27.2021 02:33	
Ethylbenzene	<0.000565	0.100	0.0876	88	0.0884	88	70-130	1	35	mg/kg	01.27.2021 02:33	
m,p-Xylenes	<0.00101	0.200	0.168	84	0.169	85	70-130	1	35	mg/kg	01.27.2021 02:33	
o-Xylene	<0.000344	0.100	0.0904	90	0.0903	90	70-130	0	35	mg/kg	01.27.2021 02:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		106		110		70-130	%	01.27.2021 02:33
4-Bromofluorobenzene	117		102		100		70-130	%	01.27.2021 02:33

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3149158 — Matrix: Solid — Date Prep: 01.27.2021
MB Sample Id: 7720185-1-BLK — LCS Sample Id: 7720185-1-BKS — LCSD Sample Id: 7720185-1-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	0.0804	80	0.0787	79	70-130	2	35	mg/kg	01.27.2021 16:14	
Toluene	<0.000456	0.100	0.0868	87	0.0794	79	70-130	9	35	mg/kg	01.27.2021 16:14	
Ethylbenzene	<0.000565	0.100	0.0863	86	0.0833	83	70-130	4	35	mg/kg	01.27.2021 16:14	
m,p-Xylenes	<0.00101	0.200	0.160	80	0.154	77	70-130	4	35	mg/kg	01.27.2021 16:14	
o-Xylene	<0.000344	0.100	0.0904	90	0.0836	84	70-130	8	35	mg/kg	01.27.2021 16:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		107		107		70-130	%	01.27.2021 16:14
4-Bromofluorobenzene	119		103		104		70-130	%	01.27.2021 16:14

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 685938

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WDDU 46

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3149029 — Matrix: Soil — Date Prep: 01.26.2021
Parent Sample Id: 685845-020 — MS Sample Id: 685845-020 S — MSD Sample Id: 685845-020 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	0.0871	87	0.0731	73	70-130	17	35	mg/kg	01.27.2021 03:14	
Toluene	<0.000457	0.100	0.0308	31	0.0332	33	70-130	8	35	mg/kg	01.27.2021 03:14	X
Ethylbenzene	<0.000566	0.100	0.0392	39	0.0420	42	70-130	7	35	mg/kg	01.27.2021 03:14	X
m,p-Xylenes	<0.00102	0.200	0.0697	35	0.0758	38	70-130	8	35	mg/kg	01.27.2021 03:14	X
o-Xylene	<0.000345	0.100	0.0682	68	0.0719	72	70-130	5	35	mg/kg	01.27.2021 03:14	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		111		70-130	%	01.27.2021 03:14
4-Bromofluorobenzene	114		119		70-130	%	01.27.2021 03:14

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3149158 — Matrix: Soil — Date Prep: 01.27.2021
Parent Sample Id: 685949-002 — MS Sample Id: 685949-002 S — MSD Sample Id: 685949-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0839	84	0.105	106	70-130	22	35	mg/kg	01.27.2021 16:55	
Toluene	0.00250	0.0996	0.0930	91	0.0991	98	70-130	6	35	mg/kg	01.27.2021 16:55	
Ethylbenzene	<0.000563	0.0996	0.0876	88	0.0928	94	70-130	6	35	mg/kg	01.27.2021 16:55	
m,p-Xylenes	<0.00101	0.199	0.178	89	0.178	90	70-130	0	35	mg/kg	01.27.2021 16:55	
o-Xylene	<0.000343	0.0996	0.0991	99	0.106	107	70-130	7	35	mg/kg	01.27.2021 16:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		108		70-130	%	01.27.2021 16:55
4-Bromofluorobenzene	118		119		70-130	%	01.27.2021 16:55

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

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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
1211 W Florida Ave
Midland TX 79701
Phone 432-704-5440

Chain of Custody Record

Client Information	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-23595-8666.1
Client Contact: Motgan Jordan	Phone: 619 851 8792	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 1 of 1
Company: ARCADIS U.S., Inc.				Job #: 085938
Address: 1717 W 6th Street. Suite 210	Due Date Requested:			
City: Austin	TAT Requested (days): Std			
State, Zip: TX, 78703				
Phone: 281 644 9437	PO #:			
Email: douglas.jordan@arcadis.com	WO #:			
Project Name: 30065060-0002B	Project #: 30065060-0002B			
Site: WDDU 46	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015_GRO/ DRO/ ORO	300 - Chloride	8021- BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N		
SB-2-S-0-.5-210125	1/25/21	1110	G	Solid							
SB-2-S-1-2-210125		1117		Solid							
SB-1-S-0-.5-210125		1124		Solid							
SB-3-S-0-.5-210125		1213		Solid							
SB-3-S-1-2-210125		1225		Solid							
SB-3-S-3-4-210125		1250		Solid							
SB-4-S-0-.5-210125		1421		Solid							
SB-4-S-1-1.25-210125		1430		Solid							
	1/25/21			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: Justin Steinmann	Date/Time: 1/25/21 1600	Company: Arcadis	Received by: Carlos Grajeda
Relinquished by: Carlos Grajeda	Date/Time: 1/25/21 1655	Company: Arcadis	Received by:
Relinquished by:	Date/Time:	Company:	Received by:

Received by: Carlos Grajeda	Date/Time: 1-25-21 1600	Company: Arcadis		
Received by:	Date/Time: 1/25/21 1655	Company:		
Received by:	Date/Time:	Company:		

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.3 .5

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis U.S., Inc

Date/ Time Received: 01.25.2021 04.55.00 PM

Work Order #: 685938

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)?	2.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 01.26.2021
Brianna Teel

Checklist reviewed by: Sachin Kudchadkar Date: 01.26.2021
Sachin Kudchadkar

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Analytical Report 686141

for

Arcadis U.S., Inc

Project Manager: Morgan Jordan

WDDU 46

30065060-0002B

02.02.2021

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 (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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02.02.2021

Project Manager: **Morgan Jordan**
Arcadis U.S., Inc
1717 W 6th Street, Suite 210
Austin, TX 78703

Reference: Eurofins Xenco, LLC Report No(s): **686141**
WDDU 46
Project Address:

Morgan Jordan:

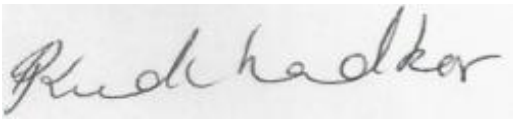
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 686141. All results being reported under this Report Number apply to the samples analyzed and properly identified 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. 686141 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Sachin Kudchadkar
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-5-S-0-.5-210126	S	01.26.2021 10:06		686141-001
SB-5-S-1-1.5-210126	S	01.26.2021 10:12		686141-002
SB-6-S-0-.5-210126	S	01.26.2021 10:24		686141-003
SB-6-S-1-1.5-210126	S	01.26.2021 10:27		686141-004
SB-6-SD-1-1.5-210126	S	01.26.2021 00:00		686141-005
SB-7-S-0-.5-210126	S	01.26.2021 10:48		686141-006
SB-8-S-0-.5-210126	S	01.26.2021 11:55		686141-007
SB-9-S-0-.5-210126	S	01.26.2021 13:10		686141-008
SB-9-S-1-1.5-210126	S	01.26.2021 13:20		686141-009
SB-10-S-0-.5-210126	S	01.26.2021 13:39		686141-010
SB-10-S-1-1.5-210126	S	01.26.2021 13:53		686141-011

CASE NARRATIVE

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Client Name: Arcadis U.S., Inc

Project Name: WDDU 46

Project ID: *30065060-0002B*
Work Order Number(s): *686141*

Report Date: *02.02.2021*
Date Received: *01.26.2021*

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-3149455 BTEX by EPA 8021B

Lab Sample ID 686141-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 686141-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3149652 TPH By SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7720483-1-BLK,686141-003,686141-008,686141-007,686141-009,686141-001,686141-004.

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-5-S-0-.5-210126** Matrix: Solid Date Received:01.26.2021 16:57

Lab Sample Id: 686141-001 Date Collected: 01.26.2021 10:06

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30 % Moisture:

Seq Number: 3149207 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7300**	99.6	17.1	mg/kg	01.28.2021 09:49		20

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00 % Moisture:

Seq Number: 3149652 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.8**	49.9	15.0	mg/kg	01.31.2021 04:37	J	1
Diesel Range Organics (DRO)	C10C28DRO	**16.9**	49.9	15.0	mg/kg	01.31.2021 04:37	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.31.2021 04:37	U	1
Total TPH	PHC635	**34.7**	49.9	15.0	mg/kg	01.31.2021 04:37	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-130	01.31.2021 04:37	
o-Terphenyl	84-15-1	134	%	70-130	01.31.2021 04:37	**

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-5-S-0-.5-210126**	Matrix:	Solid	Date Received:	01.26.2021 16:57
Lab Sample Id:	686141-001	Date Collected:	01.26.2021 10:06		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.29.2021 17:00	% Moisture:	
Seq Number:	3149455			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00179**	0.00198	0.000381	mg/kg	01.30.2021 05:40	JX	1
Toluene	108-88-3	**0.00465**	0.00198	0.000451	mg/kg	01.30.2021 05:40	X	1
Ethylbenzene	100-41-4	**0.00148**	0.00198	0.000559	mg/kg	01.30.2021 05:40	JX	1
m,p-Xylenes	179601-23-1	**0.00552**	0.00396	0.00100	mg/kg	01.30.2021 05:40	X	1
o-Xylene	95-47-6	**0.00171**	0.00198	0.000341	mg/kg	01.30.2021 05:40	JX	1
Total Xylenes	1330-20-7	**0.00723**	0.00198	0.000341	mg/kg	01.30.2021 05:40		1
Total BTEX		**0.0152**	0.00198	0.000341	mg/kg	01.30.2021 05:40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.30.2021 05:40	
1,4-Difluorobenzene	540-36-3	97	%	70-130	01.30.2021 05:40	

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-5-S-1-1.5-210126** Matrix: Solid Date Received:01.26.2021 16:57

Lab Sample Id: 686141-002 Date Collected: 01.26.2021 10:12

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30 % Moisture:

Seq Number: 3149207 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**928**	25.0	4.28	mg/kg	01.28.2021 09:54		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00 % Moisture:

Seq Number: 3149652 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.6**	49.8	14.9	mg/kg	01.31.2021 04:58	J	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	01.31.2021 04:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	01.31.2021 04:58	U	1
Total TPH	PHC635	**17.6**	49.8	14.9	mg/kg	01.31.2021 04:58	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-130	01.31.2021 04:58	
o-Terphenyl	84-15-1	123	%	70-130	01.31.2021 04:58	

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-5-S-1-1.5-210126**	Matrix:	Solid	Date Received:	01.26.2021 16:57
Lab Sample Id:	686141-002	Date Collected:	01.26.2021 10:12		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.29.2021 17:00	% Moisture:	
Seq Number:	3149455			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00156**	0.00199	0.000383	mg/kg	01.30.2021 06:00	J	1
Toluene	108-88-3	**0.00442**	0.00199	0.000453	mg/kg	01.30.2021 06:00		1
Ethylbenzene	100-41-4	**0.00266**	0.00199	0.000561	mg/kg	01.30.2021 06:00		1
m,p-Xylenes	179601-23-1	**0.0150**	0.00398	0.00101	mg/kg	01.30.2021 06:00		1
o-Xylene	95-47-6	**0.00483**	0.00199	0.000342	mg/kg	01.30.2021 06:00		1
Total Xylenes	1330-20-7	**0.0198**	0.00199	0.000342	mg/kg	01.30.2021 06:00		1
Total BTEX		**0.0285**	0.00199	0.000342	mg/kg	01.30.2021 06:00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.30.2021 06:00	
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.30.2021 06:00	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-6-S-0-.5-210126** Matrix: Solid Date Received:01.26.2021 16:57

Lab Sample Id: 686141-003 Date Collected: 01.26.2021 10:24

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30 % Moisture:

Seq Number: 3149207 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.8**	4.95	0.850	mg/kg	01.28.2021 11:02		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00 % Moisture:

Seq Number: 3149652 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.4**	49.9	15.0	mg/kg	01.31.2021 05:19	J	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	01.31.2021 05:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.31.2021 05:19	U	1
Total TPH	PHC635	**16.4**	49.9	15.0	mg/kg	01.31.2021 05:19	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-130	01.31.2021 05:19	
o-Terphenyl	84-15-1	149	%	70-130	01.31.2021 05:19	**

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-6-S-0-.5-210126**	Matrix:	Solid	Date Received:	01.26.2021 16:57
Lab Sample Id:	686141-003	Date Collected:	01.26.2021 10:24		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.29.2021 17:00	% Moisture:	
Seq Number:	3149455			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00123**	0.00200	0.000384	mg/kg	01.30.2021 06:21	J	1
Toluene	108-88-3	**0.00210**	0.00200	0.000455	mg/kg	01.30.2021 06:21		1
Ethylbenzene	100-41-4	**0.000699**	0.00200	0.000564	mg/kg	01.30.2021 06:21	J	1
m,p-Xylenes	179601-23-1	**0.00227**	0.00399	0.00101	mg/kg	01.30.2021 06:21	J	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.30.2021 06:21	U	1
Total Xylenes	1330-20-7	**0.00227**	0.00200	0.000344	mg/kg	01.30.2021 06:21		1
Total BTEX		**0.00630**	0.00200	0.000344	mg/kg	01.30.2021 06:21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.30.2021 06:21	
1,4-Difluorobenzene	540-36-3	97	%	70-130	01.30.2021 06:21	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-6-S-1-1.5-210126** Matrix: Solid Date Received:01.26.2021 16:57

Lab Sample Id: 686141-004 Date Collected: 01.26.2021 10:27

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30 % Moisture:

Seq Number: 3149207 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.6**	4.96	0.852	mg/kg	01.28.2021 11:07		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00 % Moisture:

Seq Number: 3149652 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.0**	49.8	14.9	mg/kg	01.31.2021 05:40	J	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	01.31.2021 05:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	01.31.2021 05:40	U	1
Total TPH	PHC635	**16.0**	49.8	14.9	mg/kg	01.31.2021 05:40	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	01.31.2021 05:40	
o-Terphenyl	84-15-1	133	%	70-130	01.31.2021 05:40	**

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-6-S-1-1.5-210126**	Matrix:	Solid	Date Received:	01.26.2021 16:57
Lab Sample Id:	686141-004	Date Collected:	01.26.2021 10:27		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.29.2021 17:00	% Moisture:	
Seq Number:	3149455			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00172**	0.00200	0.000385	mg/kg	01.30.2021 06:41	J	1
Toluene	108-88-3	**0.00537**	0.00200	0.000456	mg/kg	01.30.2021 06:41		1
Ethylbenzene	100-41-4	**0.00178**	0.00200	0.000565	mg/kg	01.30.2021 06:41	J	1
m,p-Xylenes	179601-23-1	**0.00715**	0.00400	0.00101	mg/kg	01.30.2021 06:41		1
o-Xylene	95-47-6	**0.00212**	0.00200	0.000344	mg/kg	01.30.2021 06:41		1
Total Xylenes	1330-20-7	**0.00927**	0.00200	0.000344	mg/kg	01.30.2021 06:41		1
Total BTEX		**0.0181**	0.00200	0.000344	mg/kg	01.30.2021 06:41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.30.2021 06:41	
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.30.2021 06:41	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-6-SD-1-1.5-210126** Matrix: Solid Date Received:01.26.2021 16:57

Lab Sample Id: 686141-005 Date Collected: 01.26.2021 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30 % Moisture:

Seq Number: 3149207 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.6**	5.02	0.862	mg/kg	01.28.2021 11:13		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00 % Moisture:

Seq Number: 3149652 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.0**	50.0	15.0	mg/kg	01.31.2021 06:01	J	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.31.2021 06:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.31.2021 06:01	U	1
Total TPH	PHC635	**16.0**	50.0	15.0	mg/kg	01.31.2021 06:01	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-130	01.31.2021 06:01	
o-Terphenyl	84-15-1	123	%	70-130	01.31.2021 06:01	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-6-SD-1-1.5-210126**	Matrix:	Solid	Date Received:	01.26.2021 16:57
Lab Sample Id:	686141-005	Date Collected:	01.26.2021 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.29.2021 17:00	% Moisture:	
Seq Number:	3149455			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00167**	0.00202	0.000388	mg/kg	01.30.2021 07:02	J	1
Toluene	108-88-3	**0.00548**	0.00202	0.000459	mg/kg	01.30.2021 07:02		1
Ethylbenzene	100-41-4	**0.00144**	0.00202	0.000569	mg/kg	01.30.2021 07:02	J	1
m,p-Xylenes	179601-23-1	**0.00499**	0.00403	0.00102	mg/kg	01.30.2021 07:02		1
o-Xylene	95-47-6	**0.00169**	0.00202	0.000347	mg/kg	01.30.2021 07:02	J	1
Total Xylenes	1330-20-7	**0.00668**	0.00202	0.000347	mg/kg	01.30.2021 07:02		1
Total BTEX		**0.0153**	0.00202	0.000347	mg/kg	01.30.2021 07:02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.30.2021 07:02	
1,4-Difluorobenzene	540-36-3	98	%	70-130	01.30.2021 07:02	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-7-S-0-.5-210126** Matrix: Solid Date Received:01.26.2021 16:57

Lab Sample Id: 686141-006 Date Collected: 01.26.2021 10:48

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30 % Moisture:

Seq Number: 3149207 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.0**	5.05	0.867	mg/kg	01.28.2021 11:18		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00 % Moisture:

Seq Number: 3149652 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**18.3**	50.0	15.0	mg/kg	01.31.2021 06:21	J	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.31.2021 06:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.31.2021 06:21	U	1
Total TPH	PHC635	**18.3**	50.0	15.0	mg/kg	01.31.2021 06:21	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	01.31.2021 06:21	
o-Terphenyl	84-15-1	125	%	70-130	01.31.2021 06:21	

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WDDU 46

Sample Id:	**SB-7-S-0-.5-210126**	Matrix:	Solid	Date Received:	01.26.2021 16:57
Lab Sample Id:	686141-006	Date Collected:	01.26.2021 10:48		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.29.2021 17:00	% Moisture:	
Seq Number:	3149455			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00190**	0.00202	0.000388	mg/kg	01.30.2021 07:22	J	1
Toluene	108-88-3	**0.00422**	0.00202	0.000459	mg/kg	01.30.2021 07:22		1
Ethylbenzene	100-41-4	**0.00242**	0.00202	0.000569	mg/kg	01.30.2021 07:22		1
m,p-Xylenes	179601-23-1	**0.00672**	0.00403	0.00102	mg/kg	01.30.2021 07:22		1
o-Xylene	95-47-6	**0.00220**	0.00202	0.000347	mg/kg	01.30.2021 07:22		1
Total Xylenes	1330-20-7	**0.00892**	0.00202	0.000347	mg/kg	01.30.2021 07:22		1
Total BTEX		**0.0175**	0.00202	0.000347	mg/kg	01.30.2021 07:22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.30.2021 07:22	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.30.2021 07:22	

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WDDU 46

Sample Id: **SB-8-S-0-.5-210126** Matrix: Solid Date Received:01.26.2021 16:57

Lab Sample Id: 686141-007 Date Collected: 01.26.2021 11:55

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30 % Moisture:

Seq Number: 3149207 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**429**	5.00	0.858	mg/kg	01.28.2021 11:23		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00 % Moisture:

Seq Number: 3149652 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**18.6**	49.8	14.9	mg/kg	01.31.2021 06:42	J	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	01.31.2021 06:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	01.31.2021 06:42	U	1
Total TPH	PHC635	**18.6**	49.8	14.9	mg/kg	01.31.2021 06:42	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-130	01.31.2021 06:42	
o-Terphenyl	84-15-1	137	%	70-130	01.31.2021 06:42	**

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-8-S-0-.5-210126**	Matrix:	Solid	Date Received:	01.26.2021 16:57
Lab Sample Id:	686141-007	Date Collected:	01.26.2021 11:55		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.29.2021 17:00	% Moisture:	
Seq Number:	3149455			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00191**	0.00202	0.000388	mg/kg	01.30.2021 07:43	J	1
Toluene	108-88-3	**0.00382**	0.00202	0.000459	mg/kg	01.30.2021 07:43		1
Ethylbenzene	100-41-4	**0.00473**	0.00202	0.000569	mg/kg	01.30.2021 07:43		1
m,p-Xylenes	179601-23-1	**0.0281**	0.00403	0.00102	mg/kg	01.30.2021 07:43		1
o-Xylene	95-47-6	**0.00957**	0.00202	0.000347	mg/kg	01.30.2021 07:43		1
Total Xylenes	1330-20-7	**0.0377**	0.00202	0.000347	mg/kg	01.30.2021 07:43		1
Total BTEX		**0.0481**	0.00202	0.000347	mg/kg	01.30.2021 07:43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.30.2021 07:43	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.30.2021 07:43	

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-9-S-0-.5-210126** Matrix: Solid Date Received:01.26.2021 16:57

Lab Sample Id: 686141-008 Date Collected: 01.26.2021 13:10

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30 % Moisture:

Seq Number: 3149207 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.7**	5.00	0.858	mg/kg	01.28.2021 11:28		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00 % Moisture:

Seq Number: 3149652 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.5**	50.0	15.0	mg/kg	01.31.2021 08:30	J	1
Diesel Range Organics (DRO)	C10C28DRO	**389**	50.0	15.0	mg/kg	01.31.2021 08:30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**129**	50.0	15.0	mg/kg	01.31.2021 08:30		1
Total TPH	PHC635	**534**	50.0	15.0	mg/kg	01.31.2021 08:30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	01.31.2021 08:30	
o-Terphenyl	84-15-1	135	%	70-130	01.31.2021 08:30	**

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-9-S-0-.5-210126**	Matrix:	Solid	Date Received:	01.26.2021 16:57
Lab Sample Id:	686141-008	Date Collected:	01.26.2021 13:10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.29.2021 17:00	% Moisture:	
Seq Number:	3149455			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	01.30.2021 08:03	U	1
Toluene	108-88-3	**0.00173**	0.00200	0.000455	mg/kg	01.30.2021 08:03	J	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	01.30.2021 08:03	U	1
m,p-Xylenes	179601-23-1	**0.00113**	0.00399	0.00101	mg/kg	01.30.2021 08:03	J	1
o-Xylene	95-47-6	**0.000439**	0.00200	0.000344	mg/kg	01.30.2021 08:03	J	1
Total Xylenes	1330-20-7	**0.00157**	0.00200	0.000344	mg/kg	01.30.2021 08:03	J	1
Total BTEX		**0.00330**	0.00200	0.000344	mg/kg	01.30.2021 08:03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.30.2021 08:03	
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.30.2021 08:03	

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-9-S-1-1.5-210126** Matrix: Solid Date Received:01.26.2021 16:57

Lab Sample Id: 686141-009 Date Collected: 01.26.2021 13:20

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30 % Moisture:

Seq Number: 3149207 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.4**	5.04	0.865	mg/kg	01.28.2021 11:44		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00 % Moisture:

Seq Number: 3149652 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**22.1**	50.0	15.0	mg/kg	01.31.2021 07:25	J	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.31.2021 07:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.31.2021 07:25	U	1
Total TPH	PHC635	**22.1**	50.0	15.0	mg/kg	01.31.2021 07:25	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-130	01.31.2021 07:25	
o-Terphenyl	84-15-1	135	%	70-130	01.31.2021 07:25	**

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-9-S-1-1.5-210126**	Matrix:	Solid	Date Received:	01.26.2021 16:57
Lab Sample Id:	686141-009	Date Collected:	01.26.2021 13:20		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.29.2021 17:00	% Moisture:	
Seq Number:	3149455			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	01.30.2021 08:24	U	1
Toluene	108-88-3	**0.00212**	0.00200	0.000457	mg/kg	01.30.2021 08:24		1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	01.30.2021 08:24	U	1
m,p-Xylenes	179601-23-1	**0.00135**	0.00401	0.00102	mg/kg	01.30.2021 08:24	J	1
o-Xylene	95-47-6	**0.000531**	0.00200	0.000345	mg/kg	01.30.2021 08:24	J	1
Total Xylenes	1330-20-7	**0.00188**	0.00200	0.000345	mg/kg	01.30.2021 08:24	J	1
Total BTEX		**0.00400**	0.00200	0.000345	mg/kg	01.30.2021 08:24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.30.2021 08:24	
1,4-Difluorobenzene	540-36-3	98	%	70-130	01.30.2021 08:24	

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-10-S-0-.5-210126** Matrix: Solid Date Received:01.26.2021 16:57

Lab Sample Id: 686141-010 Date Collected: 01.26.2021 13:39

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30 % Moisture:

Seq Number: 3149207 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3420**	49.8	8.55	mg/kg	01.28.2021 11:49		10

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00 % Moisture:

Seq Number: 3149652 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**18.3**	49.8	14.9	mg/kg	01.31.2021 07:47	J	1
Diesel Range Organics (DRO)	C10C28DRO	**42.5**	49.8	14.9	mg/kg	01.31.2021 07:47	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**18.7**	49.8	14.9	mg/kg	01.31.2021 07:47	J	1
Total TPH	PHC635	**79.5**	49.8	14.9	mg/kg	01.31.2021 07:47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-130	01.31.2021 07:47	
o-Terphenyl	84-15-1	128	%	70-130	01.31.2021 07:47	

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-10-S-0-.5-210126**	Matrix:	Solid	Date Received:	01.26.2021 16:57
Lab Sample Id:	686141-010	Date Collected:	01.26.2021 13:39		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.29.2021 17:00	% Moisture:	
Seq Number:	3149455			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	01.30.2021 08:44	U	1
Toluene	108-88-3	**0.00218**	0.00201	0.000457	mg/kg	01.30.2021 08:44		1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	01.30.2021 08:44	U	1
m,p-Xylenes	179601-23-1	**0.00118**	0.00402	0.00102	mg/kg	01.30.2021 08:44	J	1
o-Xylene	95-47-6	**0.000432**	0.00201	0.000346	mg/kg	01.30.2021 08:44	J	1
Total Xylenes	1330-20-7	**0.00161**	0.00201	0.000346	mg/kg	01.30.2021 08:44	J	1
Total BTEX		**0.00379**	0.00201	0.000346	mg/kg	01.30.2021 08:44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.30.2021 08:44	
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.30.2021 08:44	

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-10-S-1-1.5-210126** Matrix: Solid Date Received:01.26.2021 16:57

Lab Sample Id: 686141-011 Date Collected: 01.26.2021 13:53

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30 % Moisture:

Seq Number: 3149207 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1600**	25.0	4.29	mg/kg	01.28.2021 12:05		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00 % Moisture:

Seq Number: 3149596 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.3**	49.9	15.0	mg/kg	01.31.2021 07:47	J	1
Diesel Range Organics (DRO)	C10C28DRO	**21.3**	49.9	15.0	mg/kg	01.31.2021 07:47	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.31.2021 07:47	U	1
Total TPH	PHC635	**36.6**	49.9	15.0	mg/kg	01.31.2021 07:47	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-130	01.31.2021 07:47	
o-Terphenyl	84-15-1	94	%	70-130	01.31.2021 07:47	

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Certificate of Analytical Results 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-10-S-1-1.5-210126**	Matrix:	Solid	Date Received:	01.26.2021 16:57
Lab Sample Id:	686141-011	Date Collected:	01.26.2021 13:53		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.29.2021 17:00	% Moisture:	
Seq Number:	3149455			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	01.30.2021 10:08	U	1
Toluene	108-88-3	**0.00214**	0.00199	0.000453	mg/kg	01.30.2021 10:08		1
Ethylbenzene	100-41-4	**0.000626**	0.00199	0.000561	mg/kg	01.30.2021 10:08	J	1
m,p-Xylenes	179601-23-1	**0.00143**	0.00398	0.00101	mg/kg	01.30.2021 10:08	J	1
o-Xylene	95-47-6	**0.000577**	0.00199	0.000342	mg/kg	01.30.2021 10:08	J	1
Total Xylenes	1330-20-7	**0.00201**	0.00199	0.000342	mg/kg	01.30.2021 10:08		1
Total BTEX		**0.00477**	0.00199	0.000342	mg/kg	01.30.2021 10:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	01.30.2021 10:08	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.30.2021 10:08	

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Blank Summary 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720180-1-BLK** Matrix: SOLID

Lab Sample Id: **7720180-1-BLK**

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

Tech: CHE

Analyst: CHE Date Prep: 01.27.2021 18:30

Seq Number: 3149207

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.28.2021 09:07	U	1

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Blank Summary 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720382-1-BLK** Matrix: SOLID

Lab Sample Id: **7720382-1-BLK**

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

Tech: KTL

Analyst: KTL Date Prep: 01.29.2021 17:00

Seq Number: 3149455

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.30.2021 05:18	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.30.2021 05:18	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.30.2021 05:18	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.30.2021 05:18	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.30.2021 05:18	U	1

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Blank Summary 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720483-1-BLK** Matrix: SOLID

Lab Sample Id: **7720483-1-BLK**

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

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00

Seq Number: 3149652

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.30.2021 23:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.30.2021 23:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.30.2021 23:03	U	1

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Blank Summary 686141

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720487-1-BLK** Matrix: SOLID

Lab Sample Id: **7720487-1-BLK**

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

Tech: DVM

Analyst: ARM Date Prep: 01.30.2021 11:00

Seq Number: 3149596

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.30.2021 23:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.30.2021 23:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.30.2021 23:03	U	1

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Form 2 - Surrogate Recoveries

Project Name: WDDU 46

Report Date: 02022021

Work Orders : 686141 **Project ID:** 30065060-0002B

Lab Batch #: 3149455 **Sample:** 7720382-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.30.2021 03:18 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0284	0.0300	95	70-130	

Lab Batch #: 3149455 **Sample:** 7720382-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.30.2021 03:39 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0280	0.0300	93	70-130	

Lab Batch #: 3149455 **Sample:** 686141-001 S / MS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.30.2021 03:59 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0334	0.0300	111	70-130	

Lab Batch #: 3149455 **Sample:** 686141-001 SD / MSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.30.2021 04:20 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	70-130	
4-Bromofluorobenzene	0.0292	0.0300	97	70-130	

Lab Batch #: 3149455 **Sample:** 7720382-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.30.2021 05:18 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

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

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Form 2 - Surrogate Recoveries

Project Name: WDDU 46

Report Date: 02022021

Work Orders : 686141 **Project ID:** 30065060-0002B

Lab Batch #: 3149596 **Sample:** 7720487-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.30.2021 23:03 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.0	100	86	70-130	
o-Terphenyl	52.9	50.0	106	70-130	

Lab Batch #: 3149596 **Sample:** 7720487-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.30.2021 23:24 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.1	100	85	70-130	
o-Terphenyl	45.5	50.0	91	70-130	

Lab Batch #: 3149596 **Sample:** 7720487-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.30.2021 23:44 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.9	100	94	70-130	
o-Terphenyl	50.3	50.0	101	70-130	

Lab Batch #: 3149596 **Sample:** 686155-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.31.2021 00:26 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.2	99.7	83	70-130	
o-Terphenyl	43.6	49.9	87	70-130	

Lab Batch #: 3149596 **Sample:** 686155-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.31.2021 00:47 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.1	99.6	84	70-130	
o-Terphenyl	42.8	49.8	86	70-130	

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

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Form 2 - Surrogate Recoveries

Project Name: WDDU 46

Report Date: 02022021

Work Orders : 686141 **Project ID:** 30065060-0002B

Lab Batch #: 3149652 **Sample:** 7720483-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.30.2021 23:03 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	100	85	70-130	
o-Terphenyl	65.7	50.0	131	70-130	**

Lab Batch #: 3149652 **Sample:** 7720483-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.30.2021 23:24 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.7	100	77	70-130	
o-Terphenyl	46.9	50.0	94	70-130	

Lab Batch #: 3149652 **Sample:** 7720483-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.30.2021 23:44 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.7	100	82	70-130	
o-Terphenyl	57.9	50.0	116	70-130	

Lab Batch #: 3149652 **Sample:** 685950-021 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.31.2021 00:26 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.7	99.9	89	70-130	
o-Terphenyl	56.0	50.0	112	70-130	

Lab Batch #: 3149652 **Sample:** 685950-021 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.31.2021 00:47 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.4	99.6	84	70-130	
o-Terphenyl	54.0	49.8	108	70-130	

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

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QC Summary 686141

Arcadis U.S., Inc

WDDU 46

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149207 — Matrix: Solid — Date Prep: 01.27.2021
MB Sample Id: 7720180-1-BLK — LCS Sample Id: 7720180-1-BKS — LCSD Sample Id: 7720180-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	252	101	249	100	90-110	1	20	mg/kg	01.28.2021 09:12	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149207 — Matrix: Soil — Date Prep: 01.27.2021
Parent Sample Id: 686129-001 — MS Sample Id: 686129-001 S — MSD Sample Id: 686129-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4720	2500	7460	110	7290	103	90-110	2	20	mg/kg	01.28.2021 09:28	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149207 — Matrix: Solid — Date Prep: 01.27.2021
Parent Sample Id: 686141-008 — MS Sample Id: 686141-008 S — MSD Sample Id: 686141-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.7	250	268	102	267	102	90-110	0	20	mg/kg	01.28.2021 11:33	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149596 — Matrix: Solid — Date Prep: 01.30.2021
MB Sample Id: 7720487-1-BLK — LCS Sample Id: 7720487-1-BKS — LCSD Sample Id: 7720487-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	956	96	1030	103	70-130	7	20	mg/kg	01.30.2021 23:24	
Diesel Range Organics (DRO)	<15.0	1000	896	90	974	97	70-130	8	20	mg/kg	01.30.2021 23:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		85		94		70-130	%	01.30.2021 23:24
o-Terphenyl	106		91		101		70-130	%	01.30.2021 23:24

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149652 — Matrix: Solid — Date Prep: 01.30.2021
MB Sample Id: 7720483-1-BLK — LCS Sample Id: 7720483-1-BKS — LCSD Sample Id: 7720483-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	834	83	862	86	70-130	3	20	mg/kg	01.30.2021 23:24	
Diesel Range Organics (DRO)	<15.0	1000	857	86	890	89	70-130	4	20	mg/kg	01.30.2021 23:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		77		82		70-130	%	01.30.2021 23:24
o-Terphenyl	131	**	94		116		70-130	%	01.30.2021 23:24

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

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

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

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QC Summary 686141

Arcadis U.S., Inc

WDDU 46

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149596 — Matrix: Solid — Date Prep: 01.30.2021
MB Sample Id: 7720487-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	01.30.2021 23:03	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149652 — Matrix: Solid — Date Prep: 01.30.2021
MB Sample Id: 7720483-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	01.30.2021 23:03	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149596 — Matrix: Soil — Date Prep: 01.30.2021
Parent Sample Id: 686155-001 — MS Sample Id: 686155-001 S — MSD Sample Id: 686155-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	931	93	932	94	70-130	0	20	mg/kg	01.31.2021 00:26	
Diesel Range Organics (DRO)	<15.0	997	855	86	853	86	70-130	0	20	mg/kg	01.31.2021 00:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	83		84		70-130	%	01.31.2021 00:26
o-Terphenyl	87		86		70-130	%	01.31.2021 00:26

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149652 — Matrix: Soil — Date Prep: 01.30.2021
Parent Sample Id: 685950-021 — MS Sample Id: 685950-021 S — MSD Sample Id: 685950-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	939	94	910	91	70-130	3	20	mg/kg	01.31.2021 00:26	
Diesel Range Organics (DRO)	<15.0	999	990	99	955	96	70-130	4	20	mg/kg	01.31.2021 00:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		84		70-130	%	01.31.2021 00:26
o-Terphenyl	112		108		70-130	%	01.31.2021 00:26

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 686141

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Arcadis U.S., Inc

WDDU 46

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3149455 — Matrix: Solid — Date Prep: 01.29.2021
MB Sample Id: 7720382-1-BLK — LCS Sample Id: 7720382-1-BKS — LCSD Sample Id: 7720382-1-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	0.104	104	0.102	102	70-130	2	35	mg/kg	01.30.2021 03:18	
Toluene	<0.000456	0.100	0.0988	99	0.0966	97	70-130	2	35	mg/kg	01.30.2021 03:18	
Ethylbenzene	<0.000565	0.100	0.0987	99	0.0967	97	70-130	2	35	mg/kg	01.30.2021 03:18	
m,p-Xylenes	<0.00101	0.200	0.192	96	0.188	94	70-130	2	35	mg/kg	01.30.2021 03:18	
o-Xylene	<0.000344	0.100	0.0951	95	0.0930	93	70-130	2	35	mg/kg	01.30.2021 03:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		102		100		70-130	%	01.30.2021 03:18
4-Bromofluorobenzene	101		95		93		70-130	%	01.30.2021 03:18

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3149455 — Matrix: Solid — Date Prep: 01.29.2021
Parent Sample Id: 686141-001 — MS Sample Id: 686141-001 S — MSD Sample Id: 686141-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00179	0.0996	0.00662	5	0.00797	6	70-130	19	35	mg/kg	01.30.2021 03:59	X
Toluene	0.00465	0.0996	0.00809	3	0.00841	4	70-130	4	35	mg/kg	01.30.2021 03:59	X
Ethylbenzene	0.00148	0.0996	0.00590	4	0.00736	6	70-130	22	35	mg/kg	01.30.2021 03:59	X
m,p-Xylenes	0.00552	0.199	0.0130	4	0.0153	5	70-130	16	35	mg/kg	01.30.2021 03:59	X
o-Xylene	0.00171	0.0996	0.00733	6	0.00816	6	70-130	11	35	mg/kg	01.30.2021 03:59	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		98		70-130	%	01.30.2021 03:59
4-Bromofluorobenzene	111		97		70-130	%	01.30.2021 03:59

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

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Flagging Criteria

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

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Eurofins Xenco
1211 W Florida Ave
Midland TX 79701
Phone 432-704-5440

Chain of Custody Record

Client Information	Sampler: J. Steinmann	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-23595-8666.1
Client Contact: Motgan Jordan	Phone: 619 851 8792	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 1 of 1
Company: ARCADIS U.S., Inc.				Job #: 108141
Address: 1717 W 6th Street. Suite 210	Due Date Requested:			
City: Austin	TAT Requested (days): Std			
State, Zip: TX, 78703				
Phone: 281 644 9437	PO #:			
Email: douglas.jordan@arcadis.com	WO #:			
Project Name: 30065060-0002B	Project #: 30065060-0002B			
Site: WDDU 46	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015_GRO/ DRO/ ORO	300 - Chloride	8021- BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N		
SB-5-S-0-.5-210126	1/26/21	1006	G	Solid						1	
SB-5-S-1-1.25-210126		1012		Solid							
~~SB-6-S-0-~~ SB-6-S-0-.5-210126		1024		Solid							
SB-6-S-1-1.5-210126		1027		Solid							
SB-6-SD-1-1.5-210126		—		Solid							
SB-7-S-0-.5-210126		1048		Solid							
SB-8-S-0-.5-210126		1155		Solid							
SB-9-S-0-.5-210126		1310		Solid							
SB-9-S-1-1.25-210126		1320		Solid							
SB-10-S-0-.5-210126		1339		Solid							
SB-10-S-1-1.5-210126		1353		Solid							

11/26/21

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: Justin Steinmann	Date/Time: 1/26/21 1600	Company Arcadis	Received by: Carlos Grajeda	Date/Time: 1-26-21 1600	Company Arcadis
Relinquished by: Carlos Grajeda	Date/Time: 1-26-21 1657	Company Arcadis	Received by:	Date/Time: 1/26/21 1657	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.9 .5

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis U.S., Inc

Date/ Time Received: 01.26.2021 04.57.00 PM

Work Order #: 686141

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)?	3.9
#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: 01.27.2021
Brianna Teel

Checklist reviewed by: Sachin Kudchadkar Date: 01.27.2021
Sachin Kudchadkar

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Analytical Report 686362

for

Arcadis U.S., Inc

Project Manager: Morgan Jordan

WDDU 46

30065060-0002B

02.02.2021

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 (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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02.02.2021

Project Manager: **Morgan Jordan**
Arcadis U.S., Inc
1717 W 6th Street, Suite 210
Austin, TX 78703

Reference: Eurofins Xenco, LLC Report No(s): **686362**
WDDU 46
Project Address:

Morgan Jordan:

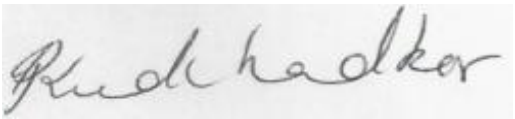
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 686362. All results being reported under this Report Number apply to the samples analyzed and properly identified 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. 686362 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Sachin Kudchadkar
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-11-S-0-.5-210127	S	01.27.2021 10:10		686362-001
SB-11-S-1-1.25-210127	S	01.27.2021 10:14		686362-002
SB-12-S-0-.5-210127	S	01.27.2021 10:47		686362-003
SB-13-S-0-.5-210127	S	01.27.2021 11:14		686362-004
SB-14-S-0-.5-210127	S	01.27.2021 11:39		686362-005
SB-14-S-1-1.25-210127	S	01.27.2021 11:45		686362-006
SB-15-S-0-.5-210127	S	01.27.2021 12:15		686362-007
SB-15-S-1-1.75-210127	S	01.27.2021 12:21		686362-008

CASE NARRATIVE

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Client Name: Arcadis U.S., Inc

Project Name: WDDU 46

Project ID: *30065060-0002B*
Work Order Number(s): *686362*

Report Date: *02.02.2021*
Date Received: *01.27.2021*

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-3149662 BTEX by EPA 8021B

Surrogate 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; Samples affected are: 686362-001.
Surrogate 4-Bromofluorobenzene recovered above QC limits . Samples affected are: 7720560-1-BKS,686362-001 S,686362-001 SD.

Lab Sample ID 686362-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 686362-001, -002, -003, -004, -005, -006, -007, -008.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

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Certificate of Analytical Results 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-11-S-0-.5-210127** Matrix: Soil Date Received:01.27.2021 17:15

Lab Sample Id: 686362-001 Date Collected: 01.27.2021 10:10

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.29.2021 13:30 % Moisture:

Seq Number: 3149533 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**356**	5.04	0.865	mg/kg	02.01.2021 09:40		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.31.2021 10:00 % Moisture:

Seq Number: 3149619 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	01.31.2021 20:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	**42.4**	49.8	14.9	mg/kg	01.31.2021 20:56	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**16.9**	49.8	14.9	mg/kg	01.31.2021 20:56	J	1
Total TPH	PHC635	**59.3**	49.8	14.9	mg/kg	01.31.2021 20:56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-130	01.31.2021 20:56	
o-Terphenyl	84-15-1	93	%	70-130	01.31.2021 20:56	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-11-S-0-.5-210127**	Matrix:	Soil	Date Received:	01.27.2021 17:15
Lab Sample Id:	686362-001	Date Collected:	01.27.2021 10:10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	02.01.2021 12:00	% Moisture:	
Seq Number:	3149662			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	02.01.2021 16:29	UX	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	02.01.2021 16:29	UX	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	02.01.2021 16:29	UX	1
m,p-Xylenes	179601-23-1	**0.00186**	0.00399	0.00101	mg/kg	02.01.2021 16:29	JX	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	02.01.2021 16:29	UX	1
Total Xylenes	1330-20-7	**0.00186**	0.00200	0.000344	mg/kg	02.01.2021 16:29	J	1
Total BTEX		**0.00186**	0.00200	0.000344	mg/kg	02.01.2021 16:29	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	62	%	70-130	02.01.2021 16:29	**
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.01.2021 16:29	

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Certificate of Analytical Results 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-11-S-1-1.25-210127** Matrix: Soil Date Received:01.27.2021 17:15

Lab Sample Id: 686362-002 Date Collected: 01.27.2021 10:14

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.29.2021 13:30 % Moisture:

Seq Number: 3149533 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**459**	4.98	0.855	mg/kg	02.01.2021 09:45		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.31.2021 10:00 % Moisture:

Seq Number: 3149619 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	01.31.2021 21:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	**18.1**	50.0	15.0	mg/kg	01.31.2021 21:17	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.31.2021 21:17	U	1
Total TPH	PHC635	**18.1**	50.0	15.0	mg/kg	01.31.2021 21:17	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-130	01.31.2021 21:17	
o-Terphenyl	84-15-1	95	%	70-130	01.31.2021 21:17	

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Certificate of Analytical Results 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-11-S-1-1.25-210127**	Matrix:	Soil	Date Received:	01.27.2021 17:15
Lab Sample Id:	686362-002	Date Collected:	01.27.2021 10:14		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	02.01.2021 12:00	% Moisture:	
Seq Number:	3149662			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	02.01.2021 23:24	U	1
Toluene	108-88-3	**0.000472**	0.00201	0.000457	mg/kg	02.01.2021 23:24	J	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	02.01.2021 23:24	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	02.01.2021 23:24	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	02.01.2021 23:24	U	1
Total Xylenes	1330-20-7	<0.000346	0.00201	0.000346	mg/kg	02.01.2021 23:24	U	1
Total BTEX		**0.000472**	0.00201	0.000346	mg/kg	02.01.2021 23:24	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	02.01.2021 23:24	
1,4-Difluorobenzene	540-36-3	84	%	70-130	02.01.2021 23:24	

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Certificate of Analytical Results 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-12-S-0-.5-210127** Matrix: Soil Date Received:01.27.2021 17:15

Lab Sample Id: 686362-003 Date Collected: 01.27.2021 10:47

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.29.2021 13:50 % Moisture:

Seq Number: 3149502 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2150**	25.0	4.29	mg/kg	01.30.2021 18:44		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.31.2021 10:00 % Moisture:

Seq Number: 3149619 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	01.31.2021 21:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.6**	49.9	15.0	mg/kg	01.31.2021 21:39	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.31.2021 21:39	U	1
Total TPH	PHC635	**19.6**	49.9	15.0	mg/kg	01.31.2021 21:39	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-130	01.31.2021 21:39	
o-Terphenyl	84-15-1	95	%	70-130	01.31.2021 21:39	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-12-S-0-.5-210127**	Matrix:	Soil	Date Received:	01.27.2021 17:15
Lab Sample Id:	686362-003	Date Collected:	01.27.2021 10:47		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	02.01.2021 12:00	% Moisture:	
Seq Number:	3149662			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	02.01.2021 23:50	U	1
Toluene	108-88-3	<0.000458	0.00201	0.000458	mg/kg	02.01.2021 23:50	U	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	02.01.2021 23:50	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	02.01.2021 23:50	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	02.01.2021 23:50	U	1
Total Xylenes	1330-20-7	<0.000346	0.00201	0.000346	mg/kg	02.01.2021 23:50	U	1
Total BTEX		<0.000346	0.00201	0.000346	mg/kg	02.01.2021 23:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	128	%	70-130	02.01.2021 23:50	
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.01.2021 23:50	

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WDDU 46

Sample Id: **SB-13-S-0-.5-210127** Matrix: Soil Date Received:01.27.2021 17:15

Lab Sample Id: 686362-004 Date Collected: 01.27.2021 11:14

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.29.2021 14:10 % Moisture:

Seq Number: 3149505 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**220**	5.02	0.862	mg/kg	01.31.2021 12:00		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.31.2021 10:00 % Moisture:

Seq Number: 3149619 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	01.31.2021 22:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	**62.7**	50.0	15.0	mg/kg	01.31.2021 22:01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**28.8**	50.0	15.0	mg/kg	01.31.2021 22:01	J	1
Total TPH	PHC635	**91.5**	50.0	15.0	mg/kg	01.31.2021 22:01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-130	01.31.2021 22:01	
o-Terphenyl	84-15-1	103	%	70-130	01.31.2021 22:01	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-13-S-0-.5-210127**	Matrix:	Soil	Date Received:	01.27.2021 17:15
Lab Sample Id:	686362-004	Date Collected:	01.27.2021 11:14		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	02.01.2021 12:00	% Moisture:	
Seq Number:	3149662			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	02.02.2021 00:15	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	02.02.2021 00:15	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	02.02.2021 00:15	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	02.02.2021 00:15	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	02.02.2021 00:15	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	02.02.2021 00:15	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	02.02.2021 00:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	02.02.2021 00:15	
1,4-Difluorobenzene	540-36-3	95	%	70-130	02.02.2021 00:15	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-14-S-0-.5-210127** Matrix: Soil Date Received:01.27.2021 17:15

Lab Sample Id: 686362-005 Date Collected: 01.27.2021 11:39

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.29.2021 14:10 % Moisture:

Seq Number: 3149505 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**59.5**	4.96	0.852	mg/kg	01.31.2021 12:16		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.31.2021 10:00 % Moisture:

Seq Number: 3149619 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	01.31.2021 22:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	**16.9**	50.0	15.0	mg/kg	01.31.2021 22:22	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.31.2021 22:22	U	1
Total TPH	PHC635	**16.9**	50.0	15.0	mg/kg	01.31.2021 22:22	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-130	01.31.2021 22:22	
o-Terphenyl	84-15-1	93	%	70-130	01.31.2021 22:22	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-14-S-0-.5-210127**	Matrix:	Soil	Date Received:	01.27.2021 17:15
Lab Sample Id:	686362-005	Date Collected:	01.27.2021 11:39		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	02.01.2021 12:00	% Moisture:	
Seq Number:	3149662			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	02.02.2021 00:40	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	02.02.2021 00:40	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	02.02.2021 00:40	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	02.02.2021 00:40	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	02.02.2021 00:40	U	1
Total Xylenes	1330-20-7	<0.000345	0.00200	0.000345	mg/kg	02.02.2021 00:40	U	1
Total BTEX		<0.000345	0.00200	0.000345	mg/kg	02.02.2021 00:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	02.02.2021 00:40	
1,4-Difluorobenzene	540-36-3	81	%	70-130	02.02.2021 00:40	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-14-S-1-1.25-210127** Matrix: Soil Date Received:01.27.2021 17:15

Lab Sample Id: 686362-006 Date Collected: 01.27.2021 11:45

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.29.2021 14:10 % Moisture:

Seq Number: 3149505 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**959**	4.99	0.857	mg/kg	01.31.2021 12:22		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.31.2021 10:00 % Moisture:

Seq Number: 3149619 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	01.31.2021 22:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.31.2021 22:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.31.2021 22:43	U	1
Total TPH	PHC635	<15.0	50.0	15.0	mg/kg	01.31.2021 22:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-130	01.31.2021 22:43	
o-Terphenyl	84-15-1	95	%	70-130	01.31.2021 22:43	

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Certificate of Analytical Results 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-14-S-1-1.25-210127**	Matrix:	Soil	Date Received:	01.27.2021 17:15
Lab Sample Id:	686362-006	Date Collected:	01.27.2021 11:45		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	02.01.2021 12:00	% Moisture:	
Seq Number:	3149662			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	02.02.2021 01:05	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	02.02.2021 01:05	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	02.02.2021 01:05	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	02.02.2021 01:05	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	02.02.2021 01:05	U	1
Total Xylenes	1330-20-7	<0.000346	0.00201	0.000346	mg/kg	02.02.2021 01:05	U	1
Total BTEX		<0.000346	0.00201	0.000346	mg/kg	02.02.2021 01:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.02.2021 01:05	
1,4-Difluorobenzene	540-36-3	94	%	70-130	02.02.2021 01:05	

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Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-15-S-0-.5-210127** Matrix: Soil Date Received:01.27.2021 17:15

Lab Sample Id: 686362-007 Date Collected: 01.27.2021 12:15

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.29.2021 14:10 % Moisture:

Seq Number: 3149505 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**45.8**	4.99	0.857	mg/kg	01.31.2021 12:27		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.31.2021 10:00 % Moisture:

Seq Number: 3149619 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	01.31.2021 23:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	01.31.2021 23:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.31.2021 23:05	U	1
Total TPH	PHC635	<15.0	49.9	15.0	mg/kg	01.31.2021 23:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-130	01.31.2021 23:05	
o-Terphenyl	84-15-1	98	%	70-130	01.31.2021 23:05	

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Certificate of Analytical Results 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-15-S-0-.5-210127**	Matrix:	Soil	Date Received:	01.27.2021 17:15
Lab Sample Id:	686362-007	Date Collected:	01.27.2021 12:15		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	02.01.2021 12:00	% Moisture:	
Seq Number:	3149662			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	02.02.2021 01:30	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	02.02.2021 01:30	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	02.02.2021 01:30	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	02.02.2021 01:30	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	02.02.2021 01:30	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	02.02.2021 01:30	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	02.02.2021 01:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	70-130	02.02.2021 01:30	
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.02.2021 01:30	

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Certificate of Analytical Results 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **SB-15-S-1-1.75-210127** Matrix: Soil Date Received:01.27.2021 17:15

Lab Sample Id: 686362-008 Date Collected: 01.27.2021 12:21

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.29.2021 14:10 % Moisture:

Seq Number: 3149505 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**772**	5.05	0.867	mg/kg	01.31.2021 12:32		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.31.2021 10:00 % Moisture:

Seq Number: 3149619 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	01.31.2021 23:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	01.31.2021 23:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	01.31.2021 23:25	U	1
Total TPH	PHC635	<14.9	49.8	14.9	mg/kg	01.31.2021 23:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-130	01.31.2021 23:25	
o-Terphenyl	84-15-1	101	%	70-130	01.31.2021 23:25	

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Certificate of Analytical Results 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id:	**SB-15-S-1-1.75-210127**	Matrix:	Soil	Date Received:	01.27.2021 17:15
Lab Sample Id:	686362-008	Date Collected:	01.27.2021 12:21		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	02.01.2021 12:00	% Moisture:	
Seq Number:	3149662			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	02.02.2021 01:55	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	02.02.2021 01:55	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	02.02.2021 01:55	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	02.02.2021 01:55	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	02.02.2021 01:55	U	1
Total Xylenes	1330-20-7	<0.000346	0.00201	0.000346	mg/kg	02.02.2021 01:55	U	1
Total BTEX		<0.000346	0.00201	0.000346	mg/kg	02.02.2021 01:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	02.02.2021 01:55	
1,4-Difluorobenzene	540-36-3	95	%	70-130	02.02.2021 01:55	

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Blank Summary 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720329-1-BLK** Matrix: SOLID

Lab Sample Id: **7720329-1-BLK**

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

Tech: CHE

Analyst: CHE Date Prep: 01.29.2021 13:30

Seq Number: 3149533

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.31.2021 15:58	U	1

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Blank Summary 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720331-1-BLK** Matrix: SOLID

Lab Sample Id: **7720331-1-BLK**

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

Tech: CHE

Analyst: CHE Date Prep: 01.29.2021 13:50

Seq Number: 3149502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.30.2021 14:39	U	1

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Blank Summary 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720335-1-BLK** Matrix: SOLID

Lab Sample Id: **7720335-1-BLK**

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

Tech: CHE

Analyst: CHE Date Prep: 01.29.2021 14:10

Seq Number: 3149505

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.31.2021 11:21	U	1

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Blank Summary 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720503-1-BLK** Matrix: SOLID

Lab Sample Id: **7720503-1-BLK**

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

Tech: DVM

Analyst: ARM Date Prep: 01.31.2021 10:00

Seq Number: 3149619

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.31.2021 14:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.31.2021 14:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.31.2021 14:36	U	1

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Blank Summary 686362

Arcadis U.S., Inc, Austin, TX

WDDU 46

Sample Id: **7720560-1-BLK** Matrix: SOLID

Lab Sample Id: **7720560-1-BLK**

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

Tech: MNR

Analyst: MNR Date Prep: 02.01.2021 12:00

Seq Number: 3149662

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	02.01.2021 16:04	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	02.01.2021 16:04	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	02.01.2021 16:04	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	02.01.2021 16:04	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	02.01.2021 16:04	U	1

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Form 2 - Surrogate Recoveries

Project Name: WDDU 46

Report Date: 02022021

Work Orders : 686362 **Project ID:** 30065060-0002B

Lab Batch #: 3149662 **Sample:** 7720560-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02.01.2021 13:15 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	70-130	
4-Bromofluorobenzene	0.0398	0.0300	133	70-130	**

Lab Batch #: 3149662 **Sample:** 7720560-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02.01.2021 13:40 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0238	0.0300	79	70-130	
4-Bromofluorobenzene	0.0371	0.0300	124	70-130	

Lab Batch #: 3149662 **Sample:** 686362-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02.01.2021 14:05 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0245	0.0300	82	70-130	
4-Bromofluorobenzene	0.0410	0.0300	137	70-130	**

Lab Batch #: 3149662 **Sample:** 686362-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02.01.2021 14:30 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	70-130	
4-Bromofluorobenzene	0.0402	0.0300	134	70-130	**

Lab Batch #: 3149662 **Sample:** 7720560-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02.01.2021 16:04 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0215	0.0300	72	70-130	
4-Bromofluorobenzene	0.0276	0.0300	92	70-130	

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

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Form 2 - Surrogate Recoveries

Project Name: WDDU 46

Report Date: 02022021

Work Orders : 686362 **Project ID:** 30065060-0002B

Lab Batch #: 3149619 **Sample:** 7720503-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.31.2021 14:36 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.5	100	86	70-130	
o-Terphenyl	46.8	50.0	94	70-130	

Lab Batch #: 3149619 **Sample:** 7720503-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.31.2021 14:57 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-130	
o-Terphenyl	54.3	50.0	109	70-130	

Lab Batch #: 3149619 **Sample:** 7720503-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.31.2021 15:18 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-130	
o-Terphenyl	55.0	50.0	110	70-130	

Lab Batch #: 3149619 **Sample:** 686304-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.31.2021 16:00 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.6	101	70-130	
o-Terphenyl	54.1	49.8	109	70-130	

Lab Batch #: 3149619 **Sample:** 686304-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.31.2021 16:21 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.8	102	70-130	
o-Terphenyl	53.1	49.9	106	70-130	

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

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QC Summary 686362

Arcadis U.S., Inc

WDDU 46

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149533 — Matrix: Solid — Date Prep: 01.29.2021
MB Sample Id: 7720329-1-BLK — LCS Sample Id: 7720329-1-BKS — LCSD Sample Id: 7720329-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	266	106	262	105	90-110	2	20	mg/kg	01.31.2021 16:04	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149502 — Matrix: Solid — Date Prep: 01.29.2021
MB Sample Id: 7720331-1-BLK — LCS Sample Id: 7720331-1-BKS — LCSD Sample Id: 7720331-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	270	108	270	108	90-110	0	20	mg/kg	01.30.2021 14:44	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149505 — Matrix: Solid — Date Prep: 01.29.2021
MB Sample Id: 7720335-1-BLK — LCS Sample Id: 7720335-1-BKS — LCSD Sample Id: 7720335-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	236	94	236	94	90-110	0	20	mg/kg	01.31.2021 11:50	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149533 — Matrix: Soil — Date Prep: 01.29.2021
Parent Sample Id: 686481-002 — MS Sample Id: 686481-002 S — MSD Sample Id: 686481-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	806	1250	2070	101	2040	99	90-110	1	20	mg/kg	01.31.2021 16:19	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149533 — Matrix: Soil — Date Prep: 01.29.2021
Parent Sample Id: 686482-003 — MS Sample Id: 686482-003 S — MSD Sample Id: 686482-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	238	95	250	100	90-110	5	20	mg/kg	02.01.2021 08:43	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149502 — Matrix: Soil — Date Prep: 01.29.2021
Parent Sample Id: 686361-002 — MS Sample Id: 686361-002 S — MSD Sample Id: 686361-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	308	250	559	100	614	122	90-110	9	20	mg/kg	01.30.2021 15:00	X

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

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

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

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QC Summary 686362

Arcadis U.S., Inc

WDDU 46

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149502 — Matrix: Soil — Date Prep: 01.29.2021
Parent Sample Id: 686399-001 — MS Sample Id: 686399-001 S — MSD Sample Id: 686399-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	182	250	441	104	442	104	90-110	0	20	mg/kg	01.30.2021 17:40	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149505 — Matrix: Soil — Date Prep: 01.29.2021
Parent Sample Id: 686362-004 — MS Sample Id: 686362-004 S — MSD Sample Id: 686362-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	220	251	496	110	494	110	90-110	0	20	mg/kg	01.31.2021 12:06	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3149505 — Matrix: Soil — Date Prep: 01.29.2021
Parent Sample Id: 686364-006 — MS Sample Id: 686364-006 S — MSD Sample Id: 686364-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.5	248	293	114	293	114	90-110	0	20	mg/kg	01.31.2021 13:20	X

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149619 — Matrix: Solid — Date Prep: 01.31.2021
MB Sample Id: 7720503-1-BLK — LCS Sample Id: 7720503-1-BKS — LCSD Sample Id: 7720503-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	913	91	889	89	70-130	3	20	mg/kg	01.31.2021 14:57	
Diesel Range Organics (DRO)	<15.0	1000	952	95	962	96	70-130	1	20	mg/kg	01.31.2021 14:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		105		102		70-130	%	01.31.2021 14:57
o-Terphenyl	94		109		110		70-130	%	01.31.2021 14:57

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149619 — Matrix: Solid — Date Prep: 01.31.2021
MB Sample Id: 7720503-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	01.31.2021 14:36	

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

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

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

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QC Summary 686362

Arcadis U.S., Inc

WDDU 46

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3149619 — Matrix: Soil — Date Prep: 01.31.2021
Parent Sample Id: 686304-001 — MS Sample Id: 686304-001 S — MSD Sample Id: 686304-001 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)	<14.9	996	923	93	1000	100	70-130	8	20	mg/kg	01.31.2021 16:00	
Diesel Range Organics (DRO)	<14.9	996	944	95	944	95	70-130	0	20	mg/kg	01.31.2021 16:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		102		70-130	%	01.31.2021 16:00
o-Terphenyl	109		106		70-130	%	01.31.2021 16:00

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3149662 — Matrix: Solid — Date Prep: 02.01.2021
MB Sample Id: 7720560-1-BLK — LCS Sample Id: 7720560-1-BKS — LCSD Sample Id: 7720560-1-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	0.102	102	0.0917	92	70-130	11	35	mg/kg	02.01.2021 13:15	
Toluene	<0.000456	0.100	0.108	108	0.0948	95	70-130	13	35	mg/kg	02.01.2021 13:15	
Ethylbenzene	<0.000565	0.100	0.109	109	0.0992	99	70-130	9	35	mg/kg	02.01.2021 13:15	
m,p-Xylenes	<0.00101	0.200	0.224	112	0.206	103	70-130	8	35	mg/kg	02.01.2021 13:15	
o-Xylene	<0.000344	0.100	0.109	109	0.101	101	70-130	8	35	mg/kg	02.01.2021 13:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	72		81		79		70-130	%	02.01.2021 13:15
4-Bromofluorobenzene	92		133	**	124		70-130	%	02.01.2021 13:15

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3149662 — Matrix: Soil — Date Prep: 02.01.2021
Parent Sample Id: 686362-001 — MS Sample Id: 686362-001 S — MSD Sample Id: 686362-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0519	52	0.0735	74	70-130	34	35	mg/kg	02.01.2021 14:05	X
Toluene	<0.000455	0.0998	0.0587	59	0.0807	81	70-130	32	35	mg/kg	02.01.2021 14:05	X
Ethylbenzene	<0.000564	0.0998	0.0577	58	0.0759	76	70-130	27	35	mg/kg	02.01.2021 14:05	X
m,p-Xylenes	0.00186	0.200	0.119	59	0.154	76	70-130	26	35	mg/kg	02.01.2021 14:05	X
o-Xylene	<0.000344	0.0998	0.0604	61	0.0767	77	70-130	24	35	mg/kg	02.01.2021 14:05	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	82		83		70-130	%	02.01.2021 14:05
4-Bromofluorobenzene	137	**	134	**	70-130	%	02.01.2021 14:05

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

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Flagging Criteria

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

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Eurofins Xenco
1211 W Florida Ave
Midland TX 79701
Phone 432-704-5440

Chain of Custody Record

Client Information	Sampler: J. Steinmann	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-23595-8666.1
Client Contact: Motgan Jordan	Phone: 619 851 8792	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 1 of 1
Company: ARCADIS U.S., Inc.				Job #: 608 03602
Address: 1717 W 6th Street. Suite 210	Due Date Requested:			
City: Austin	TAT Requested (days): std			
State, Zip: TX, 78703				
Phone: 281 644 9437	PO #:			
Email: douglas.jordan@arcadis.com	WO #:			
Project Name: 30065060-0002B	Project #: 30065060-0002B			
Site: WDDU 46	SSOW#:			

Analysis 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 - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015_GRO/ DRO/ ORO	300 - Chloride	8021- BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N		
SB-11-S-0-.5-210127	1/27/21	1010	G	Solid							
SB-11-S-1-1.25-210127		1014		Solid							
SB-12-S-0-.5-210127		1047		Solid							
SB-13-S-0-.5-210127		1114		Solid							
SB-14-S-0-.5-210127		1139		Solid							
SB-14-S-1-1.25-210127		1145		Solid							
SB-15-S-0-.5-210127		1215		Solid							
SB-15-S-1-1.75-210127		1221		Solid							
				Solid							
				Solid							
				Solid							

QC 1/27/21

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	1/27/21 1500	Arcadis		1-27-21 1500	Arcadis
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	1-27-21 1715	Arcadis		1-27-21 17:15	Eurofins
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: 0.1°C

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis U.S., Inc

Date/ Time Received: 01.27.2021 05.15.00 PM

Work Order #: 686362

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
#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: 01.28.2021

Brianna Teel

Checklist reviewed by: Sachin Kudchadkar Date: 01.28.2021

Sachin Kudchadkar

Appendix E

Revised C-141 Form - 1RP-2163

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	NGRL0912837220
District RP	1RP-2163
Facility ID	fGRL0912836556
Application ID	NA

Release Notification

Responsible Party

Responsible Party: Chevron USA	OGRID: 4323
Contact Name: Armando Martinez	Contact Telephone: 505-690-5408
Contact email: amarti@chevron.com	Incident # *(assigned by OCD)* NGRL0912837220
Contact mailing address:	

Location of Release Source

Latitude 32.178339 Longitude -103.092128
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: WDDU 46	Site Type: Water Injection Well
Date Release Discovered: 04/03/2009	API# *(if applicable):* 30-025-12273

Unit Letter	Section	Township	Range	County
A	31	24S	38E	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): 55	Volume Recovered (bbls): 10
	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: Internal corrosion on 2" IPC nipple from Water Injection Station failed.		

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NGRL0912837220
District RP	1RP-2163
Facility ID	fGRL0912836556
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 April 17, 2009.**	

Incident ID	NGRL0912837220
District RP	1RP-2163
Facility ID	fGRL0912836556
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?	82 (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: **51-100 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: **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.

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NGRL0912837220
District RP	1RP-2163
Facility ID	fGRL0912836556
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: 07/27/21_____

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 50626

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 50626
	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