

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)

Prepared By:

AECOM

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Site Assessment Report and Remediation Plan

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Chevron Mid-Continent Business Unit (MCBU)

August 2020
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>

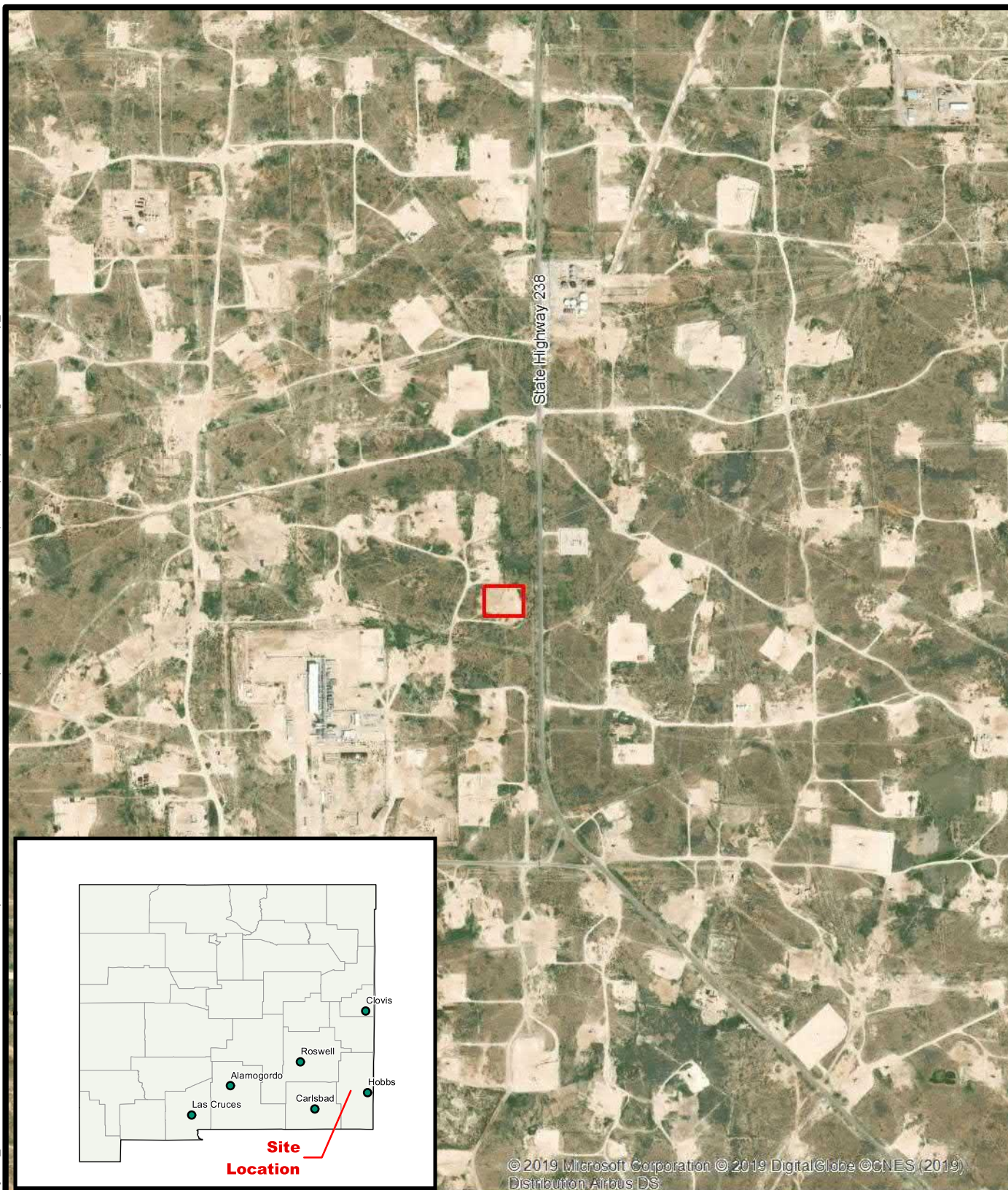
Google Earth Pro.

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>.

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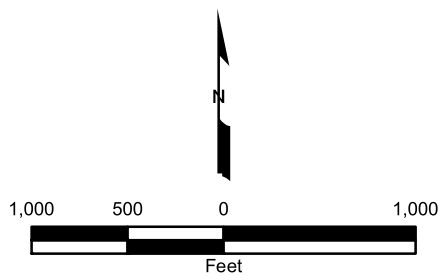
Figures

Path: C:\Houston\ushour1fs001\proj\Projects\ENVP2\JOBS2\Chevron\Chevron MCBU NM Spill Sites\60605245 1RP-3412 CVU 84 Old Spill\900-CAD, GIS\920-929 (GIS-Graphics)\MXD\Fig 1 Site Loc Map_CVU84.mxd Date: 8/2/2019



Legend

 Site Area



AECOM

Drawn by:
NH

Client:
Chevron MCBU
Lea County, New Mexico

Report:
Central Vacuum
Unit #084

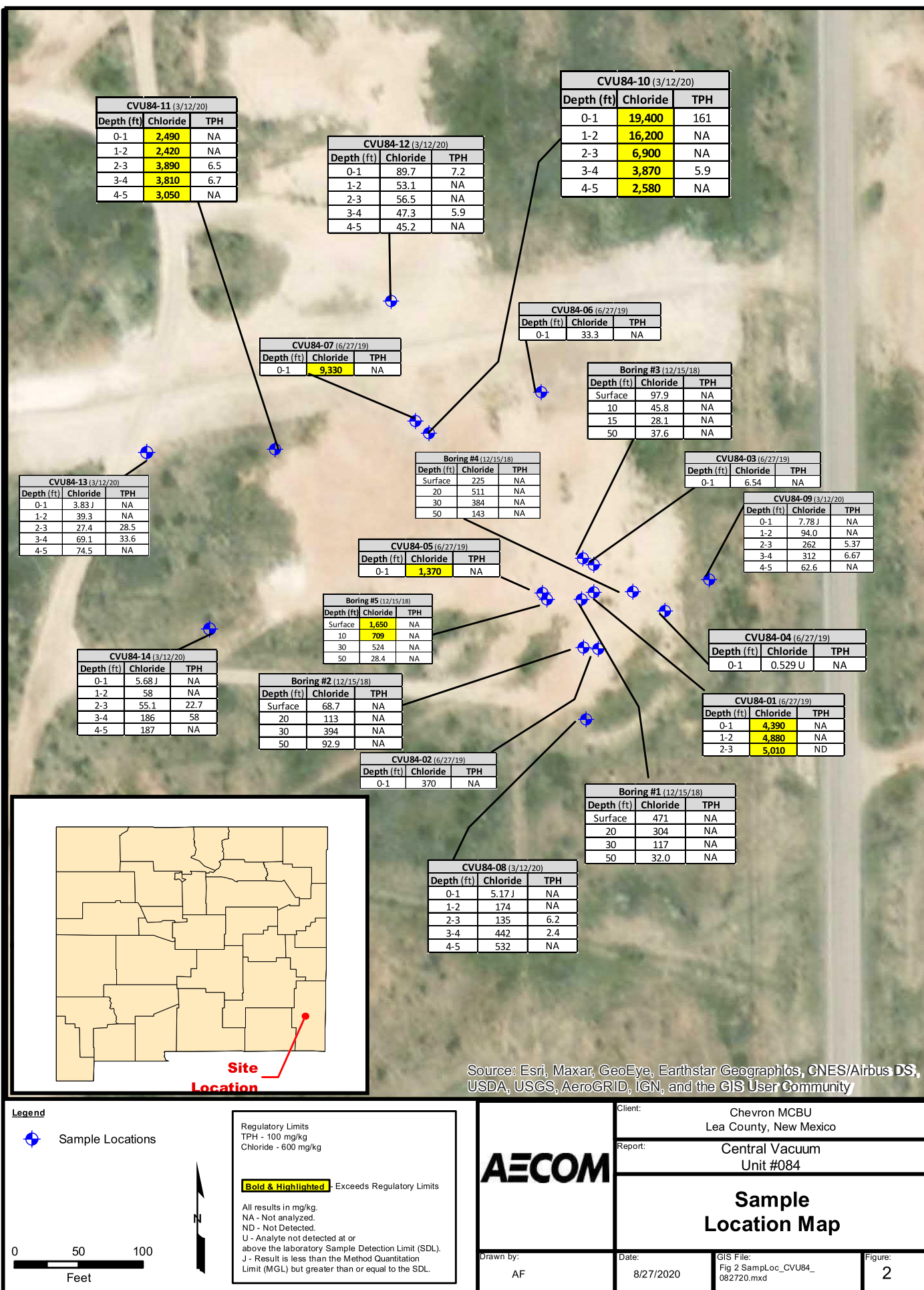
Site Location Map

Date:
8/2/2019

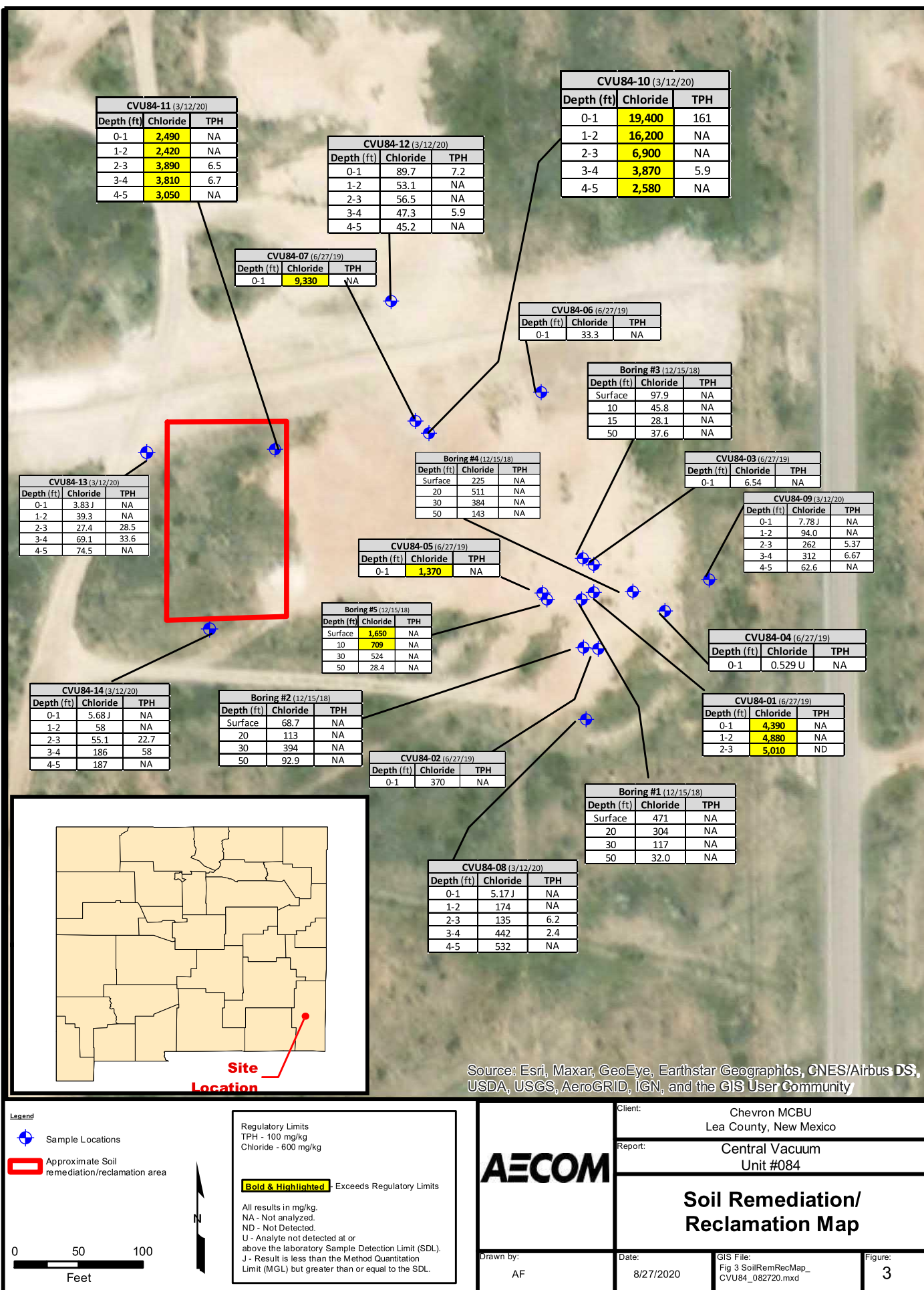
GIS File:
Fig 1 Site Loc Map_CVU84.mxd

Figure:
1

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Site Assessment Report and Remediation Plan

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)				Benzene
			GRO C6-C10	DRO C10-C28	MRO C28-C36	TPH GRO+DRO+MRO	
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, TX.
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 Detection Limit (SDL).
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.

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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
HOBBS OCD
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED Release Notification and Corrective Action

OPERATOR

☒ Initial Report

☐ Final Report

Name of Company: Chevron USA Inc.	Contact: Edem Sededji
Address: 15 Smith Rd., Midland, TX, 79705	Telephone No. 432-234-4437
Facility Name: CVU 84	Facility Type: Injection Well

Surface Owner: N/A	Mineral Owner	API No. 30-025-25732
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LOCATION OF RELEASE

Unit Letter I	Section 36	Township 17S	Range 34E	Feet from the 1333	North/South Line SOUTH	Feet from the 151	East/West Line EAST	County LEA
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Latitude 32.7879 Longitude -103.5060

NATURE OF RELEASE

Type of Release: Release to land	Volume of Release: 158.21 bbls of Produced Water	Volume Recovered: 70 bbls
Source of Release: Injection line	Date and Hour of Occurrence: 11/02/2014 04:00 AM	Date and Hour of Discovery: 11/02/2014 04:00 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Dr. Tomas Oberding	
By Whom? James Trujillo	Date and Hour: 11/02/2014 01:07 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Spill was due to Injection line failure resulting in a produced water spill of 158.21 bbls. Immediate remedial action was taken using a vacuum truck to clean up the spill. 70 bbls of fluids were recovered.

Describe Area Affected and Cleanup Action Taken.*

The area affected was around Central Vacuum Unit Satellite 4. A vacuum truck was called out and recovered 70 bbls of fluid. The next step is for backhoe to excavate top layer of soil approximate 12" deep and soil samples will be taken to the laboratory to determine TPH, Benzene and Chlorides contaminants levels. In case any of the contaminants levels are still high, the spill location will be turned over to Chevron management Company (EMC) for further remediation.

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

NOV 10 2014

11/6/2014

X Edem SededjiEdem Sededji
HE Specialist

Signature: Signed by: Edem Sededji

Printed Name: Edem Sededji

Title: HE Specialist

E-mail Address: etpo@chevron.com

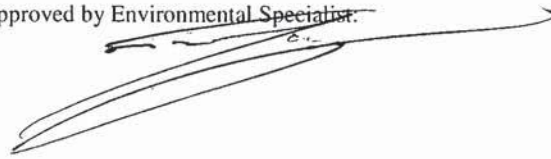
Date: 11/06/2014

Phone: 432-234-4437

* Attach Additional Sheets If Necessary

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:



Approval Date: 11-7-14

Expiration Date: 1-7-15

Conditions of Approval:

*Site Specific report
Relevant to conditions are on page
NMOCP general, Sub 2
Final 1-141 by 1-7-15*Attached ☐

IRP-3412

*OSR 4323
1701431128762
P70 1731128967***HOBBS OCD**
NOV 07 2014
RECEIVED

Incident ID	
District RP	
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?	<u>95</u> (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.

State of New Mexico
Oil Conservation Division

Page 5

Incident ID	
District RP	
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: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

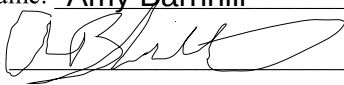
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ 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.

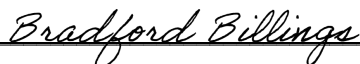
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public 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: 07/21/2021

Site Assessment Report and Remediation Plan

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																		
Sub-		Q Q Q											Depth			Depth		Water
POD Number	Code	basin	County	64	16	4	Sec	Tws	Rng	X	Y	Distance	Well	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

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

9/21/18 9:16 AM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

Site Assessment Report and Remediation Plan

Appendix C

Photographic Documentation

PHOTO LOG

Central Vacuum Unit (CVU) #084

Site Location:
Lea County, NMProject No.
60591820Photo No.
1 Date:
12/15/18Direction Photo
Taken:

North

Description:

Central Vacuum Unit
#84 well information
sign.Photo No.
2 Date:
12/15/18Direction Photo
Taken:

East

Description:

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

Site Assessment Report and Remediation Plan

Appendix D

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



9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron

Project Name: Chevron Produced water spill site CVU 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	Hole - Surface	Med to drk brn, top soil & caliche				EC - 916 mslm
5					Tan to white, Limestone / caliche, finegrained powdery, dry.				-5' EC-260
10									-10' EC-165
15									-15' EC-118
20				Hole - 20'	Tan, Limestone, Fine grained - silty, moist Dry broken rock cuttings for				-20' EC-91

 9400 Amberglen BLVD Austin, TX, 78729				Client: Chevron					
				Project Name: <i>Chesapeake water spill sites</i> <i>CVU #84</i>					
				Project No.: <i>60591820</i>					
				Project Location:					
Logged By: Samuel Whipkey									
Borehole ID: <i>Hd-1</i>				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		<i>Hd-1-30</i>	N/A		<i>Tan, Fine grained Limestone, moist.</i>				<i>30' EC-213</i>
40									<i>40' EC-113</i>
50		<i>Hd-1-50</i>			<i>Tan, Fine grained silty, Limestone, moist.</i>				<i>50' EC-42</i>
55									
60									



9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron

Project Name: Chevron Produced Water Spill sites CUV #84

Project No.: 60591820

Project Location: Lea County, NM

Logged By: Samuel Whipkey

Borehole ID: Hole 2

Drilling Company: HCI

Total Depth: 50

Location: CUV 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: ~18

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 2 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 2-76							20' EC-87

				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 Z Location: CVU #84 Start Date: Completion Date:				Drilling Company: HCI Driller Name: Drilling Method: Air Rotary Sampling Device:		Total Depth: 50 Completed Depth: 50 Borehole Diameter: 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		Table 30	N/A		Thin, Limestone, Fine grained, moist				30' EC-304
40									40' EC-311
50		Table 50			Thin Limestone, Fine grained, silty, moist.				50' EC-308
55									
60									

AECOM9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron

Project Name: *Chevron Spill Site* Cvu #84

Project No.: 60591820

Project Location: *Lea County, NM*

Logged By: Samuel Whipkey

Borehole ID: <i>Hde3</i>	Drilling Company: HCl	Total Depth: <i>50</i>
Location: <i>Cvu #84</i>	Driller Name: <i>Kenny Cooper</i>	Completed Depth: <i>50</i>
Start Date: <i>12/15/18</i>	Drilling Method: <i>Air Rotary</i>	Borehole Diameter:
Completion Date: <i>12/15/18</i>	Sampling Device:	Static Water Level: <i>N/A</i>

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		<i>Hole 3 Surface</i>	<i>N/A</i>		<i>Med to dark brown, Top soil / Caliche</i>				<i>EC-192</i>
5					<i>Tan to white, ^{moist} dry silty powder, dry.</i>				<i>-5' EC-172</i>
10		<i>Hole 3-10</i>							<i>-10' EC-270</i>
15		<i>Hole 3-15</i>							<i>-15' EC-130</i>
20					<i>Tan to white, dry silty powder,</i>				<i>-20' EC-57</i>

 9400 Amberglen BLVD Austin, TX, 78729				Client: Chevron					
				Project Name: <i>Chevron Spill Sites CVU#84</i>					
				Project No.: <i>60591820</i>					
				Project Location: <i>Lea County, NM</i>					
Logged By: Samuel Whipkey									
Borehole ID: <i>Hole 3</i>				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		<i>Tan to white, Limestone, Fine Sitty powder, moist.</i>				<i>EC-126</i>
40									<i>40' EC-36</i>
50		<i>Hole 3-50</i>			<i>Tan to white, Limestone, Fine grained w/ rock drill cuttings, Dry</i>				<i>50' EC-17</i>
55									
60									



9400 Amberglen BLVD
Austin, TX, 78729

Client: Chevron

Project Name: Chevron Produced Water Spill Sites

Project No.: 60591820

Project Location: Lee County, NM

Logged By: Samuel Whipkey

Borehole ID: Hole 4	Drilling Company: HCI	Total Depth: 50
Location: CVO #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: 10/12

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, Top soil / Caliche				EC-854
5					Tan to white Limestone, Fine grained, silty, moist.				5' EC-524
10									10' EC-532
15									15' EC-70
20		Adel-20			Tan to white Limestone, Fine grained dry silty powder, Drill cuttings rock chips in sample				20' EC-90

				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 Location: CVU #84 Start Date: 12/15/18 Completion Date: 12/15/18				Drilling Company: HCI Driller Name: Kenny Cooper Drilling Method: Air Rotary Sampling Device:		Total Depth: 50 Completed Depth: 50 Borehole Diameter: 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		Hole 4-30	N/A		Tan, Limestone, Moist silty powder,				30' EC-1640
40					Tan-white, Limestone, Dry silty powder, Drill cutting chips				40' EC-180
50		Hole 4-50			Tan-white, Limestone, Dry silty powder, Drill cuttings in sample				50' EC-30
60									



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: Holes	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: 1
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		Holes surface	N/A		Dark Brown, Top soil, moist.				EC-1380
5					Tan to white, Limestone, silty powder, moist. Chalk				5' EC-1127
10		Holes 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

 9400 Amberglen BLVD Austin, TX, 78729		Client: Chevron							
		Project Name: <i>Chevron Produced water spill sites</i>							
		Project No.: <i>60591820</i>							
		Project Location: <i>Lee County NM</i> <i>CVU #84</i>							
		Logged By: Samuel Whipkey							
Borehole ID: <i>Hole 5</i>		Drilling Company: HCl	Total Depth: <i>50</i>						
Location: CVU #84		Driller Name: <i>Kenny Cooper</i>	Completed Depth: <i>50</i>						
Start Date: <i>12/15/18</i>		Drilling Method: Air Rotary	Borehole Diameter: <i>/</i>						
Completion Date: <i>12/15/18</i>		Sampling Device:	Static Water Level: <i>/</i>						
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		<i>Hole 5-20</i>	N/A		<i>Tan to white, moist silty powder. Limestone</i>				<i>EC-563</i>
40									<i>40' EC-235</i>
50	<i>Hole 5-50</i>				<i>Tan to white, moist silty powder, Limestone</i>				<i>50' EC-97</i>
16									
60									

Location CUV 84 Date 12/15/18 ⁷⁷
 Project / Client Chevron

0730	Leave hotel				
0805	Arrive onsite				
0815	HCI + Martin R. (Chevron).				
	Martin issued permit.				
0825	Go over HARP + JSAs w/ Kenny + Sam				
0840	Setting up to drill Hole 1.	32,787,940, - 103,505,909			
0843	Surface	916.			
0844	5'	260			
0845	10'	105	Dry rockchip		
0847	15'	118	Dry rockchip / in situ grading		
0849	20'	91	Dry rockchips	Sample	
0850	30'	213		Sample	
0851	40'	113			
0852	50'	42			
0900	Clear Hole 2	32,787,833, - 103,505,962			
0902	Surface	167			
0903	10'	310	Dry rock chips -		
		88			
0904	15'	42	11 11 11		
0905	20'	87		Sample	
0907	30'	304		Sample	
0908	40'	311			
0910	50'	238			

Rite in the Rain

78

Location CVO 84

Date 12/15/18

Project / Client Clevon

Cont'd

912	Clear Hole 3	(32.788024, -103.505968)	
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	Surface	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, rubble
0948	Clear Hole 5	(32.787942, -103.506002)	
0950	Surface	1380	moist.
0952	5	1127	moist.
0953	10	1780	moist. Sample
0954	15	413	

Location CVO 84

Date 12/15/18

Project / Client Clevon

Cont'd

0956	20	1446	220	Dry
0958	30	503	Sample	moist Sample
0959	40	235		
1000	50	47		moist.
1005	HCI opposite			
1112	AECOM address.			
2026 (57)	Arrive here.			
05	0	04		
	0	0		

Return to Rain.

Site Assessment Report and Remediation Plan

Appendix E

Summary of Field Sample Collection and Screening Activities

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) STILTY CLAY (CL) W/SOME WHITE CALCICHE SEAMS NO ORRS	1040	0.1		7235	
		1-2		1045	0.1		1082.0	
		2-3		1050	0.1		948	
		3-4	VERY PALE BROWN (10YR, 8/3) CALCICHE W/SOME WHITE 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) STILTY CLAY (CL) W/SOME CALCICHE SEAMS	1110	0.1		448.2	
		1-2		1115	0.1		767.0	
		2-3	RED (10R, 5/8) STILTY SAND (CL) FINE GRAINED, UNCONSOLIDATED	1120	0.2		1935.5	
		3-4		1130	0.1		2391.0	
		4-5	WHITE CALCICHE W/SOME BROWN SS	1135	0.0		789.5	
3/12/20	CVU084-10	0-1	BROWN (7.5YR, 4/3) STILTY CLAY (CL) W/SOME WHITE CALCICHE SEAMS NO ORRS	1145	1.1		60.25	
		1-2		1150	1.0		51.2	
		2-3		1155	0.9		2190.0	
		3-4	WHITE CALCICHE W/SOME VERY PALE BROWN STILTY SAND (CL), NO ORRS	1200	0.1		7875.0	
		4-5		1205	0.0		8650.0	
3/12/20	CVU084-11	0-1	BROWN (7.5YR, 4/3) STILTY CLAY W/SOME WHITE CALCICHE SEAMS	1215	0.1		21,175.0	
		1-2		1220	0.1		13,375	
		2-3	RED (10R, 5/8) STILTY SAND (CL) FINE GRAINED, UNCONSOLIDATED	1225	0.2		13540	
		3-4		1230	0.1		12490.0	
		4-5	WHITE CALCICHE W/SOME BROWN SS	1235	0.0		12630	
3/12/20	CVU084-12	0-1	BROWN (7.5YR, 4/3) STILTY CLAY (CL) W/SOME WHITE CALCICHE SEAMS	1245	0.2		NA	
		1-2		1250	0.1		NA	
		2-3	VERY PALE BROWN (10YR, 8/3) CALCICHE W/SOME WHITE STILTY SAND	1255	0.1		NA	
		3-4		1300	0.0		NA	
		4-5	SEAMS NO ORRS	1305	0.0		NA	

Total Field Hours

7 hours

CP-5

N 32° 47' 15.694"
W 103° 30' 21.459"

N 32° 47' 16.717"

W 103° 30' 20.577"

N 32° 47' 17.545"

W 103° 30' 22.739"

N 32° 47' 17.509"

W 103° 30' 24.287"

N 32° 47' 18.875"

W 103° 30' 23.403"

HOLD 3 SAMPLES

W 651984

**Sample Collection and Screening
CVU #084**

Date	Boring ID	Depth (ft bgs)	Lithology	Time	Flow (p n)
6/18/2020	CVU84-13	0-1	Dark Brown Silty Sand w/ caliche nodules	1520	3.0
		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	0.7
		1-2	Caliche	0940	3.8
		2-3	Yellow-Brown Silty Sand w/ caliche nodules	0940	4.0
		3-4	SAA	0945	4.2

Site Assessment Report and Remediation Plan

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

<i>Analysis Requested</i>	<i>Lab Id:</i>	609123-001	609123-002	609123-003	609123-004	609123-005	609123-006
	<i>Field Id:</i>	Hole1-Surface	Hole1-20	Hole1-30	Hole1-50	Hole2-Surface	Hole2-20
	<i>Depth:</i>	0-	20-	30-	50-	0-	20-
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	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	<i>Extracted:</i>	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
	<i>Analyzed:</i>	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
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		471	304	117	32.0	68.7	113
		4.95	5.00	4.95	5.00	5.00	5.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - 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



<i>Analysis Requested</i>	<i>Lab Id:</i>	609123-007	609123-008	609123-009	609123-010	609123-011	609123-012
	<i>Field Id:</i>	Hole2-30	Hole2-50	Hole3-Surface	Hole3-10	Hole3-15	Hole3-50
	<i>Depth:</i>	30-	50-	0-	10-	15-	50-
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	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	<i>Extracted:</i>	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
	<i>Analyzed:</i>	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
	<i>Units/RL:</i>	mg/kg RL 394 5.00	mg/kg RL 92.9 4.95	mg/kg RL 97.9 5.00	mg/kg RL 45.8 4.99	mg/kg RL 28.1 4.99	mg/kg RL 37.6 4.95
Chloride							

Kelsey Brooks
Project Manager

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



Project Id: 60591820
Contact: Kevin Pasternak
Project Location:

Certificate of Analysis Summary 609123

AECOM, Austin, TX
Project Name: CVU 84



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

<i>Analysis Requested</i>	<i>Lab Id:</i>	609123-013	609123-014	609123-015	609123-016	609123-017	609123-018
	<i>Field Id:</i>	Hole4-Surface	Hole4-20	Hole4-30	Hole4-50	Hole5-Surface	Hole5-10
	<i>Depth:</i>	0-	20-	30-	50-	0-	10-
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Chloride by EPA 300	<i>Sampled:</i>	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
	<i>Extracted:</i>	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
	<i>Analyzed:</i>	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
	<i>Units/RL:</i>	mg/kg RL 225 5.00	mg/kg RL 511 4.97	mg/kg RL 384 4.99	mg/kg RL 143 5.00	mg/kg RL 1650 25.0	mg/kg RL 709 4.99
Chloride							

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

Kelsey Brooks
Project Manager



Project Id: 60591820
Contact: Kevin Pasternak
Project Location:

Certificate of Analysis Summary 609123

AECOM, Austin, TX
Project Name: CVU 84



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

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

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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

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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): 609123Report 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



AECOM

CVU 84

Analytical Method: Chloride by EPA 300

Seq Number: 3074055

MB Sample Id: 7668540-1-BLK

Matrix: Solid

LCS Sample Id: 7668540-1-BKS

Prep Method: E300P

Date Prep: 12.20.18

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

Seq Number: 3073884

MB Sample Id: 7668542-1-BLK

Matrix: Solid

LCS Sample Id: 7668542-1-BKS

Prep Method: E300P

Date Prep: 12.20.18

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

Seq Number: 3074055

Parent Sample Id: 609121-014

Matrix: Soil

MS Sample Id: 609121-014 S

Prep Method: E300P

Date Prep: 12.20.18

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

Seq Number: 3074055

Parent Sample Id: 609123-004

Matrix: Soil

MS Sample Id: 609123-004 S

Prep Method: E300P

Date Prep: 12.20.18

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

Seq Number: 3073884

Parent Sample Id: 609123-014

Matrix: Soil

MS Sample Id: 609123-014 S

Prep Method: E300P

Date Prep: 12.20.18

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
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



AECOM

CVU 84

Analytical Method: Chloride by EPA 300

Seq Number: 3073884

Parent Sample Id: 609123-020

Matrix: Soil

MS Sample Id: 609123-020 S

Prep Method: E300P

Date Prep: 12.20.18

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
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



Chain of Custody

Work Order No: 609123

HOUSTON, TX (281) 240-4200 Dallas, TX (214) 502-0300 San Antonio, TX (214) 303-0334
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)

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

Work Order Comments Program: UST/PT ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐ State of Project:	
Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐ Deliverables: EDO ☐ ADAPT ☐ Other:	

Project Name:	CV084	Turn Around	
Project Number:	60591820	Route:	☒
P.O. Number:		Rush:	
Sampler's Name:	Sam Whipple	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	1.41.3	Thermometer ID		
Received Intact:	Yes ☒ No ☐	Correction Factor:		
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:		
Sample Custody Seals:	Yes ☒ No ☐	-0.1		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number		TPH	Chlorides																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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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	Ti	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 Ti 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 Xenoco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco 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 Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, 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. Sam Whipple		12/16/18 / 1800	2. Kevin Pasternak		12/18/18 1550
3.			4.		
5.			6.		

78450143 3277

Revised Date 05/14/18 Rev. 2018.1



Chain of Custody

Work Order No: 6009123

Houston, TX (281) 240-4200 Dallas, TX (214) 502-0000 San Antonio, TX (210) 509-0004
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

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Project Manager:	Kevin Posternak	Bill to: (if different)	
Company Name:	AECOM	Company Name:	
Address:	4100 Ambleside Blvd	Address:	
City, State ZIP:	Austin, TX	City, State ZIP:	
Phone:	(512) 419-5293	Email:	Kevin.Posternak@aecom.com

Work Order Comments	
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐	
State of Project:	
Reporting Level: I ☐ II ☐ III ☐ PST/UST ☐ TRRP ☐ Level IV ☐	
Deliverables: EDD ☐ ADAPT ☐ Other:	

Project Name:	CVU 84	Turn Around	
Project Number:	60591820	Route	☒
P.O. Number:		Rush:	
Sampler's Name:	Sam Whipple	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	1.411.3	Thermometer ID		
Received Intact:	Yes ☒ No ☐	Correction Factor: R8		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers: -0.1		
Sample Custody Seals:	Yes ☒ No ☐ N/A			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH	Chlorides	Sample Comments
Hole 3-15	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 4-50	S	12/15/18	0937	30	1	✓	✓	
Hole 4-56	S	12/15/18	0941	50	1	✓	✓	
Hole 5 - 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	✓	✓	

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 Ti 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 Ti U

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.

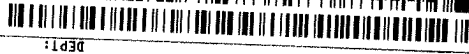
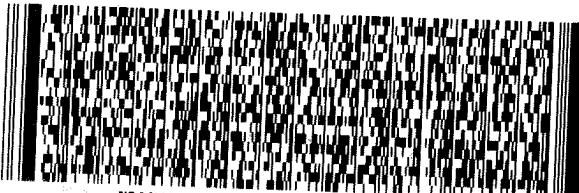
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1. <i>Sam Whipple</i>		12/16/18 1800	2. <i>Sam Whipple</i>		12/18/18 1550
3.			4.		
5.			6.		

782451142 27722

Revised Date 05/14/18 Rev. 2018.1



AL MAFA
TRK# 7845 0143 3277
TUE - 18 DEC 10:30A
PRIORITY OVERNIGHT
DSR AHS
79701
TX-US LBB



XENCO LABORATORIES
1211 W FLORIDA AVE
MIDLAND TX 79701
REF: (000) 000-0000
DEPT:

Part # 156297-2800 11/19

ORIGIN ID:BSMA (000) 000-0000
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



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



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

LINKS

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results through
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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: AECOM
Project/Site: Central Vacuum Unit 84

Laboratory Job ID: 600-187804-1

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Case Narrative

Client: AECOM
Project/Site: Central Vacuum 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

Job ID: 600-187804-1

Project/Site: Central Vaccum Unit 84

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

Eurofins TestAmerica, Houston

Sample Summary

Client: AECOM

Job ID: 600-187804-1

Project/Site: Central Vaccum Unit 84

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

Eurofins TestAmerica, Houston

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

Eurofins TestAmerica, Houston

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 than 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

Eurofins TestAmerica, Houston

QC Sample Results

Client: AECOM

Job ID: 600-187804-1

Project/Site: Central Vaccum Unit 84

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

Eurofins TestAmerica, Houston

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

Eurofins TestAmerica, Houston

QC Sample Results

Client: AECOM

Job ID: 600-187804-1

Project/Site: Central Vaccum Unit 84

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

Eurofins TestAmerica, Houston

Unadjusted Detection Limits

Client: AECOM

Job ID: 600-187804-1

Project/Site: Central Vaccum Unit 84

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

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QC Association Summary

Client: AECOM

Job ID: 600-187804-1

Project/Site: Central Vaccum Unit 84

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	

Eurofins TestAmerica, Houston

Lab Chronicle

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**

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**Lab Sample ID: 600-187804-2****Date Collected: 06/27/19 12:11****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		20	268534	07/02/19 20:18	SKR	TAL HOU

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**

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**Lab Sample ID: 600-187804-4****Date Collected: 06/27/19 12:16****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		2	268534	07/02/19 14:36	SKR	TAL HOU

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**

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

Eurofins TestAmerica, Houston

Lab Chronicle

Client: AECOM
Project/Site: Central Vaccum Unit 84

Job ID: 600-187804-1

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**

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

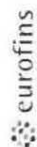
* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Houston

Eurofins TestAmerica, Houston

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

Chain of Custody Record



Environment Testing
TestAmerica

Client Information		Lab PM		Carrier Tracking No(s)		GOC No																							
Sampler: <u>Seth Frederick</u> Phone: <u>505.699.3257</u>		Kudchadkar, Sachin G E-Mail: <u>sachin.kudchadkar@testamericainc.com</u>				600-69310-18903.1 Page <u>1/1</u> Job #																							
Address		Due Date Requested:		Analysis Requested		Preservation Codes:																							
19219 Katy Freeway Suite 100 Houston TX, 77094 Phone: 713-520-9900 (Tel) 713-520-6800 (Fax) Email: <u>wallace.gilmore@aecom.com</u> Project Name: <u>Chevron</u> Site: <u>Central Vacuum Unit # 84</u>		TAT Requested (days): PO # WO # Project #: 60008660 SSOW#		Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No) TX 1005 - (TPH) 8260B - BTEX Only 9056 ORGFM 28D - Chloride 1311/6010B, 7470A - TCLP metals moisture		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anichlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MPA																							
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=other)		Preservation Code		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		Spec	
CVU84-01-0-1		6/27/19		1208		G		Solid		G		X		X		N		N		N		N		X					
CVU84-01-1-2				1211				Solid																					
CVU84-01-2-3				1213				Solid																					
CVU84-02-0-1				1216				Solid																					
CVU84-03-0-1				1222				Solid																					
CVU84-04-0-1				1227				Solid																					
CVU84-05-0-1				1235				Solid																					
CVU84-06-0-1				1241				Solid																					
CVU84-07-0-1				1247				Solid																					
								Solid																					
								Solid																					
								Solid																					

600-187804 Chain of Custody

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Long Hain Date: 6/27/19 Time: 1700 Company: AECOM

Relinquished by: Long Hain Date/Time: 6/27/19 1700 Company: AECOM

Relinquished by: Long Hain Date/Time: 6/27/19 1700 Company: AECOM

Relinquished by: Long Hain Date/Time: 6/27/19 1700 Company: AECOM

Custody Seals Intact ☐ Yes ☐ 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:

CLIENT:

UNPACKED BY:

CARRIER/DRIVER:

Custody Seal Present:

☒ YES☐ NO

Number of Coolers Received:

1

Cooler ID	Temp Blank	Temp Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
BLW	Y / N	Y / N	0.3	675	+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				
	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 2900 6474



600-187804 Waybill



600-187804 Waybill

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

6911 BLANCO RD

SAN ANTONIO, TX 78216
UNITED STATES USSHIP DATE: 27JUN19
ACTWGT: 61.80 LB
CAD: 6997036/SSF02002
DIMS: 25x14x13 IN

BILL THIRD PARTY

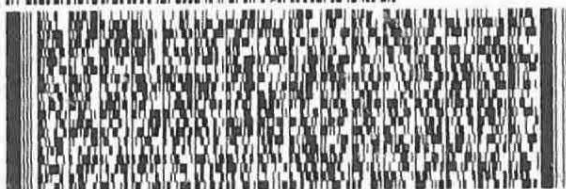
TO **SAMPLE RECIEVING**
TEST AMERICA HOUSTON
6310 ROTHWAY ST**HOUSTON TX 77040**

(713) 690-4444

REF: SAMPLING

INV:

DEPT:

**FedEx**
ExpressTRK# 7881 6146 4703
0201**43 LKSA****FRI - 28 JUN 10:30A**
PRIORITY OVERNIGHT**AHS**
77040



7-119-1

Client Information (Sub Contract Lab)										
Sampler:	Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No:	600-40424.1						
Phone:	sachin.kudchadkar@testamericainc.com	State of Origin:	Page:	Page 1 of 1						
E-Mail:	sachin.kudchadkar@testamericainc.com	Texas	Job #:	600-187804-1						
Company:	TestAmerica Laboratories, Inc.	Accreditations Required (See note):	NELAP - Texas							
Due Date Requested:		Analysis Requested								
TAT Requested (days):										
PO #:										
WO #:										
Project #:	60008660									
Site:	Central Vacuum Unit 84									
Sample Identification - Client ID (Lab ID)		Total Number of containers								
CVU84-01-2-3 (600-187804-3)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wet, Solid, Over-sat, St-Tissue, A-Alk)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_GRO/5030B_SolidNAC (MOD) Copy Analytes	8015B_GRO/3546 (MOD) Diesel Range Organics [C10-C29]	Preservation Codes:	Special Instructions/Note:
	6/27/19	12:13 Central		Solid	X	X	X	X		3
	6/27/19	12:16 Central		Solid	X	X	X	X		3
	6/27/19	12:22 Central		Solid	X	X	X	X		3
	6/27/19	12:27 Central		Solid	X	X	X	X		3
	6/27/19	12:35 Central		Solid	X	X	X	X		3
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our 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/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 compliance to TestAmerica Laboratories, Inc.										
Possible Hazard Identification										
Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify)										
Primary Deliverable Rank: 2										
Empty Kit Relinquished by: <i>[Signature]</i>										
Relinquished by: <i>[Signature]</i>										
Relinquished by: <i>[Signature]</i>										
Relinquished by: <i>[Signature]</i>										
Custody Seal Intact: <i>[Signature]</i>										
Custody Seal No.: <i>[Signature]</i>										

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Canton Facility				Login # : _____
Client <u>Houston</u>		Site Name _____		Cooler unpacked by:
Cooler Received on <u>7-3-19</u>		Opened on <u>7-3-19</u>		
FedEx: 1 st Grd ☒ Exp ☐ UPS ☐ FAS ☐ Clipper ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other ☐				
Receipt After-hours: Drop-off Date/Time _____			Storage Location _____	
TestAmerica Cooler # <u>7A</u> 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. <u>1.6</u> °C Corrected Cooler Temp. <u>1.7</u> °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 <u>1</u> 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# <u>HC984738</u>				
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				
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____				
Concerning _____				

Tests that are not checked for pH by Receiving:

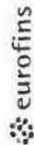
VOAs
Oil and Grease
TOC

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: _____	

Eurofins TestAmerica, Houston

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

Chain of Custody Record



Environment Testing
TestAmerica

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking Notis:	COC No:
Client Contact: Shipping/Receiving		Phone:	Kudchadkar, Sachin G	State of Origin:	600-40424.1
Company: TestAmerica Laboratories, Inc.		E-Mail:	sachin.kudchadkar@testamericainc.com	Page 1 of 1	
Address: 4101 Shuffel Street NW		Accreditations Required (See note): NELAP - Texas		Job #:	600-187804-1
City: North Canton		Analysis Requested			
State, Zip: OH, 44720		Preservation Codes:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:			
Email:		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)			
Project Name: Central Vaccum Unit 84		Total Number of Containers			
Site:		Special Instructions/Note: C177 4C			
Sample Identification - Client ID (Lab ID)					
Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, ST=Time, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)
6/27/19	12:13 Central	Solid		X	X
6/27/19	12:16 Central	Solid		X	X
6/27/19	12:22 Central	Solid		X	X
6/27/19	12:27 Central	Solid		X	X
6/27/19	12:35 Central	Solid		X	X
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/chemicals/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 compliance to TestAmerica Laboratories, Inc.					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify)					
Primary Deliverable Rank: 2					
Empty Kit Relinquished by:					
Relinquished by: <i>Maife</i>					
Relinquished by: <i>Maife</i>					
Relinquished by: <i>Maife</i>					
Custody Seals Intact: ☐ Yes ☐ No					
Custody Seal No.:					
Cooler Temperature(s) °C and Other Remarks:					
Date:					
Time:					
Received by: <i>Maife</i>					
Date/Time: 7-3-19 945					
Company: TA					
Received by:					
Date/Time:					
Company:					
Received by:					
Date/Time:					
Company:					
Method of Shipment:					
Special Instructions/QC Requirements:					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months					

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative				Login # : _____
Canton Facility				
Client <u>Houston</u>		Site Name _____		Cooler unpacked by: _____
Cooler Received on <u>7-3-19</u>		Opened on <u>7-3-19</u>		
FedEx: 1 st Grd ☒ Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____				
Receipt After-hours: Drop-off Date/Time _____			Storage Location _____	
TestAmerica Cooler # <u>74</u> 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. <u>1.6</u> °C Corrected Cooler Temp. <u>1.7</u> °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 <u>1</u> 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 NA				
-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# <u>HC984738</u>				
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				
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____				
Concerning _____				

Tests that are not
checked for pH by
Receiving:

VOAs
Oil and Grease
TOC

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 $\leq$ 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 $<6\text{mm}$ (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
Project: CVU 084
Work Order: HS20030697

CASE NARRATIVE

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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-8, 0-1'	Lab ID:HS20030697-01
Collection Date:	12-Mar-2020 10:40	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-8, 1-2'	Lab ID:HS20030697-02
Collection Date:	12-Mar-2020 10:45	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-8, 4-5'	Lab ID:HS20030697-05
Collection Date:	12-Mar-2020 11:00	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-9, 0-1'	Lab ID:HS20030697-06
Collection Date:	12-Mar-2020 11:10	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-9, 1-2'	Lab ID:HS20030697-07
Collection Date:	12-Mar-2020 11:15	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-9, 4-5'	Lab ID:HS20030697-10
Collection Date:	12-Mar-2020 11:30	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-10, 1-2'	Lab ID:HS20030697-12
Collection Date:	12-Mar-2020 11:50	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-10, 2-3'	Lab ID:HS20030697-13
Collection Date:	12-Mar-2020 11:55	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-10, 4-5'	Lab ID:HS20030697-15
Collection Date:	12-Mar-2020 12:05	Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		Method:ASTM D2216		Analyst: DFF			
Percent Moisture	6.44		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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-11, 0-1'	Lab ID:HS20030697-16
Collection Date:	12-Mar-2020 12:15	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-11, 1-2'	Lab ID:HS20030697-17
Collection Date:	12-Mar-2020 12:20	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-11, 4-5'	Lab ID:HS20030697-20
Collection Date:	12-Mar-2020 12:35	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-12, 1-2'	Lab ID:HS20030697-22
Collection Date:	12-Mar-2020 12:50	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-12, 2-3'	Lab ID:HS20030697-23
Collection Date:	12-Mar-2020 12:55	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	ANALYTICAL REPORT
Project:	CVU 084	WorkOrder:HS20030697
Sample ID:	CVU084-12, 4-5'	Lab ID:HS20030697-25
Collection Date:	12-Mar-2020 13:05	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.

ALS Houston, US

Date: 24-Mar-20

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

ALS Houston, US

Date: 24-Mar-20

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

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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	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	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	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	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	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	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	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	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

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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			

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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					

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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	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	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	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	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 Quantitation 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: 24-Mar-20

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
Work Order: HS20030697

Date/Time Received: **16-Mar-2020 09:40**
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
	Yes ☒	No ☐	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:

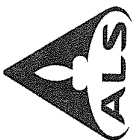
Comments:

Corrective Action:

HS20030697

AECOM
CVU 084

Chain of Custody Form

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Page 1 of 3

COC ID: 214733

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)												
City/State/Zip	Houston, TX 77094	City/State/Zip	Austin TX 78720	F													
Phone	(281) 646-24	Phone	(512) 419-6825	G													
Fax	(713) 780-0838	Fax		H													
e-Mail Address	Wallace.Gilmore@aecom.com	e-Mail Address	USAPImaging@aecom.com	I													
				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	S011	NA	1	X	X			X						
2	CVU084-8, 0-2'		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						

Shipment Method: Handcarried

Relinquished by: Wallace Gilmore Date: 3/16/20

Relinquished by: Wallace Gilmore Date: 3/16/20

Logged by (Laboratory): Wallace Gilmore Date: 3/16/20

Required Turnaround Time: (Check Box) ☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 24 -hour

Notes: AECOM CVU 084, All 5 samples are in E3/10/10/20

QC Package: (Check One Box Below)

Level II Std QC ☒ Level III Std QC ☐ Level IV SW846/CLP ☐ Other ☐

Results Due Date: 10/10/20

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other

Time: 0940

Date: 3/16/20

Time: 0940

Date: 3/16/20

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other

Time: 0940

Date: 3/16/20

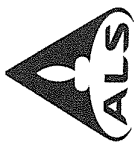
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Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

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 of this form.

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

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Chain of Custody Form

Page 2 of 3

COC ID: 214734

HS20030697

AECOM
CVU 084



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	USAP/Imaging - 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) 646-24	Phone	(512) 419-6825														
Fax	(713) 780-0838	Fax															
e-Mail Address	Wallace.Gilmore@aecom.com	e-Mail Address	USAP/Imaging@aecom.com														
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						

Relinquished by: *[Signature]* Date: 3/16/20

Relinquished by: *[Signature]* Date: 3/16/20

Logged by (Laboratory): *[Signature]* Date: 3/16/20

Shipment Method: *17M/Plastic bag*

Received by: *[Signature]* Date: 3/16/20

Received by (Laboratory): *[Signature]* Date: 3/16/20

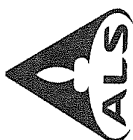
Checked by (Laboratory): *[Signature]* Date: 3/16/20

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

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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Chain of Custody Form

HS20030697

Page 3 of 3

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ALS Project Manager:	
Project Information	

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Customer Information

C
-

Imaging: 7/21/2021 1:13:15 PM

Customer Information				Project Information				ALS Project Manager:											
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																	
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) 730-0838	Fax																	
e-Mail Address	Wallace.Gilmore@aecom.com	e-Mail Address	USAPImaging@aecom.com																
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	12:45	Soil	NA	2	X	X	X	X	X								
2	CVU084 -12, 1-2'		12:50			1	X	X			X								
3	CVU084 -12, 2-3'		12:55			1	X	X			X								
4	CVU084 -12, 3-4'		1:00			2	X	X	X	X	X								
5	CVU084 -12, 4-5'		1:05			1	X	X			X								
6																			
7																			
8																			
9																			
10																			

Shipper(s) Please Print & Sign				Shipment Method				Required Turnaround Time: (Check Box)				Results Due Date:			
Relinquished by: [Signature]				Received by: [Signature]				Other				24-hour			
Date: 3/16/20				Date: 3/16/20				5 Wk: Days				2 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days				1 Wk: Days			
Time: 3:16:20				Time: 3:16:20				10 Wk: Days				1 Wk: Days			
Date: 3/16/20				Date: 3/16/20				10 Wk: Days							

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RIGHT SOLUTIONS | RIGHT PARTNER



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Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

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,

A handwritten signature in black ink, appearing to read "Dane J. Wacasey".

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
Project: 60605245 CVU 084
Work Order: HS20060996

CASE NARRATIVE

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.
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Date: 02-Jul-20

Client:	AECOM	ANALYTICAL REPORT
Project:	60605245 CVU 084	WorkOrder:HS20060996
Sample ID:	CVU84-14 0-1	Lab ID:HS20060996-01
Collection Date:	18-Jun-2020 14:40	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.

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Date: 02-Jul-20

Client:	AECOM	ANALYTICAL REPORT
Project:	60605245 CVU 084	WorkOrder:HS20060996
Sample ID:	CVU84-14 1-2	Lab ID:HS20060996-02
Collection Date:	18-Jun-2020 14:45	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.

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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	ANALYTICAL REPORT
Project:	60605245 CVU 084	WorkOrder:HS20060996
Sample ID:	CVU84-14 4-5	Lab ID:HS20060996-05
Collection Date:	18-Jun-2020 15:00	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.

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Date: 02-Jul-20

Client:	AECOM	ANALYTICAL REPORT
Project:	60605245 CVU 084	WorkOrder:HS20060996
Sample ID:	CVU84-13 0-1	Lab ID:HS20060996-06
Collection Date:	18-Jun-2020 15:20	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.

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Date: 02-Jul-20

Client:	AECOM	ANALYTICAL REPORT
Project:	60605245 CVU 084	WorkOrder:HS20060996
Sample ID:	CVU84-13 1-2	Lab ID:HS20060996-07
Collection Date:	18-Jun-2020 15:25	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.

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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.

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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	ANALYTICAL REPORT
Project:	60605245 CVU 084	WorkOrder:HS20060996
Sample ID:	CVU84-13 4-5	Lab ID:HS20060996-10
Collection Date:	18-Jun-2020 15:40	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.

ALS Houston, US

Date: 02-Jul-20

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

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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

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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	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	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	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	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	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	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	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	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	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			

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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

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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			

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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

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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 Quantitation 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

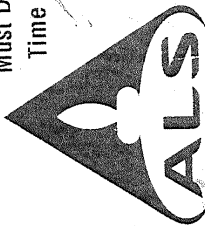
RUN A-E

ALS 10450 Stancil Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5556 Fax. +1 281 530 5887		STUDY SEAL Date: _____ Time: 1700 Name: _____ Company: _____		Seal Broken By: <i>SM</i> Date: <i>06/19/20</i>
--	--	--	--	--

45446

JUN 19 2020

Must Deliver *FL* Business Day
 Time and Temperature Sensitive!



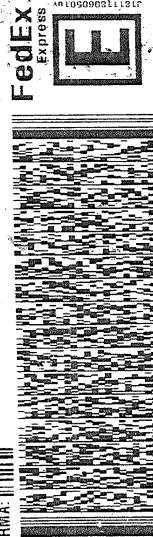
ORIGIN: ID: SGRA (512) 419-6295
 OFFICE: ZAPPA
 15215 KATY FREEWAY SUITE 100
 HOUSTON, TX 77094
 UNITED STATES US

TO CLIENT SERVICES

ALS LABORATORY GROUP
 10450 STANCLIFF ROAD
 SUITE 210
 HOUSTON TX 77099

(281) 530-5556
 REF: CEMC NM - CVU BATTER - BO 70691 - DW

RMA: III III



RETURNS MON - SAT
 PRIORITY OVERNIGHT

TRK 1052
 DE

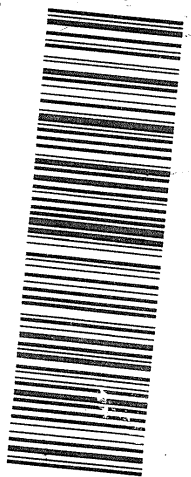
FedEx

TRK 1251 0295 1052
 0221

FRI - 19 JUN 10:30A
 PRIORITY OVERNIGHT

AB SGRA

77099
 TX-US IAH



Page 35 of 35

RIGHT SOLUTIONS | RIGHT PARTNER

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 10374

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 10374
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	Deferral on pad is approved. Off pad remediation plan is approved to most stringent Table 1 values and as section 13 in rule 29. DO NOT submit a CLOSURE report for off pad work, place in portal as an interim report on remediation. Closure for incident can only be granted following on pad remediation.	7/21/2021