Armando Martinez
Operations Lead, Portfolio Operations Central

INFORMATION ONLY

April 19, 2021

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

Re: 2021 Soil Assessment Report – WDDU 42
Case No. 1RP-2142
Lea County, New Mexico

Dear Bradford Billings:

Chevron Environmental Management Company (CEMC) submits herein the *2021 Soil Assessment Report* for 1RP-2142, WDDU 42 The Site is located approximately 8.10 miles northeast of Jal, in Unit A, Section 32, 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 chloride impact in soil.

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

Respectfully,

Armando Martinez

Encl. 2021 Soil Assessment Report – WDDU 42

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 42
Case No. 1RP-2142

April 2021

2021 Soil Assessment Report

WDDU 42
Case No. 1RP-2142

April 2021

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

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

Our Ref:
30065089

Morgan Jordan
Task Manager I

Scott Foord, PG
Certified Project Manager

Contents

Tables

Figures

Appendices

1 Introduction

Arcadis U.S., Inc. (Arcadis) prepared this Site Assessment Report (Report), on behalf of Chevron Environmental Management Company (CEMC), summarizing the soil assessment activities conducted for the WDDU 42 (Site).

2 Project Summary

The Site is located approximately 8.10 miles northeast of Jal, in Unit A, Section 32, Township 24 South, Range 38 East, Lea County, New Mexico. A site location map is included as **Figure 1**.

On March 11, 2009, internal corrosion on a 2" steel connection from the Water Injection Station failed releasing 70 barrels (bbls) of produced water. The Initial C-141 Form stated free liquids were removed, but the recovered volume (bbls) of produced water was noted as zero. According to the New Mexico Office of the State Engineers (NMOSE) database, there is a water well approximately 0.94 miles south of the Site with a depth to groundwater of 105 feet below ground surface (bgs). The Initial C-141 Form for this release was submitted to the New Mexico Oil Conservation Division (NMOCD) on March 17, 2009 and approved by NMOCD on April 2, 2009. The release was assigned remediation permit number 1RP-2142. The Initial C-141 Form for this release is included in **Appendix A**.

3 2021 Soil Assessment

On January 6 – 7, 2021, Arcadis personnel collected soil samples from twelve locations (SB-1 through SB-12) within the release area. The sample locations were determined based on information obtained by Arcadis from the Initial C-141 Forms and from Chevron personnel familiar with the release location associated with remediation permit number 1RP-2142. The soil samples were collected with a hand auger at depths ranging from the surface to approximately 3.5 feet bgs. Hand auger refusal was encountered within all boring locations. Each boring location was backfilled with the remaining soil. Soils were characterized and logged by a field geologist based on the Unified Soil Classification System (USCS), including texture, structure, and consistence at each sample location from surface to refusal depths encountered within each boring. Boring logs for borings installed deeper than 2 feet bgs are included in **Appendix B**. Soil sample locations are presented on **Figure 2**. A photographic 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 (TPH-GRO) by USEPA Method 8015;
- TPH as diesel (TPH-DRO) by USEPA Method 8015;
- TPH as oil (TPH-ORO) by USEPA Method 8015; and
- Chloride by USEPA Method 300.

4 Soil Analytical Results

The soil analytical results were compared to the revised New Mexico Administration Code (NMAC) screening levels for BTEX, TPH, and chloride for depth to groundwater greater than 100 feet bgs (revised Rule 19.15.29). A summary of the soil sample analytical results is presented in **Table 1**. Copies of the certified analytical reports and chain-of-custody documentation from Eurofins 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 below the NMAC standard of 1,000 mg/kg at all sample locations.
- Total TPH (GRO + DRO + MRO) concentrations were reported below the NMAC standard of 2,500 mg/kg at all sample locations.

4.3 Chloride

- Chloride concentrations were reported below the revised Rule 19.15.29 screening limit of 20,000 mg/kg at all sample locations. However, concentrations did exceed the revised Rule (19.15.29.13) restoration screening criteria of 600 mg/kg at three sample locations (SB-4, SB-7, and SB-8).
    - SB-4 (0 – 0.5 ft) at 2,670 mg/kg
    - SB-7 (0 – 0.5 ft) at 1,280 mg/kg
    - SB-8 (0 – 0.5 ft) at 10,100 mg/kg

5 Conclusion

Analytical results associated with the recent assessment activities indicate that concentrations of chloride above the restoration screening criteria of 600 mg/kg within the top 4 feet bgs of the soil column are present in surface and shallow soil in the vicinity of SB-4, SB-7, and SB-8. Based upon the findings presented in this report, additional soil assessment activities are recommended to further delineate the chloride impact 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 42
Lea County, New Mexico

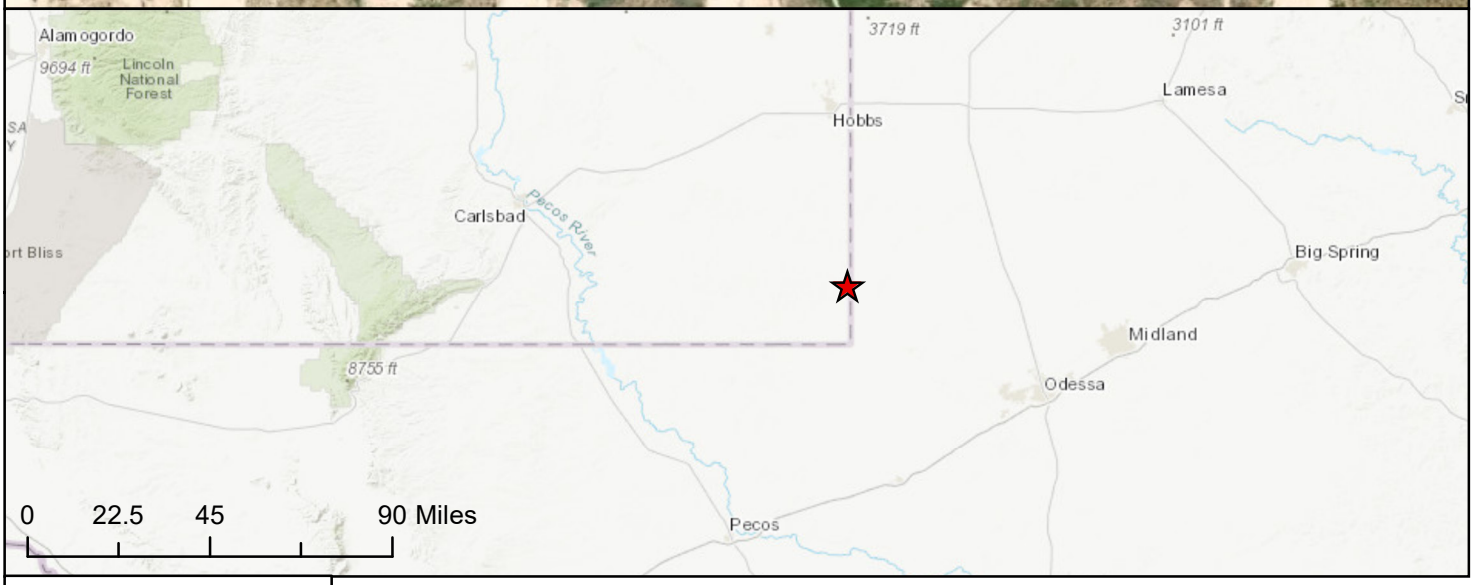
ARCADIS Design & Consultancy for natural and built assets

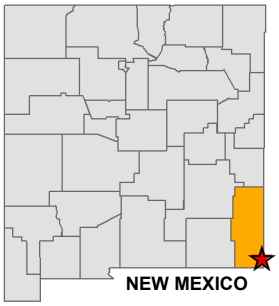
Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Gasoline Range Organics	Diesel Range Organics	GRO + DRO	Motor Oil Range Organics	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			**10**	**--**	**--**	**--**	**50**	**--**	**--**	**1,000**	**--**	**2,500**	**20,000**
Restoration Requirements													**600***
SB-1	0-0.5	01/07/21	<0.000383	<0.000453	<0.000561	<0.000342	<0.000342	21.2 J	21.4 J	42.6 J	<15.0	42.6 J	2.68 J
	1-1.25	01/07/21	<0.000385	<0.000456	<0.000565	<0.000344	<0.000344	<15.0	19.0 J	19.0 J	<15.0	19.0 J	3.60 J
SB-2	0-0.5	01/06/21	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	<15.0	<15.0	<15.0	<15.0	<15.0	63.2
SB-3	0-0.5	01/06/21	<0.000383	<0.000453	<0.000561	<0.000342	<0.000342	<15.0	<15.0	<15.0	15.1 J	15.1 J	127
SB-4	0-0.5	01/06/21	<0.000382	<0.000452	<0.000560	<0.000342	<0.000342	<15.0	84.2	84.2	62.3	147	***2,670***
SB-5	0-0.25	01/06/21	<0.000383	<0.000454	<0.000563	<0.000343	<0.000343	<15.0	72.0	72.0	50.7	123	115
SB-6	0-0.5	01/06/21	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	<14.9	30.9 J	30.9 J	21.8 J	52.7	47.4
SB-7	0-0.5	01/06/21	<0.000382	<0.000452	<0.000560	<0.000342	<0.000342	18.9 J	<15.0	18.9 J	<15.0	18.9 J	***1,280***
SB-8	0-0.5	01/06/21	<0.000385	<0.000456	<0.000565	<0.000344	<0.000344	<15.0	<15.0	<15.0	<15.0	<15.0	***10,100***
SB-9	0-0.5	01/07/21	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	17.1 J	<14.9	17.1 J	<14.9	17.1 J	8.09
SB-10	0-0.5	01/07/21	<0.000387	<0.000458	<0.000568	<0.000346	<0.000346	20.5 J	40.3 J	60.8 J	18.0 J	78.8	43.9
	1-1.25	01/07/21	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	15.3 J	<15.0	15.3 J	<15.0	15.3 J	168
SB-11	0-0.5	01/07/21	<0.000382	<0.000452	<0.000560	<0.000342	<0.000342	18.6 J	<14.9	18.6 J	<14.9	18.6 J	69.6
	1-2	01/07/21	<0.000382	<0.000452	<0.000560	<0.000342	<0.000342	17.9 J	<15.0	17.9 J	<15.0	17.9 J	7.14
	3-3.5	01/07/21	<0.000389	<0.000460	<0.000570	<0.000348	<0.000348	17.0 J	<14.9	17.0 J	<14.9	17.0 J	9.31
DUP (SB-11)	3-3.5	01/07/21	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	16.8 J	<15.0	16.8 J	<15.0	16.8 J	8.78
SB-12	0-0.5	01/07/21	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	17.3 J	32.2 J	49.5 J	15.6 J	65.1	2.49 J

Notes:
BOLD = Analytes exceeding NMAC standards and restoration requirements for chloride
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)
mg/kg: Milligram per Kilogram
NMAC : New Mexico Administration Code
BTEX : Benzene, Toluene, Ethylbenzene, and Total Xylenes
TPH GRO: Total Petroleum Hydrocarbons Gasoline Range Organics
TPH MRO: Total Petroluem Hydrocarbons Motor Oil Range Organics
TPH DRO: Total Petroleum Hydrocarbon Diesel 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 DRO/ ORO 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: 32.179328, -103.076061

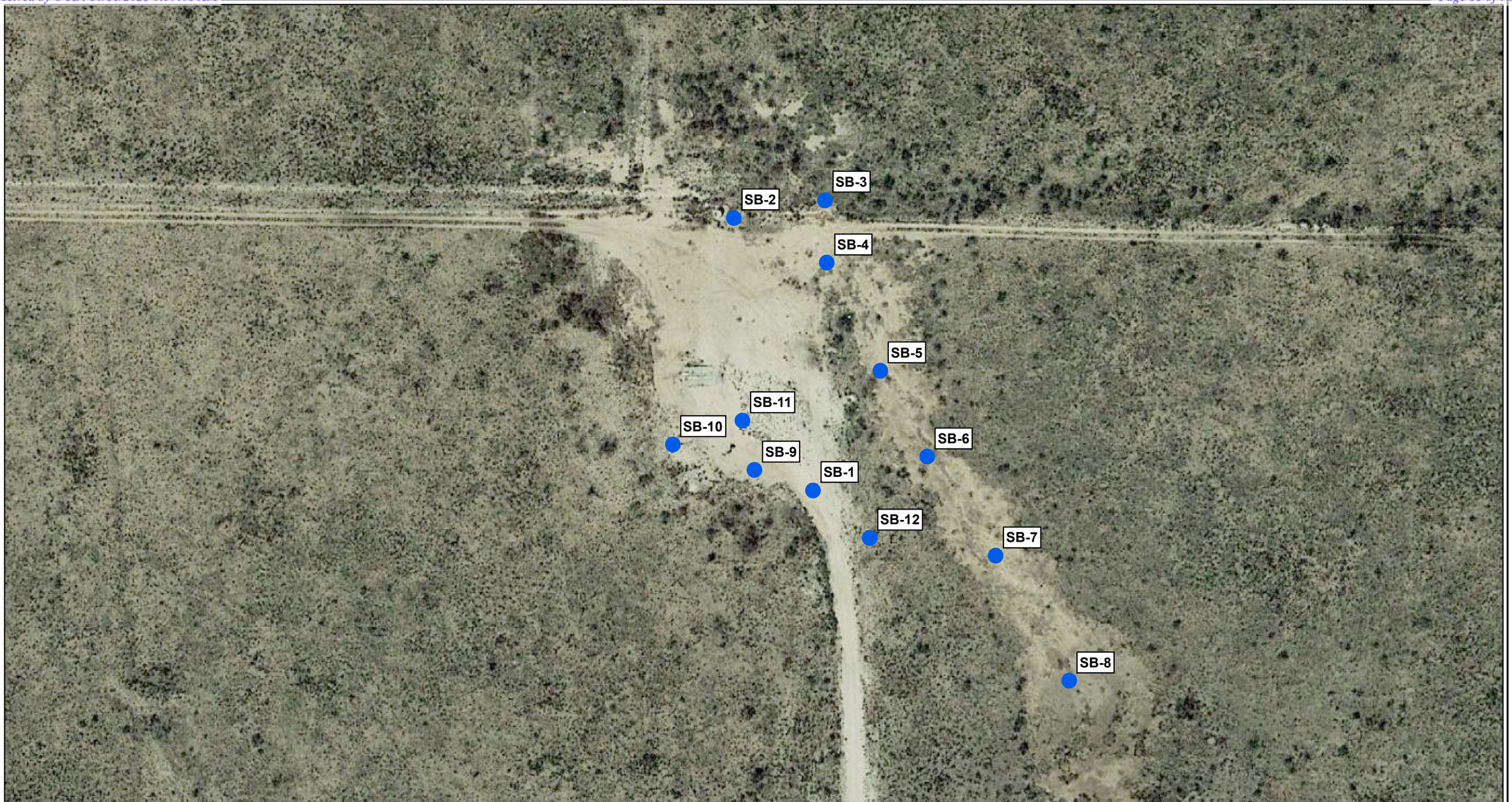
Chevron Environmental Management Company
WDDU 42
Lea County, New Mexico

SITE LOCATION MAP

ARCADIS

FIGURE
1

P:\T:_ENV\Chevron\Chevron_WDDU 42\MXD\Figure 1_Site Location Map.mxd: 2/18/2021: 11:26:12 AM



LEGEND:

Soil Sample Locations

NOTES:
1. Datum: GCS_WGS_1984
2. Site Location: 32.179328, -103.076061

N

0 25 50 100
Feet

Chevron Environmental Management Company
WDDU 42
Lea County, New Mexico

SOIL SAMPLE LOCATIONS MAP

ARCADIS

FIGURE
2

SB-2	
SAMPLE DATE	01/06/2021
DEPTH (ft)	0-0.5'
TOTAL BTEX	<0.000344
TOTAL GRO+DRO	<15.0
TOTAL TPH	<15.0
CHLORIDE	63.2

SB-3	
SAMPLE DATE	01/06/2021
DEPTH (ft)	0-0.5'
TOTAL BTEX	<0.000342
TOTAL GRO+DRO	<15.0
TOTAL TPH	15.1 J
CHLORIDE	127

SB-11			
SAMPLE DATE	01/07/2021		
DEPTH (ft)	0-0.5'	1'-2'	3'-3.5'
TOTAL BTEX	<0.000342	<0.000342	<0.000348
TOTAL GRO+DRO	18.6 J	17.9 J	17.0 J
TOTAL TPH	18.6 J	17.9 J	17.0 J
CHLORIDE	69.6	7.14	9.31

SB-4	
SAMPLE DATE	01/06/2021
DEPTH (ft)	0-0.5'
TOTAL BTEX	<0.000342
TOTAL GRO+DRO	84.2
TOTAL TPH	147
CHLORIDE	***2,670***

DUP (SB-11)	
SAMPLE DATE	01/07/2021
DEPTH (ft)	3'-3.5'
TOTAL BTEX	<0.000345
TOTAL GRO+DRO	16.8 J
TOTAL TPH	16.8 J
CHLORIDE	8.78

SB-5	
SAMPLE DATE	01/06/2021
DEPTH (ft)	0-0.25'
TOTAL BTEX	<0.000343
TOTAL GRO+DRO	72.0
TOTAL TPH	123
CHLORIDE	115

SB-10		
SAMPLE DATE	01/07/2021	
DEPTH (ft)	0-0.5'	1'-1.25'
TOTAL BTEX	<0.000346	<0.000344
TOTAL GRO+DRO	60.8 J	15.3 J
TOTAL TPH	78.8	15.3 J
CHLORIDE	43.9	168

SB-6	
SAMPLE DATE	01/06/2021
DEPTH (ft)	0-0.5'
TOTAL BTEX	<0.000345
TOTAL GRO+DRO	30.9 J
TOTAL TPH	52.7
CHLORIDE	47.4

SB-9	
SAMPLE DATE	01/07/2021
DEPTH (ft)	0-0.5'
TOTAL BTEX	<0.000344
TOTAL GRO+DRO	17.1 J
TOTAL TPH	17.1 J
CHLORIDE	8.09

SB-7	
SAMPLE DATE	01/06/2021
DEPTH (ft)	0-0.5'
TOTAL BTEX	<0.000342
TOTAL GRO+DRO	18.9 J
TOTAL TPH	18.9 J
CHLORIDE	***1,280***

SB-1		
SAMPLE DATE	01/07/2021	
DEPTH (ft)	0-0.5'	1'-1.25'
TOTAL BTEX	<0.000342	<0.000344
TOTAL GRO+DRO	42.6 J	19.0 J
TOTAL TPH	42.6 J	19.0 J
CHLORIDE	2.68 J	3.60 J

SB-8	
SAMPLE DATE	01/06/2021
DEPTH (ft)	0-0.5'
TOTAL BTEX	<0.000344
TOTAL GRO+DRO	<15.0
TOTAL TPH	<15.0
CHLORIDE	***10,100***

SB-12	
SAMPLE DATE	01/07/2021
DEPTH (ft)	0-0.5'
TOTAL BTEX	<0.000345
TOTAL GRO+DRO	49.5 J
TOTAL TPH	65.1
CHLORIDE	2.49 J

LEGEND:

Soil Sample Locations

NOTES:
1. Datum: GCS_WGS_1984
2. Site Location: 32.179328, -103.076061

Analyte	NMAC Standards	Restoration Requirements
TOTAL BTEX	50	--
TOTAL GRO+DRO	1,000	--
TOTAL TPH	2,500	--
CHLORIDE	20,000	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 42
Lea County, New Mexico

SOIL ANALYTICAL RESULTS MAP

ARCADIS

FIGURE 3

T:_ENV\Chevron\Chevron_WDDU 42\MXD\Figure 3_Soil Analytical Map.mxd: 2/22/2021: 12:17:00 PM

Appendix A

Initial C-141 Forms 1RP-2142

RECEIVED
MAR 18 2009
HOBBSOCD

District I
1625 N. French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company : Chevron	Contact : Ricky Heredia
Address ; P.O. Drawer 29	Telephone No.: 432-523-3655 ext 7603
Facility Name : West Dollarhide Drinkard Unit	Facility Type : 2" Lateral line to well #42

Surface Owner : Chevron	Mineral Owner	Lease No.

LOCATION OF RELEASE

NEARBY WELL WDDU 042 API # 30-025-12321-00-00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	32	24S	38 E					

Latitude____ Longitude_____

NATURE OF RELEASE

Type of Release : Produce Water	Volume of Release : 70 bbls	Volume Recovered : 0 bbls
Source of Release	Date and Hour of Occurrence 3/11/2009 19:30	Date and Hour of Discovery 3/11/2009 20:15
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Called OCD	
By Whom? Ricky Heredia	Date and Hour : 03/12/2009 @ 15:30	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
NA

WATER @ 320'

Describe Cause of Problem and Remedial Action Taken.*
Internal Corrosion on 2" Steel IPC nipple from Water Injection Station failed releasing 70 bbls produce water

Describe Area Affected and Cleanup Action Taken.*
Free liquids were removed from the spill area The impacted area will be evaluated for depth and quantity of chlorides. If additional remediation is needed a workplan will be submitted to OCD describing the proposed actions to be taken.

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: Stephen Gwin	OIL CONSERVATION DIVISION	
Printed Name: Stephen Gwin	Approved by District Supervisor: Jeffrey Lekmus	
Title: Environmental Specialist	Approval Date: 04/02/09	Expiration Date: 06/01/09
E-mail Address: gwst@chevron.com	Conditions of Approval: SUBMIT FINAL C-141 BY	Attached ☐ IRP-09-3-2142
Date: 03/17/2009 Phone: 432-687-7575		

* Attach Additional Sheets If Necessary

fGRL0909235759

Appendix B

Boring Log

Date Start/Finish: 1/07/2021 **Drilling Company:** Arcadis **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger Grab	**Borehole Depth:** 3.5' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** SB-11 **Client:** Chevron **Location:** WDDU-42

DEPTH	Sample Interval	Geologic Column	Stratigraphic Description
0	0-0.5'		Silty sand 10YR 7/3 very pale brown, very fine to fine sand, with trace to little medium sand, sub-rounded, moderately sorted, silty, with little to some granules to pebbles, caliche, hard, loose, dry. USCS - SM
1	1-2'		
2			
3	3-3.5'		Sand, 10YR 8/3 very pale brown, very fine sand, little silt, well sorted, subrounded, loose, with little to some pebbles to cobbles, caliche, hard, loose, unsorted, throughout, very slightly moist. @ 3' as above with color change to 7.5YR 8/3 pink. USCS - SP
4			End of boring 3.5' bgs.

ARCADIS

Remarks: Total Depth: 3.5' Below Ground Surface (bgs)

Project: 30065038 Template: LPTEMPLATE_HA_Final *Page: 1 of 1*
Data File: SB-11 Date: 2/12/2021 Created/Edited by: AD

Appendix C

Photographic Log

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 42	Lea County, NM	1RP-2142

Photo No.	Date:
1	01/06/2021

Direction Photo Taken:

Facing east

Description:

North of pad, south of valve box

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 42	Lea County, NM	1RP-2142

Photo No.	Date:
2	01/06/2021

Direction Photo Taken:

Northeast

Description:

North of pad, south of valve box

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 42	Lea County, NM	1RP-2142

Photo No.	Date:
3	01/06/2021

Direction Photo Taken:

Facing south

Description:

North of drainage

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 42	Lea County, NM	1RP-2142

Photo No.	Date:
4	01/06/2021

Direction Photo Taken:

Facing west

Description:

East of valve box

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 42	Lea County, NM	1RP-2142

Photo No.	Date:
5	01/06/2021

Direction Photo Taken:

Facing south

Description:

Center of drainage

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 42	Lea County, NM	1RP-2142

Photo No.	Date:
6	01/06/2021

Direction Photo Taken:

Facing north

Description:

Center of drainage

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 42	Lea County, NM	1RP-2142

Photo No.	Date:
7	01/06/2021

Direction Photo Taken:

Facing northwest

Description:

Southwest of drainage

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 42	Lea County, NM	1RP-2142

Photo No.	Date:
8	01/06/2021

Direction Photo Taken:

Facing east/notheast

Description:

Well on pad

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WDDU 42	Lea County, NM	1RP-2142

Photo No.	Date:
9	01/06/21

Direction Photo Taken:

East

Description:
South of pad

Appendix D

Analytical Reports

eurofins | Environment Testing Xenco

Analytical Report 683721

for

Arcadis U.S., Inc

Project Manager: Morgan Jordan

WDDU 42

30065078-0002B

01.11.2021

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)

eurofins | Environment Testing Xenco

01.11.2021

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

Reference: Eurofins Xenco, LLC Report No(s): **683721**
WDDU 42
Project Address:

Morgan Jordan:

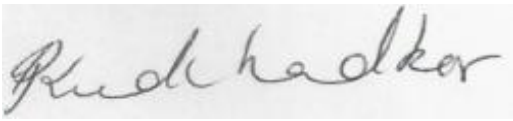
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 683721. All results being reported under this Report Number apply to the samples analyzed and properly identified 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. 683721 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Sachin Kudchadkar
Project Manager

A Small Business and Minority Company

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

eurofins | Environment Testing Xenco

Sample Cross Reference 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-2-S-0-.5-210106	S	01.06.2021 10:47		683721-001
SB-3-S-0-.5-210106	S	01.06.2021 11:00		683721-002
SB-4-S-0-.5-210106	S	01.06.2021 11:19		683721-003
SB-5-S-0-.5-210106	S	01.06.2021 11:30		683721-004
SB-6-S-0-.5-210106	S	01.06.2021 11:39		683721-005
SB-7-S-0-.5-210106	S	01.06.2021 13:27		683721-006
SB-8-S-0-.5-210106	S	01.06.2021 13:38		683721-007

eurofins | Environment Testing Xenco

CASE NARRATIVE

Client Name: Arcadis U.S., Inc

Project Name: WDDU 42

Project ID: *30065078-0002B*
Work Order Number(s): *683721*

Report Date: *01.11.2021*
Date Received: *01.06.2021*

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

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-2-S-0-.5-210106** Matrix: Solid Date Received:01.06.2021 17:25

Lab Sample Id: 683721-001 Date Collected: 01.06.2021 10:47

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.08.2021 11:50 % Moisture:

Seq Number: 3147243 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**63.2**	25.0	4.29	mg/kg	01.08.2021 19:51		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.07.2021 12:00 % Moisture:

Seq Number: 3147306 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	01.07.2021 14:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	01.07.2021 14:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.07.2021 14:35	U	1
Total TPH	PHC635	<15.0	49.9	15.0	mg/kg	01.07.2021 14:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	01.07.2021 14:35	
o-Terphenyl	84-15-1	99	%	70-130	01.07.2021 14:35	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id:	**SB-2-S-0-.5-210106**	Matrix:	Solid	Date Received:	01.06.2021 17:25
Lab Sample Id:	683721-001	Date Collected:	01.06.2021 10:47		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.07.2021 16:00	% Moisture:	
Seq Number:	3147096			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	01.07.2021 20:56	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	01.07.2021 20:56	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	01.07.2021 20:56	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	01.07.2021 20:56	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.07.2021 20:56	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.07.2021 20:56	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.07.2021 20:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	01.07.2021 20:56	
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.07.2021 20:56	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-3-S-0-.5-210106** Matrix: Solid Date Received:01.06.2021 17:25

Lab Sample Id: 683721-002 Date Collected: 01.06.2021 11:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.08.2021 11:50 % Moisture:

Seq Number: 3147243 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**127**	5.02	0.862	mg/kg	01.08.2021 19:56		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.07.2021 12:00 % Moisture:

Seq Number: 3147306 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	01.07.2021 15:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.07.2021 15:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**15.1**	50.0	15.0	mg/kg	01.07.2021 15:31	J	1
Total TPH	PHC635	**15.1**	50.0	15.0	mg/kg	01.07.2021 15:31	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-130	01.07.2021 15:31	
o-Terphenyl	84-15-1	101	%	70-130	01.07.2021 15:31	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-3-S-0-.5-210106**
Matrix: Solid
Date Received:01.06.2021 17:25
Lab Sample Id: 683721-002
Date Collected: 01.06.2021 11:00

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5035A
Tech: KTL
Analyst: KTL
Date Prep: 01.07.2021 16:00
% Moisture:
Basis: Wet Weight
Seq Number: 3147096

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	01.07.2021 21:17	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	01.07.2021 21:17	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	01.07.2021 21:17	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	01.07.2021 21:17	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	01.07.2021 21:17	U	1
Total Xylenes	1330-20-7	<0.000342	0.00199	0.000342	mg/kg	01.07.2021 21:17	U	1
Total BTEX		<0.000342	0.00199	0.000342	mg/kg	01.07.2021 21:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	01.07.2021 21:17	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.07.2021 21:17	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-4-S-0-.5-210106** Matrix: Solid Date Received:01.06.2021 17:25

Lab Sample Id: 683721-003 Date Collected: 01.06.2021 11:19

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.08.2021 13:50 % Moisture:

Seq Number: 3147245 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2670**	25.2	4.33	mg/kg	01.08.2021 22:22		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.07.2021 12:00 % Moisture:

Seq Number: 3147306 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	01.07.2021 15:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	**84.2**	50.0	15.0	mg/kg	01.07.2021 15:50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**62.3**	50.0	15.0	mg/kg	01.07.2021 15:50		1
Total TPH	PHC635	**147**	50.0	15.0	mg/kg	01.07.2021 15:50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-130	01.07.2021 15:50	
o-Terphenyl	84-15-1	90	%	70-130	01.07.2021 15:50	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-4-S-0-.5-210106**
Lab Sample Id: 683721-003

Matrix: Solid
Date Collected: 01.06.2021 11:19

Date Received:01.06.2021 17:25

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3147096

Date Prep: 01.07.2021 16:00

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	01.07.2021 21:38	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	01.07.2021 21:38	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	01.07.2021 21:38	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	01.07.2021 21:38	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	01.07.2021 21:38	U	1
Total Xylenes	1330-20-7	<0.000342	0.00198	0.000342	mg/kg	01.07.2021 21:38	U	1
Total BTEX		<0.000342	0.00198	0.000342	mg/kg	01.07.2021 21:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	70-130	01.07.2021 21:38	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.07.2021 21:38	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-5-S-0-.5-210106** Matrix: Solid Date Received:01.06.2021 17:25

Lab Sample Id: 683721-004 Date Collected: 01.06.2021 11:30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.08.2021 13:50 % Moisture:

Seq Number: 3147245 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**115**	4.98	0.855	mg/kg	01.08.2021 22:38		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.07.2021 12:00 % Moisture:

Seq Number: 3147306 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	01.07.2021 16:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	**72.0**	49.9	15.0	mg/kg	01.07.2021 16:08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**50.7**	49.9	15.0	mg/kg	01.07.2021 16:08		1
Total TPH	PHC635	**123**	49.9	15.0	mg/kg	01.07.2021 16:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	01.07.2021 16:08	
o-Terphenyl	84-15-1	89	%	70-130	01.07.2021 16:08	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id:	**SB-5-S-0-.5-210106**	Matrix:	Solid	Date Received:	01.06.2021 17:25
Lab Sample Id:	683721-004	Date Collected:	01.06.2021 11:30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.07.2021 16:00	% Moisture:	
Seq Number:	3147096			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	01.07.2021 21:58	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	01.07.2021 21:58	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	01.07.2021 21:58	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	01.07.2021 21:58	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	01.07.2021 21:58	U	1
Total Xylenes	1330-20-7	<0.000343	0.00199	0.000343	mg/kg	01.07.2021 21:58	U	1
Total BTEX		<0.000343	0.00199	0.000343	mg/kg	01.07.2021 21:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91	%	70-130	01.07.2021 21:58	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.07.2021 21:58	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-6-S-0-.5-210106** Matrix: Solid Date Received:01.06.2021 17:25

Lab Sample Id: 683721-005 Date Collected: 01.06.2021 11:39

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.08.2021 13:50 % Moisture:

Seq Number: 3147245 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**47.4**	5.00	0.858	mg/kg	01.08.2021 22:43		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.07.2021 12:00 % Moisture:

Seq Number: 3147306 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	01.07.2021 16:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	**30.9**	49.8	14.9	mg/kg	01.07.2021 16:27	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**21.8**	49.8	14.9	mg/kg	01.07.2021 16:27	J	1
Total TPH	PHC635	**52.7**	49.8	14.9	mg/kg	01.07.2021 16:27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-130	01.07.2021 16:27	
o-Terphenyl	84-15-1	86	%	70-130	01.07.2021 16:27	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id:	**SB-6-S-0-.5-210106**	Matrix:	Solid	Date Received:	01.06.2021 17:25
Lab Sample Id:	683721-005	Date Collected:	01.06.2021 11:39		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.07.2021 16:00	% Moisture:	
Seq Number:	3147096			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	01.07.2021 22:19	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	01.07.2021 22:19	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	01.07.2021 22:19	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	01.07.2021 22:19	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	01.07.2021 22:19	U	1
Total Xylenes	1330-20-7	<0.000345	0.00200	0.000345	mg/kg	01.07.2021 22:19	U	1
Total BTEX		<0.000345	0.00200	0.000345	mg/kg	01.07.2021 22:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91	%	70-130	01.07.2021 22:19	
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.07.2021 22:19	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-7-S-0-.5-210106** Matrix: Solid Date Received:01.06.2021 17:25

Lab Sample Id: 683721-006 Date Collected: 01.06.2021 13:27

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.08.2021 13:50 % Moisture:

Seq Number: 3147245 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1280**	25.3	4.34	mg/kg	01.08.2021 22:48		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.07.2021 12:00 % Moisture:

Seq Number: 3147306 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**18.9**	49.9	15.0	mg/kg	01.07.2021 16:46	J	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	01.07.2021 16:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.07.2021 16:46	U	1
Total TPH	PHC635	**18.9**	49.9	15.0	mg/kg	01.07.2021 16:46	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-130	01.07.2021 16:46	
o-Terphenyl	84-15-1	96	%	70-130	01.07.2021 16:46	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id:	**SB-7-S-0-.5-210106**	Matrix:	Solid	Date Received:	01.06.2021 17:25
Lab Sample Id:	683721-006	Date Collected:	01.06.2021 13:27		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.07.2021 16:00	% Moisture:	
Seq Number:	3147096			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	01.07.2021 22:40	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	01.07.2021 22:40	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	01.07.2021 22:40	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	01.07.2021 22:40	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	01.07.2021 22:40	U	1
Total Xylenes	1330-20-7	<0.000342	0.00198	0.000342	mg/kg	01.07.2021 22:40	U	1
Total BTEX		<0.000342	0.00198	0.000342	mg/kg	01.07.2021 22:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	01.07.2021 22:40	
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.07.2021 22:40	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-8-S-0-.5-210106** Matrix: Solid Date Received:01.06.2021 17:25

Lab Sample Id: 683721-007 Date Collected: 01.06.2021 13:38

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.08.2021 13:50 % Moisture:

Seq Number: 3147245 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10100**	100	17.2	mg/kg	01.08.2021 22:53		20

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 01.07.2021 12:00 % Moisture:

Seq Number: 3147306 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	01.07.2021 17:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.07.2021 17:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.07.2021 17:05	U	1
Total TPH	PHC635	<15.0	50.0	15.0	mg/kg	01.07.2021 17:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-130	01.07.2021 17:05	
o-Terphenyl	84-15-1	88	%	70-130	01.07.2021 17:05	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-8-S-0-.5-210106**
Lab Sample Id: 683721-007

Matrix: Solid
Date Collected: 01.06.2021 13:38

Date Received:01.06.2021 17:25

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3147235

Date Prep: 01.08.2021 17:00

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.09.2021 04:09	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.09.2021 04:09	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.09.2021 04:09	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.09.2021 04:09	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.09.2021 04:09	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.09.2021 04:09	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.09.2021 04:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	01.09.2021 04:09	
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.09.2021 04:09	

eurofins | Environment Testing Xenco

Blank Summary 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **7718694-1-BLK** Matrix: SOLID

Lab Sample Id: **7718694-1-BLK**

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

Tech: KTL

Analyst: KTL Date Prep: 01.07.2021 16:00

Seq Number: 3147096

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.07.2021 20:35	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.07.2021 20:35	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.07.2021 20:35	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.07.2021 20:35	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.07.2021 20:35	U	1

eurofins | Environment Testing Xenco

Blank Summary 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **7718716-1-BLK** Matrix: SOLID

Lab Sample Id: **7718716-1-BLK**

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

Tech: DVM

Analyst: ARM Date Prep: 01.07.2021 12:00

Seq Number: 3147306

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.07.2021 13:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.07.2021 13:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.07.2021 13:38	U	1

eurofins | Environment Testing Xenco

Blank Summary 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **7718733-1-BLK** Matrix: SOLID

Lab Sample Id: **7718733-1-BLK**

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

Tech: CHE

Analyst: CHE Date Prep: 01.08.2021 11:50

Seq Number: 3147243

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.08.2021 17:20	U	1

eurofins | Environment Testing Xenco

Blank Summary 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **7718758-1-BLK** Matrix: SOLID

Lab Sample Id: **7718758-1-BLK**

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

Tech: CHE

Analyst: CHE Date Prep: 01.08.2021 13:50

Seq Number: 3147245

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.08.2021 22:06	U	1

eurofins | Environment Testing Xenco

Blank Summary 683721

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **7718793-1-BLK** Matrix: SOLID

Lab Sample Id: **7718793-1-BLK**

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

Tech: KTL

Analyst: KTL Date Prep: 01.08.2021 17:00

Seq Number: 3147235

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.09.2021 01:04	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.09.2021 01:04	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.09.2021 01:04	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.09.2021 01:04	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.09.2021 01:04	U	1

eurofins | Environment Testing Xenco

Form 2 - Surrogate Recoveries

Project Name: WDDU 42

Report Date: 01112021

Work Orders : 683721 **Project ID:** 30065078-0002B

Lab Batch #: 3147096 **Sample:** 7718694-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.07.2021 18:34 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	70-130	
4-Bromofluorobenzene	0.0300	0.0300	100	70-130	

Lab Batch #: 3147096 **Sample:** 7718694-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.07.2021 18:54 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	70-130	
4-Bromofluorobenzene	0.0297	0.0300	99	70-130	

Lab Batch #: 3147096 **Sample:** 683721-001 S / MS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.07.2021 19:15 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	70-130	
4-Bromofluorobenzene	0.0306	0.0300	102	70-130	

Lab Batch #: 3147096 **Sample:** 683721-001 SD / MSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.07.2021 19:36 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	70-130	
4-Bromofluorobenzene	0.0308	0.0300	103	70-130	

Lab Batch #: 3147096 **Sample:** 7718694-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.07.2021 20:35 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0264	0.0300	88	70-130	
4-Bromofluorobenzene	0.0317	0.0300	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.

eurofins | Environment Testing Xenco

Form 2 - Surrogate Recoveries

Project Name: WDDU 42

Report Date: 01112021

Work Orders : 683721 **Project ID:** 30065078-0002B

Lab Batch #: 3147235 **Sample:** 7718793-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.08.2021 23:04 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	70-130	
4-Bromofluorobenzene	0.0288	0.0300	96	70-130	

Lab Batch #: 3147235 **Sample:** 7718793-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.08.2021 23:24 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	70-130	
4-Bromofluorobenzene	0.0308	0.0300	103	70-130	

Lab Batch #: 3147235 **Sample:** 683472-011 S / MS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.08.2021 23:45 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	70-130	
4-Bromofluorobenzene	0.0298	0.0300	99	70-130	

Lab Batch #: 3147235 **Sample:** 683472-011 SD / MSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.09.2021 00:05 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

Lab Batch #: 3147235 **Sample:** 7718793-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.09.2021 01:04 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	70-130	
4-Bromofluorobenzene	0.0313	0.0300	104	70-130	

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

eurofins | Environment Testing Xenco

Form 2 - Surrogate Recoveries

Project Name: WDDU 42

Report Date: 01112021

Work Orders : 683721 **Project ID:** 30065078-0002B

Lab Batch #: 3147306 **Sample:** 7718716-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.07.2021 13:38 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.0	100	83	70-130	
o-Terphenyl	47.0	50.0	94	70-130	

Lab Batch #: 3147306 **Sample:** 7718716-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.07.2021 13:57 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	100	96	70-130	
o-Terphenyl	46.6	50.0	93	70-130	

Lab Batch #: 3147306 **Sample:** 7718716-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.07.2021 14:16 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-130	
o-Terphenyl	51.4	50.0	103	70-130	

Lab Batch #: 3147306 **Sample:** 683721-001 S / MS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.07.2021 14:53 **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	47.0	49.8	94	70-130	

Lab Batch #: 3147306 **Sample:** 683721-001 SD / MSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.07.2021 15:12 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.4	99.8	86	70-130	
o-Terphenyl	47.7	49.9	96	70-130	

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

QC Summary 683721

eurofins | Environment Testing Xenco

Arcadis U.S., Inc

WDDU 42

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3147243 — Matrix: Solid — Date Prep: 01.08.2021
MB Sample Id: 7718733-1-BLK — LCS Sample Id: 7718733-1-BKS — LCSD Sample Id: 7718733-1-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	257	103	256	102	90-110	0	20	mg/kg	01.08.2021 17:26	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3147245 — Matrix: Solid — Date Prep: 01.08.2021
MB Sample Id: 7718758-1-BLK — LCS Sample Id: 7718758-1-BKS — LCSD Sample Id: 7718758-1-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	257	103	257	103	90-110	0	20	mg/kg	01.08.2021 22:12	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3147243 — Matrix: Soil — Date Prep: 01.08.2021
Parent Sample Id: 683633-002 — MS Sample Id: 683633-002 S — MSD Sample Id: 683633-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2600	1240	3890	104	3890	104	90-110	0	20	mg/kg	01.08.2021 17:41	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3147243 — Matrix: Soil — Date Prep: 01.08.2021
Parent Sample Id: 683634-005 — MS Sample Id: 683634-005 S — MSD Sample Id: 683634-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7310	2510	9760	98	9870	102	90-110	1	20	mg/kg	01.08.2021 18:54	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3147245 — Matrix: Solid — Date Prep: 01.08.2021
Parent Sample Id: 683721-003 — MS Sample Id: 683721-003 S — MSD Sample Id: 683721-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2670	1260	4010	106	4000	106	90-110	0	20	mg/kg	01.08.2021 22:27	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3147245 — Matrix: Soil — Date Prep: 01.08.2021
Parent Sample Id: 683745-004 — MS Sample Id: 683745-004 S — MSD Sample Id: 683745-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.5	285	314	106	314	106	90-110	0	20	mg/kg	01.08.2021 23:41	

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 683721

eurofins | Environment Testing Xenco

Arcadis U.S., Inc

WDDU 42

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3147306 — Matrix: Solid — Date Prep: 01.07.2021
MB Sample Id: 7718716-1-BLK — LCS Sample Id: 7718716-1-BKS — LCSD Sample Id: 7718716-1-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	909	91	1010	101	70-130	11	20	mg/kg	01.07.2021 13:57	
Diesel Range Organics (DRO)	<15.0	1000	885	89	955	96	70-130	8	20	mg/kg	01.07.2021 13:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	83		96		107		70-130	%	01.07.2021 13:57
o-Terphenyl	94		93		103		70-130	%	01.07.2021 13:57

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3147306 — Matrix: Solid — Date Prep: 01.07.2021
MB Sample Id: 7718716-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	01.07.2021 13:38	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3147306 — Matrix: Solid — Date Prep: 01.07.2021
Parent Sample Id: 683721-001 — MS Sample Id: 683721-001 S — MSD Sample Id: 683721-001 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	895	90	907	91	70-130	1	20	mg/kg	01.07.2021 14:53	
Diesel Range Organics (DRO)	<14.9	996	919	92	926	93	70-130	1	20	mg/kg	01.07.2021 14:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		86		70-130	%	01.07.2021 14:53
o-Terphenyl	94		96		70-130	%	01.07.2021 14:53

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3147096 — Matrix: Solid — Date Prep: 01.07.2021
MB Sample Id: 7718694-1-BLK — LCS Sample Id: 7718694-1-BKS — LCSD Sample Id: 7718694-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.103	103	0.104	104	70-130	1	35	mg/kg	01.07.2021 18:34	
Toluene	<0.000456	0.100	0.116	116	0.118	118	70-130	2	35	mg/kg	01.07.2021 18:34	
Ethylbenzene	<0.000565	0.100	0.110	110	0.112	112	70-130	2	35	mg/kg	01.07.2021 18:34	
m,p-Xylenes	<0.00101	0.200	0.217	109	0.224	112	70-130	3	35	mg/kg	01.07.2021 18:34	
o-Xylene	<0.000344	0.100	0.106	106	0.109	109	70-130	3	35	mg/kg	01.07.2021 18:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		92		90		70-130	%	01.07.2021 18:34
4-Bromofluorobenzene	106		100		99		70-130	%	01.07.2021 18:34

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 683721

eurofins | Environment Testing Xenco

Arcadis U.S., Inc

WDDU 42

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3147235 — Matrix: Solid — Date Prep: 01.08.2021
MB Sample Id: 7718793-1-BLK — LCS Sample Id: 7718793-1-BKS — LCSD Sample Id: 7718793-1-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	0.0954	95	0.0890	89	70-130	7	35	mg/kg	01.08.2021 23:04	
Toluene	<0.000456	0.100	0.0906	91	0.0844	84	70-130	7	35	mg/kg	01.08.2021 23:04	
Ethylbenzene	<0.000565	0.100	0.0916	92	0.0860	86	70-130	6	35	mg/kg	01.08.2021 23:04	
m,p-Xylenes	<0.00101	0.200	0.182	91	0.171	86	70-130	6	35	mg/kg	01.08.2021 23:04	
o-Xylene	<0.000344	0.100	0.0923	92	0.0868	87	70-130	6	35	mg/kg	01.08.2021 23:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		98		97		70-130	%	01.08.2021 23:04
4-Bromofluorobenzene	104		96		103		70-130	%	01.08.2021 23:04

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3147096 — Matrix: Solid — Date Prep: 01.07.2021
Parent Sample Id: 683721-001 — MS Sample Id: 683721-001 S — MSD Sample Id: 683721-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000381	0.0990	0.0874	88	0.0897	90	70-130	3	35	mg/kg	01.07.2021 19:15	
Toluene	<0.000451	0.0990	0.0910	92	0.0929	93	70-130	2	35	mg/kg	01.07.2021 19:15	
Ethylbenzene	<0.000559	0.0990	0.0849	86	0.0852	85	70-130	0	35	mg/kg	01.07.2021 19:15	
m,p-Xylenes	<0.00100	0.198	0.168	85	0.167	84	70-130	1	35	mg/kg	01.07.2021 19:15	
o-Xylene	<0.000341	0.0990	0.0799	81	0.0813	81	70-130	2	35	mg/kg	01.07.2021 19:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		90		70-130	%	01.07.2021 19:15
4-Bromofluorobenzene	102		103		70-130	%	01.07.2021 19:15

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3147235 — Matrix: Solid — Date Prep: 01.08.2021
Parent Sample Id: 683472-011 — MS Sample Id: 683472-011 S — MSD Sample Id: 683472-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000389	0.101	0.0752	74	0.0743	74	70-130	1	35	mg/kg	01.08.2021 23:45	
Toluene	<0.000460	0.101	0.0723	72	0.0704	70	70-130	3	35	mg/kg	01.08.2021 23:45	
Ethylbenzene	<0.000570	0.101	0.0742	73	0.0717	72	70-130	3	35	mg/kg	01.08.2021 23:45	
m,p-Xylenes	<0.00102	0.202	0.147	73	0.141	71	70-130	4	35	mg/kg	01.08.2021 23:45	
o-Xylene	<0.000348	0.101	0.0729	72	0.0698	70	70-130	4	35	mg/kg	01.08.2021 23:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		97		70-130	%	01.08.2021 23:45
4-Bromofluorobenzene	99		101		70-130	%	01.08.2021 23:45

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 — MS = Matrix Spike
A = Parent Result — B = Spike Added
C = MS/LCS Result — D = MSD/LCSD % Rec
E = MSD/LCSD Result

eurofins | Environment Testing Xenco

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Eurofins Xenco
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: ~~Morgan Jordan~~ Morgan Jordan gs 1/06/21	Phone: 619 851 8792	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 1 of 1
Company: ARCADIS U.S., Inc.				Job #: 683721
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: 30065078-0002B	Project #: 30065078-0002B			
Site: WDDU 42	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:		X	X	N	N	N	X	
SB-2-S-0-.5-210106	1/06/21	1047	G	Solid						1	
SB-3-S-0-.5-210106		1100		Solid							
SB-4-S-0-.5-210106		1119		Solid							
SB-5-S-0-.25-210106		1130		Solid							
SB-6-S-0-.5-210106		1139		Solid							
SB-7-S-0-.5-210106		1327		Solid							
SB-8-S-0-.5-210106		1338		Solid							
				Solid							
gs 1/06/21				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:	Date/Time:	Company	Received by:	Date/Time:	Company
	1/06/21 1500	Arcadis		1-6-21 1800	Arcadis
Relinquished by: Carlos Gracida	Date/Time: 1-6-21 1725	Company Arcadis	Received by: Bill Thomas	Date/Time: 1-6-21 1725	Company Eurofins
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: 5.4°C

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis U.S., Inc

Date/ Time Received: 01.06.2021 05.25.00 PM

Work Order #: 683721

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)?	5.4	
#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**	BTEX was in bulk container
#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: 01.07.2021
Brianna Teel

Checklist reviewed by: Sachin Kudchadkar Date: 01.07.2021
Sachin Kudchadkar

eurofins | Environment Testing Xenco

Analytical Report 683898

for

Arcadis U.S., Inc

Project Manager: Morgan Jordan

WDDU 42

30065078-0002B

01.11.2021

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)

eurofins | Environment Testing Xenco

01.11.2021

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

Reference: Eurofins Xenco, LLC Report No(s): **683898**
WDDU 42
Project Address:

Morgan Jordan:

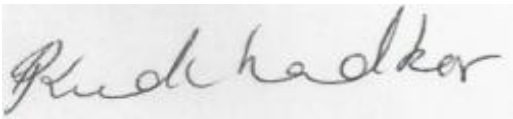
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 683898. All results being reported under this Report Number apply to the samples analyzed and properly identified 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. 683898 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Sachin Kudchadkar
Project Manager

A Small Business and Minority Company

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

eurofins | Environment Testing Xenco

Sample Cross Reference 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1-S-0-.5-210107	S	01.07.2021 10:51		683898-001
SB-1-S-1-1.25-210107	S	01.07.2021 11:07		683898-002
SB-9-S-0-.5-210107	S	01.07.2021 11:16		683898-003
SB-10-S-0-.5-210107	S	01.07.2021 11:44		683898-004
SB-10-S-1-1.25-210107	S	01.07.2021 11:51		683898-005
SB-11-S-0-.5-210107	S	01.07.2021 12:15		683898-006
SB-11-S-1-2-210107	S	01.07.2021 12:30		683898-007
SB-11-S-3-3.5-210107	S	01.07.2021 12:50		683898-008
SB-11-SD-3-3.5-210107	S	01.07.2021 00:00		683898-009
SB-12-S-0-.5-210107	S	01.07.2021 13:10		683898-010

CASE NARRATIVE

eurofins | Environment Testing Xenco

Client Name: Arcadis U.S., Inc

Project Name: WDDU 42

Project ID: *30065078-0002B*
Work Order Number(s): *683898*

Report Date: *01.11.2021*
Date Received: *01.07.2021*

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-3147232 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 683898-010.

Batch: LBA-3147383 TPH By SW8015 Mod

Surrogate 1-Chlorooctane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 683898-002,683898-010,683898-008,683898-005.

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-1-S-0-.5-210107** Matrix: Solid Date Received:01.07.2021 17:08

Lab Sample Id: 683898-001 Date Collected: 01.07.2021 10:51

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.09.2021 09:30 % Moisture:

Seq Number: 3147334 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2.68**	4.98	0.855	mg/kg	01.09.2021 11:44	J	1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MNR

Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:

Seq Number: 3147383 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**21.2**	50.0	15.0	mg/kg	01.09.2021 13:20	J	1
Diesel Range Organics (DRO)	C10C28DRO	**21.4**	50.0	15.0	mg/kg	01.09.2021 13:20	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.09.2021 13:20	U	1
Total TPH	PHC635	**42.6**	50.0	15.0	mg/kg	01.09.2021 13:20	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-130	01.09.2021 13:20	
o-Terphenyl	84-15-1	74	%	70-130	01.09.2021 13:20	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id:	**SB-1-S-0-.5-210107**	Matrix:	Solid	Date Received:	01.07.2021 17:08
Lab Sample Id:	683898-001	Date Collected:	01.07.2021 10:51		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.08.2021 16:00	% Moisture:	
Seq Number:	3147232			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	01.09.2021 03:08	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	01.09.2021 03:08	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	01.09.2021 03:08	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	01.09.2021 03:08	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	01.09.2021 03:08	U	1
Total Xylenes	1330-20-7	<0.000342	0.00199	0.000342	mg/kg	01.09.2021 03:08	U	1
Total BTEX		<0.000342	0.00199	0.000342	mg/kg	01.09.2021 03:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	01.09.2021 03:08	
4-Bromofluorobenzene	460-00-4	95	%	70-130	01.09.2021 03:08	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-1-S-1-1.25-210107** Matrix: Solid Date Received:01.07.2021 17:08

Lab Sample Id: 683898-002 Date Collected: 01.07.2021 11:07

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.09.2021 09:30 % Moisture:

Seq Number: 3147334 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3.60**	4.99	0.857	mg/kg	01.09.2021 11:49	J	1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MNR

Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:

Seq Number: 3147383 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	01.09.2021 14:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.0**	49.9	15.0	mg/kg	01.09.2021 14:17	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.09.2021 14:17	U	1
Total TPH	PHC635	**19.0**	49.9	15.0	mg/kg	01.09.2021 14:17	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	67	%	70-130	01.09.2021 14:17	**
o-Terphenyl	84-15-1	78	%	70-130	01.09.2021 14:17	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id:	**SB-1-S-1-1.25-210107**	Matrix:	Solid	Date Received:	01.07.2021 17:08
Lab Sample Id:	683898-002	Date Collected:	01.07.2021 11:07		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.08.2021 16:00	% Moisture:	
Seq Number:	3147232			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.09.2021 03:34	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.09.2021 03:34	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.09.2021 03:34	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.09.2021 03:34	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.09.2021 03:34	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.09.2021 03:34	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.09.2021 03:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	01.09.2021 03:34	
4-Bromofluorobenzene	460-00-4	88	%	70-130	01.09.2021 03:34	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-9-S-0-.5-210107** Matrix: Solid Date Received:01.07.2021 17:08

Lab Sample Id: 683898-003 Date Collected: 01.07.2021 11:16

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.09.2021 09:30 % Moisture:

Seq Number: 3147334 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.09**	5.02	0.862	mg/kg	01.09.2021 11:54		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MNR

Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:

Seq Number: 3147383 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.1**	49.8	14.9	mg/kg	01.09.2021 14:36	J	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	01.09.2021 14:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	01.09.2021 14:36	U	1
Total TPH	PHC635	**17.1**	49.8	14.9	mg/kg	01.09.2021 14:36	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-130	01.09.2021 14:36	
o-Terphenyl	84-15-1	76	%	70-130	01.09.2021 14:36	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-9-S-0-.5-210107**
Lab Sample Id: 683898-003

Matrix: Solid
Date Collected: 01.07.2021 11:16

Date Received:01.07.2021 17:08

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3147232

Date Prep: 01.08.2021 16:00

Prep Method: SW5035A
% Moisture:
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	01.09.2021 04:00	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	01.09.2021 04:00	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	01.09.2021 04:00	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	01.09.2021 04:00	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.09.2021 04:00	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.09.2021 04:00	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.09.2021 04:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	71	%	70-130	01.09.2021 04:00	
1,4-Difluorobenzene	540-36-3	93	%	70-130	01.09.2021 04:00	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-10-S-0-.5-210107** Matrix: Solid Date Received:01.07.2021 17:08

Lab Sample Id: 683898-004 Date Collected: 01.07.2021 11:44

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.09.2021 09:30 % Moisture:

Seq Number: 3147334 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**43.9**	4.96	0.852	mg/kg	01.09.2021 12:00		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MNR

Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:

Seq Number: 3147383 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**20.5**	50.0	15.0	mg/kg	01.09.2021 14:55	J	1
Diesel Range Organics (DRO)	C10C28DRO	**40.3**	50.0	15.0	mg/kg	01.09.2021 14:55	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**18.0**	50.0	15.0	mg/kg	01.09.2021 14:55	J	1
Total TPH	PHC635	**78.8**	50.0	15.0	mg/kg	01.09.2021 14:55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-130	01.09.2021 14:55	
o-Terphenyl	84-15-1	76	%	70-130	01.09.2021 14:55	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-10-S-0-.5-210107**
Lab Sample Id: 683898-004
Matrix: Solid
Date Collected: 01.07.2021 11:44
Date Received:01.07.2021 17:08

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3147232
Date Prep: 01.08.2021 16:00
Prep Method: SW5035A
% Moisture:
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	01.09.2021 04:26	U	1
Toluene	108-88-3	<0.000458	0.00201	0.000458	mg/kg	01.09.2021 04:26	U	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	01.09.2021 04:26	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	01.09.2021 04:26	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	01.09.2021 04:26	U	1
Total Xylenes	1330-20-7	<0.000346	0.00201	0.000346	mg/kg	01.09.2021 04:26	U	1
Total BTEX		<0.000346	0.00201	0.000346	mg/kg	01.09.2021 04:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	01.09.2021 04:26	
1,4-Difluorobenzene	540-36-3	92	%	70-130	01.09.2021 04:26	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-10-S-1-1.25-210107** Matrix: Solid Date Received:01.07.2021 17:08

Lab Sample Id: 683898-005 Date Collected: 01.07.2021 11:51

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.09.2021 09:30 % Moisture:

Seq Number: 3147334 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**168**	4.99	0.857	mg/kg	01.09.2021 12:15		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MNR

Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:

Seq Number: 3147383 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	01.09.2021 15:14	J	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	01.09.2021 15:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.09.2021 15:14	U	1
Total TPH	PHC635	**15.3**	49.9	15.0	mg/kg	01.09.2021 15:14	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	64	%	70-130	01.09.2021 15:14	**
o-Terphenyl	84-15-1	75	%	70-130	01.09.2021 15:14	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-10-S-1-1.25-210107**
Matrix: Solid
Date Received:01.07.2021 17:08
Lab Sample Id: 683898-005
Date Collected: 01.07.2021 11:51

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5035A
Tech: KTL
Analyst: KTL
Date Prep: 01.08.2021 16:00
% Moisture:
Basis: Wet Weight
Seq Number: 3147232

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	01.09.2021 04:52	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	01.09.2021 04:52	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	01.09.2021 04:52	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	01.09.2021 04:52	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.09.2021 04:52	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.09.2021 04:52	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.09.2021 04:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	127	%	70-130	01.09.2021 04:52	
1,4-Difluorobenzene	540-36-3	98	%	70-130	01.09.2021 04:52	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-11-S-0-.5-210107** Matrix: Solid Date Received:01.07.2021 17:08

Lab Sample Id: 683898-006 Date Collected: 01.07.2021 12:15

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.09.2021 09:30 % Moisture:

Seq Number: 3147334 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**69.6**	5.00	0.858	mg/kg	01.09.2021 12:20		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MNR

Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:

Seq Number: 3147383 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	01.09.2021 15:33	J	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	01.09.2021 15:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	01.09.2021 15:33	U	1
Total TPH	PHC635	**18.6**	49.8	14.9	mg/kg	01.09.2021 15:33	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	74	%	70-130	01.09.2021 15:33	
o-Terphenyl	84-15-1	84	%	70-130	01.09.2021 15:33	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-11-S-0-.5-210107**
Lab Sample Id: 683898-006

Matrix: Solid
Date Collected: 01.07.2021 12:15

Date Received:01.07.2021 17:08

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3147232

Date Prep: 01.08.2021 16:00

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	01.09.2021 05:18	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	01.09.2021 05:18	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	01.09.2021 05:18	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	01.09.2021 05:18	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	01.09.2021 05:18	U	1
Total Xylenes	1330-20-7	<0.000342	0.00198	0.000342	mg/kg	01.09.2021 05:18	U	1
Total BTEX		<0.000342	0.00198	0.000342	mg/kg	01.09.2021 05:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	01.09.2021 05:18	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.09.2021 05:18	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-11-S-1-2-210107** Matrix: Solid Date Received:01.07.2021 17:08

Lab Sample Id: 683898-007 Date Collected: 01.07.2021 12:30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.09.2021 09:30 % Moisture:

Seq Number: 3147334 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.14**	5.00	0.858	mg/kg	01.09.2021 12:26		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MNR

Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:

Seq Number: 3147383 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.9**	50.0	15.0	mg/kg	01.09.2021 15:53	J	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.09.2021 15:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.09.2021 15:53	U	1
Total TPH	PHC635	**17.9**	50.0	15.0	mg/kg	01.09.2021 15:53	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	76	%	70-130	01.09.2021 15:53	
o-Terphenyl	84-15-1	88	%	70-130	01.09.2021 15:53	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id:	**SB-11-S-1-2-210107**	Matrix:	Solid	Date Received:	01.07.2021 17:08
Lab Sample Id:	683898-007	Date Collected:	01.07.2021 12:30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.08.2021 16:00	% Moisture:	
Seq Number:	3147232			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	01.09.2021 05:44	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	01.09.2021 05:44	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	01.09.2021 05:44	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	01.09.2021 05:44	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	01.09.2021 05:44	U	1
Total Xylenes	1330-20-7	<0.000342	0.00198	0.000342	mg/kg	01.09.2021 05:44	U	1
Total BTEX		<0.000342	0.00198	0.000342	mg/kg	01.09.2021 05:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.09.2021 05:44	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.09.2021 05:44	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-11-S-3-3.5-210107** Matrix: Solid Date Received:01.07.2021 17:08

Lab Sample Id: 683898-008 Date Collected: 01.07.2021 12:50

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.09.2021 09:30 % Moisture:

Seq Number: 3147334 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.31**	5.00	0.858	mg/kg	01.09.2021 12:31		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MNR

Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:

Seq Number: 3147383 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.0**	49.8	14.9	mg/kg	01.09.2021 16:12	J	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	01.09.2021 16:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	01.09.2021 16:12	U	1
Total TPH	PHC635	**17.0**	49.8	14.9	mg/kg	01.09.2021 16:12	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	64	%	70-130	01.09.2021 16:12	**
o-Terphenyl	84-15-1	72	%	70-130	01.09.2021 16:12	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id:	**SB-11-S-3-3.5-210107**	Matrix:	Solid	Date Received:	01.07.2021 17:08
Lab Sample Id:	683898-008	Date Collected:	01.07.2021 12:50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.08.2021 16:00	% Moisture:	
Seq Number:	3147232			Basis:	Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000389	0.00202	0.000389	mg/kg	01.09.2021 06:10	U	1
Toluene	108-88-3	<0.000460	0.00202	0.000460	mg/kg	01.09.2021 06:10	U	1
Ethylbenzene	100-41-4	<0.000570	0.00202	0.000570	mg/kg	01.09.2021 06:10	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00404	0.00102	mg/kg	01.09.2021 06:10	U	1
o-Xylene	95-47-6	<0.000348	0.00202	0.000348	mg/kg	01.09.2021 06:10	U	1
Total Xylenes	1330-20-7	<0.000348	0.00202	0.000348	mg/kg	01.09.2021 06:10	U	1
Total BTEX		<0.000348	0.00202	0.000348	mg/kg	01.09.2021 06:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	01.09.2021 06:10	
1,4-Difluorobenzene	540-36-3	98	%	70-130	01.09.2021 06:10	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-11-SD-3-3.5-210107** Matrix: Solid Date Received:01.07.2021 17:08

Lab Sample Id: 683898-009 Date Collected: 01.07.2021 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.09.2021 09:30 % Moisture:

Seq Number: 3147334 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.78**	5.03	0.864	mg/kg	01.09.2021 12:36		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MNR

Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:

Seq Number: 3147383 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.8**	50.0	15.0	mg/kg	01.09.2021 16:31	J	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.09.2021 16:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.09.2021 16:31	U	1
Total TPH	PHC635	**16.8**	50.0	15.0	mg/kg	01.09.2021 16:31	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-130	01.09.2021 16:31	
o-Terphenyl	84-15-1	79	%	70-130	01.09.2021 16:31	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id:	**SB-11-SD-3-3.5-210107**	Matrix:	Solid	Date Received:	01.07.2021 17:08
Lab Sample Id:	683898-009	Date Collected:	01.07.2021 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.08.2021 16:00	% Moisture:	
Seq Number:	3147232			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	01.09.2021 07:54	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	01.09.2021 07:54	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	01.09.2021 07:54	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	01.09.2021 07:54	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	01.09.2021 07:54	U	1
Total Xylenes	1330-20-7	<0.000345	0.00200	0.000345	mg/kg	01.09.2021 07:54	U	1
Total BTEX		<0.000345	0.00200	0.000345	mg/kg	01.09.2021 07:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	84	%	70-130	01.09.2021 07:54	
4-Bromofluorobenzene	460-00-4	119	%	70-130	01.09.2021 07:54	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **SB-12-S-0-.5-210107** Matrix: Solid Date Received:01.07.2021 17:08

Lab Sample Id: 683898-010 Date Collected: 01.07.2021 13:10

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 01.09.2021 09:30 % Moisture:

Seq Number: 3147334 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2.49**	4.95	0.850	mg/kg	01.09.2021 12:41	J	1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: MNR

Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:

Seq Number: 3147383 Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.3**	50.0	15.0	mg/kg	01.09.2021 16:50	J	1
Diesel Range Organics (DRO)	C10C28DRO	**32.2**	50.0	15.0	mg/kg	01.09.2021 16:50	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**15.6**	50.0	15.0	mg/kg	01.09.2021 16:50	J	1
Total TPH	PHC635	**65.1**	50.0	15.0	mg/kg	01.09.2021 16:50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	62	%	70-130	01.09.2021 16:50	**
o-Terphenyl	84-15-1	74	%	70-130	01.09.2021 16:50	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id:	**SB-12-S-0-.5-210107**	Matrix:	Solid	Date Received:	01.07.2021 17:08
Lab Sample Id:	683898-010	Date Collected:	01.07.2021 13:10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	01.08.2021 16:00	% Moisture:	
Seq Number:	3147232			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	01.09.2021 08:20	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	01.09.2021 08:20	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	01.09.2021 08:20	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	01.09.2021 08:20	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	01.09.2021 08:20	U	1
Total Xylenes	1330-20-7	<0.000345	0.00200	0.000345	mg/kg	01.09.2021 08:20	U	1
Total BTEX		<0.000345	0.00200	0.000345	mg/kg	01.09.2021 08:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	68	%	70-130	01.09.2021 08:20	**
1,4-Difluorobenzene	540-36-3	92	%	70-130	01.09.2021 08:20	

eurofins | Environment Testing Xenco

Blank Summary 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **7718791-1-BLK** Matrix: SOLID

Lab Sample Id: **7718791-1-BLK**

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

Tech: KTL

Analyst: KTL Date Prep: 01.08.2021 16:00

Seq Number: 3147232

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.09.2021 01:49	U	1
Toluene	108-88-3	0.000510	0.00200	0.000456	mg/kg	01.09.2021 01:49	BJ	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.09.2021 01:49	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.09.2021 01:49	U	1
o-Xylene	95-47-6	0.000360	0.00200	0.000344	mg/kg	01.09.2021 01:49	BJ	1

eurofins | Environment Testing Xenco

Blank Summary 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **7718818-1-BLK** Matrix: SOLID

Lab Sample Id: **7718818-1-BLK**

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

Tech: CHE

Analyst: CHE Date Prep: 01.09.2021 09:30

Seq Number: 3147334

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.09.2021 11:13	U	1

eurofins | Environment Testing Xenco

Blank Summary 683898

Arcadis U.S., Inc, Austin, TX

WDDU 42

Sample Id: **7718858-1-BLK** Matrix: SOLID

Lab Sample Id: **7718858-1-BLK**

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

Tech: MNR

Analyst: ARM Date Prep: 01.09.2021 09:00

Seq Number: 3147383

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.09.2021 12:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.09.2021 12:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.09.2021 12:24	U	1

eurofins | Environment Testing Xenco

Form 2 - Surrogate Recoveries

Project Name: WDDU 42

Report Date: 01112021

Work Orders : 683898 **Project ID:** 30065078-0002B

Lab Batch #: 3147232 **Sample:** 7718791-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.08.2021 23:13 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	70-130	
4-Bromofluorobenzene	0.0305	0.0300	102	70-130	

Lab Batch #: 3147232 **Sample:** 7718791-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.08.2021 23:39 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	70-130	
4-Bromofluorobenzene	0.0361	0.0300	120	70-130	

Lab Batch #: 3147232 **Sample:** 683755-015 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.09.2021 00:05 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0371	0.0300	124	70-130	

Lab Batch #: 3147232 **Sample:** 683755-015 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01.09.2021 00:31 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	70-130	
4-Bromofluorobenzene	0.0367	0.0300	122	70-130	

Lab Batch #: 3147232 **Sample:** 7718791-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.09.2021 01:49 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0247	0.0300	82	70-130	
4-Bromofluorobenzene	0.0353	0.0300	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.

eurofins | Environment Testing Xenco

Form 2 - Surrogate Recoveries

Project Name: WDDU 42

Report Date: 01112021

Work Orders : 683898 **Project ID:** 30065078-0002B

Lab Batch #: 3147383 **Sample:** 7718858-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.09.2021 12:24 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	72.5	100	73	70-130	
o-Terphenyl	42.8	50.0	86	70-130	

Lab Batch #: 3147383 **Sample:** 7718858-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.09.2021 12:43 **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	100	84	70-130	
o-Terphenyl	41.6	50.0	83	70-130	

Lab Batch #: 3147383 **Sample:** 7718858-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.09.2021 13:01 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.3	100	86	70-130	
o-Terphenyl	43.3	50.0	87	70-130	

Lab Batch #: 3147383 **Sample:** 683898-001 S / MS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.09.2021 13:39 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.7	99.8	85	70-130	
o-Terphenyl	38.2	49.9	77	70-130	

Lab Batch #: 3147383 **Sample:** 683898-001 SD / MSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01.09.2021 13:58 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.8	99.9	82	70-130	
o-Terphenyl	39.4	50.0	79	70-130	

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

QC Summary 683898

eurofins | Environment Testing Xenco

Arcadis U.S., Inc

WDDU 42

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3147334 — Matrix: Solid — Date Prep: 01.09.2021
MB Sample Id: 7718818-1-BLK — LCS Sample Id: 7718818-1-BKS — LCSD Sample Id: 7718818-1-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	229	92	247	99	90-110	8	20	mg/kg	01.09.2021 11:18	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3147334 — Matrix: Soil — Date Prep: 01.09.2021
Parent Sample Id: 683780-037 — MS Sample Id: 683780-037 S — MSD Sample Id: 683780-037 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2210	1260	3370	92	3450	98	90-110	2	20	mg/kg	01.09.2021 11:34	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3147334 — Matrix: Solid — Date Prep: 01.09.2021
Parent Sample Id: 683898-010 — MS Sample Id: 683898-010 S — MSD Sample Id: 683898-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.49	248	242	97	228	91	90-110	6	20	mg/kg	01.09.2021 12:46	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3147383 — Matrix: Solid — Date Prep: 01.09.2021
MB Sample Id: 7718858-1-BLK — LCS Sample Id: 7718858-1-BKS — LCSD Sample Id: 7718858-1-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	946	95	887	89	70-130	6	20	mg/kg	01.09.2021 12:43	
Diesel Range Organics (DRO)	<15.0	1000	874	87	938	94	70-130	7	20	mg/kg	01.09.2021 12:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	73		84		86		70-130	%	01.09.2021 12:43
o-Terphenyl	86		83		87		70-130	%	01.09.2021 12:43

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3147383 — Matrix: Solid — Date Prep: 01.09.2021
MB Sample Id: 7718858-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	01.09.2021 12:24	

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

QC Summary 683898

eurofins | Environment Testing Xenco

Arcadis U.S., Inc

WDDU 42

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3147383 Matrix: Solid Date Prep: 01.09.2021
Parent Sample Id: 683898-001 MS Sample Id: 683898-001 S MSD Sample Id: 683898-001 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)	21.2	998	817	80	856	84	70-130	5	20	mg/kg	01.09.2021 13:39	
Diesel Range Organics (DRO)	21.4	998	804	78	804	78	70-130	0	20	mg/kg	01.09.2021 13:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		82		70-130	%	01.09.2021 13:39
o-Terphenyl	77		79		70-130	%	01.09.2021 13:39

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3147232 Matrix: Solid Date Prep: 01.08.2021
MB Sample Id: 7718791-1-BLK LCS Sample Id: 7718791-1-BKS LCSD Sample Id: 7718791-1-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	0.0860	86	0.0894	89	70-130	4	35	mg/kg	01.08.2021 23:13	
Toluene	<0.000456	0.100	0.0873	87	0.0951	95	70-130	9	35	mg/kg	01.08.2021 23:13	
Ethylbenzene	<0.000565	0.100	0.0842	84	0.0915	92	70-130	8	35	mg/kg	01.08.2021 23:13	
m,p-Xylenes	<0.00101	0.200	0.167	84	0.183	92	70-130	9	35	mg/kg	01.08.2021 23:13	
o-Xylene	<0.000344	0.100	0.0870	87	0.0967	97	70-130	11	35	mg/kg	01.08.2021 23:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	82		86		95		70-130	%	01.08.2021 23:13
4-Bromofluorobenzene	118		102		120		70-130	%	01.08.2021 23:13

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3147232 Matrix: Soil Date Prep: 01.08.2021
Parent Sample Id: 683755-015 MS Sample Id: 683755-015 S MSD Sample Id: 683755-015 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	0.0815	82	0.0780	78	70-130	4	35	mg/kg	01.09.2021 00:05	
Toluene	<0.000455	0.0998	0.0867	87	0.0842	84	70-130	3	35	mg/kg	01.09.2021 00:05	
Ethylbenzene	<0.000564	0.0998	0.0819	82	0.0791	79	70-130	3	35	mg/kg	01.09.2021 00:05	
m,p-Xylenes	<0.00101	0.200	0.163	82	0.157	79	70-130	4	35	mg/kg	01.09.2021 00:05	
o-Xylene	<0.000344	0.0998	0.0857	86	0.0828	83	70-130	3	35	mg/kg	01.09.2021 00:05	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		94		70-130	%	01.09.2021 00:05
4-Bromofluorobenzene	124		122		70-130	%	01.09.2021 00:05

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

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

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

eurofins | Environment Testing Xenco

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: 6198518792	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 1 of 1
Company: ARCADIS U.S., Inc.				Job #: 183898
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: 30065078-0002B	Project #: 30065078-0002B			
Site: WDDU 42	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-1-S-0-.5-210107	1/07/21	1051	G	Solid						1	
SB-1-S-1-1.25-210107		1107		Solid							
SB-9-S-0-.5-210107		1116		Solid							
SB-10-S-0-.5-210107		1144		Solid							
SB-10-S-1-1.25-210107		1151		Solid							
SB-11-S-0-.5-210107		1215		Solid							
SB-11-S-1-2-210107		1230		Solid							
SB-11-S-3-3.5-210107		1250		Solid							
SB-11-SD-3-3.5-210107		—		Solid							
SB-12-S-0-.5-210107		1310		Solid							GS 1/07/21
				Solid							

1107 GS

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		1/07/21 1500	Arcadis		1-7-21 1500	Arcadis
2		1-7-21 1707	Arcadis		1-7-21 1708	
3						

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 5.3

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis U.S., Inc

Date/ Time Received: 01.07.2021 05.08.00 PM

Work Order #: 683898

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)?	5.3	
#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**	BTEX was in bulk container
#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: 01.08.2021

Brianna Teel

Checklist reviewed by: Sachin Kudchadkar Date: 01.08.2021

Sachin Kudchadkar

Appendix E

Revised C-141 Form 1RP-2142

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	NGRL0909236372
District RP	1RP-2142
Facility ID	fGRL0909235759
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)* NGRL0909236372
Contact mailing address:	

Location of Release Source

Latitude 32.179328 Longitude -103.076061

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: WDDU 42	Site Type: 2” Lateral Line to well#42
Date Release Discovered: 03/11/2009	API# *(if applicable):* 30-025-12321

Unit Letter	Section	Township	Range	County
A	32	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): 70	Volume Recovered (bbls): 0
	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” steel IPC Nipple from Water Injection Station failed.		

State of New Mexico
Oil Conservation Division

Incident ID	NGRL0909236372
District RP	1RP-2142
Facility ID	fGRL0909235759
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 March 17, 2009.**	

Incident ID	NGRL0909236372
District RP	1RP-2142
Facility ID	fGRL0909235759
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?	105 (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: **>101 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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NGRL0909236372
District RP	1RP-2142
Facility ID	fGRL0909235759
Application ID	NA

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

Printed Name: Armando Martinez Title: Environmental Project Manager

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

email: ____ amarti@chevron.com _____ Telephone: 505-690-5408_____

OCD Only

Received by: _____ Date: _____

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

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

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

CONDITIONS

Action 55028

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 55028
	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 work plan development. Submit work plan via the ODC permitting portal by 6/9/2023.	3/7/2023