Adriane Gifford
Project Manager

Upstream Business Unit
Environmental Management Company
1500 Louisiana Street
Room 38108
Houston, Texas 77002
Tel 832-854-5620
agifford@chevron.com

October 28, 2020

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

Re: 2020 Soil Assessment Report – WLU East Test Satellite
Case No. 1RP-2563
Lea County, New Mexico

Dear New Mexico Oil Conservation Division:

Chevron Environmental Management Company (CEMC) submits herein the 2020 Soil Assessment Report for 1RP-2563, WLU East Test Satellite, which is located approximately 7.2 miles south of Lovington, in Unit L, Section 4, Township 17 South, Range 36 East in Lea County, New Mexico. The Report was prepared by Arcadis U.S., Inc. (Arcadis), on behalf of CEMC. Based on the 2020 soil investigation data, additional assessment activities will be evaluated, and a proposed scope will be included in a Work Plan for review and approval to further delineate chloride impact in soil.

If you have any questions regarding this submittal, please contact Scott Foord of Arcadis at (713) 953-4853 or me at (832) 854-5620.

Respectfully,

Chevron Environmental Management Company
on behalf of
Chevron U.S.A. Inc.

Adriane Gifford
Project Manager

Encl.

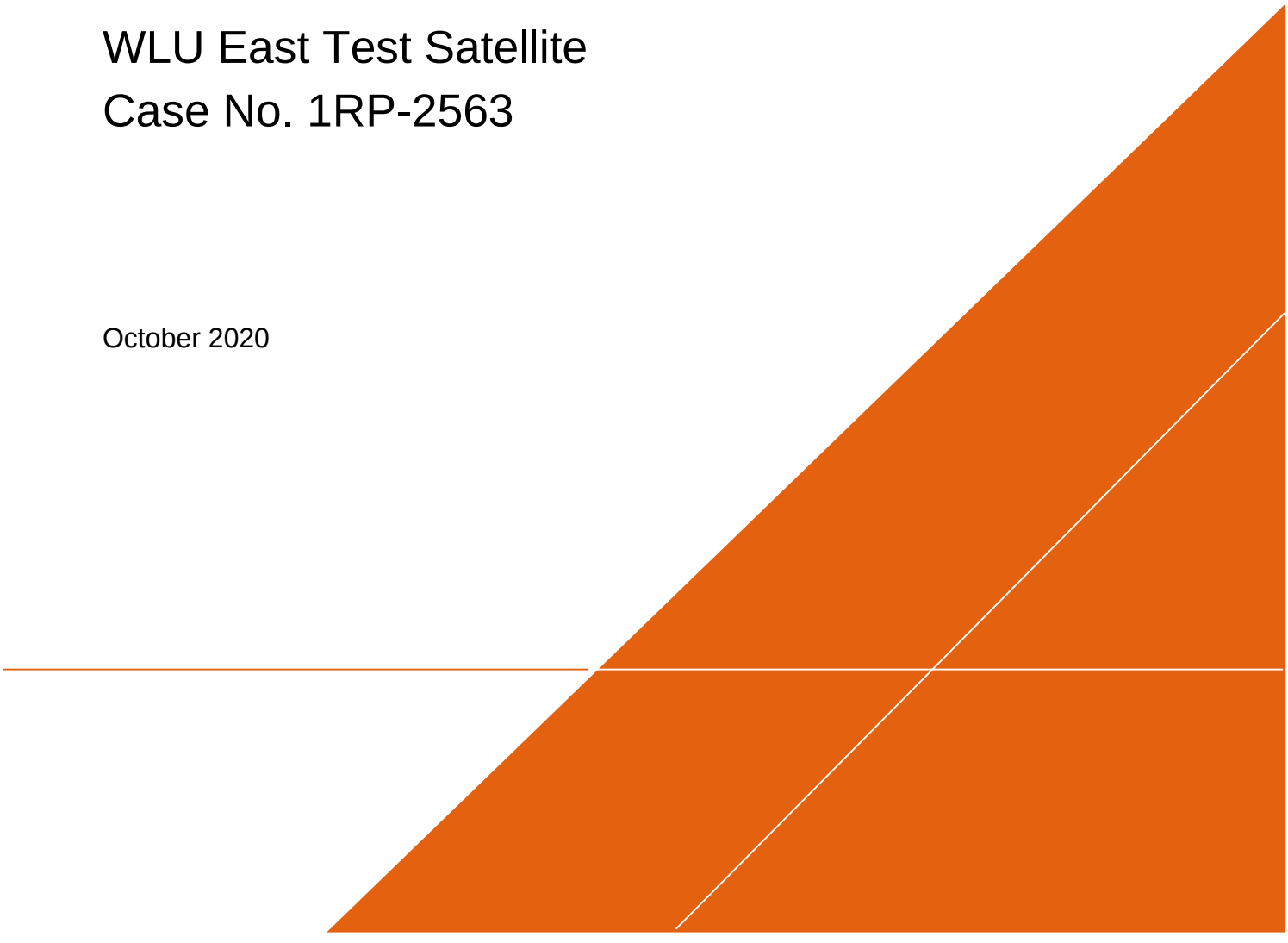
ARCADIS Design & Consultancy for natural and built assets

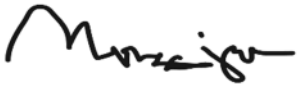
Chevron Environmental Management Company

2020 SOIL ASSESSMENT REPORT

WLU East Test Satellite
Case No. 1RP-2563

October 2020





Morgan Jordan
Task Manager I

Scott Foord, PG
Certified Project Manager

2020 SOIL ASSESSMENT REPORT

WLU East Test Satellite
Case No. 1RP-2563

Prepared for:

Chevron Environmental Management Company
Upstream Business Unit
1500 Louisiana Street, Room 38108
Houston, Tx 77002

Prepared by:

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

Our Ref:
30057179

Date:
October 2020

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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 WLU East Test Satellite (Site).

2 PROJECT SUMMARY

The Site is located approximately 7.20 miles south of Lovington, in Unit L, Section 4, Township 17 South, Range 36 East, Lea County, New Mexico. A site location map is included as **Figure 1**.

On June 10, 2010, a 4-inch diameter trunk line fuse leaked and released 0.40 barrels (bbls) of oil and 5.56 barrels (bbls) produced water. The Initial C-141 Form stated that free liquids and saturated solids were reportedly removed by a third-party contractor, but no recovered volume is noted. According to the New Mexico Office of the State Engineers (NMOSE) database, there is a water well approximately 0.42 miles east of the Site with a depth to groundwater of 118 feet below ground surface (bgs). The Initial C-141 Form was submitted to the New Mexico Oil Conservation Division (NMOCD) on June 18, 2010 and approved by NMOCD on June 18, 2010. The release was assigned remediation permit number 1RP-2563. The Initial C-141 Form is included as **Appendix A.**

3 2020 SOIL ASSESSMENT

On September 1, 2020, Arcadis personnel collected soil samples from five locations (HA-1 through HA-5) within the release area after conducting an in-field site assessment. The samples locations were determined based on information obtained by Arcadis from the Initial C-141 Form and from Chevron personnel familiar with the release location associated with remediation permit number 1RP-2563. The soil samples were collected with a hand auger at depths ranging from the surface to approximately 3 feet (ft) below ground surface (bgs). 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 ft bgs are included in **Appendix B**. Soil sample locations are presented in **Figure 2**. After collecting the samples, they were jarred and placed on ice for delivery to Eurofins TestAmerica in Houston, Texas for analysis.

The soil samples were analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) by 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 9056A.

4 SOIL ANALYTICAL RESULTS

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

4.1 BTEX

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

4.2 TPH

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

4.3 Chloride

- Chloride concentrations were reported below the revised Rule 19.15.29 screening limit of 20,000 mg/kg at all sample locations. However, concentrations did exceed the revised Rule (19.15.29.13) restoration screening criteria of 600 mg/kg at three soil sample locations (HA-1, HA-2, and HA-4).
- Chloride concentrations exceeding restoration screening criteria of 600 mg/kg included:
    - HA-1 (1 – 2') at 699 mg/kg
    - HA-2 (1 – 2') at 1,350 mg/kg
    - HA-2 (2 – 3') at 647 mg/kg
    - HA-4 (1 – 2') at 793 mg/kg

5 RECOMMENDATION

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 soil in the vicinity of HA-1, HA-2, and HA-4. 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.

TABLES

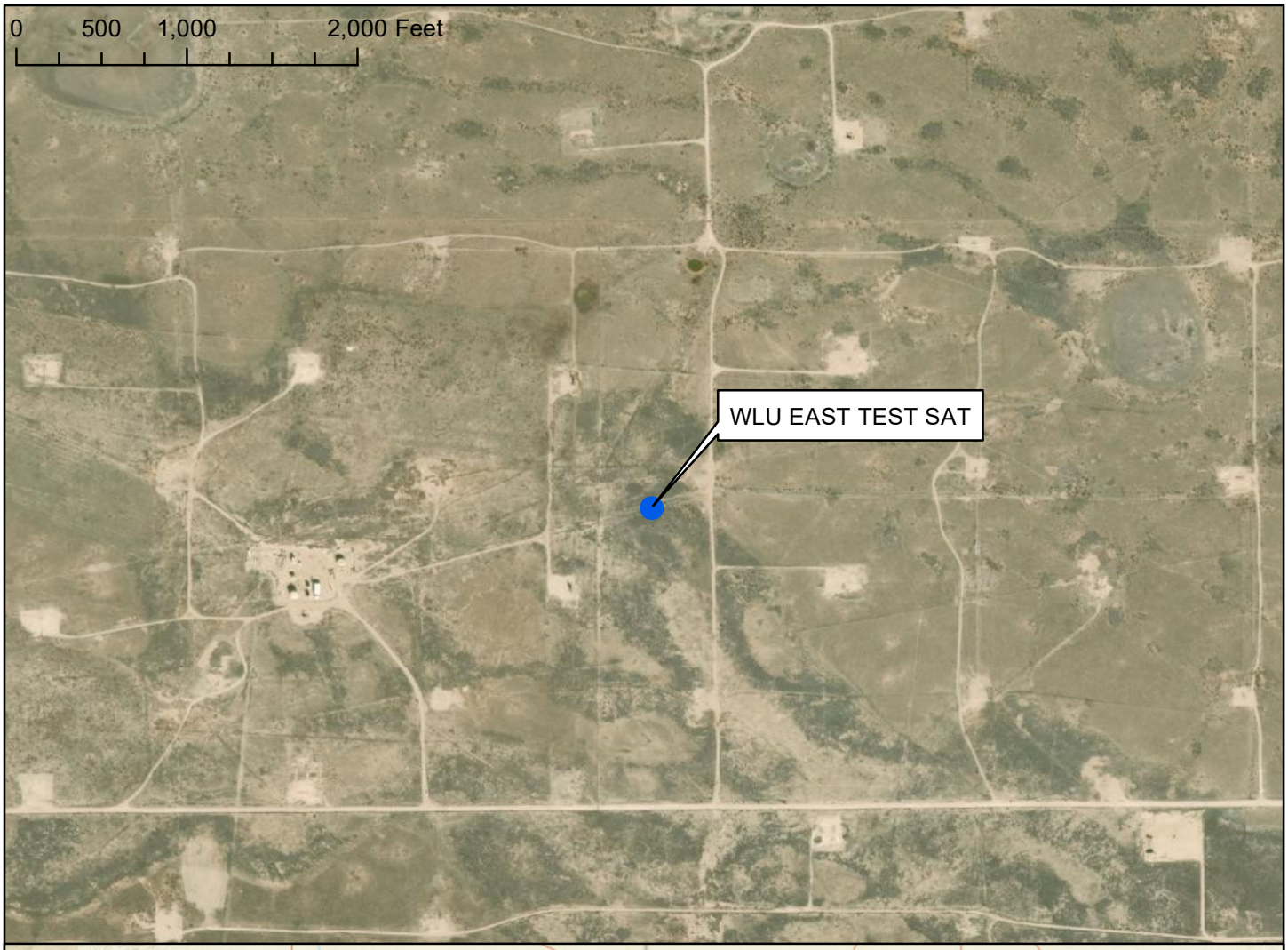
Table 1
2020 Soil Analytical Results
Chevron Environmental Management Company
WLU East Test Sat
Lea County, New Mexico

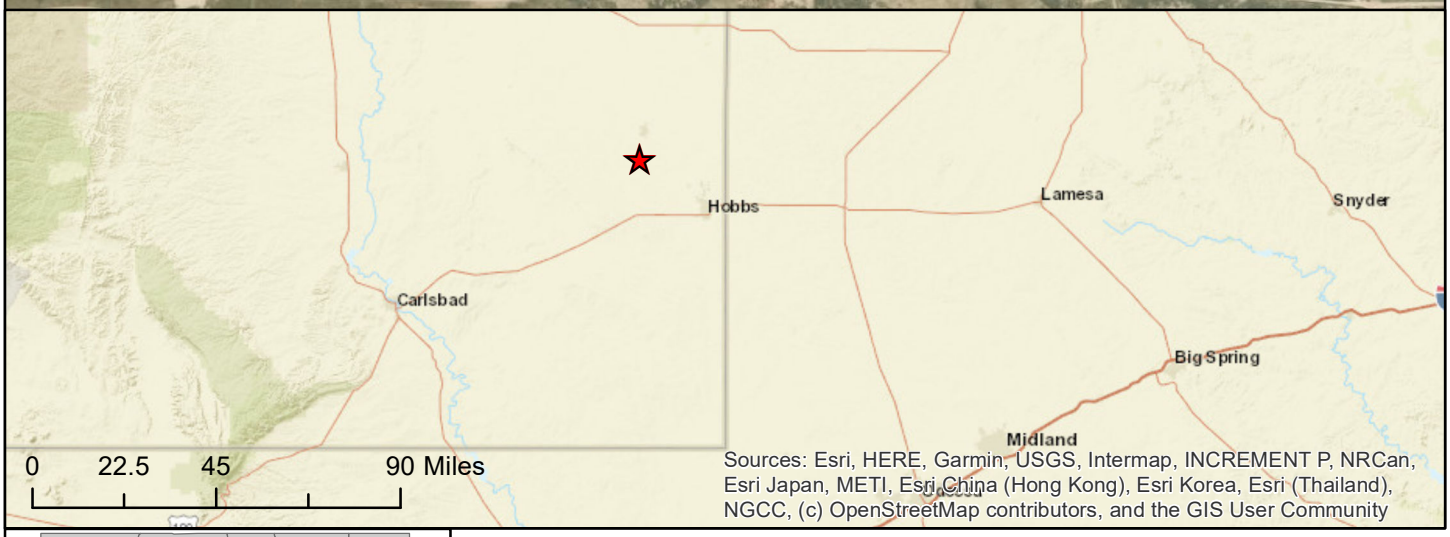
ARCADIS Design & Consultancy for natural and built assets

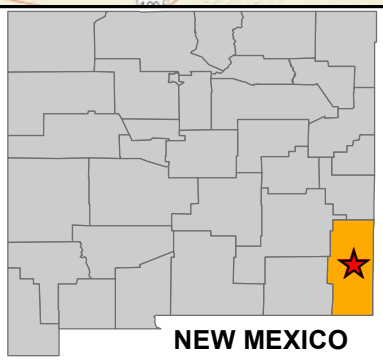
Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Gasoline Range Organics	Diesel Range Organics	Total GRO + DRO	Oil Range Organics	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			**10**	**--**	**--**	**--**	**50**	**--**	**--**	**1,000**	**--**	**2,500**	**20,000**
Restoration Requirements													**600***
HA-1	0-.5'	09/01/20	<0.000696	<0.00152	<0.00113	<0.00125	<0.000696	<0.633	18.6	18.6	104	123	16.5
	1-2'	09/01/20	<0.000658	<0.00144	<0.00106	<0.00118	<0.000658	<0.680	7.78 J	7.78 J	42.4	42.4	***699***
HA-2	0-.5'	09/01/20	<0.000829	<0.00182	<0.00134	<0.00149	<0.000829	<0.737	104	104	514	618	169
	1-2'	09/01/20	<0.000816	<0.00179	<0.00132	<0.00146	<0.000816	<0.707	16.2	16.2	66.5	82.7	***1,350***
Dup	1-2'	09/01/20	<0.000765	<0.00168	<0.00124	<0.00137	<0.000765	<0.729	12.5	12.5	68.9	81.4	***1,320***
	2-3'	09/01/20	<0.000748	<0.00164	<0.00121	<0.00134	<0.000748	<0.740	11.4	11.4	62.3	73.7	***647***
HA-3	0-.5'	09/01/20	<0.000821	<0.00180	<0.00133	<0.00147	<0.000821	<0.695	8.45 J	8.45 J	61.3	61.3	4.16 J
	1-2'	09/01/20	<0.000713	<0.00156	<0.00115	<0.00128	<0.000713	<0.647	10.8	10.8	46.8	57.6	2.40 J
HA-4	0-.5'	09/01/20	<0.000793	<0.00174	<0.00128	<0.00142	<0.000793	<0.712	24.1	24.1	98.0	122	90.1
	1-2'	09/01/20	<0.000699	<0.00153	<0.00113	<0.00125	<0.000699	<0.654	25.8	25.8	97.1	123	***793***
	3-4'	09/01/20	<0.000708	<0.00155	<0.00115	<0.00127	<0.000708	<0.697	7.58 J	7.58 J	45.4	45.4	599
HA-5	0-.5'	09/01/20	<0.000717	<0.00157	<0.00116	<0.00116	<0.000717	<0.672	16.3	16.3	89.1	105	16.7
	1-2'	09/01/20	<0.000724	<0.00159	<0.00117	<0.00130	<0.000724	<0.654	6.60 J	6.60 J	46.8	46.8	404
	2-3'	09/01/20	<0.000764	<0.00167	<0.00124	<0.00137	<0.000764	<0.685	6.89 J	6.89 J	38.9	38.9	337

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
BTEX : Benzene, Toluene, Ethylbenzene, and Total Xylenes
NMAC : New Mexico Administration Code
TPH GRO: Total Petroleum Hydrocarbons Gasoline Range Organics
TPH ORO: Total Petroluem Hydrocarbons Motor Oil Range Organics
TPH DRO: Total Petroleum Hydrocarbon Diesel Range Organics
*Revised screening limit and restoration criteria within the first 4 feet below ground surface per Rule 19.15.29 effective August 14, 2018
TPH analyzed by EPA Method 8015D
BTEX analyzed by EPA Method 8260C
Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)
DUP: Duplicate Sample
" ' " : Indicates one foot
" : Indicated inches

FIGURES







N

Notes:
1. Datum: D_WGS_1984
2. Site Location: 32.861611, -103.3669

Chevron Environmental Management Company
WLU East Test Sat
Lea County, New Mexico

SITE LOCATION MAP

ARCADIS

FIGURE
1

Document Path: T:_ENV\Chevron\WLU East Test Sat\D-ProjectWorking_\D02-Drawings\D-ProjectWorking_\MXD\Figure 1 - Site Location Map.mxd

Document Path: T:_ENV\Chevron\WLU East Test Sat\D-ProjectWorking_\D02-Drawings\D-ProjectWorking_\MXD\Figure 2 - Soil Sample Locations.mxd

Legend

- Soil Sample Locations

Notes:
1. Datum: D_WGS_1984
2. Site Location: 32.861611, -103.366944

N

0 37.5 75 150 Feet

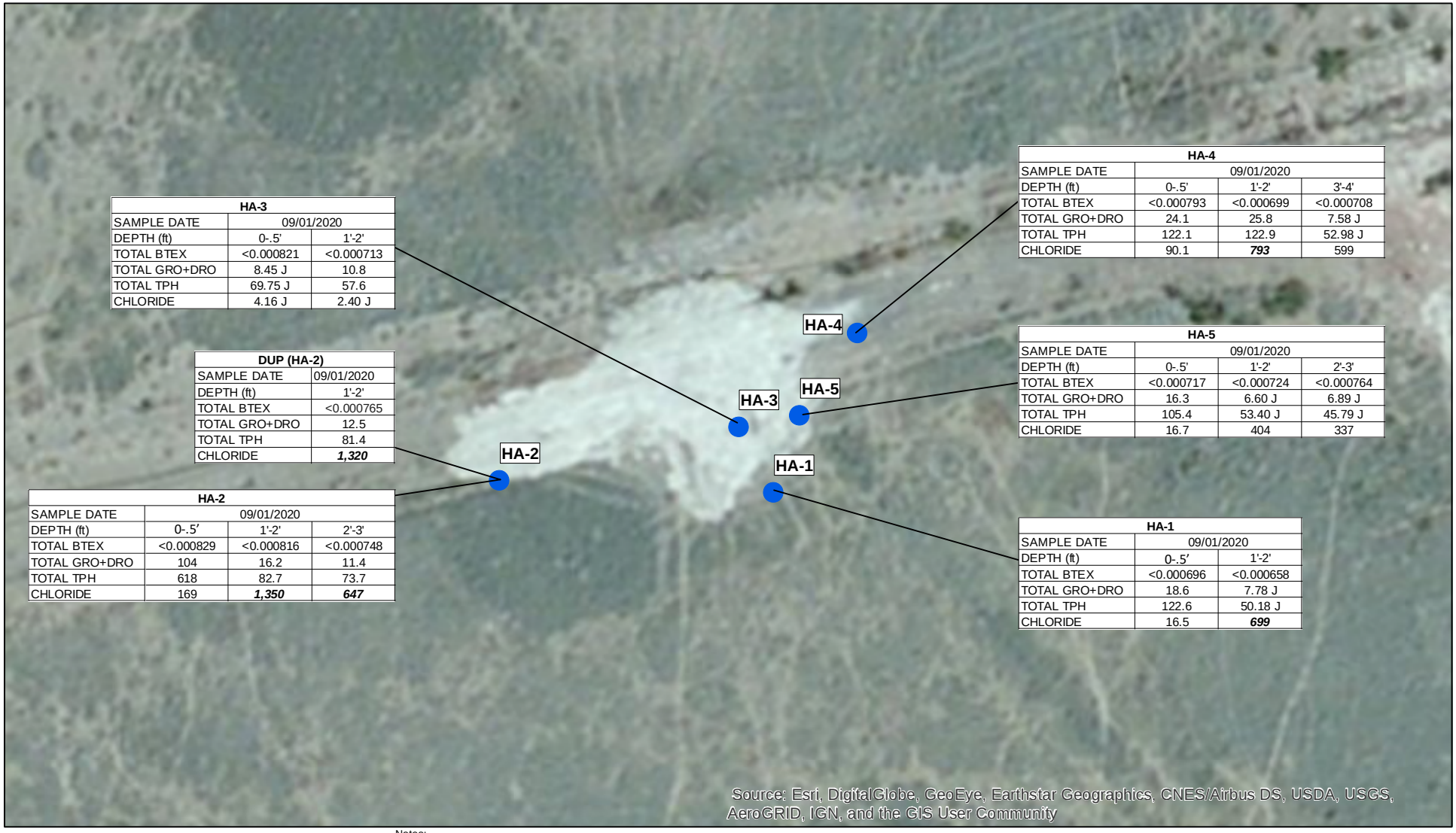
Chevron Environmental Management Company
WLU East Test Sat
Lea County, New Mexico

SOIL SAMPLE LOCATIONS MAP

ARCADIS

FIGURE 2

Document Path: T:_ENV\Chevron\WLU East Test Sat\D-ProjectWorking_\D02-Drawings\D-ProjectWorking_\MXD\Figure 3 - Soil Analitical Results Map.mxd



HA-3		
SAMPLE DATE	09/01/2020	
DEPTH (ft)	0-.5'	1'-2'
TOTAL BTEX	<0.000821	<0.000713
TOTAL GRO+DRO	8.45 J	10.8
TOTAL TPH	69.75 J	57.6
CHLORIDE	4.16 J	2.40 J

DUP (HA-2)	
SAMPLE DATE	09/01/2020
DEPTH (ft)	1'-2'
TOTAL BTEX	<0.000765
TOTAL GRO+DRO	12.5
TOTAL TPH	81.4
CHLORIDE	***1,320***

HA-2			
SAMPLE DATE	09/01/2020		
DEPTH (ft)	0-.5'	1'-2'	2'-3'
TOTAL BTEX	<0.000829	<0.000816	<0.000748
TOTAL GRO+DRO	104	16.2	11.4
TOTAL TPH	618	82.7	73.7
CHLORIDE	169	***1,350***	***647***

HA-4			
SAMPLE DATE	09/01/2020		
DEPTH (ft)	0-.5'	1'-2'	3'-4'
TOTAL BTEX	<0.000793	<0.000699	<0.000708
TOTAL GRO+DRO	24.1	25.8	7.58 J
TOTAL TPH	122.1	122.9	52.98 J
CHLORIDE	90.1	***793***	599

HA-5			
SAMPLE DATE	09/01/2020		
DEPTH (ft)	0-.5'	1'-2'	2'-3'
TOTAL BTEX	<0.000717	<0.000724	<0.000764
TOTAL GRO+DRO	16.3	6.60 J	6.89 J
TOTAL TPH	105.4	53.40 J	45.79 J
CHLORIDE	16.7	404	337

HA-1		
SAMPLE DATE	09/01/2020	
DEPTH (ft)	0-.5'	1'-2'
TOTAL BTEX	<0.000696	<0.000658
TOTAL GRO+DRO	18.6	7.78 J
TOTAL TPH	122.6	50.18 J
CHLORIDE	16.5	***699***

Legend

Soil Sample Locations

Notes:
1. Datum: D_WGS_1984
2. Site Location: 32.861611, -103.366944

N

0 25 50 100 Feet

Notes:
1. **Bold** and *italicized* Analytes exceeding NMAC standards and restoration requirements for Chloride.
2. J Indicates Result is less than the Reporting Limit but greater than or equal to the MDL and the concentration is an approximate value.
3. '<' Indicates the analyte was not detected at or above the Method Detection Limit (MDL).
4. NMAC Indicates New Mexico Administration Code.
5. All values are in mg/kg (Milligram per Kilogram).
6. "' ' " Indicates one foot.
7. "' Indicates inches.
8. DUP Indicates Duplicate Sample.
9. BTEX Indicates Benzene, Toluene, Ethylbenzene, and Total Xylenes.
10. HA Indicates Hand Auger Sample Point Location.
11. TPH GRO Indicates Total Petroleum Hydrocarbons Gasoline Range Organics.
12. TPH ORO Indicates Total Petroluem Hydrocarbons Oil Range Organics.
13. TPH DRO Indicates Total Petroleum Hydrocarbon Diesel Range Organics.
14. *Revised screening limit and restoration criteria within the first 4 feet below ground surface per Rule 19.15.29 effective August 15, 2018.
15. Chloride analyzed by United States Environmental Protection Agency Method 300.0.
16. TPH analyzed by EPA Method 8015D.
17. BTEX analyzed by EPA Method 8260C.
18. Closure Criteria New Mexico Administrative Code .15.29.12.E(2).

Chevron Environmental Management Company
WLU East Test Sat
Lea County, New Mexico

SOIL ANALYTICAL RESULTS MAP

ARCADIS

FIGURE
3

APPENDIX A

Initial C-141 Form 1RP-2563

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

State of New Mexico
Energy Minerals and Natural Resources

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

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 Mid-Continent LP	Contact Kim Klahsen
Address HCR 60 Box 423 Lovington, NM 88260	Telephone No. 575-396-4414 X 128 432-894-3298 (Cell)
Facility Name West Lovington Unit East Test Satellite Trunk line	Facility Type Trunkline

Surface Owner Chevron	Mineral Owner State of NM	~~Lease No.~~ B-4120-1

30025038 73

LOCATION OF RELEASE- The closest well is WLU # 23: Currently looking for coordinates

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	4	17	36					Lea

Latitude N 32degree 51.701minutes **Longitude** W 103degrees 22.019 minutes

NATURE OF RELEASE

Type of Release Oil and Produced Water	Volume of Release 0.40 bbl oil and 5.56 bbls water	Volume Recovered None
Source of Release Trunk line	Date and Hour of Occurrence 6-10-10 ~ 12:30	Date and Hour of Discovery 6-10-10~ 14:00
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? OCD- Larry Ridenour notified Mr. Leking	
By Whom? Larry Ridenour	Date and Hour 6-10-10 @ 3:50 PM by E- Mail	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
No Impact to watercourse.

Describe Cause of Problem and Remedial Action Taken.*

CHLORIDE ??

A 4 inch diameter trunk line fuse leaked resulting in a 0.4 bl oil spill and a 5.56 bbl produced water spill to soil.

Describe Area Affected and Cleanup Action Taken.*

Liquid and saturated solids were removed by a 3rd party contract company. Soil samples will be collected to determine if additional remediation will be performed to meet recommended thresholds for oil and chloride contamination in soil.

SPILL AREA ?

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: Kim Klahsen	OIL CONSERVATION DIVISION
Printed Name: Kim Klahsen	Approved by District Supervisor: Johnson ENVIRONMENTAL ENGINEER
Title: HES Specialist	Approval Date: 6-18-10 Expiration Date: 8-18-10
E-mail Address: KDKL@chevron.com	Conditions of Approval: SUBMIT FINAL C-141 W/ DOCS BY Attached ☐ IRP # 10.6.2563
Date: 6/18/10 Phone:575-396-4414	

NLOST 1016954547
PLWS 1016954924

APPENDIX B

Laboratory Report

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-210633-1
Client Project/Site: Chevron - WLU East Test Sat Site

For:
ARCADIS U.S., Inc.
1004 North Big Spring
Suite 121
Midland, Texas 79701

Attn: Justin Nixon

Authorized for release by:
9/23/2020 4:46:24 PM

Sachin Kudchadkar, Senior Project Manager
(713)690-4444
Sachin.Kudchadkar@Eurofinset.com

Table of Contents

Method Summary

Client: ARCADIS U.S., Inc.
Job ID: 600-210633-1
Project/Site: Chevron - WLU East Test Sat Site

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL HOU
8015D	Gasoline Range Organics (GRO) (GC)	SW846	TAL HOU
8015D	Diesel Range Organics (DRO) (GC)	SW846	TAL HOU
300.0	Anions, Ion Chromatography	MCAWW	TAL HOU
2540B	Percent Moisture	SM20	TAL HOU
3546	Microwave Extraction	SW846	TAL HOU
5030C	Purge and Trap for Solids	SW846	TAL HOU
5030C	Purge and Trap Methanol Dilution	SW846	TAL HOU
DI Leach	Deionized Water Leaching Procedure (Routine)	ASTM	TAL HOU

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: ARCADIS U.S., Inc.
Job ID: 600-210633-1
Project/Site: Chevron - WLU East Test Sat Site

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-210633-1	HA-1-S-0-.5-200901	Solid	09/01/20 11:30	09/02/20 10:35	
600-210633-2	HA-1-S-1-2-200901	Solid	09/01/20 11:42	09/02/20 10:35	
600-210633-3	HA-2-S-0-.5-200901	Solid	09/01/20 11:52	09/02/20 10:35	
600-210633-4	HA-2-S-1-2-200901	Solid	09/01/20 11:57	09/02/20 10:35	
600-210633-5	HA-2-SD-1-2-200901	Solid	09/01/20 11:57	09/02/20 10:35	
600-210633-6	HA-2-S-2-3-200901	Solid	09/01/20 12:00	09/02/20 10:35	
600-210633-7	HA-3-S-0-.5-200901	Solid	09/01/20 12:08	09/02/20 10:35	
600-210633-8	HA-3-S-1-2-200901	Solid	09/01/20 12:11	09/02/20 10:35	
600-210633-9	HA-4-S-0-.5-200901	Solid	09/01/20 12:20	09/02/20 10:35	
600-210633-10	HA-4-S-1-2-200901	Solid	09/01/20 12:37	09/02/20 10:35	
600-210633-11	HA-4-S-3-4-200901	Solid	09/01/20 12:48	09/02/20 10:35	
600-210633-12	HA-5-S-0-.5-200901	Solid	09/01/20 12:54	09/02/20 10:35	
600-210633-13	HA-5-S-1-2-200901	Solid	09/01/20 12:58	09/02/20 10:35	
600-210633-14	HA-5-S-2-3-200901	Solid	09/01/20 13:04	09/02/20 10:35	

Client Sample ID: HA-1-S-0-.5-200901

Lab Sample ID: 600-210633-1
Date Collected: 09/01/20 11:30
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 94.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.696	U	5.52	0.696	ug/Kg	☼	09/02/20 15:07	09/04/20 14:39	1
Ethylbenzene	1.13	U	5.52	1.13	ug/Kg	☼	09/02/20 15:07	09/04/20 14:39	1
Toluene	1.52	U	5.52	1.52	ug/Kg	☼	09/02/20 15:07	09/04/20 14:39	1
Xylenes, Total	1.25	U	5.52	1.25	ug/Kg	☼	09/02/20 15:07	09/04/20 14:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*61 - 130*	*09/02/20 15:07*	*09/04/20 14:39*	*1*
4-Bromofluorobenzene	*92*		*57 - 140*	*09/02/20 15:07*	*09/04/20 14:39*	*1*
Dibromofluoromethane	*99*		*68 - 140*	*09/02/20 15:07*	*09/04/20 14:39*	*1*
Toluene-d8 (Surr)	*100*		*50 - 130*	*09/02/20 15:07*	*09/04/20 14:39*	*1*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.633	U	1.08	0.633	mg/Kg	☼	09/04/20 07:03	09/04/20 11:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*91*		*70 - 130*	*09/04/20 07:03*	*09/04/20 11:02*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**18.6**		8.73	1.80	mg/Kg	☼	09/10/20 14:35	09/15/20 19:14	1
Oil Range Organics (C28-C36)	**104**		8.73	5.26	mg/Kg	☼	09/10/20 14:35	09/15/20 19:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*129*		*60 - 140*	*09/10/20 14:35*	*09/15/20 19:14*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16.5**		4.21	0.563	mg/Kg	☼		09/17/20 22:30	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**5.1**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**94.9**		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-1-S-1-2-200901

Lab Sample ID: 600-210633-2
Date Collected: 09/01/20 11:42
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 91.2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.658	U	5.22	0.658	ug/Kg	☼	09/02/20 15:07	09/04/20 15:02	1
Ethylbenzene	1.06	U	5.22	1.06	ug/Kg	☼	09/02/20 15:07	09/04/20 15:02	1
Toluene	1.44	U	5.22	1.44	ug/Kg	☼	09/02/20 15:07	09/04/20 15:02	1
Xylenes, Total	1.18	U	5.22	1.18	ug/Kg	☼	09/02/20 15:07	09/04/20 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*61 - 130*	*09/02/20 15:07*	*09/04/20 15:02*	*1*
4-Bromofluorobenzene	*102*		*57 - 140*	*09/02/20 15:07*	*09/04/20 15:02*	*1*
Dibromofluoromethane	*99*		*68 - 140*	*09/02/20 15:07*	*09/04/20 15:02*	*1*
Toluene-d8 (Surr)	*101*		*50 - 130*	*09/02/20 15:07*	*09/04/20 15:02*	*1*

Client Sample ID: HA-1-S-1-2-200901

Lab Sample ID: 600-210633-2

Date Collected: 09/01/20 11:42
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 91.2

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.680	U	1.16	0.680	mg/Kg	☼	09/04/20 07:03	09/04/20 11:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*97*		*70 - 130*	*09/04/20 07:03*	*09/04/20 11:27*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**7.78**	**J**	9.08	1.87	mg/Kg	☼	09/10/20 14:35	09/15/20 19:45	1
Oil Range Organics (C28-C36)	**42.4**		9.08	5.47	mg/Kg	☼	09/10/20 14:35	09/15/20 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*120*		*60 - 140*	*09/10/20 14:35*	*09/15/20 19:45*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**699**		21.9	2.93	mg/Kg	☼		09/17/20 23:32	5

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**8.8**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**91.2**		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-2-S-0-.5-200901

Lab Sample ID: 600-210633-3

Date Collected: 09/01/20 11:52
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 79.3

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.829	U	6.58	0.829	ug/Kg	☼	09/02/20 15:07	09/04/20 15:25	1
Ethylbenzene	1.34	U	6.58	1.34	ug/Kg	☼	09/02/20 15:07	09/04/20 15:25	1
Toluene	1.82	U	6.58	1.82	ug/Kg	☼	09/02/20 15:07	09/04/20 15:25	1
Xylenes, Total	1.49	U	6.58	1.49	ug/Kg	☼	09/02/20 15:07	09/04/20 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*61 - 130*	*09/02/20 15:07*	*09/04/20 15:25*	*1*
4-Bromofluorobenzene	*109*		*57 - 140*	*09/02/20 15:07*	*09/04/20 15:25*	*1*
Dibromofluoromethane	*101*		*68 - 140*	*09/02/20 15:07*	*09/04/20 15:25*	*1*
Toluene-d8 (Surr)	*98*		*50 - 130*	*09/02/20 15:07*	*09/04/20 15:25*	*1*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.737	U	1.26	0.737	mg/Kg	☼	09/04/20 07:03	09/04/20 11:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*94*		*70 - 130*	*09/04/20 07:03*	*09/04/20 11:52*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**104**		20.8	4.29	mg/Kg	☼	09/10/20 14:35	09/16/20 09:09	2
Oil Range Organics (C28-C36)	**514**		20.8	12.5	mg/Kg	☼	09/10/20 14:35	09/16/20 09:09	2

Client Sample ID: HA-2-S-0-.5-200901

Lab Sample ID: 600-210633-3

Date Collected: 09/01/20 11:52
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 79.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		60 - 140	09/10/20 14:35	09/16/20 09:09	2

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	169		5.04	0.673	mg/Kg	☼		09/17/20 23:52	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20.7		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	79.3		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-2-S-1-2-200901

Lab Sample ID: 600-210633-4

Date Collected: 09/01/20 11:57
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 85.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.816	U	6.48	0.816	ug/Kg	☼	09/02/20 15:07	09/04/20 15:49	1
Ethylbenzene	1.32	U	6.48	1.32	ug/Kg	☼	09/02/20 15:07	09/04/20 15:49	1
Toluene	1.79	U	6.48	1.79	ug/Kg	☼	09/02/20 15:07	09/04/20 15:49	1
Xylenes, Total	1.46	U	6.48	1.46	ug/Kg	☼	09/02/20 15:07	09/04/20 15:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		61 - 130	09/02/20 15:07	09/04/20 15:49	1
4-Bromofluorobenzene	117		57 - 140	09/02/20 15:07	09/04/20 15:49	1
Dibromofluoromethane	102		68 - 140	09/02/20 15:07	09/04/20 15:49	1
Toluene-d8 (Surr)	104		50 - 130	09/02/20 15:07	09/04/20 15:49	1

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.707	U	1.21	0.707	mg/Kg	☼	09/04/20 07:03	09/04/20 12:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	99		70 - 130	09/04/20 07:03	09/04/20 12:17	1

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	16.2		9.66	1.99	mg/Kg	☼	09/10/20 14:35	09/15/20 20:47	1
Oil Range Organics (C28-C36)	66.5		9.66	5.82	mg/Kg	☼	09/10/20 14:35	09/15/20 20:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	129		60 - 140	09/10/20 14:35	09/15/20 20:47	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1350		46.6	6.23	mg/Kg	☼		09/18/20 00:13	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14.2		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	85.8		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-2-SD-1-2-200901
Lab Sample ID: 600-210633-5

Date Collected: 09/01/20 11:57
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 85.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.765	U	6.07	0.765	ug/Kg	☼	09/02/20 15:07	09/05/20 10:19	1
Ethylbenzene	1.24	U	6.07	1.24	ug/Kg	☼	09/02/20 15:07	09/05/20 10:19	1
Toluene	1.68	U	6.07	1.68	ug/Kg	☼	09/02/20 15:07	09/05/20 10:19	1
Xylenes, Total	1.37	U	6.07	1.37	ug/Kg	☼	09/02/20 15:07	09/05/20 10:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*61 - 130*	*09/02/20 15:07*	*09/05/20 10:19*	*1*
4-Bromofluorobenzene	*114*		*57 - 140*	*09/02/20 15:07*	*09/05/20 10:19*	*1*
Dibromofluoromethane	*100*		*68 - 140*	*09/02/20 15:07*	*09/05/20 10:19*	*1*
Toluene-d8 (Surr)	*93*		*50 - 130*	*09/02/20 15:07*	*09/05/20 10:19*	*1*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.729	U	1.24	0.729	mg/Kg	☼	09/04/20 07:03	09/04/20 12:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*96*		*70 - 130*	*09/04/20 07:03*	*09/04/20 12:42*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**12.5**		9.60	1.98	mg/Kg	☼	09/10/20 14:35	09/15/20 21:19	1
Oil Range Organics (C28-C36)	**68.9**		9.60	5.78	mg/Kg	☼	09/10/20 14:35	09/15/20 21:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*133*		*60 - 140*	*09/10/20 14:35*	*09/15/20 21:19*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1320**		46.6	6.21	mg/Kg	☼		09/18/20 00:33	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**14.1**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**85.9**		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-2-S-2-3-200901
Lab Sample ID: 600-210633-6

Date Collected: 09/01/20 12:00
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 80.7

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.748	U	5.94	0.748	ug/Kg	☼	09/02/20 15:07	09/04/20 16:34	1
Ethylbenzene	1.21	U	5.94	1.21	ug/Kg	☼	09/02/20 15:07	09/04/20 16:34	1
Toluene	1.64	U	5.94	1.64	ug/Kg	☼	09/02/20 15:07	09/04/20 16:34	1
Xylenes, Total	1.34	U	5.94	1.34	ug/Kg	☼	09/02/20 15:07	09/04/20 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*61 - 130*	*09/02/20 15:07*	*09/04/20 16:34*	*1*
4-Bromofluorobenzene	*115*		*57 - 140*	*09/02/20 15:07*	*09/04/20 16:34*	*1*
Dibromofluoromethane	*104*		*68 - 140*	*09/02/20 15:07*	*09/04/20 16:34*	*1*
Toluene-d8 (Surr)	*101*		*50 - 130*	*09/02/20 15:07*	*09/04/20 16:34*	*1*

Client Sample ID: HA-2-S-2-3-200901
Lab Sample ID: 600-210633-6

Date Collected: 09/01/20 12:00
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 80.7

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.740	U	1.26	0.740	mg/Kg	☼	09/04/20 07:03	09/04/20 13:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*98*		*70 - 130*	*09/04/20 07:03*	*09/04/20 13:08*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**11.4**		10.3	2.12	mg/Kg	☼	09/10/20 14:35	09/15/20 21:50	1
Oil Range Organics (C28-C36)	**62.3**		10.3	6.19	mg/Kg	☼	09/10/20 14:35	09/15/20 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*118*		*60 - 140*	*09/10/20 14:35*	*09/15/20 21:50*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**647**		24.8	3.31	mg/Kg	☼		09/18/20 00:53	5

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**19.3**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**80.7**		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-3-S-0-.5-200901
Lab Sample ID: 600-210633-7

Date Collected: 09/01/20 12:08
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 84.3

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.821	U	6.52	0.821	ug/Kg	☼	09/02/20 15:07	09/04/20 16:57	1
Ethylbenzene	1.33	U	6.52	1.33	ug/Kg	☼	09/02/20 15:07	09/04/20 16:57	1
Toluene	1.80	U	6.52	1.80	ug/Kg	☼	09/02/20 15:07	09/04/20 16:57	1
Xylenes, Total	1.47	U	6.52	1.47	ug/Kg	☼	09/02/20 15:07	09/04/20 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*61 - 130*	*09/02/20 15:07*	*09/04/20 16:57*	*1*
4-Bromofluorobenzene	*113*		*57 - 140*	*09/02/20 15:07*	*09/04/20 16:57*	*1*
Dibromofluoromethane	*102*		*68 - 140*	*09/02/20 15:07*	*09/04/20 16:57*	*1*
Toluene-d8 (Surr)	*99*		*50 - 130*	*09/02/20 15:07*	*09/04/20 16:57*	*1*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.695	U	1.19	0.695	mg/Kg	☼	09/04/20 07:03	09/04/20 13:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*95*		*70 - 130*	*09/04/20 07:03*	*09/04/20 13:33*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**8.45**	**J**	9.80	2.02	mg/Kg	☼	09/10/20 14:35	09/15/20 22:21	1
Oil Range Organics (C28-C36)	**61.3**		9.80	5.90	mg/Kg	☼	09/10/20 14:35	09/15/20 22:21	1

Client Sample ID: HA-3-S-0-.5-200901

Lab Sample ID: 600-210633-7

Date Collected: 09/01/20 12:08
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 84.3

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*122*		*60 - 140*	*09/10/20 14:35*	*09/15/20 22:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.16**	**J**	4.75	0.634	mg/Kg	☼		09/18/20 01:55	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15.7**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**84.3**		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-3-S-1-2-200901

Lab Sample ID: 600-210633-8

Date Collected: 09/01/20 12:11
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 92.4

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.713	U	5.66	0.713	ug/Kg	☼	09/02/20 15:07	09/04/20 17:20	1
Ethylbenzene	1.15	U	5.66	1.15	ug/Kg	☼	09/02/20 15:07	09/04/20 17:20	1
Toluene	1.56	U	5.66	1.56	ug/Kg	☼	09/02/20 15:07	09/04/20 17:20	1
Xylenes, Total	1.28	U	5.66	1.28	ug/Kg	☼	09/02/20 15:07	09/04/20 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*61 - 130*	*09/02/20 15:07*	*09/04/20 17:20*	*1*
4-Bromofluorobenzene	*115*		*57 - 140*	*09/02/20 15:07*	*09/04/20 17:20*	*1*
Dibromofluoromethane	*105*		*68 - 140*	*09/02/20 15:07*	*09/04/20 17:20*	*1*
Toluene-d8 (Surr)	*98*		*50 - 130*	*09/02/20 15:07*	*09/04/20 17:20*	*1*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.647	U	1.10	0.647	mg/Kg	☼	09/04/20 07:03	09/04/20 13:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*99*		*70 - 130*	*09/04/20 07:03*	*09/04/20 13:58*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**10.8**		8.97	1.85	mg/Kg	☼	09/10/20 14:35	09/15/20 23:24	1
Oil Range Organics (C28-C36)	**46.8**		8.97	5.40	mg/Kg	☼	09/10/20 14:35	09/15/20 23:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*103*		*60 - 140*	*09/10/20 14:35*	*09/15/20 23:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2.40**	**J**	4.33	0.578	mg/Kg	☼		09/18/20 02:15	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**7.6**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**92.4**		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-4-S-0-.5-200901

Lab Sample ID: 600-210633-9
Date Collected: 09/01/20 12:20
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 81.0

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.793	U	6.29	0.793	ug/Kg	☼	09/02/20 15:07	09/04/20 17:43	1
Ethylbenzene	1.28	U	6.29	1.28	ug/Kg	☼	09/02/20 15:07	09/04/20 17:43	1
Toluene	1.74	U	6.29	1.74	ug/Kg	☼	09/02/20 15:07	09/04/20 17:43	1
Xylenes, Total	1.42	U	6.29	1.42	ug/Kg	☼	09/02/20 15:07	09/04/20 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*61 - 130*	*09/02/20 15:07*	*09/04/20 17:43*	*1*
4-Bromofluorobenzene	*118*		*57 - 140*	*09/02/20 15:07*	*09/04/20 17:43*	*1*
Dibromofluoromethane	*104*		*68 - 140*	*09/02/20 15:07*	*09/04/20 17:43*	*1*
Toluene-d8 (Surr)	*98*		*50 - 130*	*09/02/20 15:07*	*09/04/20 17:43*	*1*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.712	U	1.22	0.712	mg/Kg	☼	09/04/20 07:03	09/04/20 14:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*94*		*70 - 130*	*09/04/20 07:03*	*09/04/20 14:23*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**24.1**		10.2	2.10	mg/Kg	☼	09/10/20 14:35	09/15/20 23:56	1
Oil Range Organics (C28-C36)	**98.0**		10.2	6.15	mg/Kg	☼	09/10/20 14:35	09/15/20 23:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*132*		*60 - 140*	*09/10/20 14:35*	*09/15/20 23:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**90.1**		24.7	3.30	mg/Kg	☼		09/18/20 02:35	5

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**19.0**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**81.0**		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-4-S-1-2-200901

Lab Sample ID: 600-210633-10
Date Collected: 09/01/20 12:37
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 89.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.699	U	5.54	0.699	ug/Kg	☼	09/02/20 15:07	09/04/20 18:05	1
Ethylbenzene	1.13	U	5.54	1.13	ug/Kg	☼	09/02/20 15:07	09/04/20 18:05	1
Toluene	1.53	U	5.54	1.53	ug/Kg	☼	09/02/20 15:07	09/04/20 18:05	1
Xylenes, Total	1.25	U	5.54	1.25	ug/Kg	☼	09/02/20 15:07	09/04/20 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*61 - 130*	*09/02/20 15:07*	*09/04/20 18:05*	*1*
4-Bromofluorobenzene	*115*		*57 - 140*	*09/02/20 15:07*	*09/04/20 18:05*	*1*
Dibromofluoromethane	*107*		*68 - 140*	*09/02/20 15:07*	*09/04/20 18:05*	*1*
Toluene-d8 (Surr)	*100*		*50 - 130*	*09/02/20 15:07*	*09/04/20 18:05*	*1*

Client Sample ID: HA-4-S-1-2-200901
Lab Sample ID: 600-210633-10

Date Collected: 09/01/20 12:37
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 89.5

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.654	U	1.12	0.654	mg/Kg	☼	09/04/20 07:03	09/04/20 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*96*		*70 - 130*	*09/04/20 07:03*	*09/04/20 14:48*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**25.8**		9.26	1.91	mg/Kg	☼	09/10/20 14:35	09/16/20 00:28	1
Oil Range Organics (C28-C36)	**97.1**		9.26	5.58	mg/Kg	☼	09/10/20 14:35	09/16/20 00:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*147*	*X*	*60 - 140*	*09/10/20 14:35*	*09/16/20 00:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**793**		22.4	2.98	mg/Kg	☼		09/18/20 02:56	5

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**10.5**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**89.5**		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-4-S-3-4-200901
Lab Sample ID: 600-210633-11

Date Collected: 09/01/20 12:48
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 90.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.708	U	5.62	0.708	ug/Kg	☼	09/02/20 15:07	09/04/20 18:28	1
Ethylbenzene	1.15	U	5.62	1.15	ug/Kg	☼	09/02/20 15:07	09/04/20 18:28	1
Toluene	1.55	U	5.62	1.55	ug/Kg	☼	09/02/20 15:07	09/04/20 18:28	1
Xylenes, Total	1.27	U	5.62	1.27	ug/Kg	☼	09/02/20 15:07	09/04/20 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*61 - 130*	*09/02/20 15:07*	*09/04/20 18:28*	*1*
4-Bromofluorobenzene	*119*		*57 - 140*	*09/02/20 15:07*	*09/04/20 18:28*	*1*
Dibromofluoromethane	*105*		*68 - 140*	*09/02/20 15:07*	*09/04/20 18:28*	*1*
Toluene-d8 (Surr)	*98*		*50 - 130*	*09/02/20 15:07*	*09/04/20 18:28*	*1*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.697	U	1.19	0.697	mg/Kg	☼	09/04/20 07:03	09/04/20 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*98*		*70 - 130*	*09/04/20 07:03*	*09/04/20 15:39*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**7.58**	**J**	9.12	1.88	mg/Kg	☼	09/10/20 14:35	09/16/20 01:00	1
Oil Range Organics (C28-C36)	**45.4**		9.12	5.49	mg/Kg	☼	09/10/20 14:35	09/16/20 01:00	1

Client Sample ID: HA-4-S-3-4-200901

Lab Sample ID: 600-210633-11

Date Collected: 09/01/20 12:48
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 90.8

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*107*		*60 - 140*	*09/10/20 14:35*	*09/16/20 01:00*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**599**		22.0	2.94	mg/Kg	☼		09/18/20 03:16	5

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**9.2**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**90.8**		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-5-S-0-.5-200901

Lab Sample ID: 600-210633-12

Date Collected: 09/01/20 12:54
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 90.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.717	U	5.69	0.717	ug/Kg	☼	09/02/20 15:07	09/04/20 13:05	1
Ethylbenzene	1.16	U	5.69	1.16	ug/Kg	☼	09/02/20 15:07	09/04/20 13:05	1
Toluene	1.57	U	5.69	1.57	ug/Kg	☼	09/02/20 15:07	09/04/20 13:05	1
Xylenes, Total	1.29	U	5.69	1.29	ug/Kg	☼	09/02/20 15:07	09/04/20 13:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*61 - 130*	*09/02/20 15:07*	*09/04/20 13:05*	*1*
4-Bromofluorobenzene	*106*		*57 - 140*	*09/02/20 15:07*	*09/04/20 13:05*	*1*
Dibromofluoromethane	*97*		*68 - 140*	*09/02/20 15:07*	*09/04/20 13:05*	*1*
Toluene-d8 (Surr)	*97*		*50 - 130*	*09/02/20 15:07*	*09/04/20 13:05*	*1*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.672	U	1.15	0.672	mg/Kg	☼	09/04/20 07:03	09/04/20 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*99*		*70 - 130*	*09/04/20 07:03*	*09/04/20 16:04*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**16.3**		9.10	1.87	mg/Kg	☼	09/10/20 14:35	09/16/20 01:32	1
Oil Range Organics (C28-C36)	**89.1**		9.10	5.48	mg/Kg	☼	09/10/20 14:35	09/16/20 01:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*138*		*60 - 140*	*09/10/20 14:35*	*09/16/20 01:32*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16.7**		4.40	0.587	mg/Kg	☼		09/18/20 04:17	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**9.1**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**90.9**		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-5-S-1-2-200901
Lab Sample ID: 600-210633-13

Date Collected: 09/01/20 12:58
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 90.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.724	U	5.75	0.724	ug/Kg	☼	09/02/20 15:07	09/04/20 18:51	1
Ethylbenzene	1.17	U	5.75	1.17	ug/Kg	☼	09/02/20 15:07	09/04/20 18:51	1
Toluene	1.59	U	5.75	1.59	ug/Kg	☼	09/02/20 15:07	09/04/20 18:51	1
Xylenes, Total	1.30	U	5.75	1.30	ug/Kg	☼	09/02/20 15:07	09/04/20 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*61 - 130*	*09/02/20 15:07*	*09/04/20 18:51*	*1*
4-Bromofluorobenzene	*115*		*57 - 140*	*09/02/20 15:07*	*09/04/20 18:51*	*1*
Dibromofluoromethane	*102*		*68 - 140*	*09/02/20 15:07*	*09/04/20 18:51*	*1*
Toluene-d8 (Surr)	*97*		*50 - 130*	*09/02/20 15:07*	*09/04/20 18:51*	*1*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.654	U	1.12	0.654	mg/Kg	☼	09/04/20 07:03	09/04/20 16:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*97*		*70 - 130*	*09/04/20 07:03*	*09/04/20 16:29*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**6.60**	**J**	9.10	1.88	mg/Kg	☼	09/10/20 14:36	09/16/20 02:03	1
Oil Range Organics (C28-C36)	**46.8**		9.10	5.48	mg/Kg	☼	09/10/20 14:36	09/16/20 02:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*119*		*60 - 140*	*09/10/20 14:36*	*09/16/20 02:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**404**		22.1	2.95	mg/Kg	☼		09/18/20 14:24	5

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**9.4**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**90.6**		1.0	1.0	%			09/03/20 09:00	1

Client Sample ID: HA-5-S-2-3-200901
Lab Sample ID: 600-210633-14

Date Collected: 09/01/20 13:04
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 89.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.764	U	6.06	0.764	ug/Kg	☼	09/02/20 15:07	09/04/20 19:13	1
Ethylbenzene	1.24	U	6.06	1.24	ug/Kg	☼	09/02/20 15:07	09/04/20 19:13	1
Toluene	1.67	U	6.06	1.67	ug/Kg	☼	09/02/20 15:07	09/04/20 19:13	1
Xylenes, Total	1.37	U	6.06	1.37	ug/Kg	☼	09/02/20 15:07	09/04/20 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*61 - 130*	*09/02/20 15:07*	*09/04/20 19:13*	*1*
4-Bromofluorobenzene	*121*		*57 - 140*	*09/02/20 15:07*	*09/04/20 19:13*	*1*
Dibromofluoromethane	*101*		*68 - 140*	*09/02/20 15:07*	*09/04/20 19:13*	*1*
Toluene-d8 (Surr)	*103*		*50 - 130*	*09/02/20 15:07*	*09/04/20 19:13*	*1*

Client: ARCADIS U.S., Inc.
Job ID: 600-210633-1
Project/Site: Chevron - WLU East Test Sat Site

Client Sample ID: HA-5-S-2-3-200901
Lab Sample ID: 600-210633-14
Date Collected: 09/01/20 13:04
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 89.1

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.685	U	1.17	0.685	mg/Kg	☼	09/04/20 07:03	09/04/20 16:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*88*		*70 - 130*	*09/04/20 07:03*	*09/04/20 16:54*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**6.89**	**J**	9.28	1.91	mg/Kg	☼	09/10/20 14:36	09/16/20 02:35	1
Oil Range Organics (C28-C36)	**38.9**		9.28	5.59	mg/Kg	☼	09/10/20 14:36	09/16/20 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*153*	*X*	*60 - 140*	*09/10/20 14:36*	*09/16/20 02:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**337**		22.5	3.00	mg/Kg	☼		09/18/20 15:25	5

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**10.9**		1.0	1.0	%			09/03/20 09:00	1
Percent Solids	**89.1**		1.0	1.0	%			09/03/20 09:00	1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate recovery exceeds control limits

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Surrogate Summary

Client: ARCADIS U.S., Inc.
Job ID: 600-210633-1
Project/Site: Chevron - WLU East Test Sat Site

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(61-130)	(57-140)	(68-140)	(50-130)
600-210633-1	HA-1-S-0-.5-200901	92	92	99	100
600-210633-2	HA-1-S-1-2-200901	93	102	99	101
600-210633-3	HA-2-S-0-.5-200901	89	109	101	98
600-210633-4	HA-2-S-1-2-200901	96	117	102	104
600-210633-5	HA-2-SD-1-2-200901	93	114	100	93
600-210633-6	HA-2-S-2-3-200901	95	115	104	101
600-210633-7	HA-3-S-0-.5-200901	93	113	102	99
600-210633-8	HA-3-S-1-2-200901	96	115	105	98
600-210633-9	HA-4-S-0-.5-200901	97	118	104	98
600-210633-10	HA-4-S-1-2-200901	101	115	107	100
600-210633-11	HA-4-S-3-4-200901	99	119	105	98
600-210633-12	HA-5-S-0-.5-200901	96	106	97	97
600-210633-13	HA-5-S-1-2-200901	98	115	102	97
600-210633-14	HA-5-S-2-3-200901	100	121	101	103
LCS 600-302885/3	Lab Control Sample	96	117	102	96
LCS 600-302930/3	Lab Control Sample	94	115	102	99
LCSD 600-302885/4	Lab Control Sample Dup	95	116	101	92
LCSD 600-302930/4	Lab Control Sample Dup	85	118	103	104
MB 600-302885/6	Method Blank	100	113	100	96
MB 600-302930/6	Method Blank	102	119	107	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		TFT1
Lab Sample ID	Client Sample ID	(70-130)
600-210633-1	HA-1-S-0-.5-200901	91
600-210633-2	HA-1-S-1-2-200901	97
600-210633-3	HA-2-S-0-.5-200901	94
600-210633-4	HA-2-S-1-2-200901	99
600-210633-5	HA-2-SD-1-2-200901	96
600-210633-6	HA-2-S-2-3-200901	98
600-210633-7	HA-3-S-0-.5-200901	95
600-210633-8	HA-3-S-1-2-200901	99
600-210633-9	HA-4-S-0-.5-200901	94
600-210633-10	HA-4-S-1-2-200901	96
600-210633-11	HA-4-S-3-4-200901	98
600-210633-12	HA-5-S-0-.5-200901	99
600-210633-13	HA-5-S-1-2-200901	97
600-210633-14	HA-5-S-2-3-200901	88
LCS 600-302715/1-A	Lab Control Sample	89
LCSD 600-302715/2-A	Lab Control Sample Dup	89
MB 600-302715/3-A	Method Blank	88

Surrogate Summary

Client: ARCADIS U.S., Inc.
Job ID: 600-210633-1
Project/Site: Chevron - WLU East Test Sat Site

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Solid
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	OTPH (60-140)							
600-210633-1	HA-1-S-0-.5-200901	129							
600-210633-2	HA-1-S-1-2-200901	120							
600-210633-3 - DL	HA-2-S-0-.5-200901	84							
600-210633-4	HA-2-S-1-2-200901	129							
600-210633-5	HA-2-SD-1-2-200901	133							
600-210633-6	HA-2-S-2-3-200901	118							
600-210633-7	HA-3-S-0-.5-200901	122							
600-210633-8	HA-3-S-1-2-200901	103							
600-210633-9	HA-4-S-0-.5-200901	132							
600-210633-10	HA-4-S-1-2-200901	147 X							
600-210633-11	HA-4-S-3-4-200901	107							
600-210633-12	HA-5-S-0-.5-200901	138							
600-210633-13	HA-5-S-1-2-200901	119							
600-210633-14	HA-5-S-2-3-200901	153 X							
LCS 600-303251/2-A	Lab Control Sample	128							
LCSD 600-303251/3-A	Lab Control Sample Dup	118							
MB 600-303251/1-A	Method Blank	118							

Surrogate Legend

OTPH = o-Terphenyl

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 600-302885/6
Matrix: Solid
Analysis Batch: 302885

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.630	U	5.00	0.630	ug/Kg			09/04/20 11:07	1
Ethylbenzene	1.02	U	5.00	1.02	ug/Kg			09/04/20 11:07	1
Toluene	1.38	U	5.00	1.38	ug/Kg			09/04/20 11:07	1
Xylenes, Total	1.13	U	5.00	1.13	ug/Kg			09/04/20 11:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*61 - 130*		*09/04/20 11:07*	*1*
4-Bromofluorobenzene	*113*		*57 - 140*		*09/04/20 11:07*	*1*
Dibromofluoromethane	*100*		*68 - 140*		*09/04/20 11:07*	*1*
Toluene-d8 (Surr)	*96*		*50 - 130*		*09/04/20 11:07*	*1*

Lab Sample ID: LCS 600-302885/3
Matrix: Solid
Analysis Batch: 302885

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	51.62		ug/Kg		103	70 - 131		
Ethylbenzene			50.0	43.51		ug/Kg		87	66 - 130		
m-Xylene & p-Xylene			50.0	43.94		ug/Kg		88	64 - 130		
o-Xylene			50.0	44.00		ug/Kg		88	62 - 130		
Toluene			50.0	44.66		ug/Kg		89	67 - 130		
Xylenes, Total			100	87.94		ug/Kg		88	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*61 - 130*
4-Bromofluorobenzene	*117*		*57 - 140*
Dibromofluoromethane	*102*		*68 - 140*
Toluene-d8 (Surr)	*96*		*50 - 130*

Lab Sample ID: LCSD 600-302885/4
Matrix: Solid
Analysis Batch: 302885

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	50.29		ug/Kg		101	70 - 131	3	30
Ethylbenzene			50.0	41.95		ug/Kg		84	66 - 130	4	30
m-Xylene & p-Xylene			50.0	40.75		ug/Kg		81	64 - 130	8	30
o-Xylene			50.0	41.40		ug/Kg		83	62 - 130	6	30
Toluene			50.0	43.03		ug/Kg		86	67 - 130	4	30
Xylenes, Total			100	82.15		ug/Kg		82	63 - 130	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*61 - 130*
4-Bromofluorobenzene	*116*		*57 - 140*
Dibromofluoromethane	*101*		*68 - 140*
Toluene-d8 (Surr)	*92*		*50 - 130*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 600-302930/6
Matrix: Solid
Analysis Batch: 302930

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.630	U	5.00	0.630	ug/Kg			09/05/20 09:34	1
Ethylbenzene	1.02	U	5.00	1.02	ug/Kg			09/05/20 09:34	1
Toluene	1.38	U	5.00	1.38	ug/Kg			09/05/20 09:34	1
Xylenes, Total	1.13	U	5.00	1.13	ug/Kg			09/05/20 09:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*61 - 130*		*09/05/20 09:34*	*1*
4-Bromofluorobenzene	*119*		*57 - 140*		*09/05/20 09:34*	*1*
Dibromofluoromethane	*107*		*68 - 140*		*09/05/20 09:34*	*1*
Toluene-d8 (Surr)	*98*		*50 - 130*		*09/05/20 09:34*	*1*

Lab Sample ID: LCS 600-302930/3
Matrix: Solid
Analysis Batch: 302930

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	55.49		ug/Kg		111	70 - 131		
Ethylbenzene			50.0	48.44		ug/Kg		97	66 - 130		
m-Xylene & p-Xylene			50.0	47.00		ug/Kg		94	64 - 130		
o-Xylene			50.0	48.75		ug/Kg		98	62 - 130		
Toluene			50.0	48.43		ug/Kg		97	67 - 130		
Xylenes, Total			100	95.75		ug/Kg		96	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*61 - 130*
4-Bromofluorobenzene	*115*		*57 - 140*
Dibromofluoromethane	*102*		*68 - 140*
Toluene-d8 (Surr)	*99*		*50 - 130*

Lab Sample ID: LCSD 600-302930/4
Matrix: Solid
Analysis Batch: 302930

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	49.81		ug/Kg		100	70 - 131	11	30
Ethylbenzene			50.0	45.32		ug/Kg		91	66 - 130	7	30
m-Xylene & p-Xylene			50.0	44.22		ug/Kg		88	64 - 130	6	30
o-Xylene			50.0	44.75		ug/Kg		90	62 - 130	9	30
Toluene			50.0	46.00		ug/Kg		92	67 - 130	5	30
Xylenes, Total			100	88.97		ug/Kg		89	63 - 130	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*61 - 130*
4-Bromofluorobenzene	*118*		*57 - 140*
Dibromofluoromethane	*103*		*68 - 140*
Toluene-d8 (Surr)	*104*		*50 - 130*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 600-302715/3-A
Matrix: Solid
Analysis Batch: 302845

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 302715

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	0.586	U	1.00	0.586	mg/Kg		09/04/20 07:03	09/04/20 10:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*88*		*70 - 130*	*09/04/20 07:03*	*09/04/20 10:37*	*1*

Lab Sample ID: LCS 600-302715/1-A
Matrix: Solid
Analysis Batch: 302845

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 302715

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics [C6 - C10]			5.04	5.121		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*89*		*70 - 130*

Lab Sample ID: LCSD 600-302715/2-A
Matrix: Solid
Analysis Batch: 302845

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 302715

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]			5.04	4.263		mg/Kg		85	70 - 130	18	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*89*		*70 - 130*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 600-303251/1-A
Matrix: Solid
Analysis Batch: 303527

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 303251

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.70	U	8.26	1.70	mg/Kg		09/10/20 14:35	09/15/20 17:40	1
Oil Range Organics (C28-C36)	4.97	U	8.26	4.97	mg/Kg		09/10/20 14:35	09/15/20 17:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*118*		*60 - 140*	*09/10/20 14:35*	*09/15/20 17:40*	*1*

Lab Sample ID: LCS 600-303251/2-A
Matrix: Solid
Analysis Batch: 303527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 303251

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			66.6	69.88		mg/Kg		105	66 - 134		

Method: 8015D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 600-303251/2-A
Matrix: Solid
Analysis Batch: 303527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 303251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	*128*		*60 - 140*

Lab Sample ID: LCSD 600-303251/3-A
Matrix: Solid
Analysis Batch: 303527

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 303251

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			66.4	69.97		mg/Kg		105	66 - 134	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	*118*		*60 - 140*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 600-303533/1-A
Matrix: Solid
Analysis Batch: 303725

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.534	U	4.00	0.534	mg/Kg			09/17/20 21:50	1

Lab Sample ID: LCS 600-303533/2-A
Matrix: Solid
Analysis Batch: 303725

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			200	192.6		mg/Kg		96	90 - 110		

Lab Sample ID: 600-210633-1 MS
Matrix: Solid
Analysis Batch: 303725

Client Sample ID: HA-1-S-0-.5-200901
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	16.5		105	103.0		mg/Kg	☼	82	80 - 120		

Lab Sample ID: 600-210633-1 MSD
Matrix: Solid
Analysis Batch: 303725

Client Sample ID: HA-1-S-0-.5-200901
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	16.5		105	103.1		mg/Kg	☼	82	80 - 120	0	20

Lab Sample ID: 600-210633-11 MS
Matrix: Solid
Analysis Batch: 303725

Client Sample ID: HA-4-S-3-4-200901
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	599		550	1043		mg/Kg	☼	81	80 - 120		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 600-210633-11 MSD
Matrix: Solid
Analysis Batch: 303725

Client Sample ID: HA-4-S-3-4-200901
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	599		550	1038		mg/Kg	☼	80	80 - 120	0	20

Lab Sample ID: MB 600-303533/1-A
Matrix: Solid
Analysis Batch: 303819

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.534	U	4.00	0.534	mg/Kg			09/18/20 12:19	1

Lab Sample ID: LCS 600-303533/2-A
Matrix: Solid
Analysis Batch: 303819

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			200	183.7		mg/Kg		92	90 - 110		

Lab Sample ID: 600-210633-13 MS
Matrix: Solid
Analysis Batch: 303819

Client Sample ID: HA-5-S-1-2-200901
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	404		552	866.6		mg/Kg	☼	84	80 - 120		

Lab Sample ID: 600-210633-13 MSD
Matrix: Solid
Analysis Batch: 303819

Client Sample ID: HA-5-S-1-2-200901
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	404		552	862.6		mg/Kg	☼	83	80 - 120	0	20

Method: 2540B - Percent Moisture

Lab Sample ID: 600-210633-10 DU
Matrix: Solid
Analysis Batch: 302758

Client Sample ID: HA-4-S-1-2-200901
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	10.5			10.3		%				2	20
Percent Solids	89.5			89.7		%				0.2	20

Unadjusted Detection Limits

Client: ARCADIS U.S., Inc.
Job ID: 600-210633-1
Project/Site: Chevron - WLU East Test Sat Site

Method: 8260C - Volatile Organic Compounds by GC/MS

Prep: 5030C

Analyte	MQL	MDL	Units
Benzene	5.00	0.630	ug/Kg
Ethylbenzene	5.00	1.02	ug/Kg
Toluene	5.00	1.38	ug/Kg
Xylenes, Total	5.00	1.13	ug/Kg

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Prep: 5030C

Analyte	MQL	MDL	Units
Gasoline Range Organics [C6 - C10]	1.00	0.586	mg/Kg

Method: 8015D - Diesel Range Organics (DRO) (GC)

Prep: 3546

Analyte	MQL	MDL	Units
Diesel Range Organics [C10-C28]	8.30	1.71	mg/Kg
Oil Range Organics (C28-C36)	8.30	5.00	mg/Kg

Method: 300.0 - Anions, Ion Chromatography - Soluble

Leach: DI Leach

Analyte	MQL	MDL	Units
Chloride	4.00	0.534	mg/Kg

General Chemistry

Analyte	MQL	MDL	Units
Percent Moisture	1.0	1.0	%
Percent Solids	1.0	1.0	%

GC/MS VOA

Prep Batch: 302716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-1	HA-1-S-0-.5-200901	Total/NA	Solid	5030C	
600-210633-2	HA-1-S-1-2-200901	Total/NA	Solid	5030C	
600-210633-3	HA-2-S-0-.5-200901	Total/NA	Solid	5030C	
600-210633-4	HA-2-S-1-2-200901	Total/NA	Solid	5030C	
600-210633-5	HA-2-SD-1-2-200901	Total/NA	Solid	5030C	
600-210633-6	HA-2-S-2-3-200901	Total/NA	Solid	5030C	
600-210633-7	HA-3-S-0-.5-200901	Total/NA	Solid	5030C	
600-210633-8	HA-3-S-1-2-200901	Total/NA	Solid	5030C	
600-210633-9	HA-4-S-0-.5-200901	Total/NA	Solid	5030C	
600-210633-10	HA-4-S-1-2-200901	Total/NA	Solid	5030C	
600-210633-11	HA-4-S-3-4-200901	Total/NA	Solid	5030C	
600-210633-12	HA-5-S-0-.5-200901	Total/NA	Solid	5030C	
600-210633-13	HA-5-S-1-2-200901	Total/NA	Solid	5030C	
600-210633-14	HA-5-S-2-3-200901	Total/NA	Solid	5030C	

Analysis Batch: 302885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-1	HA-1-S-0-.5-200901	Total/NA	Solid	8260C	302716
600-210633-2	HA-1-S-1-2-200901	Total/NA	Solid	8260C	302716
600-210633-3	HA-2-S-0-.5-200901	Total/NA	Solid	8260C	302716
600-210633-4	HA-2-S-1-2-200901	Total/NA	Solid	8260C	302716
600-210633-6	HA-2-S-2-3-200901	Total/NA	Solid	8260C	302716
600-210633-7	HA-3-S-0-.5-200901	Total/NA	Solid	8260C	302716
600-210633-8	HA-3-S-1-2-200901	Total/NA	Solid	8260C	302716
600-210633-9	HA-4-S-0-.5-200901	Total/NA	Solid	8260C	302716
600-210633-10	HA-4-S-1-2-200901	Total/NA	Solid	8260C	302716
600-210633-11	HA-4-S-3-4-200901	Total/NA	Solid	8260C	302716
600-210633-12	HA-5-S-0-.5-200901	Total/NA	Solid	8260C	302716
600-210633-13	HA-5-S-1-2-200901	Total/NA	Solid	8260C	302716
600-210633-14	HA-5-S-2-3-200901	Total/NA	Solid	8260C	302716
MB 600-302885/6	Method Blank	Total/NA	Solid	8260C	
LCS 600-302885/3	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 600-302885/4	Lab Control Sample Dup	Total/NA	Solid	8260C	

Analysis Batch: 302930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-5	HA-2-SD-1-2-200901	Total/NA	Solid	8260C	302716
MB 600-302930/6	Method Blank	Total/NA	Solid	8260C	
LCS 600-302930/3	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 600-302930/4	Lab Control Sample Dup	Total/NA	Solid	8260C	

GC VOA

Prep Batch: 302715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-1	HA-1-S-0-.5-200901	Total/NA	Solid	5030C	
600-210633-2	HA-1-S-1-2-200901	Total/NA	Solid	5030C	
600-210633-3	HA-2-S-0-.5-200901	Total/NA	Solid	5030C	
600-210633-4	HA-2-S-1-2-200901	Total/NA	Solid	5030C	
600-210633-5	HA-2-SD-1-2-200901	Total/NA	Solid	5030C	
600-210633-6	HA-2-S-2-3-200901	Total/NA	Solid	5030C	

GC VOA (Continued)

Prep Batch: 302715 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-7	HA-3-S-0-.5-200901	Total/NA	Solid	5030C	
600-210633-8	HA-3-S-1-2-200901	Total/NA	Solid	5030C	
600-210633-9	HA-4-S-0-.5-200901	Total/NA	Solid	5030C	
600-210633-10	HA-4-S-1-2-200901	Total/NA	Solid	5030C	
600-210633-11	HA-4-S-3-4-200901	Total/NA	Solid	5030C	
600-210633-12	HA-5-S-0-.5-200901	Total/NA	Solid	5030C	
600-210633-13	HA-5-S-1-2-200901	Total/NA	Solid	5030C	
600-210633-14	HA-5-S-2-3-200901	Total/NA	Solid	5030C	
MB 600-302715/3-A	Method Blank	Total/NA	Solid	5030C	
LCS 600-302715/1-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 600-302715/2-A	Lab Control Sample Dup	Total/NA	Solid	5030C	

Analysis Batch: 302845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-1	HA-1-S-0-.5-200901	Total/NA	Solid	8015D	302715
600-210633-2	HA-1-S-1-2-200901	Total/NA	Solid	8015D	302715
600-210633-3	HA-2-S-0-.5-200901	Total/NA	Solid	8015D	302715
600-210633-4	HA-2-S-1-2-200901	Total/NA	Solid	8015D	302715
600-210633-5	HA-2-SD-1-2-200901	Total/NA	Solid	8015D	302715
600-210633-6	HA-2-S-2-3-200901	Total/NA	Solid	8015D	302715
600-210633-7	HA-3-S-0-.5-200901	Total/NA	Solid	8015D	302715
600-210633-8	HA-3-S-1-2-200901	Total/NA	Solid	8015D	302715
600-210633-9	HA-4-S-0-.5-200901	Total/NA	Solid	8015D	302715
600-210633-10	HA-4-S-1-2-200901	Total/NA	Solid	8015D	302715
600-210633-11	HA-4-S-3-4-200901	Total/NA	Solid	8015D	302715
600-210633-12	HA-5-S-0-.5-200901	Total/NA	Solid	8015D	302715
600-210633-13	HA-5-S-1-2-200901	Total/NA	Solid	8015D	302715
600-210633-14	HA-5-S-2-3-200901	Total/NA	Solid	8015D	302715
MB 600-302715/3-A	Method Blank	Total/NA	Solid	8015D	302715
LCS 600-302715/1-A	Lab Control Sample	Total/NA	Solid	8015D	302715
LCSD 600-302715/2-A	Lab Control Sample Dup	Total/NA	Solid	8015D	302715

GC Semi VOA

Prep Batch: 303251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-1	HA-1-S-0-.5-200901	Total/NA	Solid	3546	
600-210633-2	HA-1-S-1-2-200901	Total/NA	Solid	3546	
600-210633-3 - DL	HA-2-S-0-.5-200901	Total/NA	Solid	3546	
600-210633-4	HA-2-S-1-2-200901	Total/NA	Solid	3546	
600-210633-5	HA-2-SD-1-2-200901	Total/NA	Solid	3546	
600-210633-6	HA-2-S-2-3-200901	Total/NA	Solid	3546	
600-210633-7	HA-3-S-0-.5-200901	Total/NA	Solid	3546	
600-210633-8	HA-3-S-1-2-200901	Total/NA	Solid	3546	
600-210633-9	HA-4-S-0-.5-200901	Total/NA	Solid	3546	
600-210633-10	HA-4-S-1-2-200901	Total/NA	Solid	3546	
600-210633-11	HA-4-S-3-4-200901	Total/NA	Solid	3546	
600-210633-12	HA-5-S-0-.5-200901	Total/NA	Solid	3546	
600-210633-13	HA-5-S-1-2-200901	Total/NA	Solid	3546	
600-210633-14	HA-5-S-2-3-200901	Total/NA	Solid	3546	
MB 600-303251/1-A	Method Blank	Total/NA	Solid	3546	

GC Semi VOA (Continued)

Prep Batch: 303251 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 600-303251/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 600-303251/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	

Analysis Batch: 303527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-1	HA-1-S-0-.5-200901	Total/NA	Solid	8015D	303251
600-210633-2	HA-1-S-1-2-200901	Total/NA	Solid	8015D	303251
600-210633-3 - DL	HA-2-S-0-.5-200901	Total/NA	Solid	8015D	303251
600-210633-4	HA-2-S-1-2-200901	Total/NA	Solid	8015D	303251
600-210633-5	HA-2-SD-1-2-200901	Total/NA	Solid	8015D	303251
600-210633-6	HA-2-S-2-3-200901	Total/NA	Solid	8015D	303251
600-210633-7	HA-3-S-0-.5-200901	Total/NA	Solid	8015D	303251
600-210633-8	HA-3-S-1-2-200901	Total/NA	Solid	8015D	303251
600-210633-9	HA-4-S-0-.5-200901	Total/NA	Solid	8015D	303251
600-210633-10	HA-4-S-1-2-200901	Total/NA	Solid	8015D	303251
600-210633-11	HA-4-S-3-4-200901	Total/NA	Solid	8015D	303251
600-210633-12	HA-5-S-0-.5-200901	Total/NA	Solid	8015D	303251
600-210633-13	HA-5-S-1-2-200901	Total/NA	Solid	8015D	303251
600-210633-14	HA-5-S-2-3-200901	Total/NA	Solid	8015D	303251
MB 600-303251/1-A	Method Blank	Total/NA	Solid	8015D	303251
LCS 600-303251/2-A	Lab Control Sample	Total/NA	Solid	8015D	303251
LCSD 600-303251/3-A	Lab Control Sample Dup	Total/NA	Solid	8015D	303251

HPLC/IC

Leach Batch: 303533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-1	HA-1-S-0-.5-200901	Soluble	Solid	DI Leach	
600-210633-2	HA-1-S-1-2-200901	Soluble	Solid	DI Leach	
600-210633-3	HA-2-S-0-.5-200901	Soluble	Solid	DI Leach	
600-210633-4	HA-2-S-1-2-200901	Soluble	Solid	DI Leach	
600-210633-5	HA-2-SD-1-2-200901	Soluble	Solid	DI Leach	
600-210633-6	HA-2-S-2-3-200901	Soluble	Solid	DI Leach	
600-210633-7	HA-3-S-0-.5-200901	Soluble	Solid	DI Leach	
600-210633-8	HA-3-S-1-2-200901	Soluble	Solid	DI Leach	
600-210633-9	HA-4-S-0-.5-200901	Soluble	Solid	DI Leach	
600-210633-10	HA-4-S-1-2-200901	Soluble	Solid	DI Leach	
600-210633-11	HA-4-S-3-4-200901	Soluble	Solid	DI Leach	
600-210633-12	HA-5-S-0-.5-200901	Soluble	Solid	DI Leach	
600-210633-13	HA-5-S-1-2-200901	Soluble	Solid	DI Leach	
600-210633-14	HA-5-S-2-3-200901	Soluble	Solid	DI Leach	
MB 600-303533/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 600-303533/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
600-210633-1 MS	HA-1-S-0-.5-200901	Soluble	Solid	DI Leach	
600-210633-1 MSD	HA-1-S-0-.5-200901	Soluble	Solid	DI Leach	
600-210633-11 MS	HA-4-S-3-4-200901	Soluble	Solid	DI Leach	
600-210633-11 MSD	HA-4-S-3-4-200901	Soluble	Solid	DI Leach	
600-210633-13 MS	HA-5-S-1-2-200901	Soluble	Solid	DI Leach	
600-210633-13 MSD	HA-5-S-1-2-200901	Soluble	Solid	DI Leach	

HPLC/IC

Analysis Batch: 303725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-1	HA-1-S-0-.5-200901	Soluble	Solid	300.0	303533
600-210633-2	HA-1-S-1-2-200901	Soluble	Solid	300.0	303533
600-210633-3	HA-2-S-0-.5-200901	Soluble	Solid	300.0	303533
600-210633-4	HA-2-S-1-2-200901	Soluble	Solid	300.0	303533
600-210633-5	HA-2-SD-1-2-200901	Soluble	Solid	300.0	303533
600-210633-6	HA-2-S-2-3-200901	Soluble	Solid	300.0	303533
600-210633-7	HA-3-S-0-.5-200901	Soluble	Solid	300.0	303533
600-210633-8	HA-3-S-1-2-200901	Soluble	Solid	300.0	303533
600-210633-9	HA-4-S-0-.5-200901	Soluble	Solid	300.0	303533
600-210633-10	HA-4-S-1-2-200901	Soluble	Solid	300.0	303533
600-210633-11	HA-4-S-3-4-200901	Soluble	Solid	300.0	303533
600-210633-12	HA-5-S-0-.5-200901	Soluble	Solid	300.0	303533
MB 600-303533/1-A	Method Blank	Soluble	Solid	300.0	303533
LCS 600-303533/2-A	Lab Control Sample	Soluble	Solid	300.0	303533
600-210633-1 MS	HA-1-S-0-.5-200901	Soluble	Solid	300.0	303533
600-210633-1 MSD	HA-1-S-0-.5-200901	Soluble	Solid	300.0	303533
600-210633-11 MS	HA-4-S-3-4-200901	Soluble	Solid	300.0	303533
600-210633-11 MSD	HA-4-S-3-4-200901	Soluble	Solid	300.0	303533

Analysis Batch: 303819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-13	HA-5-S-1-2-200901	Soluble	Solid	300.0	303533
600-210633-14	HA-5-S-2-3-200901	Soluble	Solid	300.0	303533
MB 600-303533/1-A	Method Blank	Soluble	Solid	300.0	303533
LCS 600-303533/2-A	Lab Control Sample	Soluble	Solid	300.0	303533
600-210633-13 MS	HA-5-S-1-2-200901	Soluble	Solid	300.0	303533
600-210633-13 MSD	HA-5-S-1-2-200901	Soluble	Solid	300.0	303533

General Chemistry

Analysis Batch: 302758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-210633-1	HA-1-S-0-.5-200901	Total/NA	Solid	2540B	
600-210633-2	HA-1-S-1-2-200901	Total/NA	Solid	2540B	
600-210633-3	HA-2-S-0-.5-200901	Total/NA	Solid	2540B	
600-210633-4	HA-2-S-1-2-200901	Total/NA	Solid	2540B	
600-210633-5	HA-2-SD-1-2-200901	Total/NA	Solid	2540B	
600-210633-6	HA-2-S-2-3-200901	Total/NA	Solid	2540B	
600-210633-7	HA-3-S-0-.5-200901	Total/NA	Solid	2540B	
600-210633-8	HA-3-S-1-2-200901	Total/NA	Solid	2540B	
600-210633-9	HA-4-S-0-.5-200901	Total/NA	Solid	2540B	
600-210633-10	HA-4-S-1-2-200901	Total/NA	Solid	2540B	
600-210633-11	HA-4-S-3-4-200901	Total/NA	Solid	2540B	
600-210633-12	HA-5-S-0-.5-200901	Total/NA	Solid	2540B	
600-210633-13	HA-5-S-1-2-200901	Total/NA	Solid	2540B	
600-210633-14	HA-5-S-2-3-200901	Total/NA	Solid	2540B	
600-210633-10 DU	HA-4-S-1-2-200901	Total/NA	Solid	2540B	

Lab Chronicle

Client: ARCADIS U.S., Inc.
Job ID: 600-210633-1
Project/Site: Chevron - WLU East Test Sat Site

Client Sample ID: HA-1-S-0-.5-200901
Lab Sample ID: 600-210633-1
Date Collected: 09/01/20 11:30
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-1-S-0-.5-200901
Lab Sample ID: 600-210633-1
Date Collected: 09/01/20 11:30
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 94.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 14:39	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 11:02	WS1	TAL HOU
Total/NA	Prep	3546			303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/15/20 19:14	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		1	303725	09/17/20 22:30	W1N	TAL HOU

Client Sample ID: HA-1-S-1-2-200901
Lab Sample ID: 600-210633-2
Date Collected: 09/01/20 11:42
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-1-S-1-2-200901
Lab Sample ID: 600-210633-2
Date Collected: 09/01/20 11:42
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 15:02	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 11:27	WS1	TAL HOU
Total/NA	Prep	3546			303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/15/20 19:45	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		5	303725	09/17/20 23:32	W1N	TAL HOU

Client Sample ID: HA-2-S-0-.5-200901
Lab Sample ID: 600-210633-3
Date Collected: 09/01/20 11:52
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-2-S-0-.5-200901
Lab Sample ID: 600-210633-3

Date Collected: 09/01/20 11:52
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 79.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 15:25	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 11:52	WS1	TAL HOU
Total/NA	Prep	3546	DL		303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D	DL	2	303527	09/16/20 09:09	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		1	303725	09/17/20 23:52	W1N	TAL HOU

Client Sample ID: HA-2-S-1-2-200901
Lab Sample ID: 600-210633-4

Date Collected: 09/01/20 11:57
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-2-S-1-2-200901
Lab Sample ID: 600-210633-4

Date Collected: 09/01/20 11:57
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 15:49	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 12:17	WS1	TAL HOU
Total/NA	Prep	3546			303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/15/20 20:47	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		10	303725	09/18/20 00:13	W1N	TAL HOU

Client Sample ID: HA-2-SD-1-2-200901
Lab Sample ID: 600-210633-5

Date Collected: 09/01/20 11:57
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-2-SD-1-2-200901
Lab Sample ID: 600-210633-5

Date Collected: 09/01/20 11:57
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 85.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302930	09/05/20 10:19	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 12:42	WS1	TAL HOU

Client Sample ID: HA-2-SD-1-2-200901
Lab Sample ID: 600-210633-5

Date Collected: 09/01/20 11:57
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 85.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/15/20 21:19	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		10	303725	09/18/20 00:33	W1N	TAL HOU

Client Sample ID: HA-2-S-2-3-200901
Lab Sample ID: 600-210633-6

Date Collected: 09/01/20 12:00
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-2-S-2-3-200901
Lab Sample ID: 600-210633-6

Date Collected: 09/01/20 12:00
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 80.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 16:34	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 13:08	WS1	TAL HOU
Total/NA	Prep	3546			303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/15/20 21:50	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		5	303725	09/18/20 00:53	W1N	TAL HOU

Client Sample ID: HA-3-S-0-.5-200901
Lab Sample ID: 600-210633-7

Date Collected: 09/01/20 12:08
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-3-S-0-.5-200901
Lab Sample ID: 600-210633-7

Date Collected: 09/01/20 12:08
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 84.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 16:57	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 13:33	WS1	TAL HOU
Total/NA	Prep	3546			303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/15/20 22:21	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		1	303725	09/18/20 01:55	W1N	TAL HOU

Client Sample ID: HA-3-S-1-2-200901
Lab Sample ID: 600-210633-8

Date Collected: 09/01/20 12:11
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-3-S-1-2-200901
Lab Sample ID: 600-210633-8

Date Collected: 09/01/20 12:11
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 17:20	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 13:58	WS1	TAL HOU
Total/NA	Prep	3546			303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/15/20 23:24	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		1	303725	09/18/20 02:15	W1N	TAL HOU

Client Sample ID: HA-4-S-0-.5-200901
Lab Sample ID: 600-210633-9

Date Collected: 09/01/20 12:20
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-4-S-0-.5-200901
Lab Sample ID: 600-210633-9

Date Collected: 09/01/20 12:20
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 17:43	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 14:23	WS1	TAL HOU
Total/NA	Prep	3546			303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/15/20 23:56	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		5	303725	09/18/20 02:35	W1N	TAL HOU

Client Sample ID: HA-4-S-1-2-200901
Lab Sample ID: 600-210633-10

Date Collected: 09/01/20 12:37
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-4-S-1-2-200901 — **Lab Sample ID: 600-210633-10**
Date Collected: 09/01/20 12:37 — **Matrix: Solid**
Date Received: 09/02/20 10:35 — **Percent Solids: 89.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 18:05	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 14:48	WS1	TAL HOU
Total/NA	Prep	3546			303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/16/20 00:28	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		5	303725	09/18/20 02:56	W1N	TAL HOU

Client Sample ID: HA-4-S-3-4-200901 — **Lab Sample ID: 600-210633-11**
Date Collected: 09/01/20 12:48 — **Matrix: Solid**
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-4-S-3-4-200901 — **Lab Sample ID: 600-210633-11**
Date Collected: 09/01/20 12:48 — **Matrix: Solid**
Date Received: 09/02/20 10:35 — **Percent Solids: 90.8**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 18:28	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 15:39	WS1	TAL HOU
Total/NA	Prep	3546			303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/16/20 01:00	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		5	303725	09/18/20 03:16	W1N	TAL HOU

Client Sample ID: HA-5-S-0-.5-200901 — **Lab Sample ID: 600-210633-12**
Date Collected: 09/01/20 12:54 — **Matrix: Solid**
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-5-S-0-.5-200901 — **Lab Sample ID: 600-210633-12**
Date Collected: 09/01/20 12:54 — **Matrix: Solid**
Date Received: 09/02/20 10:35 — **Percent Solids: 90.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 13:05	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 16:04	WS1	TAL HOU

Client Sample ID: HA-5-S-0-.5-200901
Lab Sample ID: 600-210633-12

Date Collected: 09/01/20 12:54
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			303251	09/10/20 14:35	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/16/20 01:32	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		1	303725	09/18/20 04:17	W1N	TAL HOU

Client Sample ID: HA-5-S-1-2-200901
Lab Sample ID: 600-210633-13

Date Collected: 09/01/20 12:58
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-5-S-1-2-200901
Lab Sample ID: 600-210633-13

Date Collected: 09/01/20 12:58
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 18:51	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 16:29	WS1	TAL HOU
Total/NA	Prep	3546			303251	09/10/20 14:36	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/16/20 02:03	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		5	303819	09/18/20 14:24	W1N	TAL HOU

Client Sample ID: HA-5-S-2-3-200901
Lab Sample ID: 600-210633-14

Date Collected: 09/01/20 13:04
Matrix: Solid
Date Received: 09/02/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540B		1	302758	09/03/20 09:00	HAS	TAL HOU

Client Sample ID: HA-5-S-2-3-200901
Lab Sample ID: 600-210633-14

Date Collected: 09/01/20 13:04
Matrix: Solid
Date Received: 09/02/20 10:35
Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			302716	09/02/20 15:07	WS1	TAL HOU
Total/NA	Analysis	8260C		1	302885	09/04/20 19:13	WS1	TAL HOU
Total/NA	Prep	5030C			302715	09/04/20 07:03	WS1	TAL HOU
Total/NA	Analysis	8015D		1	302845	09/04/20 16:54	WS1	TAL HOU
Total/NA	Prep	3546			303251	09/10/20 14:36	SMB	TAL HOU
Total/NA	Analysis	8015D		1	303527	09/16/20 02:35	RJV	TAL HOU
Soluble	Leach	DI Leach			303533	09/15/20 14:09	HAS	TAL HOU
Soluble	Analysis	300.0		5	303819	09/18/20 15:25	W1N	TAL HOU

Lab Chronicle

Client: ARCADIS U.S., Inc.
Job ID: 600-210633-1
Project/Site: Chevron - WLU East Test Sat Site

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: ARCADIS U.S., Inc. Job ID: 600-210633-1
Project/Site: Chevron - WLU East Test Sat Site

Laboratory: Eurofins TestAmerica, Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704223-20-26	10-31-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540B		Solid	Percent Moisture
2540B		Solid	Percent Solids
8015D	3546	Solid	Oil Range Organics (C28-C36)

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

Chain of Custody Record

Midland #264

eurofins

Client Information	Sampler: J. Steinmann	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-78645-21182.1
Client Contact: Justin Nixon	Phone: 619 851 8792	E-Mail: Sachin.Kudchadkar@Eurofinset.com		Page: Page 2 of 2
Company: ARCADIS U.S., Inc.				Job #:

Address: 1004 North Big Spring Suite 121	Due Date Requested: —	Analysis Requested	Preservation Codes:
City: Midland	TAT Requested (days): Std		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: TX, 79701			
Phone: —	PO #: 30057179		Other:
Email: Justin.Nixon@arcadis.com	WO #:		
Project Name: Chevron - WLU East Test Sat Site	Project #: 60012618		
Site: WLU East Test Sat	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015D_DRO/ ORO	8015D_GRO	8260B- BTEX	300- Chloride	moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N	N		
HA-1-S-0-.5-200901	9/01/20	1130	G	Solid								9	
HA-1-S-1-2-200901		1142		Solid									
HA-2-S-0-.5-200901		1152		Solid									
HA-2-S-1-2-200901		1157		Solid									
HA-2-SD-1-2-200901		1157		Solid									
~~HA-2-2~~ HA-2-S-2-3-200901		1200		Solid									
HA-3-S-0-.5-200901		1208		Solid									
HA-3-S-1-2-200901		1211		Solid									
HA-4-S-0-.5-200901		1220		Solid									
HA-4-S-1-2-200901		1237		Solid									
HA-4-S-3-4-200901		1248		Solid									

600-210633 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ 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: 1600 9/01/20	Company: Arcadis	Received by:	Date/Time: 9/2/20 1035	Company: ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 01/16/2019

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

Chain of Custody Record

Midland #264

eurofins

Client Information	Sampler: J. Steinmann	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-78645-21182.1
Client Contact: Justin Nixon	Phone: 619 851 8792	E-Mail: Sachin.Kudchadkar@Eurofinset.com		Page: Page 2 of 2
Company: ARCADIS U S., Inc.				Job #:
Address: 1004 North Big Spring Suite 121	Due Date Requested: —	Analysis Requested		Preservation Codes:
City: Midland	TAT Requested (days): Std			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: TX, 79701				Other:
Phone: —	PO #: 30057179			
Email: Justin.Nixon@arcadis.com	WO #:			
Project Name: Chevron - WLU East Test Sat Site	Project #: 60012618			
Site: WLU East Test Sat	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015D_DRO/ ORO	8015D_GRO	8260B- BTEX	300- Chloride	moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code				N	N	N	N	N		
HA-5-S-0-.5-200901	9/01/20	1254	G	Solid								2	
HA-5-S-1-2-200901	9/01/20	1258	G	Solid								1	
HA-5-S-2-3-200901	9/01/20	1304	G	Solid								1	
				Solid									
				Solid									
				Solid									
				Solid									
				Solid									
				Solid									
				Solid									
				Solid									
				Solid									

qs 9/01/20

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	[signature]	9/01/20 1600	Arcadis	[signature]	9/2/20 1035	ETA
2						
3						

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

Ver: 01/16/2019

Loc: 600
210633

eurofins | Environment Testing TestAmerica

Eurofins TestAmerica Houston

Sample Receipt Checklist

'20 SEP 2 10:35

Date/Time Received: 9/2/20 10:35

JOB NUMBER: _____ CLIENT: Arcadis

UNPACKED BY: _____ CARRIER/DRIVER: Fedex

Custody Seal Present: ☒YES ☐NO Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
8086	Y / N	Y / N	1.1	68	+0.1	1.2
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				9/2/20
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☒YES ☐NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒NO ☐YES

Base samples are>pH 12: ☐YES ☐NO Acid preserved are<pH 2: ☐YES ☐NO

TX1005 samples frozen upon receipt: ☐ YES DATE & TIME PUT IN FREEZER: _____

pH paper Lot #_____ VOA headspace acceptable (5-6mm): ☐YES ☐NO ☒NA

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	☒YES	☐ NO

COMMENTS:

9/2/20

HS-SA-WI-013 Rev. 4A; 08/26/2019

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 600-210633-1

Login Number: 210633

List Source: Eurofins TestAmerica, Houston

List Number: 1

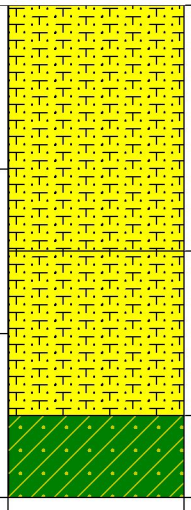
Creator: Rubio, Yuri

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

APPENDIX C

Boring Logs

Date Start/Finish: 9/1/2020 **Drilling Company:** Arcadis **Driller's Name:** Justin Steinmann **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger	**Borehole Depth:** 3' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** HA-2 **Client:** Chevron **Location:** WLU East Test Sat

DEPTH	Geologic Column	Stratigraphic Description
0		silty sand, gray brown sand, very fine to fine, mod - well sorted, subrounded, with silt, loose - friable, trace to little roots, slight organic odor at 2-3" dark brown, USCS - SM
2		silty sand, gray brown as above with trace to little clay, blocky, firm, non pliable, dry, USCS- SM.
3		sandy clay, med brown clay, slightly pliable, non plastic, firm, very slightly moist, with very fine to fine sand, loose, moderately sorted throughout, trace orange streaks throughout. USCS - SC
		End of boring 3' bgs

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

Project: 30057179 Template: LPTEMPLATE_HA_1.ldfx

Data File: HA-2 Date: 9/13/2020 Created/Edited by: AD

Date Start/Finish: 9/1/2020 **Drilling Company:** Arcadis **Driller's Name:** Justin Steinmann **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger	**Borehole Depth:** 4' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** HA-4 **Client:** Chevron **Location:** WLU East Test Sat

DEPTH	Geologic Column	Stratigraphic Description
0		silty sand, light gray/brown sand, very fine to fine grained, moderately sorted, subrounded, silty, loose, dry. USCS - SM
		sandy clay, dark brown clay, non pliable, non plastic, firm - pliable, dry, with little to some sand, fine grained, moderately to well sorted throughout, dry. USCS - CL @ 0.75' sand decreases to trace-little, clay becomes firm, mod cohesive
		clayey sand, light brown sand, very fine to fine grained, well sorted, subrounded, dry, with trace clay, loose. USCS - SC @ 2' clay becomes trace-little clay, slightly pliable, firm, mottled throughout
		clayey sand, light brown as above w/ clay decreasing to trace, sand becoming slightly cemented, friable @ 3' trace nodules clay, dark brown. USCS - SC
		Clayey sand, pink brown sand, very fine to fine, moderately to well sorted, loose, subangular, w/ clay lenses, little to some dry, non-pliable, non-plastic, orange brown trace black streaks within clay. USCS - SC @ 3.75' clay increases to some-abundant
		Sandy clay, orange brown clay, non pliable, firm, non-plastic, little to some sand, very fine, moderately sorted throughout, trace calcareous silt. USCS - CL
		End of boring 4' bgs

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

Project: 30057179 Template: LPTEMPLATE_HA_1.ldfx

Data File: HA-4 Date: 9/13/2020 Created/Edited by: AD

Date Start/Finish: 9/1/2020 **Drilling Company:** Arcadis **Driller's Name:** Justin Steinmann **Drilling Method:** Hand Auger **Sampling Method:** Hand Auger	**Borehole Depth:** 3' **Surface Elevation:** N/A **Descriptions By:** Justin Steinmann	**Well/Boring ID:** HA-5 **Client:** Chevron **Location:** WLU East Test Sat

DEPTH	Geologic Column	Stratigraphic Description
0		silty sand, gray brown sand, very fine to fine sand, sub-rounded, well sorted, silty, loose, dry, trace roots. USCS - SM
		silty sand, dark brown, very fine to fine sand, sub-rounded, moderately to well sorted, loose - friable, dry, trace to little clay throughout. USCS - SM
		sandy clay, medium brown clay, non-pliable, non-plastic, firm to hard, friable, dry, with some sand moderately sorted throughout, very fine. USCS - CL
		silty sand, gray brown very fine to fine sand, subrounded, moderately to well sorted, silty, loose, friable, trace clay throughout, lenses, slightly pliable. USCS - SM
		End of boring 3' bgs

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

APPENDIX D

Photographic Log

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PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WLU East Test Sat	Lea County, TX	1RP-2563

Photo No.	Date:
1	9/01/2020

Direction Photo Taken:

Facing North

Description:

In vicinity of HA-1

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PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WLU East Test Sat	Lea County, TX	1RP-2563

Photo No.	Date:
2	9/01/2020

Direction Photo Taken:

Facing West

Description:

East side of release area

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PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WLU East Test Sat	Lea County, TX	1RP-2563

Photo No.	Date:
3	9/01/2020

Direction Photo Taken:

Facing South

Description:

Directly north of release area

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PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WLU East Test Sat	Lea County, TX	1RP-2563

Photo No.	Date:
4	9/01/2020

Direction Photo Taken:

Facing East

Description:

Release area in vicinity of HA-2, on west side

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PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WLU East Test Sat	Lea County, TX	1RP-2563

Photo No.	Date:
5	9/01/2020

Direction Photo Taken:

Facing East

Description:

Release area

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PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
WLU East Test Sat	Lea County, TX	1RP-2563

Photo No.	Date:
6	9/01/2020

Direction Photo Taken:

Facing East

Description:

Center of release area

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