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Site Assessment Report and Remediation Plan

Central Vacuum Unit #084
Produced Water Spill Site
Lea County, New Mexico
New Mexico Oil Conservation Division (NMOCD) District RP #1RP-3412

Prepared For:
Chevron Mid-Continent Business Unit (MCBU)

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AECOM Project No. 60605245

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Executive Summary

Central Vacuum Unit (CVU) #084, Lea County, NM, NMOC District RP #1RP-3412

Site Background		
Release Description(s): On November 2, 2014, approximately 158.21 barrels (bbls) of produced water with a dissolved chloride concentration greater than 10,000 milligrams per liter (mg/L) were released at the Site due to an injection line failure. Approximately 70 bbls of released fluids were recovered. On September 1, 2018, approximately 208 bbls of produced water with a dissolved chloride concentration greater than 10,000 mg/L were released at the Site due to internal corrosion of an injection line. Approximately 160 bbls of released fluids were recovered.	**Release Response:** Stopped the release at the source, secured the impacted area to prevent impact to protect human health and the environment, contained the release, and recovered approximately 70 bbls of produced water in November 2014 and 160 bbls in September 2018.	**Current and Planned Future Land Use:** The Site and surrounding area are used for oil and gas exploration, development and production (E&P), and livestock grazing. Future land use is expected to be the same as the current use.

Summary of Sensitive Receptor Survey

Depth to Groundwater: Based on an online Water Column/Average Depth to Water Report from the New Mexico Water Rights Reporting System (NMWRRS), **four water wells are present within 1,000 feet (ft) of the Site**. The shallowest potential depth to groundwater beneath the Site is 90 feet below ground surface (ft bgs) and the average depth to groundwater is 119 ft bgs. On December 15, 2018, Boring #1 through Boring #5 were each drilled to depths of 50 ft below ground surface (bgs). No evidence of groundwater was observed to a depth of 50 ft bgs in Boring #1 through Boring #5.

Sensitive Receptors Survey Results:

- No continuously flowing watercourses, known springs, or wells used for domestic or stock watering purposes were identified within ½ mile of the Site.
- The Site is not located within 200 ft of any lakebed, known sinkhole, or playa lake.
- No occupied permanent residence, school, hospital, institution, church, incorporated municipal boundaries or defined municipal fresh water well fields are located within 10 miles of the Site.
- No wetlands are present within 300 feet of the Site.
- No subsurface mines are located beneath the Site, no karst geology features, or other unstable areas are known to be located near the Site, and the Site is not located within a 100-year floodplain.
- Operations near the Site are for agricultural/livestock grazing use and oil and gas exploration, development, production, or storage only, and no impact to areas that are not on an exploration, development, production, or storage site are expected.

Constituent	19.15.29.12 NMAC Table 1 Regulatory Limits		Maximum Concentration Detected (mg/kg)
	Groundwater depth of < 50 ft bgs	Groundwater depth of 51-100 ft bgs	
Chloride	**600**	**10,000**	**19,400**
TPH	**100**	**2,500**	**Below laboratory method reporting limits**

Soil Assessment Results Discussion

Soil Sample Results Comparison to 19.15.29.12 NMAC Table I Regulatory Limits:

- Groundwater was not observed to a depth of 50 ft bgs in Boring #1 through Boring #5. However, due to the presence of four water wells within 1,000 ft of the Site, the release must be treated as if it occurred in an area with groundwater at depths of less than 50 ft in accordance with 19.15.29.12(C)(4) NMAC. Consequently, the applicable regulatory limits for the Site are 600 mg/kg chloride and 100 mg/kg TPH. Chloride concentrations exceeded the regulatory limit of 600 mg/kg in samples collected from borings CVU84-01, CVU84-05, CVU84-07, CVU84-10, CVU84-11 and Boring #5. The horizontal extent of chloride concentrations that exceed 600 mg/kg is delineated on the operations pad to the north, east and south by the analytical results for borings CVU84-12, CVU84-09 and CVU84-08, respectively. The horizontal extent of chloride concentrations that exceed reclamation limits is delineated to the west by boring CVU84-13, which is located approximately 110 ft west of the operations pad. The vertical extent of the chloride concentrations above 600 mg/kg is delineated by the analytical results for Boring #1 through Boring #5, which were drilled in the source area associated with the release. The deepest chloride concentration above 600 mg/kg is 709 mg/kg reported for the sample collected at a depth of 10 ft bgs from Boring #5. Below that depth, chloride concentrations were reported as 524 mg/kg and 28.4 for samples collected at 30 and 50 ft bgs from Boring #5.

Path Forward Recommendations
Remediation/Reclamation Plan activities for the Site include the following: • **Chevron MCBU requests NMOCD approval for deferral of remediation/reclamation of chloride-impacted soil within the footprint of the operations pad in accordance with 19.15.29.12(C)(2) NMAC**. • Soil remediation/reclamation will be performed (not deferred) west of the operations pad within the area where chloride concentrations exceed 600 mg/kg, which is delineated horizontally to the north, west and south based on laboratory analytical results for borings CVU84-12, CVU84-13 and CVU84-14, respectively. The extent of proposed initial soil excavation is about 100 ft by 150 ft by 4 ft deep as shown on **Figure 3**. It is currently estimated that about 2,500 cubic yards of soil will be excavated from the impacted area west of the operations pad. • In conjunction with excavation of impacted soil, confirmation samples will be collected from the walls and bottom of the excavation according to NMOCD requirements. Soil excavation activities will continue as necessary until confirmation sample results are within the required regulatory limits. • A Site Closure Report will be prepared to document soil remediation and confirmation sampling activities.

1. Introduction

On behalf of Chevron Mid-Continent Business Unit (MCBU), AECOM Technical Services, Inc. (AECOM) has prepared this Site Assessment Report and Remediation Plan to address constituent of concern (COC) impacts to soil resulting from a produced water spill that occurred at the Central Vacuum Unit #084 (CVU 084) site in Lea County, New Mexico ("the Site"). Site activities include operation of an active produced water injection well.

2. Background

The Site is located at Latitude 32.7879219 North, Longitude 103.5059967 West in Lea County, New Mexico (**Figure 1**). Two reported produced water spill incidents have occurred at the Site. As required by the New Mexico Oil Conservation Division (NMOCD) under 19.15.29 New Mexico Administrative Code (NMAC), Chevron's initial response to each of the two releases included the following:

- Stopping the release at the source;
- Securing the impacted soil area to protect human health and the environment; and
- Containing and recovering the released produced water.

These two produced water spill incidents are summarized below.

On November 2, 2014, approximately 158.21 barrels (bbls) of produced water with a dissolved chloride concentration greater than 10,000 milligrams per liter (mg/L) were released at the Site due to an injection line failure. Approximately 70 bbls of released fluids were recovered. A Release Notification, Form C-141, dated November 6, 2014, was submitted to the NMOCD. The Form C-141 documents the responsible party, location of the release source, nature and volume of the release, and initial response to the release. An updated Form C-141 is provided in Appendix A.

On September 1, 2018, approximately 208 bbls of produced water with a dissolved chloride concentration greater than 10,000 mg/L were released at the Site due to internal corrosion of an injection line. Approximately 160 bbls of released fluids were recovered. A Release Notification, Form C-141, dated September 12, 2018, was submitted to the NMOCD. An updated Form C-141 is provided in **Appendix A**.

3. Initial Site Assessment/Characterization

The findings from an initial assessment/characterization of the Site are summarized below.

- Based on a Water Column/Average Depth to Water Report from the New Mexico Water Rights Reporting System (NMWRRS) for wells located within 805 meters (½ mile) of the Site, the shallowest potential depth to groundwater beneath the Site is 90 feet below ground surface (ft bgs) and the average depth to groundwater is 119 ft bgs. A copy of the Water Column/Average Depth to Water Report is provided as **Appendix B**.
- The underlying soils at the Site are comprised of gravelly loam down to 10 inches and caliche from 10 to 80 inches. Soil sampling has been conducted to characterize potential chloride and petroleum hydrocarbon impacts to soil at the Site.
- There are no continuously flowing watercourses or other significant watercourses within 300 ft of the Site.
- The Site is not located within 200 ft of any lakebed, sinkhole, or playa lake.

- The nearest occupied permanent residence, school, hospital, institution, or church is over 10 miles from the Site.
- There are no springs or wells used for domestic or stock watering purposes within 500 ft of the Site.
- There are four water wells within 1,000 ft of the Site. This site characterization finding affects remediation limits for the Site as described below in Section 5.1.
- No incorporated municipal boundaries or defined municipal fresh water well fields are located within 10 miles of the Site.
- No wetlands are present within 300 ft of the Site.
- No subsurface mines are located beneath the Site.
- No karst geology features or other unstable areas are known to be located near the Site.
- A 100-year floodplain was not identified near the Site.
- All operations near the Site are for oil and gas exploration, development, production, or storage only, and no impact to areas that are not on an exploration, development, production, or storage site are expected.
- **Figure 1** shows the location of the Site and surrounding area on an aerial photograph. Site photographs are provided in **Appendix C**. Based on information obtained during the initial desktop assessment/characterization and the volume of produced water released and recovered, no impact to groundwater, surface water, springs, or other sources of fresh water is currently suspected.

4. Soil Assessment

Initial soil assessment activities were conducted in December 2018 in response to the September 1, 2018 spill. Additional assessment activities were performed in June 2019, March 2020, and June 2020, which took into account the additional information associated with the November 2, 2014 spill incident. The soil assessment activities are summarized below.

2018 Assessment Activities

In December 2018, five soil borings (Boring #1 through Boring #5) were drilled to a depth of 50 ft bgs using air rotary drilling equipment. The boring locations are shown on **Figure 2**. During the drilling activities, soil cuttings were retrieved at 5-ft to 10-ft depth intervals for lithological logging and field screening for potential elevated chloride concentrations using an electrical conductivity (EC) probe. Four soil samples from each boring were selected for laboratory analysis of chloride. In addition to a surface sample and total depth sample, two other depth intervals from each boring were selected for laboratory analysis based on the EC field screening results. The soil samples were submitted to Xenco Laboratories in Midland, Texas for chloride analysis by Method U.S. Environmental Protection Agency (EPA) 300.0. The laboratory analytical results are presented in **Table 1**. Soil boring locations and laboratory analytical results are shown on **Figure 2**.

In Boring #1 through Boring #5, tan silty sand and caliche were generally observed from the surface to the total depth of the borings at 50 ft bgs. No groundwater was observed in the borings. The field soil boring logs are provided as **Appendix D**.

The December 2018 soil sampling activities and results were documented in a report entitled *Central Vacuum Unit #084, Produced Water Spill Site, Lea County, New Mexico,* dated January 25, 2019. The report was not approved by the NMOCD due to insufficient sampling from 0 to 5 ft bgs.

2019 - 2020 Assessment Activities

Hand auger sampling equipment was initially used to conduct the shallow soil sampling at the Site. In June 2019, seven hand auger borings (CVU84-01 through CVU84-07) were drilled and sampled to

address the November 2, 2014 spill (Figure 2). Due to the presence of shallow caliche, all but one of the borings had to be terminated at a depth of 1 ft bgs due to auger refusal.

Air rotary drilling equipment was used to advance borings CVU84-08 through CVU84-12 in March 2020 and borings CVU84-13 and CVU84-14 in June 2020. The air rotary borings were drilled to depths of 5 ft bgs. Soil samples were collected at one-ft depth intervals from each of the borings and field-screened for petroleum hydrocarbons using a photoionization detector (PID) to measure volatile organic vapor concentrations and an EC meter to screen for elevated chloride concentrations. A Summary of Field Sample Collection and Screening Activities is provided as **Appendix E**.

The soil samples were transferred into clean, laboratory-provided sample containers, labeled and placed on ice in laboratory-provided coolers. Chain of Custody forms were completed and the samples were shipped to the ALS Laboratory in Houston, Texas for analysis of benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8260C, total petroleum hydrocarbons (TPH) by EPA Method 8015M and chloride by EPA Method 9056A.The laboratory results are summarized in **Table 1** and the laboratory analytical report is provided as **Appendix F**.

Each of the 1-ft depth interval samples from the air rotary borings were submitted for laboratory analysis of chloride. Based on PID field screening results, up to two depth interval samples were also submitted for laboratory analysis of BTEX and TPH for each of the air rotary borings.

At the conclusion of drilling and soil sampling activities, the soil cuttings were returned to the boreholes, which were then sealed near the surface with bentonite chips.

4.1 Soil Sampling Results

The soil analytical results were compared to *Table I, Closure Criteria for Soils Impacted by a Release* provided in 19.15.29.12 NMAC, which includes the following:

Table I
Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/L TDS	Constituent	Limit (mg/kg)
All depths	Benzene	10
	Total BTEX	50
≤ 50 ft bgs	Chloride	600
	TPH (GRO+DRO+MRO)	100
51 – 100 ft bgs	Chloride	10,000
	TPH (GRO+DRO+MRO)	2,500
>100 ft bgs	Chloride	20,000
	TPH (GRO+DRO+MRO)	2,500
mg/kg – milligrams per kilogram		

As described above, no groundwater was observed to a depth of 50 ft bgs in Boring #1 through Boring #5. However, due to the presence of four water wells within 1,000 ft of the Site, the release must be treated as if occurred less than 50 ft to groundwater in accordance with 19.15.29.12(C)(4) NMAC.

None of the laboratory analytical results indicated BTEX and/or TPH concentrations that exceeded the applicable limits in *Table I*. Chloride concentrations exceeded the regulatory limit of 600 mg/kg in samples collected from borings CVU84-01, CVU84-05, CVU84-07, CVU84-10, CVU84-11 and Boring #5. The horizontal extent of chloride concentrations that exceed 600 mg/kg is delineated within the footprint of the operations pad to the north, east and south by the analytical results for borings CVU84-12, CVU84-09

and CVU84-08, respectively. The horizontal extent of chloride concentrations that exceed 600 mg/kg is delineated to the west by boring CVU84-13, which is located approximately 110 ft west of the operations pad.

The vertical extent of the chloride concentrations above 600 mg/kg is delineated by the analytical results for Boring #1 through Boring #5, which were drilled in the source area associated with the release. The deepest chloride concentration above 600 mg/kg is 709 mg/kg reported for the sample collected at a depth of 10 ft bgs from Boring #5. Below that depth, chloride concentrations were reported as 524 mg/kg and 28.4 for samples collected at 30 and 50 ft bgs from Boring #5.

The laboratory analytical results for the soil assessment samples are summarized in **Table 1** and on **Figure 2**. The laboratory analytical report is provided in **Appendix F**.

5. Remediation Plan

Future Site remediation activities will be conducted to address the following regulatory requirements applicable to the site:

- Soil remediation requirements in *Table I, Closure Criteria for Soils Impacted by a Release* provided in 19.15.29.12 NMAC; and
- Soil reclamation requirements under 19.15.29.13.D.(1) NMAC.

5.1 Proposed Soil Remediation/Reclamation Approach

Chevron MCBU requests NMOCD approval for deferral of remediation/reclamation of chloride-impacted soil within the footprint of the CVU #084 injection well operations pad in accordance with 19.15.29.12(C)(2) NMAC. Furthermore, it is requested that the NMOCD approve deferral of soil remediation/reclamation for the area immediately north of the CVU #084 operations pad where a northeast-southwest trending subsurface pipeline appears to have been recently installed as indicated on **Figure 3**.

Soil remediation/reclamation will not be deferred west of the operations pad within the area where chloride concentrations exceed 600 mg/kg, which is delineated horizontally to the north, west and south based on laboratory analytical results for borings CVU84-12, CVU84-13 and CVU84-14, respectively. As shown on **Figure 3**, the extent of the proposed initial soil excavation is about 100 ft by 150 ft by 4 ft deep. The actual extent of the soil excavation will be determined based on the laboratory analytical results for confirmation soil samples collected from the walls and bottom of the excavation as described below. It is currently estimated that about 2,500 cubic yards of soil will be excavated from the impacted area west of the operations pad.

5.2 Soil Excavation and Confirmation Sampling associated with Site Remediation/Reclamation

Remediation/reclamation will be performed by excavation and off-site disposal of impacted soil separately for the portion of the site outside the current operations area and the portion of the site within the current operations area (which will be deferred until operations cease). For each event, the excavated soil will be transported off site for disposal at a Chevron approved waste disposal facility that accepts oil and gas exploration and production (E&P) exempt wastes.

In conjunction with excavation of impacted soil, confirmation samples will be collected from the walls and bottom of the excavation according to NMOCD requirements. The soil samples will be submitted for laboratory analysis of chloride by EPA Method 9056A or Method 9250. The soil samples will be collected in clean, laboratory-provided sample containers, labeled, and placed on ice in laboratory-provided coolers. AECOM will complete Chain of Custody forms and arrange for shipment/transportation of the samples to AECOM's subcontractor, ALS Laboratory in Houston, Texas.

Excavation activities will continue as necessary until confirmation sample results are within the required regulatory limits.

5.3 Site Closure Report

Upon completion of soil remediation/reclamation activities for each event, a Site Closure Report will be submitted to the NMOCD describing the soil excavation and disposal activities, and the closure confirmation sampling results.

6. Schedule

Depending on receipt of approval from the NMOCD, the soil remediation/reclamation activities west of the operations pad will be scheduled for the fourth quarter of 2020. The schedule for future soil remediation/reclamation of the operations pad area will be determined once the injection well has been taken out of service.

7. References

AECOM, 2019. Produced Water Spill Site Assessment Report, Central Vacuum Unit Spill Site, Lee County, New Mexico. January 25, 2019.

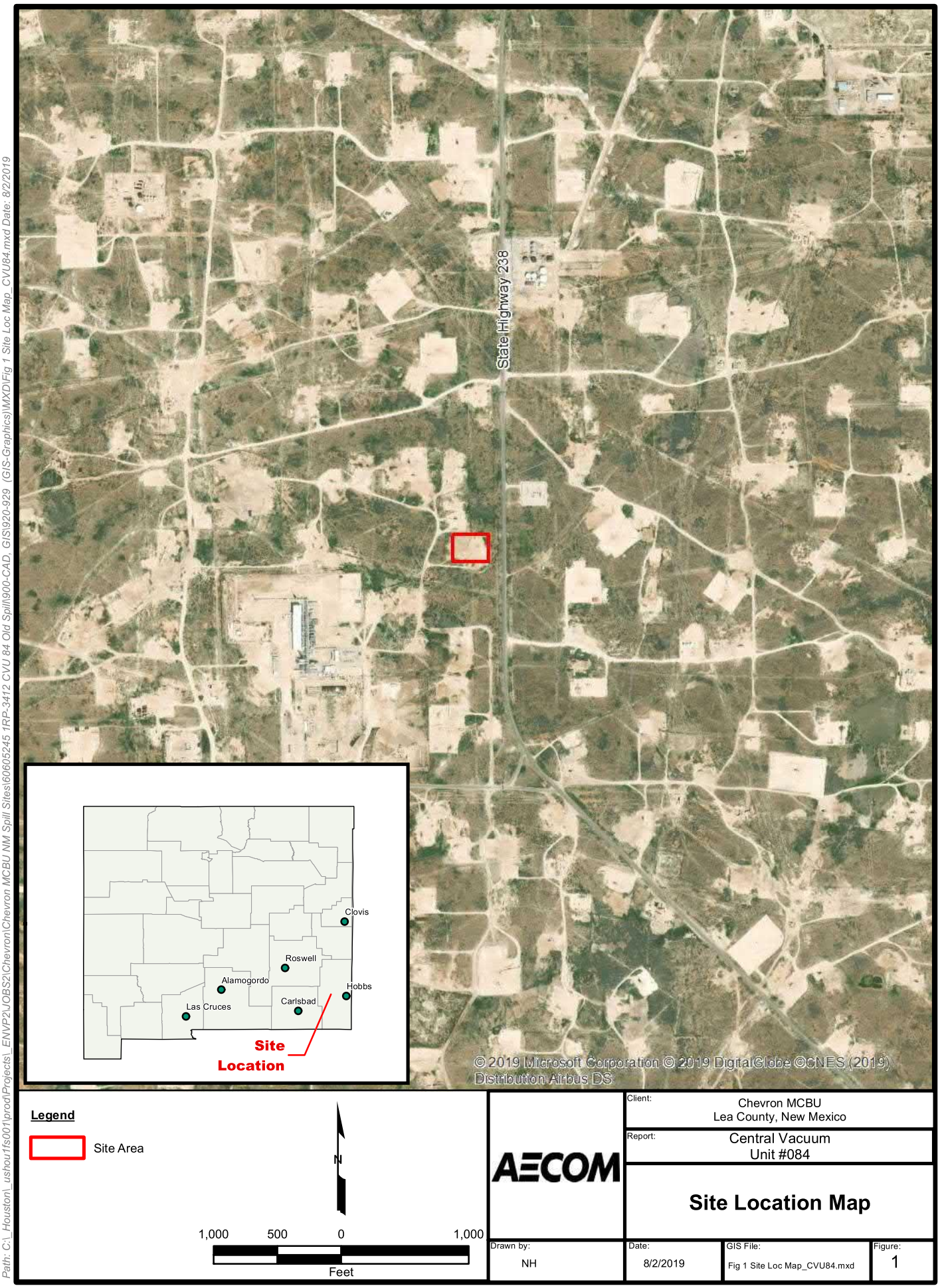
New Mexico Water Rights Reporting System (NMWRRS), Water Column/Average Depth to Water Report. http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.html .

National Wetlands Inventory, Surface Waters and Wetlands. https://www.fws.gov/wetlands/data/mapper.html

Google Earth Pro.

United States Department of Agriculture – Natural Resources Conservation Service. Web Soil Survey. Available on line at https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

Figures



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Client: Chevron MCBU
Lea County, New Mexico

Report: Central Vacuum
Unit #084

Site Location Map

Drawn by:	Date:	GIS File:	Figure:
NH	8/2/2019	Fig 1 Site Loc Map_CVU84.mxd	1

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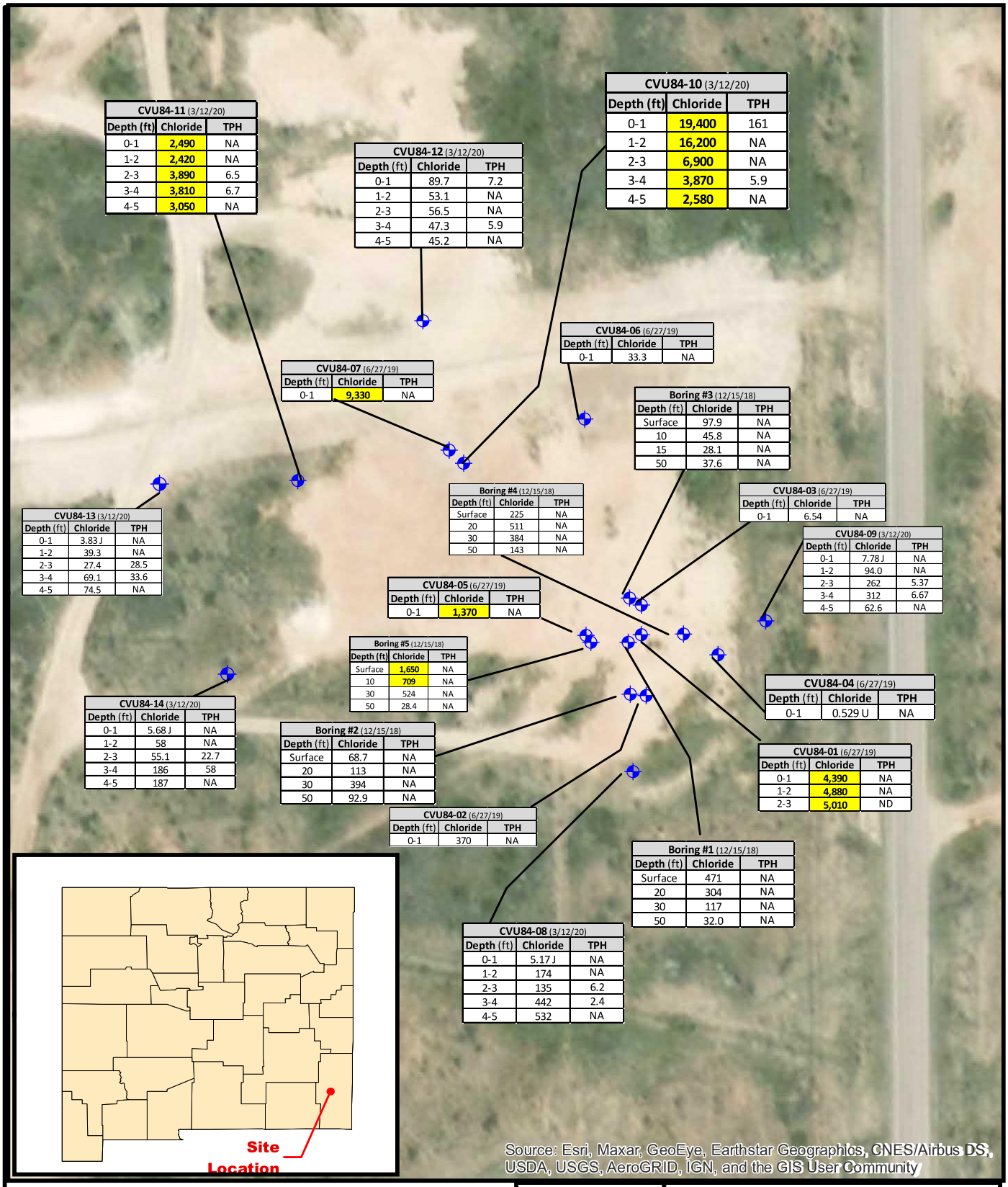

CVU84-11 (3/12/20)

Depth (ft)	Chloride	TPH
0-1	**2,490**	NA
1-2	**2,420**	NA
2-3	**3,890**	6.5
3-4	**3,810**	6.7
4-5	**3,050**	NA

CVU84-12 (3/12/20)

Depth (ft)	Chloride	TPH
0-1	89.7	7.2
1-2	53.1	NA
2-3	56.5	NA
3-4	47.3	5.9
4-5	45.2	NA

CVU84-10 (3/12/20)

Depth (ft)	Chloride	TPH
0-1	**19,400**	161
1-2	**16,200**	NA
2-3	**6,900**	NA
3-4	**3,870**	5.9
4-5	**2,580**	NA

CVU84-06 (6/27/19)

Depth (ft)	Chloride	TPH
0-1	33.3	NA

CVU84-07 (6/27/19)

Depth (ft)	Chloride	TPH
0-1	**9,330**	NA

Boring #3 (12/15/18)

Depth (ft)	Chloride	TPH
Surface	97.9	NA
10	45.8	NA
15	28.1	NA
50	37.6	NA

Boring #4 (12/15/18)

Depth (ft)	Chloride	TPH
Surface	225	NA
20	511	NA
30	384	NA
50	143	NA

CVU84-03 (6/27/19)

Depth (ft)	Chloride	TPH
0-1	6.54	NA

CVU84-13 (3/12/20)

Depth (ft)	Chloride	TPH
0-1	3.83 J	NA
1-2	39.3	NA
2-3	27.4	28.5
3-4	69.1	33.6
4-5	74.5	NA

CVU84-09 (3/12/20)

Depth (ft)	Chloride	TPH
0-1	7.78 J	NA
1-2	94.0	NA
2-3	262	5.37
3-4	312	6.67
4-5	62.6	NA

CVU84-05 (6/27/19)

Depth (ft)	Chloride	TPH
0-1	**1,370**	NA

Boring #5 (12/15/18)

Depth (ft)	Chloride	TPH
Surface	**1,650**	NA
10	**709**	NA
30	524	NA
50	28.4	NA

CVU84-14 (3/12/20)

Depth (ft)	Chloride	TPH
0-1	5.68 J	NA
1-2	58	NA
2-3	55.1	22.7
3-4	186	58
4-5	187	NA

CVU84-04 (6/27/19)

Depth (ft)	Chloride	TPH
0-1	0.529 U	NA

Boring #2 (12/15/18)

Depth (ft)	Chloride	TPH
Surface	68.7	NA
20	113	NA
30	394	NA
50	92.9	NA

CVU84-01 (6/27/19)

Depth (ft)	Chloride	TPH
0-1	**4,390**	NA
1-2	**4,880**	NA
2-3	**5,010**	ND

CVU84-02 (6/27/19)

Depth (ft)	Chloride	TPH
0-1	370	NA

Boring #1 (12/15/18)

Depth (ft)	Chloride	TPH
Surface	471	NA
20	304	NA
30	117	NA
50	32.0	NA

CVU84-08 (3/12/20)

Depth (ft)	Chloride	TPH
0-1	5.17 J	NA
1-2	174	NA
2-3	135	6.2
3-4	442	2.4
4-5	532	NA

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

Sample Locations

Regulatory Limits
TPH - 100 mg/kg
Chloride - 600 mg/kg

Bold & Highlighted - Exceeds Regulatory Limits

All results in mg/kg.
NA - Not analyzed.
ND - Not Detected.
U - Analyte not detected at or above the laboratory Sample Detection Limit (SDL).
J - Result is less than the Method Quantitation Limit (MGL) but greater than or equal to the SDL.

0 50 100
Feet

N

AECOM

Client: Chevron MCBU
Lea County, New Mexico

Report: Central Vacuum Unit #084

Sample Location Map

Drawn by: AF

Date: 8/27/2020

GIS File: Fig 2 SampLoc_CVU84_082720.mxd

Figure: 2

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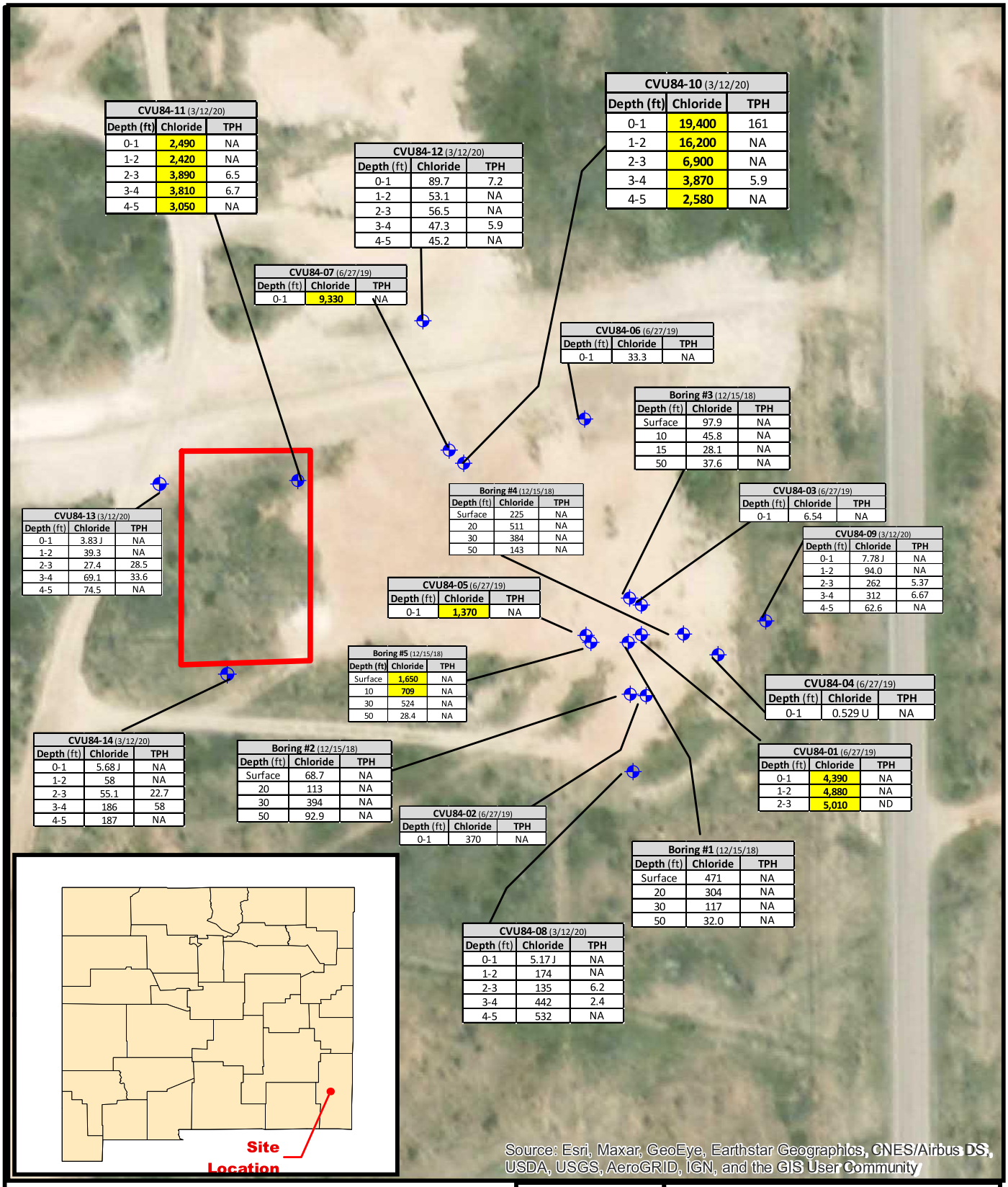

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Sample Locations

Approximate Soil remediation/reclamation area

0 50 100

Feet

Regulatory Limits
TPH - 100 mg/kg
Chloride - 600 mg/kg

Bold & Highlighted - Exceeds Regulatory Limits

All results in mg/kg.
NA - Not analyzed.
ND - Not Detected.
U - Analyte not detected at or above the laboratory Sample Detection Limit (SDL).
J - Result is less than the Method Quantitation Limit (MGL) but greater than or equal to the SDL.

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Client: Chevron MCBU
Lea County, New Mexico

Report: Central Vacuum Unit #084

Soil Remediation/ Reclamation Map

Drawn by: AF

Date: 8/27/2020

GIS File: Fig 3 SoilRemRecMap_ CVU84_082720.mxd

Figure: 3

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Tables

Table 1
Soil Analytical Results
Central Vaccum Unit 84
New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons (EPA 8015B)				
			GRO C6-C10	DRO C10-C28	MRO C28-C36	TPH GRO+DRO+MRO	Benze
Regulatory Limits		**0 - 4**	**--**	**--**	**--**	**100**	**10**
Boring #1	12/15/18	Surface	NA	NA	NA	NA	NA
		20	NA	NA	NA	NA	NA
		30	NA	NA	NA	NA	NA
		50	NA	NA	NA	NA	NA
Boring #2	12/15/18	Surface	NA	NA	NA	NA	NA
		20	NA	NA	NA	NA	NA
		30	NA	NA	NA	NA	NA
		50	NA	NA	NA	NA	NA
Boring #3	12/15/18	Surface	NA	NA	NA	NA	NA
		10	NA	NA	NA	NA	NA
		15	NA	NA	NA	NA	NA
		50	NA	NA	NA	NA	NA
Boring #4	12/15/18	Surface	NA	NA	NA	NA	NA
		20	NA	NA	NA	NA	NA
		30	NA	NA	NA	NA	NA
		50	NA	NA	NA	NA	NA
Boring #5	12/15/18	Surface	NA	NA	NA	NA	NA
		10	NA	NA	NA	NA	NA
		30	NA	NA	NA	NA	NA
		50	NA	NA	NA	NA	NA
CVU84-01	06/27/19	0-1	NA	NA	NA	NA	NA
		1-2	NA	NA	NA	NA	NA
		2-3	0.0648 U	33.5 U	33.5 U	ND	0.00053
CVU84-02	06/27/19	0-1	NA	NA	NA	NA	NA
CVU84-03	06/27/19	0-1	NA	NA	NA	NA	NA
CVU84-04	06/27/19	0-1	NA	NA	NA	NA	NA
CVU84-05	06/27/19	0-1	NA	NA	NA	NA	NA
CVU84-06	06/27/19	0-1	NA	NA	NA	NA	NA
CVU84-07	06/27/19	0-1	NA	NA	NA	NA	NA
CVU84-08	03/12/20	0-1	NA	NA	NA	NA	NA
		1-2	NA	NA	NA	NA	NA
		2-3	<0.010	**1.70 J**	**4.5**	**6.2**	<0.0005
		3-4	<0.011	<0.53	**2.4 J**	**2.4**	<0.0005
		4-5	NA	NA	NA	NA	NA
		0-1	NA	NA	NA	NA	NA

Table 1
Soil Analytical Results
Central Vaccum Unit 84
New Mexico

CVU84-14	6/18/2020	0-1	NA	NA	NA	NA	NA
		1-2	NA	NA	NA	NA	NA
		2-3	0.011 U	**7.7**	**15**	**22.7**	0.00047
		3-4	0.011 U	**27**	**31**	**58**	0.0005
		4-5	NA	NA	NA	NA	NA

Notes:

1. Soil analyses performed by Xenco Laboratories in Midland, Texas and TestAmerica Laboratories, Inc. and ALS in Houston, Te
2. Units for all analytical data provided are mg/Kg (milligrams per kilogram).
3. GRO - Gasoline Range Organic Compounds
4. DRO - Diesel Range Organic Compounds
5. MRO - Motor Oil/Lube Range Organic Compounds
6. Regulatory Limits are from 19.15.29 New Mexico Administrative Code (NMAC).
7. NA - Not analyzed.
8. ND - Not detected.
9. J - Indicates that the result is less than the Method Quantitation Limit (MQL) but greater than or equal to the Sample Detectior
10. U - Indicates that the analyte was analyzed but not detected at or above the laboratory SDL.
11. **Bold** - Detectable concentration that exceeds laboratory method reporting limits.
12. **Bold and Shaded** - Reported concentration exceeds Regulatory Limits.
13. ft bgs - feet below ground surface.
14. -- Indicates that no applicable regulatory limit exists for that analyte.

Appendix A

Form C-141 – Central Vacuum Unit #084

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	1RP-5193
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: **Chevron USA Inc.**	OGRID: **4323**
Contact Name: **Josepha DeLeon**	Contact Telephone: **575-263-0424**
Contact email: **jdxd@chevron.com**	Incident # *(assigned by OCD)*
Contact mailing address: **1616 Bender Blvd., Hobbs, NM 88240**	

Location of Release Source

Latitude 32.7879219 Longitude -103.5059967
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: **Central Vacuum Unit #084**	Site Type: **Injection**
Date Release Discovered: **09/01/2018**	API# *(if applicable)*: ***30-025-25732***

Unit Letter	Section	Township	Range	County
I	36	17S	34E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls): **208**	Volume Recovered (bbls): **160**
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release **Internal corrosion on injection line.**		

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-5193
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? **"unauthorized release greater than 25 barrels"**
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? **YES, by Josepha DeLeon to Maxey Brown, phone 09/01/2018; 09:27 a.m.**	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:
N/A

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: **Josepha DeLeon** Title: **Environmental Compliance Specialist**

Signature: JDeLeon Date: September 12, 2018

email: jdxd@chevron.com Telephone: 575-263-0424

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-5193
Facility ID	
Application ID	

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-5193
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	95 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☒ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

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

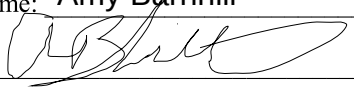
Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-5193
Facility ID	
Application ID	

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

Printed Name: Amy Barnhill Title: Waste and Water Specialist

Signature:  Date: 9-28-20

email: ABarnhill@chevron.com Telephone: 432-687-7108

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-5193
Facility ID	
Application ID	

Remediation Plan

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

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

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

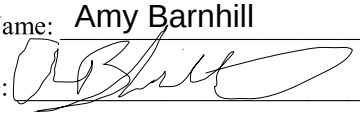
☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Amy Barnhill Title: Waste and Water Specialist

Signature:  Date: 9-28-20

email: ABarnhill@chevron.com Telephone: 432-687-7108

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Appendix B

NMWRRS Water Column/Average Depth to Water

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 04247 POD5		L	LE	3	1	3	31	17S	35E	640040	3628781	138	235	95	140
L 04247 POD7		L	LE	1	3	3	31	17S	35E	640054	3628747	151		240	
L 05288		L	LE		4	4	36	17S	34E	639760	3628552*	255	231	90	141
L 05288	R	L	LE		4	4	36	17S	34E	639760	3628552*	255	231	90	141
L 04247 POD6		L	LE	2	1	3	31	17S	35E	640299	3629074	502	232	117	115
L 02722 S5		L	LE	2	2	2	01	18S	34E	639866	3628246*	519	232		
L 07119		L	LE	1	1	1	06	18S	35E	640068	3628255*	535	233	95	138
L 02722 S4		L	LE	1	2	2	01	18S	34E	639666	3628246*	569	234		
L 13820 POD1		L	LE	3	1	3	01	18S	34E	639472	3628296	636	150	131	19
L 13820 POD2		L	LE	3	1	3	01	18S	34E	639472	3628296	636	150	131	19
L 07119 S		L	LE	1	2	1	06	18S	35E	640445	3628259*	740	233	95	138
L 10337		L	LE	4	1	1	06	18S	35E	640268	3628055*	797	190	100	90
L 10467		L	LE		1	2	01	18S	34E	639365	3628137*	826	231	115	116
L 14180 POD1		L	LE	4	2	2	36	17S	34E	639756	3629715	962	231	126	105
L 14180 POD2		L	LE	4	2	2	36	17S	34E	639781	3629735	978	233	126	107

Average Depth to Water: **119 feet**

Minimum Depth: **90 feet**

Maximum Depth: **240 feet**

Record Count: 15

UTMNAD83 Radius Search (in meters):

Easting (X): 639903 **Northing (Y):** 3628764.25 **Radius:** 1000

***UTM location was derived from PLSS - see Help**

Appendix C

Photographic Documentation

[redacted]

PHOTO LOG

	Site Location: Lea County, NM	**Project No.** 60591820
Central Vacuum Unit (CVU) #084		

Photo No. 1	**Date:** 12/15/18

Direction Photo Taken:

North

Description:

Central Vacuum Unit #84 well information sign.

Photo No. 2	**Date:** 12/15/18

Direction Photo Taken:

East

Description:

Image of CVU #84 injection well and site location. Borehole locations are visible.

Appendix D

Field Soil Boring Logs for Boring B #1 through B #5

AECOM
9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron
Project Name: Chevron Produced water spill site GVU 84
Project No.: 60591820
Project Location: Lea County, NM Central Vacuum Unit #84
Logged By: Samuel Whipkey

Borehole ID: Hole 1	Drilling Company: HCI	Total Depth: 50
Location: CVU #84	Driller Name: Kenny Cooper	Completed Depth:
Start Date: 12/15/18	Drilling Method: Air Rotary	Borehole Diameter:
Completion Date: 12/15/18	Sampling Device: N/A	Static Water Level: N/A

Depth (ft)	Recovery (%)	Sample No. & Depth Interval (ft)	Blow Count	Classification USCS	Lithologic Description (Include lithology, grain size, sorting, anularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	Screening VOCs	Lithology	Well Construction	Additional Remarks
0			N/A	Hdel-Surface	Med to drk brn, top soil + caliche				EC - 916 mS/cm
5					Tan to white, Limestone/caliche, finegrained powdery, dry.				5' EC - 260
10									10' EC-105
15									15' EC - 1.8
20		Hdel-20			Tan, Limestone, Fine grained - silty, ~~moist~~ Dry broken rock cuttings ~~for~~				20' EC - 91

Page 1 of 2

AECOM
9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron
Project Name: Chevron Produce water spill sites CVU #84
Project No.: 60591820
Project Location:
Logged By: Samuel Whipkey

Borehole ID: Hole 1	Drilling Company: HCI	Total Depth:
Location: CVU #84	Driller Name:	Completed Depth:
Start Date:	Drilling Method: Air Rotary	Borehole Diameter:
Completion Date:	Sampling Device:	Static Water Level:

Depth (ft)	Recovery (%)	Sample No. & Depth Interval (ft)	Blow Count	Classification USCS	Lithologic Description (Include lithology, grain size, sorting, anularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	Screening VOCs	Lithology	Well Construction	Additional Remarks
30		Hole1-30	N/A		Tan, Fine grained Limestone, moist.				30' EC-213
40									40' EC-113
50	Hole1 50				Tan, Fine grained silty, Limestone, moist.				50' EC-42
~~75~~									
60									

AECOM
9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron
Project Name: Chevron Produced Water Spill Sites CVU #84
Project No.: 60591820
Project Location: Lea County, NM
Logged By: Samuel Whipkey

Borehole ID: Hole R	Drilling Company: HCI	Total Depth: 50
Location: CVU 84	Driller Name: Kenny Cooper	Completed Depth: 50
Start Date: 12/15/18	Drilling Method: Air Rotary	Borehole Diameter:
Completion Date: 12/15/18	Sampling Device:	Static Water Level: N/A

Depth (ft)	Recovery (%)	Sample No. & Depth Interval (ft)	Blow Count	Classification USCS	Lithologic Description (Include lithology, grain size, sorting, anularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	Screening VOCs	Lithology	Well Construction	Additional Remarks
0			N/A	Hole R Surface	Med-dark brown Top soil + caliche,				EC-167
5					Tan-White, Limestone/caliche, Dry powder				5' EC-3
10									10' EC-105
15									15' EC-42
20		Hole R-20							20 EC-87

AECOM
9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron
Project Name: Chevron Produced Water Spill sites CVU #84
Project No.: 60591820
Project Location: Lea County, NM
Logged By: Samuel Whipkey

Borehole ID: Hole 2	Drilling Company: HCI	Total Depth: 50
Location: CVU #84	Driller Name:	Completed Depth: 50
Start Date:	Drilling Method: Air Rotary	Borehole Diameter:
Completion Date:	Sampling Device:	Static Water Level: N/A

Depth (ft)	Recovery (%)	Sample No. & Depth Interval (ft)	Blow Count	Classification USCS	Lithologic Description (Include lithology, grain size, sorting, anularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	Screening VOCs	Lithology	Well Construction	Additional Remarks
30		Hole 2 30	N/A		Tan, Limestone, Fine grained, moist				30' EC-304
40									40' EC-311
50		Hole 2 50			Tan Limestone, Fin grained, silty, moist.				50' EC 238
~~15~~									
60									

Page 2 of 2

AECOM
9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron
Project Name: Chevron Spill Sites CVU #84
Project No.: 60591820
Project Location: Lea County, NM
Logged By: Samuel Whipkey

Borehole ID: Hole3	Drilling Company: HCI	Total Depth: 50
Location: CVU #84	Driller Name: Kenny Cooper	Completed Depth: 50
Start Date: 12/15/18	Drilling Method: Air Rotary	Borehole Diameter:
Completion Date: 12/15/18	Sampling Device:	Static Water Level: N/A

Depth (ft)	Recovery (%)	Sample No. & Depth Interval (ft)	Blow Count	Classification USCS	Lithologic Description (Include lithology, grain size, sorting, anularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	Screening VOCs	Lithology	Well Construction	Additional Remarks
0		Hole3 Surface	N/A		Med to dark brown, Top soil/Caliche				EC-192
5					Tan to white, moist ~~dry~~ silty powder, dry.				5' EC-172
10		Hole3-10							10' EC-270
15		Hole3-15							15' EC-130
20					Tan to white, dry silty powder,				20' EC-57

AECOM
9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron
Project Name: Chevron Spill Sites CVU #84
Project No.: 60591820
Project Location: Lea County, NM
Logged By: Samuel Whipkey

Borehole ID: Hole 3	Drilling Company: HCI	Total Depth:
Location: CVU #84	Driller Name:	Completed Depth:
Start Date:	Drilling Method: Air Rotary	Borehole Diameter:
Completion Date:	Sampling Device:	Static Water Level:

Depth (ft)	Recovery (%)	Sample No. & Depth Interval (ft)	Blow Count	Classification USCS	Lithologic Description (Include lithology, grain size, sorting, anularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	Screening VOCs	Lithology	Well Construction	Additional Remarks
30			N/A		Tan to white, Limestone, Fine Silty powder, moist.				EC- 126
40									40' EC-36
50		Hole3-50			Tan to white, Limestone, Fine grained w/ rock drill cuttings, Dry				50' EC-17
~~15~~									
60									

AECOM
9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron
Project Name: Chevron Produced Water spill sites
Project No.: 60591820
Project Location: Lea County, NM
Logged By: Samuel Whipkey

Borehole ID: Hole 4	Drilling Company: HCI	Total Depth: 50
Location: CVU #84	Driller Name: Kenny Cooper	Completed Depth: 50
Start Date: 12/15/18	Drilling Method: Air Rotary	Borehole Diameter:
Completion Date:	Sampling Device:	Static Water Level: NA/P

Depth (ft)	Recovery (%)	Sample No. & Depth Interval (ft)	Blow Count	Classification USCS	Lithologic Description (Include lithology, grain size, sorting, anularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	Screening VOCs	Lithology	Well Construction	Additional Remarks
0		Hole 4-Surface	N/A		Medium to dark brown, Topsoil / caliche				EC - 854
					Tan to white Limestone, Fine grained, silty, moist.				5' EC-524
5									
									10' EC-532
10									
									15' EC-70
15									
		Hole4-20			Tan to white Limestone, Fine grained dry silty powder, Drill cutting rock chips in sample				20' EC-90
20									

AECOM
9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron
Project Name: Chevron Produced water Spill sites
Project No.: 60591820
Project Location: Lea County, NM
Logged By: Samuel Whipkey

Borehole ID: Hole 4 | Drilling Company: HCI | Total Depth: 50
Location: CVU #84 | Driller Name: Kenny Cooper | Completed Depth: 50
Start Date: 12/14/18 | Drilling Method: Air Rotary | Borehole Diameter:
Completion Date: 12/15/18 | Sampling Device: | Static Water Level: —

Depth (ft)	Recovery (%)	Sample No. & Depth Interval (ft)	Blow Count	Classification USCS	Lithologic Description (Include lithology, grain size, sorting, anularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	Screening VOCs	Lithology	Well Construction	Additional Remarks
30		Hole4-30	N/A		Tan, Limestone, Moist silty powder,				30' EC-1640
40					Tan-white, Limestone, Dry silty powder, Drill cutting chips				40' EC-180
50		Hole4 50			Tan-white, Limestone, Dry silty powder, Drill cuttings in sample				50' EC-30
60									

Page 2 of 2

AECOM
9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron
Project Name: Chevron Produced water Spill sites
Project No.: 60591820
Project Location:
Logged By: Samuel Whipkey

Borehole ID: Hole5	Drilling Company: HCI	Total Depth: 50
Location: CVU #84	Driller Name: Kenny Cooper	Completed Depth: 50
Start Date: 12/15/18	Drilling Method: Air Rotary	Borehole Diameter: —
Completion Date: 12/15/18	Sampling Device:	Static Water Level: N/A

Depth (ft)	Recovery (%)	Sample No. & Depth Interval (ft)	Blow Count	Classification USCS	Lithologic Description (Include lithology, grain size, sorting, anularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	Screening VOCs	Lithology	Well Construction	Additional Remarks
0		Hole5 surface	N/A		Dark Brown, Top soil, moist.				EC-1380
5					Tan to white, Limestone, silty powder, moist. Caliche				5' EC-1127
10		Hole5 10			Tan to Dark Tan, Limestone, Moist silty powder.				10' EC-1780
15									15' EC-43
20					Tan to white, Limestone Dry silty powder,				20' EC-220

Page of

AECOM
9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron
Project Name: Chevron Produced water spill sites
Project No.: 60591820
Project Location: Lea County, NM CVU #84
Logged By: Samuel Whipkey

Borehole ID: Hole 5	Drilling Company: HCI	Total Depth: 50
Location: CVU #84	Driller Name: Kenny Cooper	Completed Depth: 50
Start Date: 12/15/18	Drilling Method: Air Rotary	Borehole Diameter: /
Completion Date: 12/15/18	Sampling Device:	Static Water Level: —

Depth (ft)	Recovery (%)	Sample No. & Depth Interval (ft)	Blow Count	Classification USCS	Lithologic Description (Include lithology, grain size, sorting, anularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc., as applicable)	Screening VOCs	Lithology	Well Construction	Additional Remarks
30		Hole5-30	N/A		Tan to White, moist silty powder. Limestone				EC-563
40									40' EC-235
50	Holes 50				Tant to White, moist silty Powder, Limestone				50' EC-97
~~15~~									
60									

Page 2 of 2

Location CVU 84 Date 12/15/18 77

Project / Client Chevron

07 30	Leave hotel			
0805	Arrive onsite.			
0815	HCI + Martin R (chevron). Martin issued permit.			
0825	Go over HASP + JSAs w/ Kenny + Sam			
0840	Setting up to drill Hole 1. 32.787940, -103.505969			
0843	Surface	916.		
0844	5'	260		
0845	10'	105	Dry rockchip	
0847	15	108	Dry rockchip/ inac readily	
0849	20	91	Dry rockchips	Sample
0850	30	213		Sample
0851	40	113		
0852	50	42		
0900	Clear Hole2	32.787833, -103.505962		
0902	Surface	167		
0903	10	3.0 88	Dry rock chips.	
0904	15	42	" " "	
0905	20	87		Sample
0907	30	304		Sample
0908	40	311		
0910	50	238		

Rite in the Rain

Location CVU 84 Date 12/15/18

Project / Client Chevron

Cont'd

912	Clear Hole 3 (32.788024, -103.505468)			
0915	Surface	192	moist	
0916	5	1172	moist.	
0917	10	270		sample
0918	15	130		sample
0919	20	57		
0921	30	126		
0922	40	36		
0924	50	17	Dry rock chips.	
928	Clear Hole 4 (32.787951, -103.505853)			
0930	Surf	854	moist	
0931	5	524	moist -	
0932	10	532		
0934	15	70	Dry rock chips	
0935	20	90	Dry rock chips, Sample.	
0937	30	1640	moist. Sample.	
0939	40	180	Dry, rock chips	
0941	50	30	Dry, rock chips, pebble	
0948	Clear Hole 5 (32.787942, -103.506062			
0950	Surface	1390	moist,	
0952	5	1127	moist.	
0953	10	1780	moist. Sample	
0954	15	43		

Location CVU 84 Date 12/15/18

Project / Client Chevron

Cont'd

0956	20	146 220		Dry
0958	30	563	Sample	moist Sample
0959	40	235		
1000	50	97		moist.
1005	HCl offsite			
1112	AECOM offsite.			
2026 (MST)	Arrive home.			
		03		
	05	01	04	
		02		

Rite in the Rain

Appendix E

Summary of Field Sample Collection and Screening Activities

GPS

Sample Collection and Screening
Central Vacuum Unit #084

Date	Boring ID	Depth (ft bgs)	Lithology	Time	PID (ppm)	Conductivity Probe (mS/cm)	EC Meter (mS/cm)	Chloride Lab Result (mg/kg)	
3/12/20	CVU084-8	0-1	BROWN (7.5YR, 4/3) SILTY CLAY (CL) W/ SOME WHITE CALICHE SEAMS NO ODORS	1040	0.1		723.5		N 32°47'15.694"
		1-2		1045	0.1		1082.0		W 103°30'21.459"
		2-3		1050	0.1	⊗	948		
		3-4	VERY PALE BROWN (10YR, 8/3) CALICHE W/ SOME WHITE SILTY SAND SEAMS	1055	0.0	⊗	2134.5		
		4-5		1100	0.0		1544.5		
3/12/20	CVU084-9	0-1	BROWN (7.5YR, 4/3) SILTY CLAY (CL) W/ SOME CALICHE SEAMS	1110	0.1		448.2		N 32°47'16.717"
		1-2		1115	0.1		767.0		
		2-3	RED (10R, 5/8) SILTY SAND (SM) FINE GRAINED, UNCONSOLIDATED	1120	0.2	⊗	1935.5		W 103°30'20.517"
		3-4		1130	0.1	⊗	2391.0		
		4-5	WHITE CALICHE W/ SOME BROWN SS	1135	0.0		789.5		
3/12/20	CVU084-10	0-1	BROWN (7.5YR, 4/3) SILTY CLAY (CL) W/ SOME WHITE CALICHE SEAMS NO ODORS	1145	1.1	⊗	60.25		N 32°47'17.545"
		1-2		1150	1.0		51.2		W 103°30'22.739"
		2-3		1155	0.9		21920.0		
		3-4	WHITE CALICHE W/ SOME VERY PALE BROWN SILTY SAND (CL), NO ODORS	1200	0.1	⊗	7875.0		
		4-5		1205	0.0		8650.0		
3/12/20	CVU084-11	0-1	BROWN (7.5YR, 4/3) SILTY CLAY W/ SOME WHITE CALICHE SEAMS	1215	0.1		21,175.0		N 32°47'17.509"
		1-2		1220	0.1		13,375		
		2-3	RED (10R, 5/8) SILTY SAND (SM) FINE GRAINED, UNCONSOLIDATED	1225	0.2	⊗	13540		W 103°30'24.287"
		3-4		1230	0.1	⊗	12490.0		
		4-5	WHITE CALICHE W/ SOME BROWN SS	1235	0.0		12630		
3/12/20	CVU084-12	0-1	BROWN (7.5YR, 4/3) SILTY CLAY (CL) W/ SOME WHITE CALICHE SEAMS	1245	0.2	⊗	I		N 32°47'18.875"
		1-2		1250	0.1				W 103°30'13.403"
		2-3	VERY PALE BROWN (10YR, 8/3) CALICHE W/ SOME WHITE SILTY SAND SEAMS NO ODORS	1255	0.1		NA		
		3-4		1300	0.0	⊗			
		4-5		1305	0.0		I		

W GS 1984

Hold 3 C4 samples

Total Field Hours

7 hours

Sample Collection and Screening
CVU #084

Date	Boring ID	Depth (ft bgs)	Lithology	Time	PID (ppm)
6/18/2020	CVU84-13	0-1	Dark Brown Silty Sand w/ caliche nodules	1520	[illegible]
		1-2	Caliche Well Cemented	1525	4.0
		2-3	SAA	1530	4.5
		3-4	SAA	1535	5.1
		4-5	SAA	1540	2.2
6/18/2020	CVU84-14	0-1	Dark Brown Silty Sand w/ caliche nodules	1440	5.1
		1-2	Caliche Well Cemented	1445	4.2
		2-3	SAA	1450	5.6
		3-4	SAA	1455	6.1
		4-5	SAA	1500	2.1
6/19/2020	CVU84-15	0-1	Dark Brown Silty Sand w/ caliche nodules	0905	2.1
		1-2	Caliche	0910	4.5
		2-3	SAA	0915	2.7
		3-4	SAA	0920	1.0
		4-5	Yellow-Brown Silty Sand w/ caliche nodules	0925	3
6/19/2020	CVU84-16	0-1	Dark Brown Silty Sand w/ caliche nodules	0935	[illegible]
		1-2	Caliche	0940	[illegible]
		2-3	Yellow-Brown Silty Sand w/ caliche nodules	0940	[illegible]
		3-4	SAA	0945	4.2

Appendix F

Laboratory Analytical Report

Certificate of Analysis Summary 609123

AECOM, Austin, TX

Project Name: CVU 84

Project Id: 60591820
Contact: Kevin Pasternak
Project Location:

Date Received in Lab: Tue Dec-18-18 03:50 pm
Report Date: 07-JAN-19
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	609123-001		609123-002		609123-003		609123-004		609123-005		609123-006	
	Field Id:	Hole1-Surface		Hole1-20		Hole1-30		Hole1-50		Hole2-Surface		Hole2-20	
	Depth:	0-		20-		30-		50-		0-		20-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-15-18 08:43		Dec-15-18 08:49		Dec-15-18 08:50		Dec-15-18 08:52		Dec-15-18 09:02		Dec-15-18 09:05	
Chloride by EPA 300	***Extracted:***	Dec-20-18 13:30		Dec-20-18 13:30		Dec-20-18 13:30		Dec-20-18 13:30		Dec-20-18 13:30		Dec-20-18 13:30	
	Analyzed:	Dec-20-18 23:03		Dec-20-18 23:13		Dec-20-18 23:23		Dec-20-18 23:34		Dec-21-18 00:26		Dec-21-18 00:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		471	4.95	304	5.00	117	4.95	32.0	5.00	68.7	5.00	113	5.00

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 609123

AECOM, Austin, TX

Project Name: CVU 84

Project Id: 60591820
Contact: Kevin Pasternak
Project Location:

Date Received in Lab: Tue Dec-18-18 03:50 pm
Report Date: 07-JAN-19
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	609123-007		609123-008		609123-009		609123-010		609123-011		609123-012	
	Field Id:	Hole2-30		Hole2-50		Hole3-Surface		Hole3-10		Hole3-15		Hole3-50	
	Depth:	30-		50-		0-		10-		15-		50-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-15-18 09:07		Dec-15-18 09:10		Dec-15-18 09:15		Dec-15-18 09:17		Dec-15-18 09:18		Dec-15-18 09:24	
Chloride by EPA 300	***Extracted:***	Dec-20-18 13:30		Dec-20-18 13:30		Dec-20-18 13:30		Dec-20-18 13:30		Dec-20-18 13:30		Dec-20-18 13:30	
	Analyzed:	Dec-21-18 00:46		Dec-21-18 00:57		Dec-21-18 01:07		Dec-21-18 01:17		Dec-21-18 01:28		Dec-21-18 01:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		394	5.00	92.9	4.95	97.9	5.00	45.8	4.99	28.1	4.99	37.6	4.95

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

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 609123

AECOM, Austin, TX

Project Name: CVU 84

Project Id: 60591820
Contact: Kevin Pasternak
Project Location:

Date Received in Lab: Tue Dec-18-18 03:50 pm
Report Date: 07-JAN-19
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	609123-013		609123-014		609123-015		609123-016		609123-017		609123-018	
	Field Id:	Hole4-Surface		Hole4-20		Hole4-30		Hole4-50		Hole5-Surface		Hole5-10	
	Depth:	0-		20-		30-		50-		0-		10-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-15-18 09:30		Dec-15-18 09:35		Dec-15-18 09:37		Dec-15-18 09:41		Dec-15-18 09:50		Dec-15-18 09:53	
Chloride by EPA 300	***Extracted:***	Dec-20-18 13:30		Dec-20-18 14:30		Dec-20-18 14:30		Dec-20-18 14:30		Dec-20-18 14:30		Dec-20-18 14:30	
	Analyzed:	Dec-21-18 01:48		Dec-21-18 00:13		Dec-21-18 00:35		Dec-21-18 00:41		Dec-21-18 00:47		Dec-21-18 00:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		225	5.00	511	4.97	384	4.99	143	5.00	1650	25.0	709	4.99

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

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 609123

AECOM, Austin, TX

Project Name: CVU 84

Project Id: 60591820
Contact: Kevin Pasternak
Project Location:

Date Received in Lab: Tue Dec-18-18 03:50 pm
Report Date: 07-JAN-19
Project Manager: Kelsey Brooks

Analysis Requested									
	Lab Id:	609123-019		609123-020					
	Field Id:	Hole5-30		Hole5-50					
	Depth:	30-		50-					
	Matrix:	SOIL		SOIL					
	Sampled:	Dec-15-18 09:58		Dec-15-18 10:00					
Chloride by EPA 300	***Extracted:***	Dec-20-18 14:30		Dec-20-18 14:30					
	Analyzed:	Dec-21-18 01:15		Dec-21-18 01:46					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		524	4.99	28.4	4.99				

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

Kelsey Brooks
Project Manager

Analytical Report 609123

for

AECOM

Project Manager: Kevin Pasternak

CVU 84

60591820

07-JAN-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

07-JAN-19

Project Manager: **Kevin Pasternak**
AECOM
9400 Amberglen Blvd.
Austin, TX 78729

Reference: XENCO Report No(s): **609123**
CVU 84
Project Address:

Kevin Pasternak:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 609123. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 609123 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 609123

AECOM, Austin, TX

CVU 84

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Hole1-Surface	S	12-15-18 08:43	0	609123-001
Hole1-20	S	12-15-18 08:49	20	609123-002
Hole1-30	S	12-15-18 08:50	30	609123-003
Hole1-50	S	12-15-18 08:52	50	609123-004
Hole2-Surface	S	12-15-18 09:02	0	609123-005
Hole2-20	S	12-15-18 09:05	20	609123-006
Hole2-30	S	12-15-18 09:07	30	609123-007
Hole2-50	S	12-15-18 09:10	50	609123-008
Hole3-Surface	S	12-15-18 09:15	0	609123-009
Hole3-10	S	12-15-18 09:17	10	609123-010
Hole3-15	S	12-15-18 09:18	15	609123-011
Hole3-50	S	12-15-18 09:24	50	609123-012
Hole4-Surface	S	12-15-18 09:30	0	609123-013
Hole4-20	S	12-15-18 09:35	20	609123-014
Hole4-30	S	12-15-18 09:37	30	609123-015
Hole4-50	S	12-15-18 09:41	50	609123-016
Hole5-Surface	S	12-15-18 09:50	0	609123-017
Hole5-10	S	12-15-18 09:53	10	609123-018
Hole5-30	S	12-15-18 09:58	30	609123-019
Hole5-50	S	12-15-18 10:00	50	609123-020

CASE NARRATIVE

Client Name: AECOM

Project Name: CVU 84

Project ID: *60591820*
Work Order Number(s): *609123*

Report Date: *07-JAN-19*
Date Received: *12/18/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3073884 Inorganic Anions by EPA 300
Lab Sample ID 609123-020 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 609123-014, -015, -016, -017, -018, -019, -020.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3074055 Chloride by EPA 300
Lab Sample ID 609123-004 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 609123-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole1-Surface**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-001	Date Collected:	12.15.18 08.43	Sample Depth:	0
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**471**	4.95	mg/kg	12.20.18 23.03		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole1-20**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-002	Date Collected:	12.15.18 08.49	Sample Depth:	20
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**304**	5.00	mg/kg	12.20.18 23.13		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole1-30**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-003	Date Collected:	12.15.18 08.50	Sample Depth:	30
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**117**	4.95	mg/kg	12.20.18 23.23		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole1-50**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-004	Date Collected:	12.15.18 08.52	Sample Depth:	50
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.0**	5.00	mg/kg	12.20.18 23.34		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole2-Surface**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-005	Date Collected:	12.15.18 09.02	Sample Depth:	0
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**68.7**	5.00	mg/kg	12.21.18 00.26		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole2-20**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-006	Date Collected:	12.15.18 09.05	Sample Depth:	20
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**113**	5.00	mg/kg	12.21.18 00.36		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole2-30**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-007	Date Collected:	12.15.18 09.07	Sample Depth:	30
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**394**	5.00	mg/kg	12.21.18 00.46		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole2-50**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-008	Date Collected:	12.15.18 09.10	Sample Depth:	50
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**92.9**	4.95	mg/kg	12.21.18 00.57		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole3-Surface**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-009	Date Collected:	12.15.18 09.15	Sample Depth:	0
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**97.9**	5.00	mg/kg	12.21.18 01.07		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole3-10**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-010	Date Collected:	12.15.18 09.17	Sample Depth:	10
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**45.8**	4.99	mg/kg	12.21.18 01.17		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole3-15**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-011	Date Collected:	12.15.18 09.18	Sample Depth:	15
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.1**	4.99	mg/kg	12.21.18 01.28		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole3-50**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-012	Date Collected:	12.15.18 09.24	Sample Depth:	50
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**37.6**	4.95	mg/kg	12.21.18 01.38		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole4-Surface**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-013	Date Collected:	12.15.18 09.30	Sample Depth:	0
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 13.30	Basis:	Wet Weight
Seq Number:	3074055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**225**	5.00	mg/kg	12.21.18 01.48		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole4-20**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-014	Date Collected:	12.15.18 09.35	Sample Depth:	20
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 14.30	Basis:	Wet Weight
Seq Number:	3073884				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**511**	4.97	mg/kg	12.21.18 00.13		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole4-30**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-015	Date Collected:	12.15.18 09.37	Sample Depth:	30
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 14.30	Basis:	Wet Weight
Seq Number:	3073884				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**384**	4.99	mg/kg	12.21.18 00.35		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole4-50**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-016	Date Collected:	12.15.18 09.41	Sample Depth:	50
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 14.30	Basis:	Wet Weight
Seq Number:	3073884				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**143**	5.00	mg/kg	12.21.18 00.41		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole5-Surface**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-017	Date Collected:	12.15.18 09.50	Sample Depth:	0
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 14.30	Basis:	Wet Weight
Seq Number:	3073884				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1650**	25.0	mg/kg	12.21.18 00.47		5

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole5-10**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-018	Date Collected:	12.15.18 09.53	Sample Depth:	10
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 14.30	Basis:	Wet Weight
Seq Number:	3073884				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**709**	4.99	mg/kg	12.21.18 00.53		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole5-30**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-019	Date Collected:	12.15.18 09.58	Sample Depth:	30
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 14.30	Basis:	Wet Weight
Seq Number:	3073884				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**524**	4.99	mg/kg	12.21.18 01.15		1

Certificate of Analytical Results 609123

AECOM, Austin, TX

CVU 84

Sample Id:	**Hole5-50**	Matrix:	Soil	Date Received:	12.18.18 15.50
Lab Sample Id:	609123-020	Date Collected:	12.15.18 10.00	Sample Depth:	50
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.20.18 14.30	Basis:	Wet Weight
Seq Number:	3073884				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.4**	4.99	mg/kg	12.21.18 01.46		1

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 609123

AECOM
CVU 84

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3074055 — Matrix: Solid — Date Prep: 12.20.18
MB Sample Id: 7668540-1-BLK — LCS Sample Id: 7668540-1-BKS — LCSD Sample Id: 7668540-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	236	94	236	94	90-110	0	20	mg/kg	12.20.18 20:48	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3073884 — Matrix: Solid — Date Prep: 12.20.18
MB Sample Id: 7668542-1-BLK — LCS Sample Id: 7668542-1-BKS — LCSD Sample Id: 7668542-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	268	107	272	109	90-110	1	20	mg/kg	12.20.18 23:59	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3074055 — Matrix: Soil — Date Prep: 12.20.18
Parent Sample Id: 609121-014 — MS Sample Id: 609121-014 S — MSD Sample Id: 609121-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	24.8	250	240	86	251	90	90-110	4	20	mg/kg	12.20.18 21:19	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3074055 — Matrix: Soil — Date Prep: 12.20.18
Parent Sample Id: 609123-004 — MS Sample Id: 609123-004 S — MSD Sample Id: 609123-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	32.0	250	244	85	243	84	90-110	0	20	mg/kg	12.20.18 23:44	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3073884 — Matrix: Soil — Date Prep: 12.20.18
Parent Sample Id: 609123-014 — MS Sample Id: 609123-014 S — MSD Sample Id: 609123-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	511	249	738	91	725	86	90-110	2	20	mg/kg	12.21.18 00:19	X

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

QC Summary 609123

AECOM
CVU 84

Analytical Method:	**Chloride by EPA 300**			Prep Method:	E300P
Seq Number:	3073884	Matrix:	Soil	Date Prep:	12.20.18
Parent Sample Id:	609123-020	MS Sample Id:	609123-020 S	MSD Sample Id:	609123-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	28.4	250	299	108	296	107	90-110	1	20	mg/kg	12.21.18 01:52	

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

Chain of Custody

Work Order No: 609123

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com Page 1 of 2

Project Manager:	Kevin Pasternak	Bill to: (if different)	
Company Name:	AECOM	Company Name:	
Address:	9400 Amberglen BLVD	Address:	
City, State ZIP:	Austin, TX	City, State ZIP:	
Phone:	(512) 419-5293	Email:	Kevin.Pasternak@aecom.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	CVU84	Turn Around	
Project Number:	60591820	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Sam Whipkey	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.4 | 1.3	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH	Chlorides
Hole1-Surface	S	12/15/18	0843	—	1	✓	✓
Hole1-20	S	12/15/18	0849	20	1	✓	✓
Hole1-30	S	12/15/18	0850	30	1	✓	✓
Hole1-50	S	12/15/18	0852	50	1	✓	✓
Hole2-Surface	S	12/15/18	0902	—	1	✓	✓
Hole2-20	S	12/15/18	0905	20	1	✓	✓
Hole2-30	S	12/15/18	0907	30	1	✓	✓
Hole2-50	S	12/15/18	0910	50	1	✓	✓
Hole3-Surface	S	12/15/18	0915	—	1	✓	✓
Hole3-10	S	12/15/18	0917	10	1	✓	✓

ANALYSIS REQUEST

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Sam Whipkey		12/16/18 1800	2		12/18/18 1550
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

7845 0143 3277

Chain of Custody

Work Order No: 609123

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) www.xenco.com Page 2 of 2

Project Manager:	Kevin Pasternak	Bill to: (if different)	
Company Name:	AECOM	Company Name:	
Address:	9400 Amberglen BLVD	Address:	
City, State ZIP:	Austin, TX	City, State ZIP:	
Phone:	(512) 419-5293	Email:	Kevin_pasternak@aecom.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting:Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	CVU84	Turn Around	
Project Number:	60591820	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Sam Whipkey	Due Date:	

SAMPLE RECEIPT			
Temperature (°C):	1.4/1.3	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Temp Blank: Yes (No) Wet Ice: (Yes) No

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH	Chlorides
Hole3 - 15	S	12/15/18	0918	15	1	✓	✓
Hole 3 - 50	S	12/15/18	0924	50	1	✓	✓
Hole 4 surface	S	12/15/18	0930	—	1	✓	✓
Hole 4 - 20	S	12/15/18	0935	20	1	✓	✓
Hole 4 - 30	S	12/15/18	0937	30	1	✓	✓
Hole 4 - 50	S	12/15/18	0941	50	1	✓	✓
Hole5 - Surface	S	12/15/18	0950	—	1	✓	✓
Hole 5 - 10	S	12/15/18	0953	10	1	✓	✓
Hole 5 - 30	S	12/15/18	0958	30	1	✓	✓
Hole 5 - 50	S	12/15/18	1000	50	1	✓	✓

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			12/16/18 1800	2 12/16/18 1800		12/18/18 1550
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

7845 0142 2777

ORIGIN ID:BSMA (000) 000-0000
AECOM

9400 AMBERGLEN BLVD

AUSTIN, TX 78729
UNITED STATES US

SHIP DATE: 17DEC18
ACTWGT: 54.80 LB
CAD: 6990515/SSF01922
DIMS: 26x15x14 IN

BILL THIRD PARTY

TO

XENCO LABORATORIES
1211 W FLORIDA AVE

MIDLAND TX 79701
(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx
Express

E

J821118081501uv

TRK# 0201 **7845 0143 3277**

TUE - 18 DEC 10:30A
PRIORITY OVERNIGHT

DSR AHS
79701
TX-US **LBB**

AL MAFA

Part # 156297-435 RRDB EXP 11/19

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: AECOM

Date/ Time Received: 12/18/2018 03:50:00 PM

Work Order #: 609123

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 12/18/2018

Checklist reviewed by: Kelsey Brooks Date: 12/21/2018

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 600-187804-1
Client Project/Site: Central Vaccum Unit 84

For:
AECOM
19219 Katy Freeway
Suite 100
Houston, Texas 77094

Attn: Mr. Wallace Gilmore

Authorized for release by:
7/16/2019 1:40:41 PM

Sachin Kudchadkar, Senior Project Manager
(713)690-4444
sachin.kudchadkar@testamericainc.com

Client: AECOM
Project/Site: Central Vaccum Unit 84

Laboratory Job ID: 600-187804-1

Table of Contents

Case Narrative

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

Job ID: 600-187804-1

Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative
600-187804-1

Comments
No additional comments.

Receipt
The samples were received on 6/28/2019 9:56 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.4° C.

Receipt Exceptions

A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC).

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Industrial Hygiene
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
8015B	Gasoline Range Organics - (GC)	SW846	TAL CAN
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL HOU
3546	Microwave Extraction	SW846	TAL CAN
5030A	Purge and Trap	SW846	TAL CAN
5035	Closed System Purge & Trap/Laboratory Preservation	SW846	TAL HOU
DI Leach	Deionized Water Leaching Procedure (Routine)	ASTM	TAL HOU

Protocol References:

ASTM = ASTM International

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

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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

Sample Summary

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-187804-1	CVU84-01-0-1	Solid	06/27/19 12:08	06/28/19 09:56	
600-187804-2	CVU84-01-1-2	Solid	06/27/19 12:11	06/28/19 09:56	
600-187804-3	CVU84-01-2-3	Solid	06/27/19 12:13	06/28/19 09:56	
600-187804-4	CVU84-02-0-1	Solid	06/27/19 12:16	06/28/19 09:56	
600-187804-5	CVU84-03-0-1	Solid	06/27/19 12:22	06/28/19 09:56	
600-187804-6	CVU84-04-0-1	Solid	06/27/19 12:27	06/28/19 09:56	
600-187804-7	CVU84-05-0-1	Solid	06/27/19 12:35	06/28/19 09:56	
600-187804-8	CVU84-06-0-1	Solid	06/27/19 12:41	06/28/19 09:56	
600-187804-9	CVU84-07-0-1	Solid	06/27/19 12:47	06/28/19 09:56	

Client Sample Results

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

Client Sample ID: CVU84-01-0-1
Lab Sample ID: 600-187804-1
Date Collected: 06/27/19 12:08
Matrix: Solid
Date Received: 06/28/19 09:56

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4390		79.8	10.7	mg/Kg			07/02/19 15:12	20

Client Sample ID: CVU84-01-1-2
Lab Sample ID: 600-187804-2
Date Collected: 06/27/19 12:11
Matrix: Solid
Date Received: 06/28/19 09:56

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4880		79.7	10.6	mg/Kg			07/02/19 20:18	20

Client Sample ID: CVU84-01-2-3
Lab Sample ID: 600-187804-3
Date Collected: 06/27/19 12:13
Matrix: Solid
Date Received: 06/28/19 09:56

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000533	U	0.00423	0.000533	mg/Kg		06/28/19 15:00	07/01/19 12:39	1
Ethylbenzene	0.000863	U	0.00423	0.000863	mg/Kg		06/28/19 15:00	07/01/19 12:39	1
Toluene	0.00117	U	0.00423	0.00117	mg/Kg		06/28/19 15:00	07/01/19 12:39	1
Xylenes, Total	0.000956	U	0.00423	0.000956	mg/Kg		06/28/19 15:00	07/01/19 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*61 - 130*	*06/28/19 15:00*	*07/01/19 12:39*	*1*
Dibromofluoromethane	*88*		*68 - 140*	*06/28/19 15:00*	*07/01/19 12:39*	*1*
Toluene-d8 (Surr)	*78*		*50 - 130*	*06/28/19 15:00*	*07/01/19 12:39*	*1*
4-Bromofluorobenzene	*92*		*57 - 140*	*06/28/19 15:00*	*07/01/19 12:39*	*1*

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	64.8	U	101	64.8	ug/Kg		07/05/19 14:10	07/05/19 18:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*89*		*43 - 120*	*07/05/19 14:10*	*07/05/19 18:55*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10 - C28]	33.5	U	48.5	33.5	mg/Kg		07/10/19 09:48	07/11/19 23:48	1
C28-C36	33.5	U	48.5	33.5	mg/Kg		07/10/19 09:48	07/11/19 23:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*76*		*26 - 125*	*07/10/19 09:48*	*07/11/19 23:48*	*1*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5010		198	26.4	mg/Kg			07/02/19 22:23	50

Client Sample Results

Client: AECOM Job ID: 600-187804-1
Project/Site: Central Vaccum Unit 84

Client Sample ID: CVU84-02-0-1 Lab Sample ID: 600-187804-4
Date Collected: 06/27/19 12:16 **Matrix: Solid**
Date Received: 06/28/19 09:56

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	370		7.98	1.07	mg/Kg			07/02/19 14:36	2

Client Sample ID: CVU84-03-0-1 Lab Sample ID: 600-187804-5
Date Collected: 06/27/19 12:22 **Matrix: Solid**
Date Received: 06/28/19 09:56

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.54		3.98	0.532	mg/Kg			07/02/19 18:48	1

Client Sample ID: CVU84-04-0-1 Lab Sample ID: 600-187804-6
Date Collected: 06/27/19 12:27 **Matrix: Solid**
Date Received: 06/28/19 09:56

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.529	U	3.96	0.529	mg/Kg			07/02/19 22:59	1

Client Sample ID: CVU84-05-0-1 Lab Sample ID: 600-187804-7
Date Collected: 06/27/19 12:35 **Matrix: Solid**
Date Received: 06/28/19 09:56

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1370		39.7	5.30	mg/Kg			07/02/19 14:00	10

Client Sample ID: CVU84-06-0-1 Lab Sample ID: 600-187804-8
Date Collected: 06/27/19 12:41 **Matrix: Solid**
Date Received: 06/28/19 09:56

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33.3		3.98	0.531	mg/Kg			07/08/19 19:45	1

Client Sample ID: CVU84-07-0-1 Lab Sample ID: 600-187804-9
Date Collected: 06/27/19 12:47 **Matrix: Solid**
Date Received: 06/28/19 09:56

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9330		398	53.1	mg/Kg			07/08/19 20:03	100

Definitions/Glossary

Client: AECOM Job ID: 600-187804-1
Project/Site: Central Vaccum Unit 84

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.

GC VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.

GC Semi VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.

HPLC/IC

Qualifier	Qualifier Description
E	Result is greater then the UQL and the concentration is an estimated value.
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.
U	Analyte was not detected at or above the SDL.

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Surrogate Summary

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA (61-130)	DBFM (68-140)	TOL (50-130)	BFB (57-140)
600-187804-3	CVU84-01-2-3	93	88	78	92
LCS 600-268395/3	Lab Control Sample	73	80	83	95
LCSD 600-268395/4	Lab Control Sample Dup	77	81	83	95
MB 600-268395/6	Method Blank	99	90	79	91

Surrogate Legend

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

Method: 8015B - Gasoline Range Organics - (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	TFT2 (43-120)
600-187804-3	CVU84-01-2-3	89
600-187804-3 MS	CVU84-01-2-3	93
600-187804-3 MSD	CVU84-01-2-3	81
LCS 240-389904/2-A	Lab Control Sample	79
MB 240-389904/1-A	Method Blank	93

Surrogate Legend

TFT = Trifluorotoluene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OTPH1 (26-125)
600-187804-3	CVU84-01-2-3	76
LCS 240-390478/19-A	Lab Control Sample	69
MB 240-390478/18-A	Method Blank	69

Surrogate Legend

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-268395/6
Matrix: Solid
Analysis Batch: 268395

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

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			07/01/19 11:27	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			07/01/19 11:27	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			07/01/19 11:27	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			07/01/19 11:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*61 - 130*		*07/01/19 11:27*	*1*
Dibromofluoromethane	*90*		*68 - 140*		*07/01/19 11:27*	*1*
Toluene-d8 (Surr)	*79*		*50 - 130*		*07/01/19 11:27*	*1*
4-Bromofluorobenzene	*91*		*57 - 140*		*07/01/19 11:27*	*1*

Lab Sample ID: LCS 600-268395/3
Matrix: Solid
Analysis Batch: 268395

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.04739		mg/Kg		95	70 - 131
Ethylbenzene	0.0500	0.04787		mg/Kg		96	66 - 130
Toluene	0.0500	0.04620		mg/Kg		92	67 - 130
Xylenes, Total	0.100	0.09559		mg/Kg		96	63 - 130
m-Xylene & p-Xylene	0.0500	0.04776		mg/Kg		96	64 - 130
o-Xylene	0.0500	0.04783		mg/Kg		96	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*73*		*61 - 130*
Dibromofluoromethane	*80*		*68 - 140*
Toluene-d8 (Surr)	*83*		*50 - 130*
4-Bromofluorobenzene	*95*		*57 - 140*

Lab Sample ID: LCSD 600-268395/4
Matrix: Solid
Analysis Batch: 268395

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	0.0500	0.04824		mg/Kg		96	70 - 131	2	30
Ethylbenzene	0.0500	0.04884		mg/Kg		98	66 - 130	2	30
Toluene	0.0500	0.04683		mg/Kg		94	67 - 130	1	30
Xylenes, Total	0.100	0.09857		mg/Kg		99	63 - 130	3	30
m-Xylene & p-Xylene	0.0500	0.04926		mg/Kg		99	64 - 130	3	30
o-Xylene	0.0500	0.04931		mg/Kg		99	62 - 130	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*77*		*61 - 130*
Dibromofluoromethane	*81*		*68 - 140*
Toluene-d8 (Surr)	*83*		*50 - 130*
4-Bromofluorobenzene	*95*		*57 - 140*

QC Sample Results

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 240-389904/1-A
Matrix: Solid
Analysis Batch: 389909

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 389904

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	64.2	U	100	64.2	ug/Kg		07/05/19 14:10	07/05/19 17:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*93*		*43 - 120*	*07/05/19 14:10*	*07/05/19 17:25*	*1*

Lab Sample ID: LCS 240-389904/2-A
Matrix: Solid
Analysis Batch: 389909

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 389904

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	800	840.8		ug/Kg		105	76 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*79*		*43 - 120*

Lab Sample ID: 600-187804-3 MS
Matrix: Solid
Analysis Batch: 389909

Client Sample ID: CVU84-01-2-3
Prep Type: Total/NA
Prep Batch: 389904

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	64.8	U	815	727.0		ug/Kg		89	25 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*93*		*43 - 120*

Lab Sample ID: 600-187804-3 MSD
Matrix: Solid
Analysis Batch: 389909

Client Sample ID: CVU84-01-2-3
Prep Type: Total/NA
Prep Batch: 389904

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	64.8	U	802	709.7		ug/Kg		89	25 - 120	2	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Trifluorotoluene (Surr)	*81*		*43 - 120*

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

Lab Sample ID: MB 240-390478/18-A
Matrix: Solid
Analysis Batch: 390809

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 390478

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10 - C28]	34.6	U	50.0	34.6	mg/Kg		07/10/19 09:48	07/11/19 17:45	1
C28-C36	34.6	U	50.0	34.6	mg/Kg		07/10/19 09:48	07/11/19 17:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*69*		*26 - 125*	*07/10/19 09:48*	*07/11/19 17:45*	*1*

QC Sample Results

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

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

Lab Sample ID: LCS 240-390478/19-A
Matrix: Solid
Analysis Batch: 390809

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 390478

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10 - C28]			250	182.9		mg/Kg		73	45 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*69*		*26 - 125*

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 600-268541/1-A
Matrix: Solid
Analysis Batch: 268534

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			07/02/19 12:30	1

Lab Sample ID: LCS 600-268541/2-A
Matrix: Solid
Analysis Batch: 268534

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			200	196.8		mg/Kg		98	90 - 110		

Lab Sample ID: 600-187699-A-10-B MS
Matrix: Solid
Analysis Batch: 268534

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	593		198	722.0	N1	mg/Kg		65	80 - 120		

Lab Sample ID: 600-187699-A-10-C MSD
Matrix: Solid
Analysis Batch: 268534

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	593		198	721.8	N1	mg/Kg		65	80 - 120	0	20

Lab Sample ID: 600-187822-B-5-C MSD
Matrix: Solid
Analysis Batch: 268534

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4040	E	499	3667	E	mg/Kg					

Lab Sample ID: 600-187822-B-13-B MS
Matrix: Solid
Analysis Batch: 268534

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	5950		2000	6201	N1	mg/Kg		13	80 - 120		

QC Sample Results

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 600-187822-B-13-C MSD
Matrix: Solid
Analysis Batch: 268534

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5950		2000	5985	N1	mg/Kg		2	80 - 120	4	20

Lab Sample ID: MB 600-268903/1-A
Matrix: Solid
Analysis Batch: 268878

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			07/08/19 15:17	1

Lab Sample ID: LCS 600-268903/2-A
Matrix: Solid
Analysis Batch: 268878

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			200	198.0		mg/Kg		99	90 - 110		

Lab Sample ID: 600-187804-9 MS
Matrix: Solid
Analysis Batch: 268878

Client Sample ID: CVU84-07-0-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	9330		9940	14300	N1	mg/Kg		50	80 - 120		

Lab Sample ID: 600-187804-9 MSD
Matrix: Solid
Analysis Batch: 268878

Client Sample ID: CVU84-07-0-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9330		9940	14450	N1	mg/Kg		52	80 - 120	1	20

Unadjusted Detection Limits

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Prep: 5035

Analyte	MQL	MDL	Units
Benzene	0.00500	0.000630	mg/Kg
Ethylbenzene	0.00500	0.00102	mg/Kg
Toluene	0.00500	0.00138	mg/Kg
Xylenes, Total	0.00500	0.00113	mg/Kg

Method: 8015B - Gasoline Range Organics - (GC)

Prep: 5030A

Analyte	MQL	MDL	Units
C6-C10	100	64.2	ug/Kg

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

Prep: 3546

Analyte	MQL	MDL	Units
C28-C36	50.0	34.6	mg/Kg
Diesel Range Organics [C10 - C28]	50.0	34.6	mg/Kg

Method: 9056A - Anions, Ion Chromatography - Soluble

Leach: DI Leach

Analyte	MQL	MDL	Units
Chloride	4.00	0.534	mg/Kg

QC Association Summary

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

GC/MS VOA

Analysis Batch: 268395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187804-3	CVU84-01-2-3	Total/NA	Solid	8260B	268424
MB 600-268395/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-268395/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-268395/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 268424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187804-3	CVU84-01-2-3	Total/NA	Solid	5035	

GC VOA

Prep Batch: 389904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187804-3	CVU84-01-2-3	Total/NA	Solid	5030A	
MB 240-389904/1-A	Method Blank	Total/NA	Solid	5030A	
LCS 240-389904/2-A	Lab Control Sample	Total/NA	Solid	5030A	
600-187804-3 MS	CVU84-01-2-3	Total/NA	Solid	5030A	
600-187804-3 MSD	CVU84-01-2-3	Total/NA	Solid	5030A	

Analysis Batch: 389909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187804-3	CVU84-01-2-3	Total/NA	Solid	8015B	389904
MB 240-389904/1-A	Method Blank	Total/NA	Solid	8015B	389904
LCS 240-389904/2-A	Lab Control Sample	Total/NA	Solid	8015B	389904
600-187804-3 MS	CVU84-01-2-3	Total/NA	Solid	8015B	389904
600-187804-3 MSD	CVU84-01-2-3	Total/NA	Solid	8015B	389904

GC Semi VOA

Prep Batch: 390478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187804-3	CVU84-01-2-3	Total/NA	Solid	3546	
MB 240-390478/18-A	Method Blank	Total/NA	Solid	3546	
LCS 240-390478/19-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 390809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187804-3	CVU84-01-2-3	Total/NA	Solid	8015B	390478
MB 240-390478/18-A	Method Blank	Total/NA	Solid	8015B	390478
LCS 240-390478/19-A	Lab Control Sample	Total/NA	Solid	8015B	390478

HPLC/IC

Analysis Batch: 268534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187804-1	CVU84-01-0-1	Soluble	Solid	9056A	268541
600-187804-2	CVU84-01-1-2	Soluble	Solid	9056A	268541
600-187804-3	CVU84-01-2-3	Soluble	Solid	9056A	268541
600-187804-4	CVU84-02-0-1	Soluble	Solid	9056A	268541
600-187804-5	CVU84-03-0-1	Soluble	Solid	9056A	268541
600-187804-6	CVU84-04-0-1	Soluble	Solid	9056A	268541
600-187804-7	CVU84-05-0-1	Soluble	Solid	9056A	268541

QC Association Summary

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

HPLC/IC (Continued)

Analysis Batch: 268534 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-268541/1-A	Method Blank	Soluble	Solid	9056A	268541
LCS 600-268541/2-A	Lab Control Sample	Soluble	Solid	9056A	268541
600-187699-A-10-B MS	Matrix Spike	Soluble	Solid	9056A	268541
600-187699-A-10-C MSD	Matrix Spike Duplicate	Soluble	Solid	9056A	268541
600-187822-B-5-B MS	Matrix Spike	Soluble	Solid	9056A	268541
600-187822-B-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	9056A	268541
600-187822-B-13-B MS	Matrix Spike	Soluble	Solid	9056A	268541
600-187822-B-13-C MSD	Matrix Spike Duplicate	Soluble	Solid	9056A	268541

Leach Batch: 268541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187804-1	CVU84-01-0-1	Soluble	Solid	DI Leach	
600-187804-2	CVU84-01-1-2	Soluble	Solid	DI Leach	
600-187804-3	CVU84-01-2-3	Soluble	Solid	DI Leach	
600-187804-4	CVU84-02-0-1	Soluble	Solid	DI Leach	
600-187804-5	CVU84-03-0-1	Soluble	Solid	DI Leach	
600-187804-6	CVU84-04-0-1	Soluble	Solid	DI Leach	
600-187804-7	CVU84-05-0-1	Soluble	Solid	DI Leach	
MB 600-268541/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 600-268541/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
600-187699-A-10-B MS	Matrix Spike	Soluble	Solid	DI Leach	
600-187699-A-10-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
600-187822-B-5-B MS	Matrix Spike	Soluble	Solid	DI Leach	
600-187822-B-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
600-187822-B-13-B MS	Matrix Spike	Soluble	Solid	DI Leach	
600-187822-B-13-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 268878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187804-8	CVU84-06-0-1	Soluble	Solid	9056A	268903
600-187804-9	CVU84-07-0-1	Soluble	Solid	9056A	268903
MB 600-268903/1-A	Method Blank	Soluble	Solid	9056A	268903
LCS 600-268903/2-A	Lab Control Sample	Soluble	Solid	9056A	268903
600-187804-9 MS	CVU84-07-0-1	Soluble	Solid	9056A	268903
600-187804-9 MSD	CVU84-07-0-1	Soluble	Solid	9056A	268903

Leach Batch: 268903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187804-8	CVU84-06-0-1	Soluble	Solid	DI Leach	
600-187804-9	CVU84-07-0-1	Soluble	Solid	DI Leach	
MB 600-268903/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 600-268903/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
600-187804-9 MS	CVU84-07-0-1	Soluble	Solid	DI Leach	
600-187804-9 MSD	CVU84-07-0-1	Soluble	Solid	DI Leach	

Lab Chronicle

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

Client Sample ID: CVU84-01-0-1
Date Collected: 06/27/19 12:08
Date Received: 06/28/19 09:56

Lab Sample ID: 600-187804-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			268541	07/02/19 12:43	SKR	TAL HOU
Soluble	Analysis	9056A		20	268534	07/02/19 15:12	SKR	TAL HOU

Client Sample ID: CVU84-01-1-2
Date Collected: 06/27/19 12:11
Date Received: 06/28/19 09:56

Lab Sample ID: 600-187804-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			268541	07/02/19 12:43	SKR	TAL HOU
Soluble	Analysis	9056A		20	268534	07/02/19 20:18	SKR	TAL HOU

Client Sample ID: CVU84-01-2-3
Date Collected: 06/27/19 12:13
Date Received: 06/28/19 09:56

Lab Sample ID: 600-187804-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			268424	06/28/19 15:00	WS1	TAL HOU
Total/NA	Analysis	8260B		1	268395	07/01/19 12:39	WS1	TAL HOU
Total/NA	Prep	5030A			389904	07/05/19 14:10	KMG	TAL CAN
Total/NA	Analysis	8015B		1	389909	07/05/19 18:55	KMG	TAL CAN
Total/NA	Prep	3546			390478	07/10/19 09:48	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	390809	07/11/19 23:48	DEB	TAL CAN
Soluble	Leach	DI Leach			268541	07/02/19 17:11	SKR	TAL HOU
Soluble	Analysis	9056A		50	268534	07/02/19 22:23	SKR	TAL HOU

Client Sample ID: CVU84-02-0-1
Date Collected: 06/27/19 12:16
Date Received: 06/28/19 09:56

Lab Sample ID: 600-187804-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			268541	07/02/19 12:43	SKR	TAL HOU
Soluble	Analysis	9056A		2	268534	07/02/19 14:36	SKR	TAL HOU

Client Sample ID: CVU84-03-0-1
Date Collected: 06/27/19 12:22
Date Received: 06/28/19 09:56

Lab Sample ID: 600-187804-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			268541	07/02/19 12:43	SKR	TAL HOU
Soluble	Analysis	9056A		1	268534	07/02/19 18:48	SKR	TAL HOU

Lab Chronicle

Client: AECOM
Job ID: 600-187804-1
Project/Site: Central Vaccum Unit 84

Client Sample ID: CVU84-04-0-1
Lab Sample ID: 600-187804-6
Date Collected: 06/27/19 12:27
Matrix: Solid
Date Received: 06/28/19 09:56

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			268541	07/02/19 17:12	SKR	TAL HOU
Soluble	Analysis	9056A		1	268534	07/02/19 22:59	SKR	TAL HOU

Client Sample ID: CVU84-05-0-1
Lab Sample ID: 600-187804-7
Date Collected: 06/27/19 12:35
Matrix: Solid
Date Received: 06/28/19 09:56

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			268541	07/02/19 12:43	SKR	TAL HOU
Soluble	Analysis	9056A		10	268534	07/02/19 14:00	SKR	TAL HOU

Client Sample ID: CVU84-06-0-1
Lab Sample ID: 600-187804-8
Date Collected: 06/27/19 12:41
Matrix: Solid
Date Received: 06/28/19 09:56

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			268903	07/08/19 17:35	SKR	TAL HOU
Soluble	Analysis	9056A		1	268878	07/08/19 19:45	SKR	TAL HOU

Client Sample ID: CVU84-07-0-1
Lab Sample ID: 600-187804-9
Date Collected: 06/27/19 12:47
Matrix: Solid
Date Received: 06/28/19 09:56

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			268903	07/08/19 17:35	SKR	TAL HOU
Soluble	Analysis	9056A		100	268878	07/08/19 20:03	SKR	TAL HOU

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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

Accreditation/Certification Summary

Client: AECOM Job ID: 600-187804-1
Project/Site: Central Vaccum Unit 84

Laboratory: Eurofins TestAmerica, Houston

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Texas	NELAP	6	T104704223-18-23	10-31-19

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

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State		2927	02-23-20
California	State Program	9	2927	02-23-20
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-20
Florida	NELAP		E87225	06-30-20
Illinois	NELAP	5	200004	07-31-19 *
Illinois	NELAP		004498	07-31-19
Iowa	State Program	7	421	06-01-21
Kansas	NELAP	7	E-10336	04-30-20
Kentucky (UST)	State Program	4	58	02-23-20
Kentucky (WW)	State Program	4	98016	12-31-19
Minnesota	NELAP	5	039-999-348	12-31-19 *
Minnesota (Petrofund)	State Program	1	3506	07-31-19 *
Nevada	State		OH00048	07-31-19
Nevada	State Program	9	OH00048	07-31-19
New Jersey	NELAP	2	OH001	06-30-20
New Jersey	NELAP		OH001	06-30-20
New York	NELAP	2	10975	03-31-20
New York	NELAP		10975	03-31-20
Ohio VAP	State Program	5	CL0024	06-05-21
Oregon	NELAP	10	4062	02-23-20
Oregon	NELAP		4062	02-23-20
Pennsylvania	NELAP	3	68-00340	08-31-19 *
Pennsylvania	NELAP		68-00340	08-31-19
Texas	NELAP	6	T104704517-18-10	08-31-19 *
Texas	NELAP		T104704517-18-10	08-31-19
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-19 *
Virginia	NELAP		010101	09-14-19
Washington	State		C971	01-12-20
Washington	State Program	10	C971	01-12-20 *
West Virginia DEP	State		210	12-31-19
West Virginia DEP	State Program	3	210	12-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: Seth Frederick	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-69310-18903.1
Client Contact: Mr. Wallace Gilmore	Phone: 505.699.3257	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 1/1
Company: AECOM		Analysis Requested		Job #:
Address: 19219 Katy Freeway Suite 100	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77094				
Phone: 713-520-990(Tel) 713-520-680(Fax)	PO #:			
Email: wallace.gilmore@aecom.com	WO #:			
Project Name: Chevron	Project #: 60008660			
Site: Central Vacuum Unit #84	SSOW#:			

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
Other:

600-187804 Chain of Custody

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)	TX_1005 - (TPH	8260B - BTEX Only	9056_ORGFM_28D - Chloride	1311/ 6010B, 7470A - TCLP metals	moisture	Total Number of containers	Special Instructions/Note
				Preservation Code:			N	N	N	N	N		
CVU84-01-0-1	6/27/19	1208	G	Solid					1				
CVU84-01-1-2	↓	1211	↓	Solid					1				
CVU84-01-2-3	↓	1213	↓	Solid			2	3	1		1		
CVU84-02-0-1	↓	1216	↓	Solid			2	3	1		1		
CVU84-03-0-1	↓	1222	↓	Solid			2	3	1		1		
CVU84-04-0-1	↓	1227	↓	Solid			2	3	1		1		
CVU84-05-0-1	↓	1235	↓	Solid			2	3	1		1		
CVU84-06-0-1	↓	1241	↓	Solid			2	3	1		1		Hold
CVU84-07-0-1	↓	1247	↓	Solid			2	3	1		1		Hold
				Solid									
				Solid									

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:		Method of Shipment:	
Relinquished by: [signature]	Date/Time: 6/27/19 @ 1700	Company: AECOM	Received by: [signature]		Date/Time: 6-28-19 930	Company: [illegible]
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

TestAmerica Houston

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Receipt Ch

Loc: 600
187804

Received: 19 JUN 28 9:56

JOB NUMBER: 804 CLIENT: AECOM

UNPACKED BY: CARRIER/DRIVER: FE

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

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
BW	Y / N	Y / N	0.3	626	+.1	0.4
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	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

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☒ YES ☐ NO ☐ NA

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

COMMENTS:

4840 2906 6474

HS-SA-WI-013 Rev. 3; 07/01/2014

600-187804 Waybill

ORIGIN ID:SATA (210) 641-2112
JULIO AGUILAR

6911 BLANCO RD

SAN ANTONIO, TX 78216
UNITED STATES US

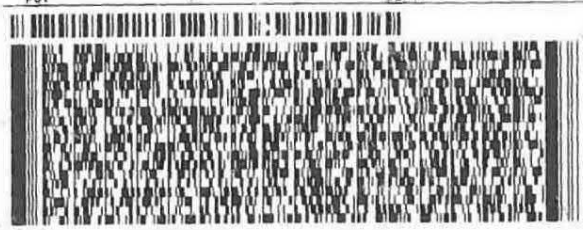
SHIP DATE: 27JUN19
ACTWGT: 61.80 LB
CAD: 6997036/SSF02002
DIMS: 25x14x13 IN

BILL THIRD PARTY

TO **SAMPLE RECIEVING**
TEST AMERICA HOUSTON
6310 ROTHWAY ST

HOUSTON TX 77040

(713) 690-4444 REF: SAMPLING
INV:
PO: DEPT:



FedEx Express

TRK# 0201 **7881 6146 4703**

FRI - 28 JUN 10:30A
PRIORITY OVERNIGHT

AHS
77040

43 LKSA

1-6-17

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-40424.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com	State of Origin: Texas	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-187804-1
Address: 4101 Shuffel Street NW, .	Due Date Requested: 7/8/2019			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Central Vaccum Unit 84	Project #: 60008660			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification - Client ID (Lab ID)	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)	8015B_GRO/5030B_SolidNAC (MOD) Copy Analytes	8015B_DRO/3546 (MOD) Diesel Range Organics [C10-C28]	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
CVU84-01-2-3 (600-187804-3)	6/27/19	12:13 Central		Solid			X	X	3	
CVU84-02-0-1 (600-187804-4)	6/27/19	12:16 Central		Solid			X	X	3	
CVU84-03-0-1 (600-187804-5)	6/27/19	12:22 Central		Solid			X	X	3	
CVU84-04-0-1 (600-187804-6)	6/27/19	12:27 Central		Solid			X	X	3	
CVU84-05-0-1 (600-187804-7)	6/27/19	12:35 Central		Solid			X	X	3	

CIT 4C

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by: Kayle	Date/Time: 7/2 1200	Company	Received by:	Date/Time: 7-3-19 945	Company TA
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 Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client Houston Site Name _____ Cooler unpacked by:

Cooler Received on 7-3-19 Opened on 7-3-19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # 14 Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp. 1.6 °C Corrected Cooler Temp. 1.7 °C
   IR GUN #36 (CF +0.6°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC984738
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

1-6/1-7

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-40424.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com	State of Origin: Texas	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-187804-1
Address: 4101 Shuffel Street NW, ,	Due Date Requested: 7/8/2019			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Central Vaccum Unit 84	Project #: 60008660			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification - Client ID (Lab ID)	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)	8015B_GRO/5030B_SolidNAC (MOD) Copy Analytes	8015B_DRO/3546 (MOD) Diesel Range Organics [C10-C28]	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
CVU84-01-2-3 (600-187804-3)	6/27/19	12:13 Central		Solid			X	X	3	
CVU84-02-0-1 (600-187804-4)	6/27/19	12:16 Central		Solid			X	X	3	
CVU84-03-0-1 (600-187804-5)	6/27/19	12:22 Central		Solid			X	X	3	
CVU84-04-0-1 (600-187804-6)	6/27/19	12:27 Central		Solid			X	X	3	
CVU84-05-0-1 (600-187804-7)	6/27/19	12:35 Central		Solid			X	X	3	

CTT 4C

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification: Unconfirmed	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) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	7/2 1600			7-3-19 945	TA
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 Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client Houston Site Name _____ Cooler unpacked by:

Cooler Received on 7-3-19 Opened on 7-3-19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 14 Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp. 1.6 °C Corrected Cooler Temp. 1.7 °C
   IR GUN #36 (CF +0.6°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC984738
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
16. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: AECOM Job Number: 600-187804-1

Login Number: 187804 **List Source: Eurofins TestAmerica, Houston**
List Number: 1
Creator: Crafton, Tommie S

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	0.4
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.	False	Received Trip Blank(s) not listed on COC.
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.

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

March 24, 2020

Wallace Gilmore
AECOM
19219 Katy Freeway
Suite 100
Houston, TX 77094

Work Order: **HS20030697**

Laboratory Results for: **CVU 084**

Dear Wallace,

ALS Environmental received 25 sample(s) on Mar 16, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Dane J. Wacasey

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Work Order: HS20030697

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20030697-01	CVU084-8, 0-1'	Soil		12-Mar-2020 10:40	16-Mar-2020 09:40	
HS20030697-02	CVU084-8, 1-2'	Soil		12-Mar-2020 10:45	16-Mar-2020 09:40	
HS20030697-03	CVU084-8, 2-3'	Soil		12-Mar-2020 10:50	16-Mar-2020 09:40	
HS20030697-04	CVU084-8, 3-4'	Soil		12-Mar-2020 10:55	16-Mar-2020 09:40	
HS20030697-05	CVU084-8, 4-5'	Soil		12-Mar-2020 11:00	16-Mar-2020 09:40	
HS20030697-06	CVU084-9, 0-1'	Soil		12-Mar-2020 11:10	16-Mar-2020 09:40	
HS20030697-07	CVU084-9, 1-2'	Soil		12-Mar-2020 11:15	16-Mar-2020 09:40	
HS20030697-08	CVU084-9, 2-3'	Soil		12-Mar-2020 11:20	16-Mar-2020 09:40	
HS20030697-09	CVU084-9, 3-4'	Soil		12-Mar-2020 11:25	16-Mar-2020 09:40	
HS20030697-10	CVU084-9, 4-5'	Soil		12-Mar-2020 11:30	16-Mar-2020 09:40	
HS20030697-11	CVU084-10, 0-1'	Soil		12-Mar-2020 11:45	16-Mar-2020 09:40	
HS20030697-12	CVU084-10, 1-2'	Soil		12-Mar-2020 11:50	16-Mar-2020 09:40	
HS20030697-13	CVU084-10, 2-3'	Soil		12-Mar-2020 11:55	16-Mar-2020 09:40	
HS20030697-14	CVU084-10, 3-4'	Soil		12-Mar-2020 12:00	16-Mar-2020 09:40	
HS20030697-15	CVU084-10, 4-5'	Soil		12-Mar-2020 12:05	16-Mar-2020 09:40	
HS20030697-16	CVU084-11, 0-1'	Soil		12-Mar-2020 12:15	16-Mar-2020 09:40	
HS20030697-17	CVU084-11, 1-2'	Soil		12-Mar-2020 12:20	16-Mar-2020 09:40	
HS20030697-18	CVU084-11, 2-3'	Soil		12-Mar-2020 12:25	16-Mar-2020 09:40	
HS20030697-19	CVU084-11, 3-4'	Soil		12-Mar-2020 12:30	16-Mar-2020 09:40	
HS20030697-20	CVU084-11, 4-5'	Soil		12-Mar-2020 12:35	16-Mar-2020 09:40	
HS20030697-21	CVU084-12, 0-1'	Soil		12-Mar-2020 12:45	16-Mar-2020 09:40	
HS20030697-22	CVU084-12, 1-2'	Soil		12-Mar-2020 12:50	16-Mar-2020 09:40	
HS20030697-23	CVU084-12, 2-3'	Soil		12-Mar-2020 12:55	16-Mar-2020 09:40	
HS20030697-24	CVU084-12, 3-4'	Soil		12-Mar-2020 13:00	16-Mar-2020 09:40	
HS20030697-25	CVU084-12, 4-5'	Soil		12-Mar-2020 13:05	16-Mar-2020 09:40	

ALS Houston, US Date: 24-Mar-20

Client: AECOM **CASE NARRATIVE**
Project: CVU 084
Work Order: HS20030697

GC Semivolatiles by Method SW8015M

Batch ID: 151858,151888

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GC Volatiles by Method SW8015

Batch ID: R358371

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R358451

Sample ID: HS20030728-01MSD

- MSD is for an unrelated sample

GCMS Volatiles by Method SW8260

Batch ID: R358645

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R358646

Sample ID: HS20030698-05MS

- MS and MSD are for an unrelated sample

Batch ID: R358681

Sample ID: HS20030674-13MS

- MS and MSD are for an unrelated sample

WetChemistry by Method ASTM D2216

Batch ID: R358762,R358763

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9250

Batch ID: 151939,151940

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-8, 0-1'
Collection Date: 12-Mar-2020 10:40

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-01
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**14.0**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:28
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: JHD
Chloride	**5.17**	J	**3.16**	**11.5**	**mg/Kg-dry**	1	20-Mar-2020 18:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-8, 1-2'
Collection Date: 12-Mar-2020 10:45

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-02
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**4.93**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:28
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 20-Mar-2020		Analyst: JHD
Chloride	**174**		**2.87**	**10.5**	**mg/Kg-dry**	1	20-Mar-2020 18:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-8, 2-3'
Collection Date: 12-Mar-2020 10:50

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-03
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: QX
Benzene	< 0.00051		0.00051	0.0051	mg/Kg-dry	1	21-Mar-2020 22:56
Ethylbenzene	< 0.00071		0.00071	0.0051	mg/Kg-dry	1	21-Mar-2020 22:56
Toluene	< 0.00061		0.00061	0.0051	mg/Kg-dry	1	21-Mar-2020 22:56
Xylenes, Total	< 0.0010		0.0010	0.0051	mg/Kg-dry	1	21-Mar-2020 22:56
Surr: 1,2-Dichloroethane-d4	*104*			*70-126*	*%REC*	*1*	*21-Mar-2020 22:56*
Surr: 4-Bromofluorobenzene	*99.7*			*70-130*	*%REC*	*1*	*21-Mar-2020 22:56*
Surr: Dibromofluoromethane	*103*			*70-130*	*%REC*	*1*	*21-Mar-2020 22:56*
Surr: Toluene-d8	*104*			*70-130*	*%REC*	*1*	*21-Mar-2020 22:56*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.010		0.010	0.051	mg/Kg-dry	1	17-Mar-2020 14:28
Surr: 4-Bromofluorobenzene	*92.6*			*70-123*	*%REC*	*1*	*17-Mar-2020 14:28*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 18-Mar-2020		Analyst: PVL
TPH (Diesel Range)	**1.7**	J	**0.51**	**1.7**	**mg/Kg-dry**	1	19-Mar-2020 12:55
TPH (Motor Oil Range)	**4.5**		**0.51**	**3.5**	**mg/Kg-dry**	1	19-Mar-2020 12:55
Surr: 2-Fluorobiphenyl	*90.0*			*60-129*	*%REC*	*1*	*19-Mar-2020 12:55*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**2.98**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:28
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: JHD
Chloride	**135**		**2.80**	**10.2**	**mg/Kg-dry**	1	20-Mar-2020 18:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-8, 3-4'
Collection Date: 12-Mar-2020 10:55

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-04
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: QX
Benzene	< 0.00052		0.00052	0.0052	mg/Kg-dry	1	20-Mar-2020 22:23
Ethylbenzene	< 0.00073		0.00073	0.0052	mg/Kg-dry	1	20-Mar-2020 22:23
Toluene	< 0.00063		0.00063	0.0052	mg/Kg-dry	1	20-Mar-2020 22:23
Xylenes, Total	< 0.0010		0.0010	0.0052	mg/Kg-dry	1	20-Mar-2020 22:23
Surr: 1,2-Dichloroethane-d4	*101*			*70-126*	*%REC*	*1*	*20-Mar-2020 22:23*
Surr: 4-Bromofluorobenzene	*100*			*70-130*	*%REC*	*1*	*20-Mar-2020 22:23*
Surr: Dibromofluoromethane	*101*			*70-130*	*%REC*	*1*	*20-Mar-2020 22:23*
Surr: Toluene-d8	*99.7*			*70-130*	*%REC*	*1*	*20-Mar-2020 22:23*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.054	mg/Kg-dry	1	17-Mar-2020 14:44
Surr: 4-Bromofluorobenzene	*92.7*			*70-123*	*%REC*	*1*	*17-Mar-2020 14:44*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 18-Mar-2020		Analyst: PVL
TPH (Diesel Range)	< 0.53		0.53	1.8	mg/Kg-dry	1	19-Mar-2020 13:19
TPH (Motor Oil Range)	**2.4**	J	**0.53**	**3.6**	**mg/Kg-dry**	1	19-Mar-2020 13:19
Surr: 2-Fluorobiphenyl	*88.3*			*60-129*	*%REC*	*1*	*19-Mar-2020 13:19*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**6.56**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:28
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: JHD
Chloride	**442**		**2.92**	**10.6**	**mg/Kg-dry**	1	20-Mar-2020 18:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-8, 4-5'
Collection Date: 12-Mar-2020 11:00

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-05
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**6.87**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:28
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 20-Mar-2020		Analyst: JHD
Chloride	**532**		**2.94**	**10.7**	**mg/Kg-dry**	1	20-Mar-2020 18:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-9, 0-1'
Collection Date: 12-Mar-2020 11:10

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-06
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**12.5**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:28
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: JHD
Chloride	**7.78**	J	**3.12**	**11.4**	**mg/Kg-dry**	1	20-Mar-2020 18:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-9, 1-2'
Collection Date: 12-Mar-2020 11:15

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-07
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**8.45**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:28
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: JHD
Chloride	**94.0**		**2.99**	**10.9**	**mg/Kg-dry**	1	20-Mar-2020 18:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-9, 2-3'
Collection Date: 12-Mar-2020 11:20

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-08
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: QX
Benzene	< 0.00052		0.00052	0.0052	mg/Kg-dry	1	20-Mar-2020 21:08
Ethylbenzene	< 0.00073		0.00073	0.0052	mg/Kg-dry	1	20-Mar-2020 21:08
Toluene	< 0.00063		0.00063	0.0052	mg/Kg-dry	1	20-Mar-2020 21:08
Xylenes, Total	< 0.0010		0.0010	0.0052	mg/Kg-dry	1	20-Mar-2020 21:08
Surr: 1,2-Dichloroethane-d4	*102*			*70-126*	*%REC*	*1*	*20-Mar-2020 21:08*
Surr: 4-Bromofluorobenzene	*99.3*			*70-130*	*%REC*	*1*	*20-Mar-2020 21:08*
Surr: Dibromofluoromethane	*102*			*70-130*	*%REC*	*1*	*20-Mar-2020 21:08*
Surr: Toluene-d8	*103*			*70-130*	*%REC*	*1*	*20-Mar-2020 21:08*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.055	mg/Kg-dry	1	18-Mar-2020 14:59
Surr: 4-Bromofluorobenzene	*93.4*			*70-123*	*%REC*	*1*	*18-Mar-2020 14:59*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 18-Mar-2020		Analyst: PVL
TPH (Diesel Range)	**0.57**	J	**0.54**	**1.8**	**mg/Kg-dry**	1	19-Mar-2020 13:44
TPH (Motor Oil Range)	**4.8**		**0.54**	**3.7**	**mg/Kg-dry**	1	19-Mar-2020 13:44
Surr: 2-Fluorobiphenyl	*81.9*			*60-129*	*%REC*	*1*	*19-Mar-2020 13:44*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**7.19**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:28
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: JHD
Chloride	**262**		**2.93**	**10.7**	**mg/Kg-dry**	1	20-Mar-2020 18:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-9, 3-4'
Collection Date: 12-Mar-2020 11:25

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-09
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: QX
Benzene	< 0.00051		0.00051	0.0051	mg/Kg-dry	1	20-Mar-2020 21:33
Ethylbenzene	< 0.00072		0.00072	0.0051	mg/Kg-dry	1	20-Mar-2020 21:33
Toluene	< 0.00062		0.00062	0.0051	mg/Kg-dry	1	20-Mar-2020 21:33
Xylenes, Total	< 0.0010		0.0010	0.0051	mg/Kg-dry	1	20-Mar-2020 21:33
Surr: 1,2-Dichloroethane-d4	*103*			*70-126*	*%REC*	*1*	*20-Mar-2020 21:33*
Surr: 4-Bromofluorobenzene	*100*			*70-130*	*%REC*	*1*	*20-Mar-2020 21:33*
Surr: Dibromofluoromethane	*102*			*70-130*	*%REC*	*1*	*20-Mar-2020 21:33*
Surr: Toluene-d8	*102*			*70-130*	*%REC*	*1*	*20-Mar-2020 21:33*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.057	mg/Kg-dry	1	17-Mar-2020 16:26
Surr: 4-Bromofluorobenzene	*92.7*			*70-123*	*%REC*	*1*	*17-Mar-2020 16:26*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 18-Mar-2020		Analyst: PVL
TPH (Diesel Range)	**0.87**	J	**0.54**	**1.8**	**mg/Kg-dry**	1	19-Mar-2020 14:09
TPH (Motor Oil Range)	**5.8**		**0.54**	**3.7**	**mg/Kg-dry**	1	19-Mar-2020 14:09
Surr: 2-Fluorobiphenyl	*79.0*			*60-129*	*%REC*	*1*	*19-Mar-2020 14:09*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**7.41**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:28
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: JHD
Chloride	**312**		**2.91**	**10.6**	**mg/Kg-dry**	1	20-Mar-2020 18:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-9, 4-5'
Collection Date: 12-Mar-2020 11:30

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-10
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**4.39**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:28
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: JHD
Chloride	**62.6**		**2.85**	**10.4**	**mg/Kg-dry**	1	20-Mar-2020 18:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-10, 0-1'
Collection Date: 12-Mar-2020 11:45

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-11
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: QX
Benzene	< 0.00057		0.00057	0.0057	mg/Kg-dry	1	20-Mar-2020 21:58
Ethylbenzene	< 0.00079		0.00079	0.0057	mg/Kg-dry	1	20-Mar-2020 21:58
Toluene	< 0.00068		0.00068	0.0057	mg/Kg-dry	1	20-Mar-2020 21:58
Xylenes, Total	< 0.0011		0.0011	0.0057	mg/Kg-dry	1	20-Mar-2020 21:58
Surr: 1,2-Dichloroethane-d4	*98.7*			*70-126*	*%REC*	*1*	*20-Mar-2020 21:58*
Surr: 4-Bromofluorobenzene	*98.5*			*70-130*	*%REC*	*1*	*20-Mar-2020 21:58*
Surr: Dibromofluoromethane	*102*			*70-130*	*%REC*	*1*	*20-Mar-2020 21:58*
Surr: Toluene-d8	*103*			*70-130*	*%REC*	*1*	*20-Mar-2020 21:58*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.054	mg/Kg-dry	1	17-Mar-2020 16:42
Surr: 4-Bromofluorobenzene	*91.4*			*70-123*	*%REC*	*1*	*17-Mar-2020 16:42*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 18-Mar-2020		Analyst: PVL
TPH (Diesel Range)	**67**		**5.7**	**19**	**mg/Kg-dry**	10	19-Mar-2020 14:33
TPH (Motor Oil Range)	**94**		**5.7**	**38**	**mg/Kg-dry**	10	19-Mar-2020 14:33
Surr: 2-Fluorobiphenyl	*95.3*			*60-129*	*%REC*	*10*	*19-Mar-2020 14:33*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**11.8**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**19,400**		**1550**	**5640**	**mg/Kg-dry**	500	23-Mar-2020 20:52

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-10, 1-2'
Collection Date: 12-Mar-2020 11:50

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-12
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**9.07**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**16,200**		**1490**	**5440**	**mg/Kg-dry**	500	23-Mar-2020 20:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-10, 2-3'
Collection Date: 12-Mar-2020 11:55

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-13
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**4.52**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**6,900**		**140**	**510**	**mg/Kg-dry**	50	23-Mar-2020 20:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-10, 3-4'
Collection Date: 12-Mar-2020 12:00

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-14
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: QX
Benzene	< 0.00050		0.00050	0.0050	mg/Kg-dry	1	20-Mar-2020 22:48
Ethylbenzene	< 0.00070		0.00070	0.0050	mg/Kg-dry	1	20-Mar-2020 22:48
Toluene	< 0.00060		0.00060	0.0050	mg/Kg-dry	1	20-Mar-2020 22:48
Xylenes, Total	< 0.0010		0.0010	0.0050	mg/Kg-dry	1	20-Mar-2020 22:48
Surr: 1,2-Dichloroethane-d4	*101*			*70-126*	*%REC*	*1*	*20-Mar-2020 22:48*
Surr: 4-Bromofluorobenzene	*98.7*			*70-130*	*%REC*	*1*	*20-Mar-2020 22:48*
Surr: Dibromofluoromethane	*102*			*70-130*	*%REC*	*1*	*20-Mar-2020 22:48*
Surr: Toluene-d8	*100*			*70-130*	*%REC*	*1*	*20-Mar-2020 22:48*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.055	mg/Kg-dry	1	17-Mar-2020 16:58
Surr: 4-Bromofluorobenzene	*94.3*			*70-123*	*%REC*	*1*	*17-Mar-2020 16:58*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 18-Mar-2020		Analyst: PVL
TPH (Diesel Range)	**3.1**		**0.52**	**1.8**	**mg/Kg-dry**	1	19-Mar-2020 14:58
TPH (Motor Oil Range)	**4.8**		**0.52**	**3.5**	**mg/Kg-dry**	1	19-Mar-2020 14:58
Surr: 2-Fluorobiphenyl	*83.8*			*60-129*	*%REC*	*1*	*19-Mar-2020 14:58*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**4.21**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**3,870**		**140**	**513**	**mg/Kg-dry**	50	23-Mar-2020 20:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-10, 4-5'
Collection Date: 12-Mar-2020 12:05

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-15
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**6.44**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**2,580**		**146**	**533**	**mg/Kg-dry**	50	23-Mar-2020 20:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-11, 0-1'
Collection Date: 12-Mar-2020 12:15

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-16
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**11.5**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**2,490**		**30.9**	**113**	**mg/Kg-dry**	10	23-Mar-2020 20:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-11, 1-2'
Collection Date: 12-Mar-2020 12:20

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-17
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**14.5**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**2,420**		**31.9**	**116**	**mg/Kg-dry**	10	23-Mar-2020 20:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-11, 2-3'
Collection Date: 12-Mar-2020 12:25

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-18
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: QX
Benzene	< 0.00056		0.00056	0.0056	mg/Kg-dry	1	20-Mar-2020 14:30
Ethylbenzene	< 0.00079		0.00079	0.0056	mg/Kg-dry	1	20-Mar-2020 14:30
Toluene	< 0.00067		0.00067	0.0056	mg/Kg-dry	1	20-Mar-2020 14:30
Xylenes, Total	< 0.0011		0.0011	0.0056	mg/Kg-dry	1	20-Mar-2020 14:30
Surr: 1,2-Dichloroethane-d4	*100*			*70-126*	*%REC*	*1*	*20-Mar-2020 14:30*
Surr: 4-Bromofluorobenzene	*100*			*70-130*	*%REC*	*1*	*20-Mar-2020 14:30*
Surr: Dibromofluoromethane	*101*			*70-130*	*%REC*	*1*	*20-Mar-2020 14:30*
Surr: Toluene-d8	*104*			*70-130*	*%REC*	*1*	*20-Mar-2020 14:30*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.054	mg/Kg-dry	1	17-Mar-2020 17:15
Surr: 4-Bromofluorobenzene	*93.8*			*70-123*	*%REC*	*1*	*17-Mar-2020 17:15*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 19-Mar-2020		Analyst: PVL
TPH (Diesel Range)	**0.70**	J	**0.56**	**1.9**	**mg/Kg-dry**	1	19-Mar-2020 19:33
TPH (Motor Oil Range)	**5.8**		**0.56**	**3.8**	**mg/Kg-dry**	1	19-Mar-2020 19:33
Surr: 2-Fluorobiphenyl	*70.5*			*60-129*	*%REC*	*1*	*19-Mar-2020 19:33*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**10.1**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**3,890**		**30.1**	**110**	**mg/Kg-dry**	10	23-Mar-2020 20:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-11, 3-4'
Collection Date: 12-Mar-2020 12:30

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-19
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: QX
Benzene	< 0.00055		0.00055	0.0055	mg/Kg-dry	1	20-Mar-2020 23:13
Ethylbenzene	< 0.00078		0.00078	0.0055	mg/Kg-dry	1	20-Mar-2020 23:13
Toluene	< 0.00067		0.00067	0.0055	mg/Kg-dry	1	20-Mar-2020 23:13
Xylenes, Total	< 0.0011		0.0011	0.0055	mg/Kg-dry	1	20-Mar-2020 23:13
Surr: 1,2-Dichloroethane-d4	*105*			*70-126*	*%REC*	*1*	*20-Mar-2020 23:13*
Surr: 4-Bromofluorobenzene	*101*			*70-130*	*%REC*	*1*	*20-Mar-2020 23:13*
Surr: Dibromofluoromethane	*103*			*70-130*	*%REC*	*1*	*20-Mar-2020 23:13*
Surr: Toluene-d8	*103*			*70-130*	*%REC*	*1*	*20-Mar-2020 23:13*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.054	mg/Kg-dry	1	17-Mar-2020 17:31
Surr: 4-Bromofluorobenzene	*94.0*			*70-123*	*%REC*	*1*	*17-Mar-2020 17:31*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 19-Mar-2020		Analyst: PVL
TPH (Diesel Range)	**1.5**	J	**0.55**	**1.9**	**mg/Kg-dry**	1	19-Mar-2020 19:58
TPH (Motor Oil Range)	**5.2**		**0.55**	**3.8**	**mg/Kg-dry**	1	19-Mar-2020 19:58
Surr: 2-Fluorobiphenyl	*85.0*			*60-129*	*%REC*	*1*	*19-Mar-2020 19:58*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**9.82**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**3,810**		**29.8**	**109**	**mg/Kg-dry**	10	23-Mar-2020 20:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-11, 4-5'
Collection Date: 12-Mar-2020 12:35

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-20
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**7.29**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**3,050**		**29.3**	**107**	**mg/Kg-dry**	10	23-Mar-2020 20:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-12, 0-1'
Collection Date: 12-Mar-2020 12:45

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-21
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: QX
Benzene	< 0.00055		0.00055	0.0055	mg/Kg-dry	1	21-Mar-2020 11:14
Ethylbenzene	< 0.00077		0.00077	0.0055	mg/Kg-dry	1	21-Mar-2020 11:14
Toluene	< 0.00066		0.00066	0.0055	mg/Kg-dry	1	21-Mar-2020 11:14
Xylenes, Total	< 0.0011		0.0011	0.0055	mg/Kg-dry	1	21-Mar-2020 11:14
Surr: 1,2-Dichloroethane-d4	*101*			*70-126*	*%REC*	*1*	*21-Mar-2020 11:14*
Surr: 4-Bromofluorobenzene	*99.0*			*70-130*	*%REC*	*1*	*21-Mar-2020 11:14*
Surr: Dibromofluoromethane	*101*			*70-130*	*%REC*	*1*	*21-Mar-2020 11:14*
Surr: Toluene-d8	*104*			*70-130*	*%REC*	*1*	*21-Mar-2020 11:14*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.057	mg/Kg-dry	1	17-Mar-2020 17:47
Surr: 4-Bromofluorobenzene	*93.9*			*70-123*	*%REC*	*1*	*17-Mar-2020 17:47*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 19-Mar-2020		Analyst: PVL
TPH (Diesel Range)	**1.2**	J	**0.56**	**1.9**	**mg/Kg-dry**	1	19-Mar-2020 20:22
TPH (Motor Oil Range)	**6.0**		**0.56**	**3.8**	**mg/Kg-dry**	1	19-Mar-2020 20:22
Surr: 2-Fluorobiphenyl	*83.6*			*60-129*	*%REC*	*1*	*19-Mar-2020 20:22*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**10.9**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**89.7**		**3.02**	**11.0**	**mg/Kg-dry**	1	23-Mar-2020 20:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-12, 1-2'
Collection Date: 12-Mar-2020 12:50

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-22
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**8.07**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**53.1**		**2.97**	**10.8**	**mg/Kg-dry**	1	23-Mar-2020 20:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-12, 2-3'
Collection Date: 12-Mar-2020 12:55

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-23
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**7.36**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**56.5**		**2.95**	**10.8**	**mg/Kg-dry**	1	23-Mar-2020 20:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-12, 3-4'
Collection Date: 12-Mar-2020 13:00

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-24
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: QX
Benzene	< 0.00053		0.00053	0.0053	mg/Kg-dry	1	21-Mar-2020 11:39
Ethylbenzene	< 0.00075		0.00075	0.0053	mg/Kg-dry	1	21-Mar-2020 11:39
Toluene	< 0.00064		0.00064	0.0053	mg/Kg-dry	1	21-Mar-2020 11:39
Xylenes, Total	< 0.0011		0.0011	0.0053	mg/Kg-dry	1	21-Mar-2020 11:39
Surr: 1,2-Dichloroethane-d4	*105*			*70-126*	*%REC*	*1*	*21-Mar-2020 11:39*
Surr: 4-Bromofluorobenzene	*101*			*70-130*	*%REC*	*1*	*21-Mar-2020 11:39*
Surr: Dibromofluoromethane	*103*			*70-130*	*%REC*	*1*	*21-Mar-2020 11:39*
Surr: Toluene-d8	*103*			*70-130*	*%REC*	*1*	*21-Mar-2020 11:39*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.054	mg/Kg-dry	1	17-Mar-2020 18:03
Surr: 4-Bromofluorobenzene	*87.9*			*70-123*	*%REC*	*1*	*17-Mar-2020 18:03*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 19-Mar-2020		Analyst: PVL
TPH (Diesel Range)	**1.1**	J	**0.54**	**1.8**	**mg/Kg-dry**	1	19-Mar-2020 20:47
TPH (Motor Oil Range)	**4.8**		**0.54**	**3.7**	**mg/Kg-dry**	1	19-Mar-2020 20:47
Surr: 2-Fluorobiphenyl	*73.3*			*60-129*	*%REC*	*1*	*19-Mar-2020 20:47*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**8.25**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**47.3**		**2.92**	**10.7**	**mg/Kg-dry**	1	23-Mar-2020 20:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
Sample ID: CVU084-12, 4-5'
Collection Date: 12-Mar-2020 13:05

ANALYTICAL REPORT
WorkOrder:HS20030697
Lab ID:HS20030697-25
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**8.15**		**0.0100**	**0.0100**	**wt%**	1	23-Mar-2020 06:31
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 20-Mar-2020		Analyst: YP
Chloride	**45.2**		**2.96**	**10.8**	**mg/Kg-dry**	1	23-Mar-2020 20:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

Batch ID: 3670 **Start Date:** 17 Mar 2020 12:09 **End Date:** 17 Mar 2020 12:09
Method: GASOLINE RANGE ORGANICS BY SW8015C **Prep Code:**

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20030697-03	1	5.125 (g)	5 (mL)	0.98	Bulk (5030B)
HS20030697-04	1	4.958 (g)	5 (mL)	1.01	Bulk (5030B)
HS20030697-08	1	4.851 (g)	5 (mL)	1.03	Bulk (5030B)
HS20030697-09	1	4.749 (g)	5 (mL)	1.05	Bulk (5030B)
HS20030697-11	1	5.243 (g)	5 (mL)	0.95	Bulk (5030B)
HS20030697-14	1	4.769 (g)	5 (mL)	1.05	Bulk (5030B)
HS20030697-18	1	5.132 (g)	5 (mL)	0.97	Bulk (5030B)
HS20030697-19	1	5.077 (g)	5 (mL)	0.98	Bulk (5030B)
HS20030697-21	1	4.975 (g)	5 (mL)	1.01	Bulk (5030B)
HS20030697-24	1	5.015 (g)	5 (mL)	1	Bulk (5030B)

Batch ID: 3676 **Start Date:** 20 Mar 2020 08:51 **End Date:** 20 Mar 2020 08:51
Method: VOLATILES BY SW8260C

Sample ID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS20030697-03	1	5.078 (g)	5 (mL)	0.98	Bulk (5030B)
HS20030697-04	1	5.098 (g)	5 (mL)	0.98	Bulk (5030B)
HS20030697-08	1	5.165 (g)	5 (mL)	0.97	Bulk (5030B)
HS20030697-09	1	5.28 (g)	5 (mL)	0.95	Bulk (5030B)
HS20030697-11	1	5.017 (g)	5 (mL)	1	Bulk (5030B)
HS20030697-14	1	5.21 (g)	5 (mL)	0.96	Bulk (5030B)
HS20030697-18	1	4.973 (g)	5 (mL)	1.01	Bulk (5030B)
HS20030697-19	1	5.025 (g)	5 (mL)	1	Bulk (5030B)
HS20030697-21	1	5.128 (g)	5 (mL)	0.98	Bulk (5030B)
HS20030697-24	1	5.109 (g)	5 (mL)	0.98	Bulk (5030B)

Batch ID: 151858 **Start Date:** 18 Mar 2020 14:30 **End Date:** 18 Mar 2020 17:30
Method: SOPREP: 3541 TPH **Prep Code:** 8015SPR_LL

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20030697-03	1	30.09 (g)	1 (mL)	0.03323
HS20030697-04	1	30.16 (g)	1 (mL)	0.03316
HS20030697-08	1	30.11 (g)	1 (mL)	0.03321
HS20030697-09	1	30.14 (g)	1 (mL)	0.03318
HS20030697-11	1	30.08 (g)	1 (mL)	0.03324
HS20030697-14	1	30.05 (g)	1 (mL)	0.03328

Batch ID: 151888 **Start Date:** 19 Mar 2020 13:00 **End Date:** 19 Mar 2020 16:30
Method: SOPREP: 3541 TPH **Prep Code:** 8015SPR_LL

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20030697-18		30.02 (g)	1 (mL)	0.03331
HS20030697-19		30.1 (g)	1 (mL)	0.03322
HS20030697-21		30.15 (g)	1 (mL)	0.03317
HS20030697-24		30.22 (g)	1 (mL)	0.03309

Weight / Prep Log

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

Batch ID: 151939 **Start Date:** 20 Mar 2020 12:06 **End Date:** 20 Mar 2020 14:30
Method: SOLID CHLORIDE PREP **Prep Code:** CHLORIDE LEACH

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20030697-01		5.0372 (grams)	50 (mL)	9.926
HS20030697-02		5.0293 (grams)	50 (mL)	9.942
HS20030697-03		5.0476 (grams)	50 (mL)	9.906
HS20030697-04		5.0249 (grams)	50 (mL)	9.95
HS20030697-05		5.0061 (grams)	50 (mL)	9.988
HS20030697-06		5.0234 (grams)	50 (mL)	9.953
HS20030697-07		5.0068 (grams)	50 (mL)	9.986
HS20030697-08		5.0338 (grams)	50 (mL)	9.933
HS20030697-09		5.0803 (grams)	50 (mL)	9.842
HS20030697-10		5.0197 (grams)	50 (mL)	9.961

Batch ID: 151940 **Start Date:** 20 Mar 2020 15:00 **End Date:** 20 Mar 2020 17:30
Method: SOLID CHLORIDE PREP **Prep Code:** CHLORIDE LEACH

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20030697-11		5.0252 (grams)	50 (mL)	9.95
HS20030697-12		5.0519 (grams)	50 (mL)	9.897
HS20030697-13		5.1332 (grams)	50 (mL)	9.741
HS20030697-14		5.0902 (grams)	50 (mL)	9.823
HS20030697-15		5.0153 (grams)	50 (mL)	9.969
HS20030697-16		5.015 (grams)	50 (mL)	9.97
HS20030697-17		5.0271 (grams)	50 (mL)	9.946
HS20030697-18		5.0563 (grams)	50 (mL)	9.889
HS20030697-19		5.0906 (grams)	50 (mL)	9.822
HS20030697-20		5.047 (grams)	50 (mL)	9.907
HS20030697-21		5.097 (grams)	50 (mL)	9.81
HS20030697-22		5.0155 (grams)	50 (mL)	9.969
HS20030697-23		5.0082 (grams)	50 (mL)	9.984
HS20030697-24		5.1092 (grams)	50 (mL)	9.786
HS20030697-25		5.0343 (grams)	50 (mL)	9.932

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 151858 (0)	**Test Name :** TPH DRO/ORO BY SW8015C				**Matrix:** Soil	
HS20030697-03	CVU084-8, 2-3'	12 Mar 2020 10:50		18 Mar 2020 14:30	19 Mar 2020 12:55	1
HS20030697-04	CVU084-8, 3-4'	12 Mar 2020 10:55		18 Mar 2020 14:30	19 Mar 2020 13:19	1
HS20030697-08	CVU084-9, 2-3'	12 Mar 2020 11:20		18 Mar 2020 14:30	19 Mar 2020 13:44	1
HS20030697-09	CVU084-9, 3-4'	12 Mar 2020 11:25		18 Mar 2020 14:30	19 Mar 2020 14:09	1
HS20030697-11	CVU084-10, 0-1'	12 Mar 2020 11:45		18 Mar 2020 14:30	19 Mar 2020 14:33	10
HS20030697-14	CVU084-10, 3-4'	12 Mar 2020 12:00		18 Mar 2020 14:30	19 Mar 2020 14:58	1
Batch ID: 151888 (0)	**Test Name :** TPH DRO/ORO BY SW8015C				**Matrix:** Soil	
HS20030697-18	CVU084-11, 2-3'	12 Mar 2020 12:25		19 Mar 2020 13:00	19 Mar 2020 19:33	1
HS20030697-19	CVU084-11, 3-4'	12 Mar 2020 12:30		19 Mar 2020 13:00	19 Mar 2020 19:58	1
HS20030697-21	CVU084-12, 0-1'	12 Mar 2020 12:45		19 Mar 2020 13:00	19 Mar 2020 20:22	1
HS20030697-24	CVU084-12, 3-4'	12 Mar 2020 13:00		19 Mar 2020 13:00	19 Mar 2020 20:47	1
Batch ID: 151939 (0)	**Test Name :** CHLORIDE BY SW-846 9250				**Matrix:** Soil	
HS20030697-01	CVU084-8, 0-1'	12 Mar 2020 10:40		20 Mar 2020 12:06	20 Mar 2020 18:30	1
HS20030697-02	CVU084-8, 1-2'	12 Mar 2020 10:45		20 Mar 2020 12:06	20 Mar 2020 18:31	1
HS20030697-03	CVU084-8, 2-3'	12 Mar 2020 10:50		20 Mar 2020 12:06	20 Mar 2020 18:31	1
HS20030697-04	CVU084-8, 3-4'	12 Mar 2020 10:55		20 Mar 2020 12:06	20 Mar 2020 18:31	1
HS20030697-05	CVU084-8, 4-5'	12 Mar 2020 11:00		20 Mar 2020 12:06	20 Mar 2020 18:31	1
HS20030697-06	CVU084-9, 0-1'	12 Mar 2020 11:10		20 Mar 2020 12:06	20 Mar 2020 18:31	1
HS20030697-07	CVU084-9, 1-2'	12 Mar 2020 11:15		20 Mar 2020 12:06	20 Mar 2020 18:31	1
HS20030697-08	CVU084-9, 2-3'	12 Mar 2020 11:20		20 Mar 2020 12:06	20 Mar 2020 18:31	1
HS20030697-09	CVU084-9, 3-4'	12 Mar 2020 11:25		20 Mar 2020 12:06	20 Mar 2020 18:32	1
HS20030697-10	CVU084-9, 4-5'	12 Mar 2020 11:30		20 Mar 2020 12:06	20 Mar 2020 18:32	1
Batch ID: 151940 (0)	**Test Name :** CHLORIDE BY SW-846 9250				**Matrix:** Soil	
HS20030697-11	CVU084-10, 0-1'	12 Mar 2020 11:45		20 Mar 2020 15:00	23 Mar 2020 20:52	500
HS20030697-12	CVU084-10, 1-2'	12 Mar 2020 11:50		20 Mar 2020 15:00	23 Mar 2020 20:53	500
HS20030697-13	CVU084-10, 2-3'	12 Mar 2020 11:55		20 Mar 2020 15:00	23 Mar 2020 20:53	50
HS20030697-14	CVU084-10, 3-4'	12 Mar 2020 12:00		20 Mar 2020 15:00	23 Mar 2020 20:53	50
HS20030697-15	CVU084-10, 4-5'	12 Mar 2020 12:05		20 Mar 2020 15:00	23 Mar 2020 20:53	50
HS20030697-16	CVU084-11, 0-1'	12 Mar 2020 12:15		20 Mar 2020 15:00	23 Mar 2020 20:53	10
HS20030697-17	CVU084-11, 1-2'	12 Mar 2020 12:20		20 Mar 2020 15:00	23 Mar 2020 20:54	10
HS20030697-18	CVU084-11, 2-3'	12 Mar 2020 12:25		20 Mar 2020 15:00	23 Mar 2020 20:54	10
HS20030697-19	CVU084-11, 3-4'	12 Mar 2020 12:30		20 Mar 2020 15:00	23 Mar 2020 20:54	10
HS20030697-20	CVU084-11, 4-5'	12 Mar 2020 12:35		20 Mar 2020 15:00	23 Mar 2020 20:54	10
HS20030697-21	CVU084-12, 0-1'	12 Mar 2020 12:45		20 Mar 2020 15:00	23 Mar 2020 20:54	1
HS20030697-22	CVU084-12, 1-2'	12 Mar 2020 12:50		20 Mar 2020 15:00	23 Mar 2020 20:54	1
HS20030697-23	CVU084-12, 2-3'	12 Mar 2020 12:55		20 Mar 2020 15:00	23 Mar 2020 20:55	1
HS20030697-24	CVU084-12, 3-4'	12 Mar 2020 13:00		20 Mar 2020 15:00	23 Mar 2020 20:55	1
HS20030697-25	CVU084-12, 4-5'	12 Mar 2020 13:05		20 Mar 2020 15:00	23 Mar 2020 20:55	1

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R358371 (0)	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C				**Matrix:** Soil	
HS20030697-03	CVU084-8, 2-3'	12 Mar 2020 10:50			17 Mar 2020 14:28	1
HS20030697-04	CVU084-8, 3-4'	12 Mar 2020 10:55			17 Mar 2020 14:44	1
HS20030697-09	CVU084-9, 3-4'	12 Mar 2020 11:25			17 Mar 2020 16:26	1
HS20030697-11	CVU084-10, 0-1'	12 Mar 2020 11:45			17 Mar 2020 16:42	1
HS20030697-14	CVU084-10, 3-4'	12 Mar 2020 12:00			17 Mar 2020 16:58	1
HS20030697-18	CVU084-11, 2-3'	12 Mar 2020 12:25			17 Mar 2020 17:15	1
HS20030697-19	CVU084-11, 3-4'	12 Mar 2020 12:30			17 Mar 2020 17:31	1
HS20030697-21	CVU084-12, 0-1'	12 Mar 2020 12:45			17 Mar 2020 17:47	1
HS20030697-24	CVU084-12, 3-4'	12 Mar 2020 13:00			17 Mar 2020 18:03	1
Batch ID: R358451 (0)	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C				**Matrix:** Soil	
HS20030697-08	CVU084-9, 2-3'	12 Mar 2020 11:20			18 Mar 2020 14:59	1
Batch ID: R358645 (0)	**Test Name :** VOLATILES BY SW8260C				**Matrix:** Soil	
HS20030697-04	CVU084-8, 3-4'	12 Mar 2020 10:55			20 Mar 2020 22:23	1
HS20030697-08	CVU084-9, 2-3'	12 Mar 2020 11:20			20 Mar 2020 21:08	1
HS20030697-09	CVU084-9, 3-4'	12 Mar 2020 11:25			20 Mar 2020 21:33	1
HS20030697-11	CVU084-10, 0-1'	12 Mar 2020 11:45			20 Mar 2020 21:58	1
HS20030697-14	CVU084-10, 3-4'	12 Mar 2020 12:00			20 Mar 2020 22:48	1
HS20030697-18	CVU084-11, 2-3'	12 Mar 2020 12:25			20 Mar 2020 14:30	1
HS20030697-19	CVU084-11, 3-4'	12 Mar 2020 12:30			20 Mar 2020 23:13	1
Batch ID: R358646 (0)	**Test Name :** VOLATILES BY SW8260C				**Matrix:** Soil	
HS20030697-21	CVU084-12, 0-1'	12 Mar 2020 12:45			21 Mar 2020 11:14	1
HS20030697-24	CVU084-12, 3-4'	12 Mar 2020 13:00			21 Mar 2020 11:39	1
Batch ID: R358681 (0)	**Test Name :** VOLATILES BY SW8260C				**Matrix:** Soil	
HS20030697-03	CVU084-8, 2-3'	12 Mar 2020 10:50			21 Mar 2020 22:56	1
Batch ID: R358762 (0)	**Test Name :** MOISTURE - ASTM D2216				**Matrix:** Soil	
HS20030697-01	CVU084-8, 0-1'	12 Mar 2020 10:40			23 Mar 2020 06:28	1
HS20030697-02	CVU084-8, 1-2'	12 Mar 2020 10:45			23 Mar 2020 06:28	1
HS20030697-03	CVU084-8, 2-3'	12 Mar 2020 10:50			23 Mar 2020 06:28	1
HS20030697-04	CVU084-8, 3-4'	12 Mar 2020 10:55			23 Mar 2020 06:28	1
HS20030697-05	CVU084-8, 4-5'	12 Mar 2020 11:00			23 Mar 2020 06:28	1
HS20030697-06	CVU084-9, 0-1'	12 Mar 2020 11:10			23 Mar 2020 06:28	1
HS20030697-07	CVU084-9, 1-2'	12 Mar 2020 11:15			23 Mar 2020 06:28	1
HS20030697-08	CVU084-9, 2-3'	12 Mar 2020 11:20			23 Mar 2020 06:28	1
HS20030697-09	CVU084-9, 3-4'	12 Mar 2020 11:25			23 Mar 2020 06:28	1
HS20030697-10	CVU084-9, 4-5'	12 Mar 2020 11:30			23 Mar 2020 06:28	1

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R358763 (0)	**Test Name :** MOISTURE - ASTM D2216				**Matrix:** Soil	
HS20030697-11	CVU084-10, 0-1'	12 Mar 2020 11:45			23 Mar 2020 06:31	1
HS20030697-12	CVU084-10, 1-2'	12 Mar 2020 11:50			23 Mar 2020 06:31	1
HS20030697-13	CVU084-10, 2-3'	12 Mar 2020 11:55			23 Mar 2020 06:31	1
HS20030697-14	CVU084-10, 3-4'	12 Mar 2020 12:00			23 Mar 2020 06:31	1
HS20030697-15	CVU084-10, 4-5'	12 Mar 2020 12:05			23 Mar 2020 06:31	1
HS20030697-16	CVU084-11, 0-1'	12 Mar 2020 12:15			23 Mar 2020 06:31	1
HS20030697-17	CVU084-11, 1-2'	12 Mar 2020 12:20			23 Mar 2020 06:31	1
HS20030697-18	CVU084-11, 2-3'	12 Mar 2020 12:25			23 Mar 2020 06:31	1
HS20030697-19	CVU084-11, 3-4'	12 Mar 2020 12:30			23 Mar 2020 06:31	1
HS20030697-20	CVU084-11, 4-5'	12 Mar 2020 12:35			23 Mar 2020 06:31	1
HS20030697-21	CVU084-12, 0-1'	12 Mar 2020 12:45			23 Mar 2020 06:31	1
HS20030697-22	CVU084-12, 1-2'	12 Mar 2020 12:50			23 Mar 2020 06:31	1
HS20030697-23	CVU084-12, 2-3'	12 Mar 2020 12:55			23 Mar 2020 06:31	1
HS20030697-24	CVU084-12, 3-4'	12 Mar 2020 13:00			23 Mar 2020 06:31	1
HS20030697-25	CVU084-12, 4-5'	12 Mar 2020 13:05			23 Mar 2020 06:31	1

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: 151858 (0) **Instrument: FID-7** **Method: TPH DRO/ORO BY SW8015C**

MBLK Sample ID: **MBLK-151858** Units: **mg/Kg** Analysis Date: **19-Mar-2020 11:41**
Client ID: Run ID: **FID-7_358542** SeqNo: **5522061** PrepDate: **18-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	< 0.50	1.7								
TPH (Motor Oil Range)	< 0.50	3.4								
Surr: 2-Fluorobiphenyl	*2.596*	*0.10*	*3.33*	*0*	*78.0*	*70 - 130*				

LCS Sample ID: **LCS-151858** Units: **mg/Kg** Analysis Date: **19-Mar-2020 12:06**
Client ID: Run ID: **FID-7_358542** SeqNo: **5522062** PrepDate: **18-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	29.07	1.7	33.33	0	87.2	70 - 130				
TPH (Motor Oil Range)	27.95	3.4	33.33	0	83.9	70 - 130				
Surr: 2-Fluorobiphenyl	*2.727*	*0.10*	*3.33*	*0*	*81.9*	*70 - 130*				

MS Sample ID: **HS20030627-10MS** Units: **mg/Kg** Analysis Date: **19-Mar-2020 13:44**
Client ID: Run ID: **FID-7_358542** SeqNo: **5522066** PrepDate: **18-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	32.06	1.7	33.3	1.565	91.6	70 - 130				
TPH (Motor Oil Range)	38.72	3.4	33.3	7.348	94.2	70 - 130				
Surr: 2-Fluorobiphenyl	*2.932*	*0.10*	*3.327*	*0*	*88.1*	*60 - 129*				

MSD Sample ID: **HS20030627-10MSD** Units: **mg/Kg** Analysis Date: **19-Mar-2020 14:09**
Client ID: Run ID: **FID-7_358542** SeqNo: **5522067** PrepDate: **18-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	30.63	1.7	33.25	1.565	87.4	70 - 130	32.06	4.57	30	
TPH (Motor Oil Range)	41.35	3.4	33.25	7.348	102	70 - 130	38.72	6.58	30	
Surr: 2-Fluorobiphenyl	*2.832*	*0.10*	*3.322*	*0*	*85.2*	*60 - 129*	*2.932*	*3.49*	*30*	

The following samples were analyzed in this batch: HS20030697-03 HS20030697-04 HS20030697-08 HS20030697-09 HS20030697-11 HS20030697-14

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: 151888 (0) **Instrument: FID-7** **Method: TPH DRO/ORO BY SW8015C**

MBLK Sample ID: **MBLK-151888** Units: **mg/Kg** Analysis Date: **19-Mar-2020 18:44**
Client ID: Run ID: **FID-7_358530** SeqNo: **5521818** PrepDate: **19-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	< 0.50	1.7								
TPH (Motor Oil Range)	< 0.50	3.4								
Surr: 2-Fluorobiphenyl	*2.505*	*0.10*	*3.33*	*0*	*75.2*	*70 - 130*				

LCS Sample ID: **LCS-151888** Units: **mg/Kg** Analysis Date: **19-Mar-2020 19:08**
Client ID: Run ID: **FID-7_358530** SeqNo: **5521819** PrepDate: **19-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	27.27	1.7	33.33	0	81.8	70 - 130				
TPH (Motor Oil Range)	29.7	3.4	33.33	0	89.1	70 - 130				
Surr: 2-Fluorobiphenyl	*2.623*	*0.10*	*3.33*	*0*	*78.8*	*70 - 130*				

MS Sample ID: **HS20030697-24MS** Units: **mg/Kg** Analysis Date: **19-Mar-2020 21:12**
Client ID: **CVU084-12, 3-4'** Run ID: **FID-7_358530** SeqNo: **5521824** PrepDate: **19-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	29.11	1.7	33.27	0.9919	84.5	70 - 130				
TPH (Motor Oil Range)	33.52	3.4	33.27	4.397	87.5	70 - 130				
Surr: 2-Fluorobiphenyl	*2.431*	*0.10*	*3.324*	*0*	*73.1*	*60 - 129*				

MSD Sample ID: **HS20030697-24MSD** Units: **mg/Kg** Analysis Date: **19-Mar-2020 21:36**
Client ID: **CVU084-12, 3-4'** Run ID: **FID-7_358530** SeqNo: **5521825** PrepDate: **19-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	28.96	1.7	33.32	0.9919	83.9	70 - 130	29.11	0.494	30	
TPH (Motor Oil Range)	32.57	3.4	33.32	4.397	84.6	70 - 130	33.52	2.87	30	
Surr: 2-Fluorobiphenyl	*2.775*	*0.10*	*3.329*	*0*	*83.4*	*60 - 129*	*2.431*	*13.2*	*30*	

The following samples were analyzed in this batch: HS20030697-18 HS20030697-19 HS20030697-21 HS20030697-24

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: R358371 (0) **Instrument:** FID-14 **Method:** GASOLINE RANGE ORGANICS BY SW8015C

MBLK Sample ID: **MBLK-031720** Units: **mg/Kg** Analysis Date: **17-Mar-2020 13:07**
Client ID: Run ID: **FID-14_358371** SeqNo: **5517415** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	< 0.010	0.050								
Surr: 4-Bromofluorobenzene	*0.08434*	*0.0050*	*0.1*	*0*	*84.3*	*75 - 121*				

LCS Sample ID: **LCS-031720** Units: **mg/Kg** Analysis Date: **17-Mar-2020 12:51**
Client ID: Run ID: **FID-14_358371** SeqNo: **5517414** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8798	0.050	1	0	88.0	72 - 121				
Surr: 4-Bromofluorobenzene	*0.07508*	*0.0050*	*0.1*	*0*	*75.1*	*75 - 121*				

MS Sample ID: **HS20030695-09MS** Units: **mg/Kg** Analysis Date: **17-Mar-2020 15:00**
Client ID: Run ID: **FID-14_358371** SeqNo: **5517422** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9282	0.049	0.98	0	94.7	70 - 130				
Surr: 4-Bromofluorobenzene	*0.07623*	*0.0049*	*0.098*	*0*	*77.8*	*70 - 123*				

MSD Sample ID: **HS20030695-09MSD** Units: **mg/Kg** Analysis Date: **17-Mar-2020 15:16**
Client ID: Run ID: **FID-14_358371** SeqNo: **5517423** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9383	0.050	1	0	93.8	70 - 130	0.9282	1.08	30	
Surr: 4-Bromofluorobenzene	*0.07774*	*0.0050*	*0.1*	*0*	*77.7*	*70 - 123*	*0.07623*	*1.96*	*30*	

The following samples were analyzed in this batch:

HS20030697-03	HS20030697-04	HS20030697-09	HS20030697-11
HS20030697-14	HS20030697-18	HS20030697-19	HS20030697-21
HS20030697-24			

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: R358451 (0) **Instrument:** FID-14 **Method:** GASOLINE RANGE ORGANICS BY SW8015C

MBLK Sample ID: **MBLK-031820** Units: **mg/Kg** Analysis Date: **18-Mar-2020 14:29**
Client ID: Run ID: **FID-14_358451** SeqNo: **5519537** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	< 0.010	0.050								
Surr: 4-Bromofluorobenzene	*0.09737*	*0.0050*	*0.1*	*0*	*97.4*	*75 - 121*				

LCS Sample ID: **LCS-031820** Units: **mg/Kg** Analysis Date: **18-Mar-2020 14:13**
Client ID: Run ID: **FID-14_358451** SeqNo: **5519536** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.121	0.050	1	0	112	72 - 121				
Surr: 4-Bromofluorobenzene	*0.09297*	*0.0050*	*0.1*	*0*	*93.0*	*75 - 121*				

MS Sample ID: **HS20030728-01MS** Units: **mg/Kg** Analysis Date: **18-Mar-2020 16:19**
Client ID: Run ID: **FID-14_358451** SeqNo: **5519543** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9389	0.049	0.98	0	95.8	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1131*	*0.0049*	*0.098*	*0*	*115*	*70 - 123*				

MSD Sample ID: **HS20030728-01MSD** Units: **mg/Kg** Analysis Date: **18-Mar-2020 16:35**
Client ID: Run ID: **FID-14_358451** SeqNo: **5519544** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.035	0.050	1.01	0	102	70 - 130	0.9389	9.72	30	
Surr: 4-Bromofluorobenzene	*0.08246*	*0.0050*	*0.101*	*0*	*81.6*	*70 - 123*	*0.1131*	*31.4*	*30*	R

The following samples were analyzed in this batch: HS20030697-08

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: R358645 (0) **Instrument:** VOA5 **Method:** VOLATILES BY SW8260C

MBLK Sample ID: **VBLKS1-032020** Units: **ug/Kg** Analysis Date: **20-Mar-2020 14:05**
Client ID: Run ID: **VOA5_358645** SeqNo: **5524074** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	< 0.50	5.0								
Ethylbenzene	< 0.70	5.0								
Toluene	< 0.60	5.0								
Xylenes, Total	< 1.0	5.0								
Surr: 1,2-Dichloroethane-d4	*51.83*	*0*	*50*	*0*	*104*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*50.1*	*0*	*50*	*0*	*100*	*80 - 120*				
Surr: Dibromofluoromethane	*51.02*	*0*	*50*	*0*	*102*	*80 - 119*				
Surr: Toluene-d8	*51.42*	*0*	*50*	*0*	*103*	*81 - 118*				

LCS Sample ID: **VLCSS1-032020** Units: **ug/Kg** Analysis Date: **20-Mar-2020 13:15**
Client ID: Run ID: **VOA5_358645** SeqNo: **5524073** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	58.11	5.0	50	0	116	75 - 124				
Ethylbenzene	55.19	5.0	50	0	110	70 - 123				
Toluene	54.81	5.0	50	0	110	76 - 122				
Xylenes, Total	165.2	5.0	150	0	110	77 - 128				
Surr: 1,2-Dichloroethane-d4	*54.15*	*0*	*50*	*0*	*108*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*51.79*	*0*	*50*	*0*	*104*	*80 - 120*				
Surr: Dibromofluoromethane	*53.82*	*0*	*50*	*0*	*108*	*80 - 119*				
Surr: Toluene-d8	*51.07*	*0*	*50*	*0*	*102*	*81 - 118*				

MS Sample ID: **HS20030697-18MS** Units: **ug/Kg** Analysis Date: **20-Mar-2020 16:10**
Client ID: **CVU084-11, 2-3'** Run ID: **VOA5_358645** SeqNo: **5524079** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	45.19	5.0	50.5	0	89.5	70 - 130				
Ethylbenzene	43.26	5.0	50.5	0	85.7	70 - 130				
Toluene	43.03	5.0	50.5	0	85.2	70 - 130				
Xylenes, Total	130.1	5.0	151.5	0	85.9	70 - 130				
Surr: 1,2-Dichloroethane-d4	*55*	*0*	*50.5*	*0*	*109*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*51.73*	*0*	*50.5*	*0*	*102*	*70 - 130*				
Surr: Dibromofluoromethane	*54.08*	*0*	*50.5*	*0*	*107*	*70 - 130*				
Surr: Toluene-d8	*51.8*	*0*	*50.5*	*0*	*103*	*70 - 130*				

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: R358645 (0) **Instrument:** VOA5 **Method:** VOLATILES BY SW8260C

MSD Sample ID: **HS20030697-18MSD** Units: **ug/Kg** Analysis Date: **20-Mar-2020 16:34**
Client ID: **CVU084-11, 2-3'** Run ID: **VOA5_358645** SeqNo: **5524080** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	39.94	5.0	49.5	0	80.7	70 - 130	45.19	12.4	30	
Ethylbenzene	38.42	5.0	49.5	0	77.6	70 - 130	43.26	11.9	30	
Toluene	38.19	5.0	49.5	0	77.2	70 - 130	43.03	11.9	30	
Xylenes, Total	113	5.0	148.5	0	76.1	70 - 130	130.1	14.1	30	
Surr: 1,2-Dichloroethane-d4	*52.89*	*0*	*49.5*	*0*	*107*	*70 - 126*	*55*	*3.91*	*30*	
Surr: 4-Bromofluorobenzene	*50.76*	*0*	*49.5*	*0*	*103*	*70 - 130*	*51.73*	*1.89*	*30*	
Surr: Dibromofluoromethane	*52.6*	*0*	*49.5*	*0*	*106*	*70 - 130*	*54.08*	*2.77*	*30*	
Surr: Toluene-d8	*50.3*	*0*	*49.5*	*0*	*102*	*70 - 130*	*51.8*	*2.93*	*30*	

The following samples were analyzed in this batch: HS20030697-04 HS20030697-08 HS20030697-09 HS20030697-11 HS20030697-14 HS20030697-18 HS20030697-19

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: R358646 (0) **Instrument:** VOA5 **Method:** VOLATILES BY SW8260C

MBLK Sample ID: **VBLKS1-032120** Units: **ug/Kg** Analysis Date: **21-Mar-2020 02:31**
Client ID: Run ID: **VOA5_358646** SeqNo: **5524101** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	< 0.50	5.0								
Ethylbenzene	< 0.70	5.0								
Toluene	< 0.60	5.0								
Xylenes, Total	< 1.0	5.0								
Surr: 1,2-Dichloroethane-d4	*53.61*	*0*	*50*	*0*	*107*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.85*	*0*	*50*	*0*	*99.7*	*80 - 120*				
Surr: Dibromofluoromethane	*51.88*	*0*	*50*	*0*	*104*	*80 - 119*				
Surr: Toluene-d8	*49.75*	*0*	*50*	*0*	*99.5*	*81 - 118*				

LCS Sample ID: **VLCSS1-032120** Units: **ug/Kg** Analysis Date: **21-Mar-2020 01:42**
Client ID: Run ID: **VOA5_358646** SeqNo: **5524100** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	49.23	5.0	50	0	98.5	75 - 124				
Ethylbenzene	45	5.0	50	0	90.0	70 - 123				
Toluene	45.61	5.0	50	0	91.2	76 - 122				
Xylenes, Total	133.4	5.0	150	0	89.0	77 - 128				
Surr: 1,2-Dichloroethane-d4	*51.7*	*0*	*50*	*0*	*103*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*51.12*	*0*	*50*	*0*	*102*	*80 - 120*				
Surr: Dibromofluoromethane	*52.54*	*0*	*50*	*0*	*105*	*80 - 119*				
Surr: Toluene-d8	*51.22*	*0*	*50*	*0*	*102*	*81 - 118*				

MS Sample ID: **HS20030698-05MS** Units: **ug/Kg** Analysis Date: **21-Mar-2020 03:21**
Client ID: Run ID: **VOA5_358646** SeqNo: **5524103** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	40.02	5.2	51.5	0	77.7	70 - 130				
Ethylbenzene	22.94	5.2	51.5	0	44.5	70 - 130				S
Toluene	30.43	5.2	51.5	0	59.1	70 - 130				S
Xylenes, Total	58.18	5.2	154.5	0	37.7	70 - 130				S
Surr: 1,2-Dichloroethane-d4	*54.58*	*0*	*51.5*	*0*	*106*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*50.84*	*0*	*51.5*	*0*	*98.7*	*70 - 130*				
Surr: Dibromofluoromethane	*54.53*	*0*	*51.5*	*0*	*106*	*70 - 130*				
Surr: Toluene-d8	*52.6*	*0*	*51.5*	*0*	*102*	*70 - 130*				

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: R358646 (0) **Instrument:** VOA5 **Method:** VOLATILES BY SW8260C

MSD Sample ID: **HS20030698-05MSD** Units: **ug/Kg** Analysis Date: **21-Mar-2020 03:46**
Client ID: Run ID: **VOA5_358646** SeqNo: **5524104** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	41.31	5.1	51	0	81.0	70 - 130	40.02	3.17	30	
Ethylbenzene	23.38	5.1	51	0	45.8	70 - 130	22.94	1.87	30	S
Toluene	30.89	5.1	51	0	60.6	70 - 130	30.43	1.5	30	S
Xylenes, Total	57.69	5.1	153	0	37.7	70 - 130	58.18	0.85	30	S
Surr: 1,2-Dichloroethane-d4	*53.86*	*0*	*51*	*0*	*106*	*70 - 126*	*54.58*	*1.33*	*30*	
Surr: 4-Bromofluorobenzene	*52.67*	*0*	*51*	*0*	*103*	*70 - 130*	*50.84*	*3.54*	*30*	
Surr: Dibromofluoromethane	*53.99*	*0*	*51*	*0*	*106*	*70 - 130*	*54.53*	*0.991*	*30*	
Surr: Toluene-d8	*52.12*	*0*	*51*	*0*	*102*	*70 - 130*	*52.6*	*0.908*	*30*	

The following samples were analyzed in this batch: HS20030697-21 HS20030697-24

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: R358681 (0) **Instrument:** VOA5 **Method:** VOLATILES BY SW8260C

MBLK Sample ID: **VBLKS1-032120** Units: **ug/Kg** Analysis Date: **21-Mar-2020 14:38**
Client ID: Run ID: **VOA5_358681** SeqNo: **5524901** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	< 0.50	5.0								
Ethylbenzene	< 0.70	5.0								
Toluene	< 0.60	5.0								
Xylenes, Total	< 1.0	5.0								
Surr: 1,2-Dichloroethane-d4	*55.3*	*0*	*50*	*0*	*111*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*50.7*	*0*	*50*	*0*	*101*	*80 - 120*				
Surr: Dibromofluoromethane	*52.88*	*0*	*50*	*0*	*106*	*80 - 119*				
Surr: Toluene-d8	*51.03*	*0*	*50*	*0*	*102*	*81 - 118*				

LCS Sample ID: **VLCSS1-032120** Units: **ug/Kg** Analysis Date: **21-Mar-2020 13:49**
Client ID: Run ID: **VOA5_358681** SeqNo: **5524900** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	53.85	5.0	50	0	108	75 - 124				
Ethylbenzene	51.47	5.0	50	0	103	70 - 123				
Toluene	49.98	5.0	50	0	100.0	76 - 122				
Xylenes, Total	152.9	5.0	150	0	102	77 - 128				
Surr: 1,2-Dichloroethane-d4	*54.24*	*0*	*50*	*0*	*108*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.97*	*0*	*50*	*0*	*99.9*	*80 - 120*				
Surr: Dibromofluoromethane	*53.38*	*0*	*50*	*0*	*107*	*80 - 119*				
Surr: Toluene-d8	*49.79*	*0*	*50*	*0*	*99.6*	*81 - 118*				

MS Sample ID: **HS20030674-13MS** Units: **ug/Kg** Analysis Date: **21-Mar-2020 15:28**
Client ID: Run ID: **VOA5_358681** SeqNo: **5524903** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	34.46	4.8	48.5	0	71.0	70 - 130				
Ethylbenzene	32.9	4.8	48.5	0	67.8	70 - 130				S
Toluene	32.34	4.8	48.5	0	66.7	70 - 130				S
Xylenes, Total	96.24	4.8	145.5	0	66.1	70 - 130				S
Surr: 1,2-Dichloroethane-d4	*53.33*	*0*	*48.5*	*0*	*110*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*49.89*	*0*	*48.5*	*0*	*103*	*70 - 130*				
Surr: Dibromofluoromethane	*51.38*	*0*	*48.5*	*0*	*106*	*70 - 130*				
Surr: Toluene-d8	*49*	*0*	*48.5*	*0*	*101*	*70 - 130*				

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: R358681 (0) **Instrument:** VOA5 **Method:** VOLATILES BY SW8260C

MSD Sample ID: **HS20030674-13MSD** Units: **ug/Kg** Analysis Date: **21-Mar-2020 15:53**
Client ID: Run ID: **VOA5_358681** SeqNo: **5524904** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	31.53	4.9	49	0	64.4	70 - 130	34.46	8.86	30	S
Ethylbenzene	30.55	4.9	49	0	62.3	70 - 130	32.9	7.43	30	S
Toluene	29.67	4.9	49	0	60.5	70 - 130	32.34	8.63	30	S
Xylenes, Total	88.54	4.9	147	0	60.2	70 - 130	96.24	8.33	30	S
Surr: 1,2-Dichloroethane-d4	*53.8*	*0*	*49*	*0*	*110*	*70 - 126*	*53.33*	*0.882*	*30*	
Surr: 4-Bromofluorobenzene	*50.17*	*0*	*49*	*0*	*102*	*70 - 130*	*49.89*	*0.572*	*30*	
Surr: Dibromofluoromethane	*51.67*	*0*	*49*	*0*	*105*	*70 - 130*	*51.38*	*0.558*	*30*	
Surr: Toluene-d8	*49.7*	*0*	*49*	*0*	*101*	*70 - 130*	*49*	*1.42*	*30*	

The following samples were analyzed in this batch: HS20030697-03

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: 151939 (0) **Instrument:** Gall01 **Method:** CHLORIDE BY SW-846 9250

MBLK Sample ID: **MBLK-151939** Units: **mg/Kg** Analysis Date: **20-Mar-2020 18:28**
Client ID: Run ID: **Gall01_358775** SeqNo: **5527053** PrepDate: **20-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	< 2.74	10.0								

LCS Sample ID: **LCS-151939** Units: **mg/Kg** Analysis Date: **20-Mar-2020 18:28**
Client ID: Run ID: **Gall01_358775** SeqNo: **5527056** PrepDate: **20-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	206.4	10.0	200	0	103	80 - 120				

MS Sample ID: **HS20030697-10MS** Units: **mg/Kg** Analysis Date: **20-Mar-2020 18:36**
Client ID: **CVU084-9, 4-5'** Run ID: **Gall01_358775** SeqNo: **5527083** PrepDate: **20-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	243.6	10.0	200	59.89	91.9	80 - 120				

MSD Sample ID: **HS20030697-10MSD** Units: **mg/Kg** Analysis Date: **20-Mar-2020 18:36**
Client ID: **CVU084-9, 4-5'** Run ID: **Gall01_358775** SeqNo: **5527084** PrepDate: **20-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	243.5	9.93	198.6	59.89	92.5	80 - 120	243.6	0.0121	30	

The following samples were analyzed in this batch:

HS20030697-01	HS20030697-02	HS20030697-03	HS20030697-04
HS20030697-05	HS20030697-06	HS20030697-07	HS20030697-08
HS20030697-09	HS20030697-10		

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: 151940 (0) **Instrument:** Gall01 **Method:** CHLORIDE BY SW-846 9250

MBLK Sample ID: **MBLK-151940** Units: **mg/Kg** Analysis Date: **23-Mar-2020 20:52**
Client ID: Run ID: **Gall01_358793** SeqNo: **5527437** PrepDate: **20-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	< 2.74	10.0								

LCS Sample ID: **LCS-151940** Units: **mg/Kg** Analysis Date: **23-Mar-2020 20:52**
Client ID: Run ID: **Gall01_358793** SeqNo: **5527438** PrepDate: **20-Mar-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	202.2	10.0	200	0	101	80 - 120				

MS Sample ID: **HS20030697-11MS** Units: **mg/Kg** Analysis Date: **23-Mar-2020 20:52**
Client ID: **CVU084-10, 0-1'** Run ID: **Gall01_358793** SeqNo: **5527440** PrepDate: **20-Mar-2020** DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	123600	4930	98620	17140	108	80 - 120				

MSD Sample ID: **HS20030697-11MSD** Units: **mg/Kg** Analysis Date: **23-Mar-2020 20:53**
Client ID: **CVU084-10, 0-1'** Run ID: **Gall01_358793** SeqNo: **5527441** PrepDate: **20-Mar-2020** DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	118800	4890	97710	17140	104	80 - 120	123600	4	30	

The following samples were analyzed in this batch:

HS20030697-11	HS20030697-12	HS20030697-13	HS20030697-14
HS20030697-15	HS20030697-16	HS20030697-17	HS20030697-18
HS20030697-19	HS20030697-20	HS20030697-21	HS20030697-22
HS20030697-23	HS20030697-24	HS20030697-25	

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: R358762 (0) **Instrument:** Balance1 **Method:** MOISTURE - ASTM D2216

DUP Sample ID: **HS20030697-10DUP** Units: **wt%** Analysis Date: **23-Mar-2020 06:28**
Client ID: **CVU084-9, 4-5'** Run ID: **Balance1_358762** SeqNo: **5526783** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	4.31	0.0100					4.39	1.84	20	

The following samples were analyzed in this batch:

HS20030697-01	HS20030697-02	HS20030697-03	HS20030697-04
HS20030697-05	HS20030697-06	HS20030697-07	HS20030697-08
HS20030697-09	HS20030697-10		

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: HS20030697

QC BATCH REPORT

Batch ID: R358763 (0) **Instrument:** Balance1 **Method:** MOISTURE - ASTM D2216

DUP Sample ID: **HS20030697-25DUP** Units: **wt%** Analysis Date: **23-Mar-2020 06:31**
Client ID: **CVU084-12, 4-5'** Run ID: **Balance1_358763** SeqNo: **5526807** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	8.56	0.0100					8.15	4.91	20	

The following samples were analyzed in this batch:

HS20030697-11	HS20030697-12	HS20030697-13	HS20030697-14
HS20030697-15	HS20030697-16	HS20030697-17	HS20030697-18
HS20030697-19	HS20030697-20	HS20030697-21	HS20030697-22
HS20030697-23	HS20030697-24	HS20030697-25	

ALS Houston, US Date: 24-Mar-20

Client: AECOM
Project: CVU 084
WorkOrder: **HS20030697**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
Date	
mg/Kg-dry	Milligrams per Kilogram- Dry weight corrected

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	19-028-0	27-Mar-2020
California	2919, 2019-2020	30-Apr-2020
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322019-2	09-May-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Kentucky	123043, 2019-2020	30-Apr-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2019-2020	30-Apr-2020
Oklahoma	2019-067	31-Aug-2020
Texas	T104704231-19-25	30-Apr-2020

ALS Houston, US Date: 24-Mar-20

Sample Receipt Checklist

Client Name: AECOM-Houston Date/Time Received: **16-Mar-2020 09:40**

Work Order: HS20030697 Received by: **NDR**

Checklist completed by: *Paresh M. Giga* 16-Mar-2020
eSignature Date

Reviewed by: *Dane J. Wacasey* 17-Mar-2020
eSignature Date

Matrices: **Soil** Carrier name: **Client**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	3 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:214733/214734/214735
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	1.8°C uc/c	IR25
Cooler(s)/Kit(s):	25498	
Date/Time sample(s) sent to storage:	3/16/2020 18:30	

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Only samples needing BTEX and TPH-GRO require TPH-DRO/ORO analysis. COC is marked for TPH-DRO/ORO on all samples .

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

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Holland, MI +1 616 399 6070

Chain of Custody Form

Page 1 of 3

COC ID: 214733

HS20030697

AECOM
CVU 084

ALS Project Manager:

Customer Information		Project Information			
Purchase Order	CVU 084	Project Name	CVU 084	A	CL_S_9250 AutoUV (SW9250 Chloride (UV))
Work Order		Project Number		B	MOIST_ASTM (D2216 Moisture %)
Company Name	AECOM	Bill To Company	AECOM	C	8260_S (8260 BTEX)
Send Report To	Wallace Gilmore	Invoice Attn	USAPImaging - A/P	D	8015_GRO_S (8015 TPH-GRO)
Address	19219 Katy Freeway Suite 100	Address	PO Box 203970	E	8015M_S_LL (8015 TPH-DRO/ORO)
				F	
City/State/Zip	Houston, TX 77094	City/State/Zip	Austin TX 78720	G	
Phone	(281) -64-6-24	Phone	(512) 419-6825	H	
Fax	(713) 780-0838	Fax		I	
e-Mail Address	Wallace.Gilmore@aecom.com	e-Mail Address	USAPImaging@aecom.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	CVU084-8, 0-1'	3/12/20	1040	SOIL	NA	1	X	X			X						
2	CVU084-8, 1-2'		1045			1	X	X			X						
3	CVU084-8, 2-3'		1050			2	X	X	X	X	X						
4	CVU084-8, 3-4'		1055			2	X	X	X	X	X						
5	CVU084-8, 4-5'		1100			1	X	X			X						
6	CVU084-9, 0-1'		1110			1	X	X			X						
7	CVU084-9, 1-2'		1115			1	X	X			X						
8	CVU084-9, 2-3'		1120			2	X	X	X	X	X						
9	CVU084-9, 3-4'		1125			2	X	X	X	X	X						
10	CVU084-9, 4-5'		1130			1	X	X			X						

Sampler(s) Please Print & Sign: [signature]

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) ☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by: [signature] Date: 3/16/20 Time: 0940 Received by:

Relinquished by: [signature] Date: 3.16.20 Time: 09.40 Received by (Laboratory): NA

Logged by (Laboratory): Date: Time: Checked by (Laboratory): NR

Notes: AECOM CVU 084 ALL SAMPLES ON ICE 3/17-18/20

Cooler ID	Cooler Temp.
45548	0.8
25498	1.5
45284	1.6

QC Package: (Check One Box Below)

☒ Level II Std QC
☐ Level III Std QC/Raw Data
☐ Level IV SVW846/CLP
☐ Other
☐ TRRP Checklist
☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

NR NR 25

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Holland, MI +1 616 399 6070

Chain of Custody Form

COC ID: 214734

HS20030697

AECOM
CVU 084

Customer Information		Project Information		ALS Project Manager:	
Purchase Order	CVU 084	Project Name	CVU 084	A	CL_S_9250 AutoUV (SW9250 Chloride (UV))
Work Order		Project Number		B	MOIST_ASTM (D2216 Moisture %)
Company Name	AECOM	Bill To Company	AECOM	C	8260_S (8260 BTEX)
Send Report To	Wallace Gilmore	Invoice Attn	USAPImaging - A/P	D	8015_GRO_S (8015 TPH-GRO)
Address	19219 Katy Freeway Suite 100	Address	PO Box 203970	E	8015M_S_LL (8015 TPH-DRO/ORO)
				F	
City/State/Zip	Houston, TX 77094	City/State/Zip	Austin TX 78720	G	
Phone	(281) -64-6-24	Phone	(512) 419-6825	H	
Fax	(713) 780-0838	Fax		I	
e-Mail Address	Wallace.Gilmore@aecom.com	e-Mail Address	USAPImaging@aecom.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	CVU084 -10, 0-1'	3/12/20	1145	SOIL	NA	2	X	X	X	X	X						
2	CVU084 -10, 1-2'		1150			1	X	X			X						
3	CVU084 -10, 2-3'		1155			1	X	X			X						
4	CVU084 -10, 3-4'		1200			2	X	X	X	X	X						
5	CVU084 -10, 4-5'		1205			1	X	X			X						
6	CVU084 -11, 0-1'		1215			1	X	X			X						
7	CVU084 -11, 1-2'		1220			1	X	X			X						
8	CVU084 -11, 2-3'		1225			2	X	X	X	X	X						
9	CVU084 -11, 3-4'		1230			2	X	X	X	X	X						
10	CVU084 -11, 4-5'		1235			1	X	X			X						

Sampler(s) Please Print & Sign

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) ☐ Other ____ ☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 -Hour

Results Due Date:

	Date:	Time:	
Relinquished by:	3/16/20	0948	Received by:
Relinquished by:	3.16.20	0940	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: AECOM CVU 084 / ATTN SAMPLES ON ICE 3 / 16-20/20

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

- ☒ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other ____
- ☐ TRRP Checklist
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
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3. The Chain of Custody is a legal document. All information must be completed accurately.

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Chain of Custody Form

Page 3 of 3

COC ID: 214735

HS20030697

WV

AECOM
CVU 084

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	CVU 084	Project Name	CVU 084
Work Order		Project Number	
Company Name	AECOM	Bill To Company	AECOM
Send Report To	Wallace Gilmore	Invoice Attn	USAPImaging - A/P
Address	19219 Katy Freeway Suite 100	Address	PO Box 203970
City/State/Zip	Houston, TX 77094	City/State/Zip	Austin TX 78720
Phone	(281) -64-6-24	Phone	(512) 419-6825
Fax	(713) 780-0838	Fax	
e-Mail Address	Wallace.Gilmore@aecom.com	e-Mail Address	USAPImaging@aecom.com

A	CL_S_9250 AutoUV (SW9250 Chloride (UV))
B	MOIST_ASTM (D2216 Moisture %)
C	8260_S (8260 BTEX)
D	8015_GRO_S (8015 TPH-GRO)
E	8015M_S_LL (8015 TPH-DRO/ORO)
F	
G	
H	
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	CVU084 -12, 0-1'	3/12/20	1240	Soil	NA	2	X	X	X	X	X						
2	CVU084 -12, 1-2'		1250			1	X	X			X						
3	CVU084 -12, 2-3'		1255			1	X	X			X						
4	CVU084 -12, 3-4'		1300			2	X	X	X	X	X						
5	CVU084 -12, 4-5'		1305			1	X	X			X						
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign

Shipment Method

Required Turnaround Time: (Check Box) [X] STD 10 Wk Days [ ] 5 Wk Days [ ] 2 Wk Days [ ] 24 Hour [ ] Other

Results Due Date:

Relinquished by: Date: 3/16/20 Time: 0940 Received by:

Relinquished by: Date: 3.16.20 Time: 09:47 Received by (Laboratory): NA

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: AECOM CVU 084, ALL SAMPLES ON ICE 3/12-16/20

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
[X] Level II Std QC
[ ] Level III Std QC/Raw Data
[ ] Level IV SW846/CLP
[ ] Other
[ ] TRRP Checklist
[ ] TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

ote: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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July 02, 2020

Wallace Gilmore
AECOM
19219 Katy Freeway
Suite 100
Houston, TX 77094

Work Order: **HS20060996**

Laboratory Results for: **60605245 CVU 084**

Dear Wallace Gilmore,

ALS Environmental received 10 sample(s) on Jun 19, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
Dane J. Wacasey

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Work Order: HS20060996

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20060996-01	CVU84-14 0-1	Soil		18-Jun-2020 14:40	19-Jun-2020 09:20	☐
HS20060996-02	CVU84-14 1-2	Soil		18-Jun-2020 14:45	19-Jun-2020 09:20	☐
HS20060996-03	CVU84-14 2-3	Soil		18-Jun-2020 14:50	19-Jun-2020 09:20	☐
HS20060996-04	CVU84-14 3-4	Soil		18-Jun-2020 14:55	19-Jun-2020 09:20	☐
HS20060996-05	CVU84-14 4-5	Soil		18-Jun-2020 15:00	19-Jun-2020 09:20	☐
HS20060996-06	CVU84-13 0-1	Soil		18-Jun-2020 15:20	19-Jun-2020 09:20	☐
HS20060996-07	CVU84-13 1-2	Soil		18-Jun-2020 15:25	19-Jun-2020 09:20	☐
HS20060996-08	CVU84-13 2-3	Soil		18-Jun-2020 15:30	19-Jun-2020 09:20	☐
HS20060996-09	CVU84-13 3-4	Soil		18-Jun-2020 15:35	19-Jun-2020 09:20	☐
HS20060996-10	CVU84-13 4-5	Soil		18-Jun-2020 15:40	19-Jun-2020 09:20	☐

ALS Houston, US Date: 02-Jul-20

Client: AECOM **CASE NARRATIVE**
Project: 60605245 CVU 084
Work Order: HS20060996

GC Semivolatiles by Method SW8015M

Batch ID: 155023

Sample ID: HS20061242-07MS

- MS and MSD are for an unrelated sample

Batch ID: 154739

Sample ID: HS20060980-01MS

- MS and MSD are for an unrelated sample

GC Volatiles by Method SW8015

Batch ID: R363801,R364156

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R363717,R364166

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R363649

Sample ID: HS20060951-11MSD

- MSD is for an unrelated sample

WetChemistry by Method ASTM D2216

Batch ID: R364213

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9250

Batch ID: 154883

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Sample ID: CVU84-14 0-1
Collection Date: 18-Jun-2020 14:40

ANALYTICAL REPORT
WorkOrder:HS20060996
Lab ID:HS20060996-01
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: KAH
Percent Moisture	**2.40**		**0.0100**	**0.0100**	**wt%**	1	29-Jun-2020 16:54
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 26-Jun-2020		Analyst: MZD
Chloride	**5.68**	J	**2.80**	**10.2**	**mg/Kg-dry**	1	27-Jun-2020 10:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Sample ID: CVU84-14 1-2
Collection Date: 18-Jun-2020 14:45

ANALYTICAL REPORT
WorkOrder:HS20060996
Lab ID:HS20060996-02
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: KAH
Percent Moisture	**1.79**		**0.0100**	**0.0100**	**wt%**	1	29-Jun-2020 16:54
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 26-Jun-2020		Analyst: MZD
Chloride	**58.0**		**2.78**	**10.1**	**mg/Kg-dry**	1	27-Jun-2020 10:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Sample ID: CVU84-14 2-3
Collection Date: 18-Jun-2020 14:50

ANALYTICAL REPORT
WorkOrder:HS20060996
Lab ID:HS20060996-03
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: WLR
Benzene	< 0.00047		0.00047	0.0047	mg/Kg-dry	1	30-Jun-2020 02:02
Ethylbenzene	< 0.00066		0.00066	0.0047	mg/Kg-dry	1	30-Jun-2020 02:02
Toluene	< 0.00057		0.00057	0.0047	mg/Kg-dry	1	30-Jun-2020 02:02
Xylenes, Total	< 0.00094		0.00094	0.0047	mg/Kg-dry	1	30-Jun-2020 02:02
Surr: 1,2-Dichloroethane-d4	*94.7*			*70-126*	*%REC*	*1*	*30-Jun-2020 02:02*
Surr: 4-Bromofluorobenzene	*99.3*			*70-130*	*%REC*	*1*	*30-Jun-2020 02:02*
Surr: Dibromofluoromethane	*93.5*			*70-130*	*%REC*	*1*	*30-Jun-2020 02:02*
Surr: Toluene-d8	*98.1*			*70-130*	*%REC*	*1*	*30-Jun-2020 02:02*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.053	mg/Kg-dry	1	29-Jun-2020 12:20
Surr: 4-Bromofluorobenzene	*107*			*70-123*	*%REC*	*1*	*29-Jun-2020 12:20*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Jun-2020		Analyst: PVL
TPH (Diesel Range)	**7.7**		**0.50**	**1.7**	**mg/Kg-dry**	1	30-Jun-2020 15:51
TPH (Motor Oil Range)	**15**		**0.50**	**3.4**	**mg/Kg-dry**	1	30-Jun-2020 15:51
Surr: 2-Fluorobiphenyl	*65.6*			*60-129*	*%REC*	*1*	*30-Jun-2020 15:51*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: KAH
Percent Moisture	**1.38**		**0.0100**	**0.0100**	**wt%**	1	29-Jun-2020 16:54
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 26-Jun-2020		Analyst: MZD
Chloride	**55.1**		**2.74**	**9.99**	**mg/Kg-dry**	1	27-Jun-2020 10:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Sample ID: CVU84-14 3-4
Collection Date: 18-Jun-2020 14:55

ANALYTICAL REPORT
WorkOrder:HS20060996
Lab ID:HS20060996-04
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: WLR
Benzene	< 0.00051		0.00051	0.0051	mg/Kg-dry	1	23-Jun-2020 01:43
Ethylbenzene	< 0.00072		0.00072	0.0051	mg/Kg-dry	1	23-Jun-2020 01:43
Toluene	< 0.00062		0.00062	0.0051	mg/Kg-dry	1	23-Jun-2020 01:43
Xylenes, Total	< 0.0010		0.0010	0.0051	mg/Kg-dry	1	23-Jun-2020 01:43
Surr: 1,2-Dichloroethane-d4	*82.5*			*70-126*	*%REC*	*1*	*23-Jun-2020 01:43*
Surr: 4-Bromofluorobenzene	*98.9*			*70-130*	*%REC*	*1*	*23-Jun-2020 01:43*
Surr: Dibromofluoromethane	*88.2*			*70-130*	*%REC*	*1*	*23-Jun-2020 01:43*
Surr: Toluene-d8	*102*			*70-130*	*%REC*	*1*	*23-Jun-2020 01:43*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.053	mg/Kg-dry	1	23-Jun-2020 21:42
Surr: 4-Bromofluorobenzene	*114*			*70-123*	*%REC*	*1*	*23-Jun-2020 21:42*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 23-Jun-2020		Analyst: PVL
TPH (Diesel Range)	**27**		**0.51**	**1.7**	**mg/Kg-dry**	1	24-Jun-2020 18:43
TPH (Motor Oil Range)	**31**		**0.51**	**3.5**	**mg/Kg-dry**	1	24-Jun-2020 18:43
Surr: 2-Fluorobiphenyl	*63.0*			*60-129*	*%REC*	*1*	*24-Jun-2020 18:43*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: KAH
Percent Moisture	**2.45**		**0.0100**	**0.0100**	**wt%**	1	29-Jun-2020 16:54
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 26-Jun-2020		Analyst: MZD
Chloride	**186**		**2.77**	**10.1**	**mg/Kg-dry**	1	27-Jun-2020 10:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Sample ID: CVU84-14 4-5
Collection Date: 18-Jun-2020 15:00

ANALYTICAL REPORT
WorkOrder:HS20060996
Lab ID:HS20060996-05
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: KAH
Percent Moisture	**2.74**		**0.0100**	**0.0100**	**wt%**	1	29-Jun-2020 16:54
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 26-Jun-2020		Analyst: MZD
Chloride	**187**		**2.79**	**10.2**	**mg/Kg-dry**	1	27-Jun-2020 10:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Sample ID: CVU84-13 0-1
Collection Date: 18-Jun-2020 15:20

ANALYTICAL REPORT
WorkOrder:HS20060996
Lab ID:HS20060996-06
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: KAH
Percent Moisture	**1.67**		**0.0100**	**0.0100**	**wt%**	1	29-Jun-2020 16:54
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 26-Jun-2020		Analyst: MZD
Chloride	**3.83**	J	**2.78**	**10.1**	**mg/Kg-dry**	1	27-Jun-2020 10:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Sample ID: CVU84-13 1-2
Collection Date: 18-Jun-2020 15:25

ANALYTICAL REPORT
WorkOrder:HS20060996
Lab ID:HS20060996-07
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: KAH
Percent Moisture	**2.44**		**0.0100**	**0.0100**	**wt%**	1	29-Jun-2020 16:54
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 26-Jun-2020		Analyst: MZD
Chloride	**39.3**		**2.80**	**10.2**	**mg/Kg-dry**	1	27-Jun-2020 10:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Sample ID: CVU84-13 2-3
Collection Date: 18-Jun-2020 15:30

ANALYTICAL REPORT
WorkOrder:HS20060996
Lab ID:HS20060996-08
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: WLR
Benzene	< 0.00050		0.00050	0.0050	mg/Kg-dry	1	30-Jun-2020 02:25
Ethylbenzene	< 0.00070		0.00070	0.0050	mg/Kg-dry	1	30-Jun-2020 02:25
Toluene	< 0.00060		0.00060	0.0050	mg/Kg-dry	1	30-Jun-2020 02:25
Xylenes, Total	< 0.0010		0.0010	0.0050	mg/Kg-dry	1	30-Jun-2020 02:25
Surr: 1,2-Dichloroethane-d4	*93.9*			*70-126*	*%REC*	*1*	*30-Jun-2020 02:25*
Surr: 4-Bromofluorobenzene	*100*			*70-130*	*%REC*	*1*	*30-Jun-2020 02:25*
Surr: Dibromofluoromethane	*97.5*			*70-130*	*%REC*	*1*	*30-Jun-2020 02:25*
Surr: Toluene-d8	*101*			*70-130*	*%REC*	*1*	*30-Jun-2020 02:25*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.010		0.010	0.050	mg/Kg-dry	1	29-Jun-2020 12:36
Surr: 4-Bromofluorobenzene	*110*			*70-123*	*%REC*	*1*	*29-Jun-2020 12:36*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Jun-2020		Analyst: PVL
TPH (Diesel Range)	**9.5**		**0.50**	**1.7**	**mg/Kg-dry**	1	30-Jun-2020 16:15
TPH (Motor Oil Range)	**19**		**0.50**	**3.4**	**mg/Kg-dry**	1	30-Jun-2020 16:15
Surr: 2-Fluorobiphenyl	*62.1*			*60-129*	*%REC*	*1*	*30-Jun-2020 16:15*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: KAH
Percent Moisture	**1.58**		**0.0100**	**0.0100**	**wt%**	1	29-Jun-2020 16:54
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 26-Jun-2020		Analyst: MZD
Chloride	**27.4**		**2.78**	**10.1**	**mg/Kg-dry**	1	27-Jun-2020 10:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Sample ID: CVU84-13 3-4
Collection Date: 18-Jun-2020 15:35

ANALYTICAL REPORT
WorkOrder:HS20060996
Lab ID:HS20060996-09
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: WLR
Benzene	< 0.00050		0.00050	0.0050	mg/Kg-dry	1	22-Jun-2020 11:28
Ethylbenzene	< 0.00070		0.00070	0.0050	mg/Kg-dry	1	22-Jun-2020 11:28
Toluene	< 0.00060		0.00060	0.0050	mg/Kg-dry	1	22-Jun-2020 11:28
Xylenes, Total	< 0.0010		0.0010	0.0050	mg/Kg-dry	1	22-Jun-2020 11:28
Surr: 1,2-Dichloroethane-d4	*92.9*			*70-126*	*%REC*	*1*	*22-Jun-2020 11:28*
Surr: 4-Bromofluorobenzene	*98.4*			*70-130*	*%REC*	*1*	*22-Jun-2020 11:28*
Surr: Dibromofluoromethane	*99.0*			*70-130*	*%REC*	*1*	*22-Jun-2020 11:28*
Surr: Toluene-d8	*102*			*70-130*	*%REC*	*1*	*22-Jun-2020 11:28*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.010		0.010	0.050	mg/Kg-dry	1	23-Jun-2020 21:58
Surr: 4-Bromofluorobenzene	*115*			*70-123*	*%REC*	*1*	*23-Jun-2020 21:58*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 23-Jun-2020		Analyst: PVL
TPH (Diesel Range)	**9.6**		**0.51**	**1.7**	**mg/Kg-dry**	1	23-Jun-2020 19:09
TPH (Motor Oil Range)	**24**		**0.51**	**3.5**	**mg/Kg-dry**	1	23-Jun-2020 19:09
Surr: 2-Fluorobiphenyl	*60.2*			*60-129*	*%REC*	*1*	*23-Jun-2020 19:09*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: KAH
Percent Moisture	**2.69**		**0.0100**	**0.0100**	**wt%**	1	29-Jun-2020 16:54
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 26-Jun-2020		Analyst: MZD
Chloride	**69.1**		**2.81**	**10.2**	**mg/Kg-dry**	1	27-Jun-2020 10:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Sample ID: CVU84-13 4-5
Collection Date: 18-Jun-2020 15:40

ANALYTICAL REPORT
WorkOrder:HS20060996
Lab ID:HS20060996-10
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: KAH
Percent Moisture	**3.34**		**0.0100**	**0.0100**	**wt%**	1	29-Jun-2020 16:54
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 26-Jun-2020		Analyst: MZD
Chloride	**74.5**		**2.83**	**10.3**	**mg/Kg-dry**	1	27-Jun-2020 10:41

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

Batch ID: 3788 **Start Date:** 22 Jun 2020 08:02 **End Date:** 22 Jun 2020 08:02
Method: VOLATILES BY SW8260C

Sample ID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS20060996-03	1	5.388 (g)	5 (mL)	0.93	Bulk (5030B)
HS20060996-04	1	4.993 (g)	5 (mL)	1	Bulk (5030B)
HS20060996-08	1	5.057 (g)	5 (mL)	0.99	Bulk (5030B)
HS20060996-09	1	5.098 (g)	5 (mL)	0.98	Bulk (5030B)

Batch ID: 3789 **Start Date:** 23 Jun 2020 09:51 **End Date:** 23 Jun 2020 09:51
Method: GASOLINE RANGE ORGANICS BY SW8015C **Prep Code:**

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20060996-04	1	4.87 (g)	5 (mL)	1.03	Bulk (5030B)
HS20060996-09	1	5.118 (g)	5 (mL)	0.98	Bulk (5030B)

Batch ID: 3798 **Start Date:** 29 Jun 2020 10:31 **End Date:** 29 Jun 2020 10:31
Method: GASOLINE RANGE ORGANICS BY SW8015C **Prep Code:**

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20060996-03	1	4.8 (g)	5 (mL)	1.04	Bulk (5030B)
HS20060996-08	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)

Batch ID: 154739 **Start Date:** 23 Jun 2020 07:19 **End Date:** 23 Jun 2020 11:30
Method: SOPREP: 3541 TPH **Prep Code:** 8015SPR_LL

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20060996-04	1	30.13 (g)	1 (mL)	0.03319	
HS20060996-09	1	30.1 (g)	1 (mL)	0.03322	

Batch ID: 154883 **Start Date:** 26 Jun 2020 08:59 **End Date:** 26 Jun 2020 15:00
Method: SOLID CHLORIDE PREP **Prep Code:** CHLORIDE LEACH

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060996-01		5.0154 (grams)	50 (mL)	9.969
HS20060996-02		5.0205 (grams)	50 (mL)	9.959
HS20060996-03		5.0763 (grams)	50 (mL)	9.85
HS20060996-04		5.0741 (grams)	50 (mL)	9.854
HS20060996-05		5.0489 (grams)	50 (mL)	9.903
HS20060996-06		5.0193 (grams)	50 (mL)	9.962
HS20060996-07		5.0119 (grams)	50 (mL)	9.976
HS20060996-08		5.0108 (grams)	50 (mL)	9.978
HS20060996-09		5.0138 (grams)	50 (mL)	9.972
HS20060996-10		5.0104 (grams)	50 (mL)	9.979

ALS Houston, US

Date: 02-Jul-20

Weight / Prep Log

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

Batch ID: 155023 **Start Date:** 30 Jun 2020 10:00 **End Date:** 30 Jun 2020 16:00
Method: SOPREP: 3541 TPH **Prep Code:** 8015SPR_LL

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060996-03		30.12 (g)	1 (mL)	0.0332
HS20060996-08		30.33 (g)	1 (mL)	0.03297

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 154739 (0)	**Test Name :** TPH DRO/ORO BY SW8015C				**Matrix:** Soil	
HS20060996-04	CVU84-14 3-4	18 Jun 2020 14:55		23 Jun 2020 07:19	24 Jun 2020 18:43	1
HS20060996-09	CVU84-13 3-4	18 Jun 2020 15:35		23 Jun 2020 07:19	23 Jun 2020 19:09	1
Batch ID: 154883 (0)	**Test Name :** CHLORIDE BY SW-846 9250				**Matrix:** Soil	
HS20060996-01	CVU84-14 0-1	18 Jun 2020 14:40		26 Jun 2020 08:59	27 Jun 2020 10:39	1
HS20060996-02	CVU84-14 1-2	18 Jun 2020 14:45		26 Jun 2020 08:59	27 Jun 2020 10:39	1
HS20060996-03	CVU84-14 2-3	18 Jun 2020 14:50		26 Jun 2020 08:59	27 Jun 2020 10:39	1
HS20060996-04	CVU84-14 3-4	18 Jun 2020 14:55		26 Jun 2020 08:59	27 Jun 2020 10:39	1
HS20060996-05	CVU84-14 4-5	18 Jun 2020 15:00		26 Jun 2020 08:59	27 Jun 2020 10:40	1
HS20060996-06	CVU84-13 0-1	18 Jun 2020 15:20		26 Jun 2020 08:59	27 Jun 2020 10:40	1
HS20060996-07	CVU84-13 1-2	18 Jun 2020 15:25		26 Jun 2020 08:59	27 Jun 2020 10:40	1
HS20060996-08	CVU84-13 2-3	18 Jun 2020 15:30		26 Jun 2020 08:59	27 Jun 2020 10:40	1
HS20060996-09	CVU84-13 3-4	18 Jun 2020 15:35		26 Jun 2020 08:59	27 Jun 2020 10:40	1
HS20060996-10	CVU84-13 4-5	18 Jun 2020 15:40		26 Jun 2020 08:59	27 Jun 2020 10:41	1
Batch ID: 155023 (0)	**Test Name :** TPH DRO/ORO BY SW8015C				**Matrix:** Soil	
HS20060996-03	CVU84-14 2-3	18 Jun 2020 14:50		30 Jun 2020 10:00	30 Jun 2020 15:51	1
HS20060996-08	CVU84-13 2-3	18 Jun 2020 15:30		30 Jun 2020 10:00	30 Jun 2020 16:15	1
Batch ID: R363649 (0)	**Test Name :** VOLATILES BY SW8260C				**Matrix:** Soil	
HS20060996-09	CVU84-13 3-4	18 Jun 2020 15:35			22 Jun 2020 11:28	1
Batch ID: R363717 (0)	**Test Name :** VOLATILES BY SW8260C				**Matrix:** Soil	
HS20060996-04	CVU84-14 3-4	18 Jun 2020 14:55			23 Jun 2020 01:43	1
Batch ID: R363801 (0)	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C				**Matrix:** Soil	
HS20060996-04	CVU84-14 3-4	18 Jun 2020 14:55			23 Jun 2020 21:42	1
HS20060996-09	CVU84-13 3-4	18 Jun 2020 15:35			23 Jun 2020 21:58	1
Batch ID: R364156 (0)	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C				**Matrix:** Soil	
HS20060996-03	CVU84-14 2-3	18 Jun 2020 14:50			29 Jun 2020 12:20	1
HS20060996-08	CVU84-13 2-3	18 Jun 2020 15:30			29 Jun 2020 12:36	1
Batch ID: R364166 (0)	**Test Name :** VOLATILES BY SW8260C				**Matrix:** Soil	
HS20060996-03	CVU84-14 2-3	18 Jun 2020 14:50			30 Jun 2020 02:02	1
HS20060996-08	CVU84-13 2-3	18 Jun 2020 15:30			30 Jun 2020 02:25	1

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R364213 (0)	**Test Name :** MOISTURE - ASTM D2216				**Matrix:** Soil	
HS20060996-01	CVU84-14 0-1	18 Jun 2020 14:40			29 Jun 2020 16:54	1
HS20060996-02	CVU84-14 1-2	18 Jun 2020 14:45			29 Jun 2020 16:54	1
HS20060996-03	CVU84-14 2-3	18 Jun 2020 14:50			29 Jun 2020 16:54	1
HS20060996-04	CVU84-14 3-4	18 Jun 2020 14:55			29 Jun 2020 16:54	1
HS20060996-05	CVU84-14 4-5	18 Jun 2020 15:00			29 Jun 2020 16:54	1
HS20060996-06	CVU84-13 0-1	18 Jun 2020 15:20			29 Jun 2020 16:54	1
HS20060996-07	CVU84-13 1-2	18 Jun 2020 15:25			29 Jun 2020 16:54	1
HS20060996-08	CVU84-13 2-3	18 Jun 2020 15:30			29 Jun 2020 16:54	1
HS20060996-09	CVU84-13 3-4	18 Jun 2020 15:35			29 Jun 2020 16:54	1
HS20060996-10	CVU84-13 4-5	18 Jun 2020 15:40			29 Jun 2020 16:54	1

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: 154739 (0) **Instrument: FID-7** **Method: TPH DRO/ORO BY SW8015C**

MBLK Sample ID: **MBLK-154739** Units: **mg/Kg** Analysis Date: **23-Jun-2020 11:54**
Client ID: Run ID: **FID-7_363774** SeqNo: **5631937** PrepDate: **23-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	< 0.50	1.7								
TPH (Motor Oil Range)	< 0.50	3.4								
Surr: 2-Fluorobiphenyl	*2.414*	*0.10*	*3.33*	*0*	*72.5*	*70 - 130*				

LCS Sample ID: **LCS-154739** Units: **mg/Kg** Analysis Date: **23-Jun-2020 12:18**
Client ID: Run ID: **FID-7_363774** SeqNo: **5631938** PrepDate: **23-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	26.88	1.7	33.33	0	80.7	70 - 130				
TPH (Motor Oil Range)	26.83	3.4	33.33	0	80.5	70 - 130				
Surr: 2-Fluorobiphenyl	*2.383*	*0.10*	*3.33*	*0*	*71.6*	*70 - 130*				

MS Sample ID: **HS20060980-01MS** Units: **mg/Kg** Analysis Date: **23-Jun-2020 13:06**
Client ID: Run ID: **FID-7_363774** SeqNo: **5631939** PrepDate: **23-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	64.02	1.7	33.24	31.7	97.2	70 - 130				
TPH (Motor Oil Range)	70.44	3.4	33.24	34.87	107	70 - 130				E
Surr: 2-Fluorobiphenyl	*2.591*	*0.10*	*3.321*	*0*	*78.0*	*60 - 129*				

MSD Sample ID: **HS20060980-01MSD** Units: **mg/Kg** Analysis Date: **23-Jun-2020 13:30**
Client ID: Run ID: **FID-7_363774** SeqNo: **5631940** PrepDate: **23-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	69.3	1.7	33.32	31.7	113	70 - 130	64.02	7.93	30	E
TPH (Motor Oil Range)	78.92	3.4	33.32	34.87	132	70 - 130	70.44	11.4	30	SE
Surr: 2-Fluorobiphenyl	*2.782*	*0.10*	*3.329*	*0*	*83.6*	*60 - 129*	*2.591*	*7.11*	*30*	

The following samples were analyzed in this batch: HS20060996-04 HS20060996-09

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: 155023 (0) **Instrument: FID-7** **Method: TPH DRO/ORO BY SW8015C**

MBLK Sample ID: **MBLK-155023** Units: **mg/Kg** Analysis Date: **30-Jun-2020 15:03**
Client ID: Run ID: **FID-7_364327** SeqNo: **5646461** PrepDate: **30-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	< 0.50	1.7								
TPH (Motor Oil Range)	< 0.50	3.4								
Surr: 2-Fluorobiphenyl	*2.346*	*0.10*	*3.33*	*0*	*70.4*	*70 - 130*				

LCS Sample ID: **LCS-155023** Units: **mg/Kg** Analysis Date: **30-Jun-2020 15:27**
Client ID: Run ID: **FID-7_364327** SeqNo: **5646462** PrepDate: **30-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	27.03	1.7	33.33	0	81.1	70 - 130				
TPH (Motor Oil Range)	25.29	3.4	33.33	0	75.9	70 - 130				
Surr: 2-Fluorobiphenyl	*2.574*	*0.10*	*3.33*	*0*	*77.3*	*70 - 130*				

MS Sample ID: **HS20061242-07MS** Units: **mg/Kg** Analysis Date: **01-Jul-2020 13:51**
Client ID: Run ID: **FID-7_364327** SeqNo: **5646644** PrepDate: **30-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	27.14	1.7	33.32	1.382	77.3	70 - 130				
TPH (Motor Oil Range)	30.82	3.4	33.32	9.141	65.1	70 - 130				S
Surr: 2-Fluorobiphenyl	*2.231*	*0.10*	*3.329*	*0*	*67.0*	*60 - 129*				

MSD Sample ID: **HS20061242-07MSD** Units: **mg/Kg** Analysis Date: **30-Jun-2020 17:52**
Client ID: Run ID: **FID-7_364327** SeqNo: **5646467** PrepDate: **30-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	30.52	1.7	33.26	1.382	87.6	70 - 130	27.14	11.7	30	
TPH (Motor Oil Range)	34.67	3.4	33.26	9.141	76.8	70 - 130	30.82	11.8	30	
Surr: 2-Fluorobiphenyl	*2.495*	*0.10*	*3.323*	*0*	*75.1*	*60 - 129*	*2.231*	*11.2*	*30*	

The following samples were analyzed in this batch: HS20060996-03 HS20060996-08

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: R363801 (0) **Instrument:** FID-14 **Method:** GASOLINE RANGE ORGANICS BY SW8015C

MBLK Sample ID: **MBLK-0623201** Units: **mg/Kg** Analysis Date: **23-Jun-2020 18:45**
Client ID: Run ID: **FID-14_363801** SeqNo: **5632638** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	< 0.010	0.050								
Surr: 4-Bromofluorobenzene	*0.1116*	*0.0050*	*0.1*	*0*	*112*	*75 - 121*				

LCS Sample ID: **LCS-0623201** Units: **mg/Kg** Analysis Date: **23-Jun-2020 18:13**
Client ID: Run ID: **FID-14_363801** SeqNo: **5632636** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.121	0.050	1	0	112	72 - 121				
Surr: 4-Bromofluorobenzene	*0.1188*	*0.0050*	*0.1*	*0*	*119*	*75 - 121*				

LCSD Sample ID: **LCSD-0623201** Units: **mg/Kg** Analysis Date: **23-Jun-2020 18:29**
Client ID: Run ID: **FID-14_363801** SeqNo: **5632637** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.097	0.050	1	0	110	72 - 121	1.121	2.2	30	
Surr: 4-Bromofluorobenzene	*0.09697*	*0.0050*	*0.1*	*0*	*97.0*	*75 - 121*	*0.1188*	*20.2*	*30*	

MS Sample ID: **HS20061021-04MS** Units: **mg/Kg** Analysis Date: **23-Jun-2020 20:22**
Client ID: Run ID: **FID-14_363801** SeqNo: **5632644** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8853	0.048	0.96	0	92.2	70 - 130				
Surr: 4-Bromofluorobenzene	*0.111*	*0.0048*	*0.096*	*0*	*116*	*70 - 123*				

MSD Sample ID: **HS20061021-04MSD** Units: **mg/Kg** Analysis Date: **23-Jun-2020 20:38**
Client ID: Run ID: **FID-14_363801** SeqNo: **5632645** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8397	0.048	0.97	0	86.6	70 - 130	0.8853	5.29	30	
Surr: 4-Bromofluorobenzene	*0.1009*	*0.0048*	*0.097*	*0*	*104*	*70 - 123*	*0.111*	*9.56*	*30*	

The following samples were analyzed in this batch: HS20060996-04 HS20060996-09

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: R364156 (0) **Instrument:** FID-14 **Method:** GASOLINE RANGE ORGANICS BY SW8015C

MBLK Sample ID: **MBLK-062920** Units: **mg/Kg** Analysis Date: **29-Jun-2020 12:04**
Client ID: Run ID: **FID-14_364156** SeqNo: **5642320** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	< 0.010	0.050								
Surr: 4-Bromofluorobenzene	*0.1084*	*0.0050*	*0.1*	*0*	*108*	*75 - 121*				

LCS Sample ID: **LCS-062920** Units: **mg/Kg** Analysis Date: **29-Jun-2020 11:48**
Client ID: Run ID: **FID-14_364156** SeqNo: **5642319** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.012	0.050	1	0	101	72 - 121				
Surr: 4-Bromofluorobenzene	*0.08497*	*0.0050*	*0.1*	*0*	*85.0*	*75 - 121*				

MS Sample ID: **HS20061396-02MS** Units: **mg/Kg** Analysis Date: **29-Jun-2020 13:56**
Client ID: Run ID: **FID-14_364156** SeqNo: **5642327** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.052	0.050	1.01	0	104	70 - 130				
Surr: 4-Bromofluorobenzene	*0.09077*	*0.0050*	*0.101*	*0*	*89.9*	*70 - 123*				

MSD Sample ID: **HS20061396-02MSD** Units: **mg/Kg** Analysis Date: **29-Jun-2020 14:12**
Client ID: Run ID: **FID-14_364156** SeqNo: **5642328** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.01	0.048	0.97	0	104	70 - 130	1.052	4.06	30	
Surr: 4-Bromofluorobenzene	*0.08408*	*0.0048*	*0.097*	*0*	*86.7*	*70 - 123*	*0.09077*	*7.65*	*30*	

The following samples were analyzed in this batch: HS20060996-03 HS20060996-08

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: R363649 (0) **Instrument: VOA8** **Method: VOLATILES BY SW8260C**

MBLK Sample ID: **VBLKS2-062220** Units: **ug/Kg** Analysis Date: **22-Jun-2020 08:48**
Client ID: Run ID: **VOA8_363649** SeqNo: **5629069** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	< 0.50	5.0								
Ethylbenzene	< 0.70	5.0								
Toluene	< 0.60	5.0								
Xylenes, Total	< 1.0	5.0								
Surr: 1,2-Dichloroethane-d4	*46.18*	*0*	*50*	*0*	*92.4*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.6*	*0*	*50*	*0*	*99.2*	*80 - 120*				
Surr: Dibromofluoromethane	*48.67*	*0*	*50*	*0*	*97.3*	*80 - 119*				
Surr: Toluene-d8	*49.82*	*0*	*50*	*0*	*99.6*	*81 - 118*				

LCS Sample ID: **VLCSS2-062220** Units: **ug/Kg** Analysis Date: **22-Jun-2020 08:02**
Client ID: Run ID: **VOA8_363649** SeqNo: **5629068** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	50.11	5.0	50	0	100	75 - 124				
Ethylbenzene	51.07	5.0	50	0	102	70 - 123				
Toluene	50.13	5.0	50	0	100	76 - 122				
Xylenes, Total	154.7	5.0	150	0	103	77 - 128				
Surr: 1,2-Dichloroethane-d4	*47.79*	*0*	*50*	*0*	*95.6*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*48.11*	*0*	*50*	*0*	*96.2*	*80 - 120*				
Surr: Dibromofluoromethane	*48.49*	*0*	*50*	*0*	*97.0*	*80 - 119*				
Surr: Toluene-d8	*48.28*	*0*	*50*	*0*	*96.6*	*81 - 118*				

MS Sample ID: **HS20060951-11MS** Units: **ug/Kg** Analysis Date: **22-Jun-2020 10:42**
Client ID: Run ID: **VOA8_363649** SeqNo: **5629441** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.88	4.4	43.5	0	112	70 - 130				
Ethylbenzene	46.44	4.4	43.5	0	107	70 - 130				
Toluene	48.83	4.4	43.5	0	112	70 - 130				
Xylenes, Total	137.6	4.4	130.5	0	105	70 - 130				
Surr: 1,2-Dichloroethane-d4	*42.05*	*0*	*43.5*	*0*	*96.7*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*38.13*	*0*	*43.5*	*0*	*87.7*	*70 - 130*				
Surr: Dibromofluoromethane	*41.55*	*0*	*43.5*	*0*	*95.5*	*70 - 130*				
Surr: Toluene-d8	*44.58*	*0*	*43.5*	*0*	*102*	*70 - 130*				

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: R363649 (0) **Instrument:** VOA8 **Method:** VOLATILES BY SW8260C

MSD Sample ID: **HS20060951-11MSD** Units: **ug/Kg** Analysis Date: **22-Jun-2020 11:05**
Client ID: Run ID: **VOA8_363649** SeqNo: **5629442** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	32.05	4.2	42.5	0	75.4	70 - 130	48.88	41.6	30	R
Ethylbenzene	27.43	4.2	42.5	0	64.5	70 - 130	46.44	51.5	30	SR
Toluene	29.45	4.2	42.5	0	69.3	70 - 130	48.83	49.5	30	SR
Xylenes, Total	79.04	4.2	127.5	0	62.0	70 - 130	137.6	54.1	30	SR
Surr: 1,2-Dichloroethane-d4	*46*	*0*	*42.5*	*0*	*108*	*70 - 126*	*42.05*	*8.97*	*30*	
Surr: 4-Bromofluorobenzene	*42.44*	*0*	*42.5*	*0*	*99.9*	*70 - 130*	*38.13*	*10.7*	*30*	
Surr: Dibromofluoromethane	*42.89*	*0*	*42.5*	*0*	*101*	*70 - 130*	*41.55*	*3.19*	*30*	
Surr: Toluene-d8	*42.62*	*0*	*42.5*	*0*	*100*	*70 - 130*	*44.58*	*4.51*	*30*	

The following samples were analyzed in this batch: HS20060996-09

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: R363717 (0) **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

MBLK Sample ID: **VBLKS2-062220** Units: **ug/Kg** Analysis Date: **22-Jun-2020 21:33**
Client ID: Run ID: **VOA5_363717** SeqNo: **5630483** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	< 0.50	5.0								
Ethylbenzene	< 0.70	5.0								
Toluene	< 0.60	5.0								
Xylenes, Total	< 1.0	5.0								
Surr: 1,2-Dichloroethane-d4	*42.45*	*0*	*50*	*0*	*84.9*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.52*	*0*	*50*	*0*	*99.0*	*80 - 120*				
Surr: Dibromofluoromethane	*45.44*	*0*	*50*	*0*	*90.9*	*80 - 119*				
Surr: Toluene-d8	*50.86*	*0*	*50*	*0*	*102*	*81 - 118*				

LCS Sample ID: **VLCSS2-062220** Units: **ug/Kg** Analysis Date: **22-Jun-2020 20:43**
Client ID: Run ID: **VOA5_363717** SeqNo: **5630482** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	54.69	5.0	50	0	109	75 - 124				
Ethylbenzene	54.34	5.0	50	0	109	70 - 123				
Toluene	53.64	5.0	50	0	107	76 - 122				
Xylenes, Total	162	5.0	150	0	108	77 - 128				
Surr: 1,2-Dichloroethane-d4	*46.7*	*0*	*50*	*0*	*93.4*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*50.61*	*0*	*50*	*0*	*101*	*80 - 120*				
Surr: Dibromofluoromethane	*49.48*	*0*	*50*	*0*	*99.0*	*80 - 119*				
Surr: Toluene-d8	*49.76*	*0*	*50*	*0*	*99.5*	*81 - 118*				

MS Sample ID: **HS20060992-02MS** Units: **ug/Kg** Analysis Date: **22-Jun-2020 23:13**
Client ID: Run ID: **VOA5_363717** SeqNo: **5630487** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.55	4.9	49	0	88.9	70 - 130				
Ethylbenzene	40.23	4.9	49	0	82.1	70 - 130				
Toluene	41.88	4.9	49	0	85.5	70 - 130				
Xylenes, Total	117.4	4.9	147	0	79.9	70 - 130				
Surr: 1,2-Dichloroethane-d4	*43.57*	*0*	*49*	*0*	*88.9*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*49.53*	*0*	*49*	*0*	*101*	*70 - 130*				
Surr: Dibromofluoromethane	*46.6*	*0*	*49*	*0*	*95.1*	*70 - 130*				
Surr: Toluene-d8	*49.92*	*0*	*49*	*0*	*102*	*70 - 130*				

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: R363717 (0) **Instrument:** VOA5 **Method:** VOLATILES BY SW8260C

MSD Sample ID: **HS20060992-02MSD** Units: **ug/Kg** Analysis Date: **22-Jun-2020 23:38**
Client ID: Run ID: **VOA5_363717** SeqNo: **5630488** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	40.53	4.8	48.5	0	83.6	70 - 130	43.55	7.19	30	
Ethylbenzene	36.69	4.8	48.5	0	75.7	70 - 130	40.23	9.2	30	
Toluene	38.87	4.8	48.5	0	80.1	70 - 130	41.88	7.46	30	
Xylenes, Total	107.1	4.8	145.5	0	73.6	70 - 130	117.4	9.19	30	
Surr: 1,2-Dichloroethane-d4	*43.1*	*0*	*48.5*	*0*	*88.9*	*70 - 126*	*43.57*	*1.08*	*30*	
Surr: 4-Bromofluorobenzene	*48.7*	*0*	*48.5*	*0*	*100*	*70 - 130*	*49.53*	*1.68*	*30*	
Surr: Dibromofluoromethane	*46.76*	*0*	*48.5*	*0*	*96.4*	*70 - 130*	*46.6*	*0.336*	*30*	
Surr: Toluene-d8	*49.42*	*0*	*48.5*	*0*	*102*	*70 - 130*	*49.92*	*1*	*30*	

The following samples were analyzed in this batch: HS20060996-04

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: R364166 (0) **Instrument: VOA8** **Method: VOLATILES BY SW8260C**

MBLK Sample ID: **VBLKS2062920** Units: **ug/Kg** Analysis Date: **29-Jun-2020 21:25**
Client ID: Run ID: **VOA8_364166** SeqNo: **5642657** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	< 0.50	5.0								
Ethylbenzene	< 0.70	5.0								
Toluene	< 0.60	5.0								
Xylenes, Total	< 1.0	5.0								
Surr: 1,2-Dichloroethane-d4	*45.86*	*0*	*50*	*0*	*91.7*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*51.05*	*0*	*50*	*0*	*102*	*80 - 120*				
Surr: Dibromofluoromethane	*48.38*	*0*	*50*	*0*	*96.8*	*80 - 119*				
Surr: Toluene-d8	*49.54*	*0*	*50*	*0*	*99.1*	*81 - 118*				

LCS Sample ID: **VLCSS2062920** Units: **ug/Kg** Analysis Date: **29-Jun-2020 20:39**
Client ID: Run ID: **VOA8_364166** SeqNo: **5642656** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	49.83	5.0	50	0	99.7	75 - 124				
Ethylbenzene	48.56	5.0	50	0	97.1	70 - 123				
Toluene	48.3	5.0	50	0	96.6	76 - 122				
Xylenes, Total	147.9	5.0	150	0	98.6	77 - 128				
Surr: 1,2-Dichloroethane-d4	*50.14*	*0*	*50*	*0*	*100*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.82*	*0*	*50*	*0*	*99.6*	*80 - 120*				
Surr: Dibromofluoromethane	*49.92*	*0*	*50*	*0*	*99.8*	*80 - 119*				
Surr: Toluene-d8	*49.13*	*0*	*50*	*0*	*98.3*	*81 - 118*				

MS Sample ID: **HS20061242-29MS** Units: **ug/Kg** Analysis Date: **29-Jun-2020 23:43**
Client ID: Run ID: **VOA8_364166** SeqNo: **5642663** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	44.3	5.0	49.5	0.7342	88.0	70 - 130				
Ethylbenzene	38.98	5.0	49.5	0.9419	76.8	70 - 130				
Toluene	46.9	5.0	49.5	9.224	76.1	70 - 130				
Xylenes, Total	117.5	5.0	148.5	4.688	76.0	70 - 130				
Surr: 1,2-Dichloroethane-d4	*46.68*	*0*	*49.5*	*0*	*94.3*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*50.65*	*0*	*49.5*	*0*	*102*	*70 - 130*				
Surr: Dibromofluoromethane	*48.18*	*0*	*49.5*	*0*	*97.3*	*70 - 130*				
Surr: Toluene-d8	*48.23*	*0*	*49.5*	*0*	*97.4*	*70 - 130*				

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: R364166 (0) **Instrument:** VOA8 **Method:** VOLATILES BY SW8260C

MSD Sample ID: **HS20061242-29MSD** Units: **ug/Kg** Analysis Date: **30-Jun-2020 00:07**
Client ID: Run ID: **VOA8_364166** SeqNo: **5642664** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	41.22	4.9	49	0.7342	82.6	70 - 130	44.3	7.2	30	
Ethylbenzene	36.08	4.9	49	0.9419	71.7	70 - 130	38.98	7.73	30	
Toluene	44.17	4.9	49	9.224	71.3	70 - 130	46.9	6.01	30	
Xylenes, Total	109.9	4.9	147	4.688	71.6	70 - 130	117.5	6.65	30	
Surr: 1,2-Dichloroethane-d4	*47.51*	*0*	*49*	*0*	*97.0*	*70 - 126*	*46.68*	*1.78*	*30*	
Surr: 4-Bromofluorobenzene	*50.43*	*0*	*49*	*0*	*103*	*70 - 130*	*50.65*	*0.442*	*30*	
Surr: Dibromofluoromethane	*48.13*	*0*	*49*	*0*	*98.2*	*70 - 130*	*48.18*	*0.103*	*30*	
Surr: Toluene-d8	*47.84*	*0*	*49*	*0*	*97.6*	*70 - 130*	*48.23*	*0.811*	*30*	

The following samples were analyzed in this batch: HS20060996-03 HS20060996-08

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: 154883 (0) **Instrument:** Gall01 **Method:** CHLORIDE BY SW-846 9250

MBLK Sample ID: **MBLK-154883** Units: **mg/Kg** Analysis Date: **27-Jun-2020 10:38**
Client ID: Run ID: **Gall01_364048** SeqNo: **5639329** PrepDate: **26-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	< 2.74	10.0								

LCS Sample ID: **LCS-154883** Units: **mg/Kg** Analysis Date: **27-Jun-2020 10:39**
Client ID: Run ID: **Gall01_364048** SeqNo: **5639330** PrepDate: **26-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	200.3	10.0	200	0	100	80 - 120				

MS Sample ID: **HS20060996-03MS** Units: **mg/Kg** Analysis Date: **27-Jun-2020 10:39**
Client ID: **CVU84-14 2-3** Run ID: **Gall01_364048** SeqNo: **5639334** PrepDate: **26-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	249.3	9.89	197.8	54.31	98.6	80 - 120				

MSD Sample ID: **HS20060996-03MSD** Units: **mg/Kg** Analysis Date: **27-Jun-2020 10:39**
Client ID: **CVU84-14 2-3** Run ID: **Gall01_364048** SeqNo: **5639335** PrepDate: **26-Jun-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	249.3	9.91	198.3	54.31	98.3	80 - 120	249.3	0.0251	30	

The following samples were analyzed in this batch:

HS20060996-01	HS20060996-02	HS20060996-03	HS20060996-04
HS20060996-05	HS20060996-06	HS20060996-07	HS20060996-08
HS20060996-09	HS20060996-10		

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: HS20060996

QC BATCH REPORT

Batch ID: R364213 (0) **Instrument:** Balance1 **Method:** MOISTURE - ASTM D2216

DUP Sample ID: **HS20060700-21DUP** Units: **wt%** Analysis Date: **29-Jun-2020 16:54**
Client ID: Run ID: **Balance1_364213** SeqNo: **5643891** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	20.6	0.0100					21.3	3.34	20	

The following samples were analyzed in this batch:

HS20060996-01	HS20060996-02	HS20060996-03	HS20060996-04
HS20060996-05	HS20060996-06	HS20060996-07	HS20060996-08
HS20060996-09	HS20060996-10		

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
WorkOrder: **HS20060996**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
Date	
mg/Kg-dry	Milligrams per Kilogram- Dry weight corrected

ALS Houston, US Date: 02-Jul-20

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2019-2020	31-Jul-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 02-Jul-20

Client: AECOM
Project: 60605245 CVU 084
Work Order: HS20060996

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20060996-01	CVU84-14 0-1	Login	6/19/2020 6:40:28 PM	JRM	SPA026
HS20060996-02	CVU84-14 1-2	Login	6/19/2020 6:40:28 PM	JRM	SPA026
HS20060996-03	CVU84-14 2-3	Login	6/19/2020 6:40:28 PM	JRM	VOA223
HS20060996-03	CVU84-14 2-3	Login	6/19/2020 6:40:28 PM	JRM	SPA026
HS20060996-04	CVU84-14 3-4	Login	6/19/2020 6:40:28 PM	JRM	VOA223
HS20060996-04	CVU84-14 3-4	Login	6/19/2020 6:40:28 PM	JRM	SPA026

ALS Houston, US Date: 02-Jul-20

Sample Receipt Checklist

Work Order ID: HS20060996 **Date/Time Received:** 19-Jun-2020 09:20

Client Name: AECOM-Houston **Received by:** Paresh M. Giga

Completed By:	/S/ Jared R. Makan	19-Jun-2020 18:48	**Reviewed by:**	/S/ Dane J. Wacasey	26-Jun-2020 19:04
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Soil** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☑	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:214737
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	0.5°C/0.5°C UC/C	IR25	
Cooler(s)/Kit(s):	45446		
Date/Time sample(s) sent to storage:	06/19/2020 18:50		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Rev 6-27-2020

RUN A - E

RUN A-E

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

45446

CUSTODY SEAL

Date: Time: 1700
Name:
Company:

Seal Broken By:
Date: 06/19/20

45446 JUN 19 2020

Must Deliver FZ by Business Day
Time and Tempature Sensitive!

45446

ORIGIN ID:SGRA (512) 419-6235
MIKE ZAPPA
ACCOM
15219 KATY FREEWAY SUITE 100

HOUSTON, TX 77094
UNITED STATES US

SHIP DATE: 05MAR20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: CEMC NM - CVU BATTER - BO 70691 - DW

RMA:

FedEx Express

RETURNS MON - SAT
PRIORITY OVERNIGHT

TRK# 0221 1251 0295 1052

FedEx
TRK# 0221 1251 0295 1052

FRI - 19 JUN 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

State of New Mexico
Oil Conservation Division

Incident ID	NCH1826229752
District RP	1RP-5193
Facility ID	
Application ID	

Remediation Plan

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

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

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

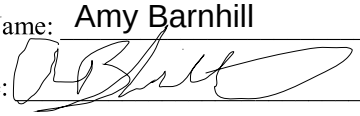
☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Amy Barnhill Title: Waste and Water Specialist

Signature:  Date: 9-28-20

email: ABarnhill@chevron.com Telephone: 432-687-7108

OCD Only

Received by: Robert Hamlet Date: 3/16/2021

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

Signature: Robert Hamlet Date: 3/16/2021

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

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

CONDITIONS

Action 10376

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
CHEVRON U S A INC	6301 Deauville Blvd	Midland, TX79706	4323	10376	C-141

OCD Reviewer	Condition
rhamlet	The SA-Remediation Plan is approved with the following conditions: Before we can approve a deferral, the spill must be fully delineated. The OCD requests that samples be taken to a depth that contamination amounts are under the limit (600 mg/kg). Please remove as much of the contaminated soil with shovels and a hydrovac. Only sample points that require a major facility deconstruction will be deferred. Please make sure the edges/sidewalls are delineated to 600 mg/kg for chlorides.