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Site Assessment Report and Remediation Plan

Langley Getty Com #002
Produced Water Spill
Lea County, New Mexico
New Mexico Oil Conservation Division (NMOCD) Incident ID: nAB1904357971

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

Prepared By:
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Site Assessment Report and Remediation Plan

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Produced Water Spill Site
Lea County, New Mexico
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Chevron Mid-Continent Business Unit (MCBU)

May 2020
AECOM Project No. 60608313

Prepared by: Wally Gilmore, P.G.
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1. Executive Summary

Langley Getty Com #002, Lea County, NM, NMOCD ID: nAB1904357971

Site Background		
Release Description: On October January 30, 2019, approximately 43.41 barrels (bbls) of produced water were released within an earthen berm secondary containment for a heater treater and a separator at the Site.	**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 40 bbls of produced water.	**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), there are no water wells located within 1,000 meters of the Site. On January 8, 2020, soil boring LG-6 was drilled to a depth of 51 ft below ground surface (ft bgs) to demonstrate that groundwater is not present within the upper 50 ft beneath the site. No evidence of groundwater was observed to a depth of 51 ft bgs in boring LG-6.

Sensitive Receptors Survey Results:

- There are no known water wells within ½ mile of the Site. The closest relevant water well identified in the online NMWRRS report with depth to water data is a well drilled by O.R. Musselwhite Water Well SE in 1972 and screened from 180 to 220 ft bgs at a location approximately 1.27-miles north of the Site. This well has a depth to groundwater of 170 ft bgs. The initial use and current status of this water well is currently unknown.
- 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 8 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 I Regulatory Limits (GW 51-100 ft bgs) (mg/kg)	19.15.29.13.D.(1) NMAC Reclamation Standard (mg/kg)	Maximum Concentration Detected (mg/kg)
Chloride	**10,000**	**600**	**38,700**
TPH	**2,500**	**100**	**Below laboratory method reporting limits**

Soil Assessment Results Discussion

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

- The regulatory limits in *Table I* above are associated with protection of sensitive receptors, which are primarily water resources for this Site. The chloride concentration of 38,700 mg/kg reported for sample LG–05-0-1 exceeds the regulatory limit of 10,000 mg/kg *Table I* for sites where groundwater is between 50 and 100 ft bgs. Though groundwater is likely deeper than 100 ft bgs, drilling was conducted only to 51 ft bgs at this time, therefore the regulatory limit of 10,000 mg/kg was selected. No other samples exhibited constituent of concern (COC) concentrations above the applicable regulatory limits listed in *Table I*.

Soil Sample Results Comparison to 19.15.29.13.D.(1) NMAC Reclamation Standard of 600 mg/kg Chloride and 100 mg/kg TPH:

- Chloride concentrations in samples LG–05-0-1 (38,700 mg/kg), LG–05-1-2 (6,530 mg/kg) and LG–05-2-3 (3,090 mg/kg) exceeded the chloride reclamation standard of 600 mg/kg. Elevated chloride concentrations in source area boring LG-05 have been delineated vertically and horizontally. Reported BTEX and TPH concentrations were below laboratory method reporting for each of the samples submitted for laboratory analysis of petroleum hydrocarbons, including the samples submitted from source area soil boring LG-05. Based on these results, no additional soil assessment is recommended at this time.

Path Forward Recommendations

Remediation/Reclamation Plan activities for the Site include the following:

- At this time, it is not practicable to remediate the upper one foot of impacted soil within the secondary containment due to the presence of production equipment (separator and heater treater) and associated subsurface piping. **Chevron MCBU requests NMOCD approval for deferral of remediation/reclamation of chloride-impacted soil in accordance with 19.15.29.12(C)(2).**
- Once the separator and heater treater in the affected area are removed from service, remediation/reclamation will be performed by excavation and off-site disposal of impacted soil. The remediation/reclamation activities will include collection of closure confirmation samples according to NMOCD requirements.
- A Site Closure Report will be prepared to document soil remediation and confirmation sampling activities.

2. 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 Langley Getty Com #002 (Langley Getty) site in Lea County, New Mexico ("the Site").

3. Background

The Site is located at Latitude 32.3727112 North, Longitude 103.2754517 West in Lea County, New Mexico (**Figure 1**).

AECOM understands that, on January 30, 2019, approximately 43.41 barrels (bbls) of produced water were released within an earthen berm secondary containment for a heater treater and a separator 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 the release included:

- Stopping the release at the source;
- Securing the impacted soil area to protect human health and the environment;
- Containing the released produced water and crude oil; and
- Recovering approximately 40 bbls of produced water.

A Release Notification, Form C-141, dated February 12, 2019, 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. NMOCD assigned Incident ID nAB1904357971 to the release. An updated Form C-141 is provided as **Appendix A**.

4. Initial Site Assessment/Characterization

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

- Based on an online Water Column/Average Depth to Water Report from the New Mexico Water Rights Reporting System (NMWRRS), there are no wells within 1,000 meters (about 3,281 feet) of the Site. 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 fine sand, sandy clay loam, and caliche past 50 inches.
- There are no continuously flowing watercourses or other significant watercourses within ½ mile of the Site.
- The Site is not located within 200 ft of any lakebed, known sinkhole, or playa lake.
- The nearest occupied permanent residence, school, hospital, institution, or church is approximately 8 miles from the Site, the distance from the site to Eunice, NM.
- There are no possible springs or wells used for domestic or stock watering purposes within ½ mile of the Site.
- There are no known water wells within ½ mile of the Site. The closest relevant water well identified in the online NMWRRS report with depth to water data is a well drilled by O.R. Musselwhite Water Well SE in 1972 and screened from 180 to 220 feet below ground surface (ft bgs) at a location approximately 1.27-miles north of the Site. This well has a depth to groundwater of 170 ft below ground surface. The initial use and current status of this water well is currently unknown.

- The closest incorporated municipal boundaries or defined municipal fresh water well fields are located approximately 8 miles northeast of the Site, which is the approximate distance from the Site to Eunice, NM.
- A review of the online U.S. Fish & Wildlife Wetlands Mapper tool indicates no wetland areas present within one mile 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.
- 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 a topographic map. 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.

5. Initial Soil Assessment

On August 1, 2019, initial soil assessment activities were conducted at the Site, which included collection of soil samples from five hand auger soil boring locations (LG-01 through LG-05) as shown on **Figure 2**. Site photographs are provided in **Appendix C**.

Caliche and silty sand surface pad material were generally observed in the upper one foot of the borings, which was underlain by reddish brown silty sand to the total depth of 5 ft bgs in borings LG-01 through LG-05. On January 8, 2020, air rotary drilling equipment was used to advance boring LG-06 to a depth of 51 ft bgs to demonstrate that groundwater is not present within the upper 50 ft bgs at the Site. Below a depth of 1 ft bgs, the caliche pad material was underlain by reddish-brown fine-grained sand to 10 ft bgs where caliche was observed to a depth of 12 ft bgs. The caliche seam was underlain by tan and reddish-brown silty sand to the total depth of the boring at 51 ft bgs. No groundwater was observed in LG-06. The field soil boring log for LG-06 is provided as **Appendix D**.

Soil samples were collected from each of the borings and field-screened for petroleum hydrocarbons using a photoionization detector (PID) to measure volatile organic vapor concentrations and an electrical conductivity probe. 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 9250.The laboratory results are summarized in **Table 1** and the laboratory analytical report is provided as **Appendix F**.

Each of the depth interval samples from borings LG-01 through LG-05 were submitted for laboratory analysis of chloride. Based on PID field screening results, additional depth intervals were also submitted for laboratory analysis of BTEX and TPH.

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.

5.1 Initial Soil Sampling Results

The soil analytical results were initially 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		

The regulatory limits in *Table I* above are associated with protection of sensitive receptors, which are primarily water resources for this Site. As described above, no groundwater was observed to a depth of 51 ft bgs in boring LG-6. The chloride concentration of 38,700 mg/kg reported for sample LG–05-0-1 exceeds the *Table I* regulatory limits where groundwater is deeper than 50 ft bgs. No other samples exhibited COC concentrations above the applicable regulatory limits listed in *Table I*.

The laboratory analytical results were also compared to the reclamation requirements for the upper four feet of soil under 19.15.29.13.D.(1) NMAC, which states, *"The reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division."*

- Although not described under 19.15.29 NMAC, the NMOC further clarified soil reclamation requirements in a document entitled *Procedures for Implementation of the Spill Rule (19.15.29)*, September 6, 2019. This document says, *the word "uncontaminated" means soils not only with a chloride concentration of less than 600 mg/kg, but also a TPH concentration of no more than 100 mg/kg, a total BTEX concentration of no more than 50 mg/kg, and a benzene concentration of no more than 10 mg/kg*. This clarification means that all soil to a depth of 4 ft bgs is subject to the *Table I* standards for sites where groundwater is present at a depth of less than 50 ft bgs, regardless of the actual depth to groundwater.

In source area boring LG-05, chloride concentrations of 38,700 milligrams per kilogram (mg/kg), 6,530 mg/kg and 3,090 mg/kg were reported by the laboratory for the 0 to 1, 1 to 2 and 2 to 3 ft bgs depth intervals, respectively. These concentrations exceeded the chloride reclamation standard of 600 mg/kg. The chloride concentrations reported for the 3 to 4 and 4 to 5 ft bgs depth intervals from boring LG-05 were below the reclamation standard. The chloride concentrations reported for the samples collected from horizontal delineation borings LG-01 through LG-04 were also below the reclamation standard .

Reported BTEX and TPH concentrations were below laboratory method reporting for each of the samples submitted for laboratory analysis of petroleum hydrocarbons, including the samples submitted from source area boring LG-05.

The sampling results indicate that chloride impacts to soil have been delineated to a depth of three ft bgs within the secondary containment where the release occurred and that no elevated COC concentrations

are present in soil outside of the bermed containment area. Therefore, no additional delineation soil sampling is recommended for the Site.

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

6. 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.

6.1 Proposed Soil Remediation/Reclamation Approach

Only the upper one foot of soil within the secondary containment area in which the release occurred exhibited a chloride concentration above the *Table I* regulatory limit of 10,000 mg/kg for sites where groundwater is present between 51 and 100 ft bgs (38,700 mg/kg for the 0 to 1 ft depth interval of boring LG-05). Remediation is not currently recommended for the upper one foot of impacted soil within the secondary containment area based on the following:

- The laboratory analytical results for 1-ft depth interval samples collected from 2 to 5 ft bgs indicated chloride concentrations below 10,000 mg/kg and the reported concentrations for the 3-4 and 4-5 ft bgs samples were 70.6 mg/kg and 249 mg/kg, respectively. These results demonstrate that the vertical extent of the chloride impacts to soil have been adequately delineated within the secondary containment area in which the release occurred.
- The samples collected from the soil borings outside of the secondary containment exhibited chloride concentrations below 600 mg/kg, which confirms that the horizontal extent of chloride-impacted soil has been delineated to below the remediation standard.
- No groundwater was observed in LG-06, which was drilled to a depth of 51 ft bgs. Based on depth to groundwater being greater than 50 ft bgs and vertical delineation of impacted soil as described above, there is currently minimal potential for chloride impact to groundwater beneath the Site.
- At this time, it is not practicable to remediate the upper one foot of impacted soil within the secondary containment due to the presence of production equipment (separator and heater treater) and associated subsurface piping. More thorough remediation of chloride-impacted soil can be performed when the existing production equipment is no longer operational.

Based on the information provided above, Chevron MCBU requests NMOCD approval for deferral of remediation/reclamation of chloride-impacted soil in accordance with 19.15.29.12(C)(2). As described below, remediation/reclamation of chloride-impacted soil will be performed once the separator and heater treater in the impacted area have been taken out of service.

6.2 Soil Excavation and Confirmation Sampling associated with Future Site Remediation/Reclamation

Once the separator and heater treater in the affected area are removed from service, remediation/reclamation will be performed by excavation and off-site disposal of impacted soil. 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.

6.3 Site Closure Report

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

7. Schedule

No further action is recommended at this time. The schedule for future soil remediation/reclamation will be determined once the production equipment in the impacted area has been taken out of service.

8. References

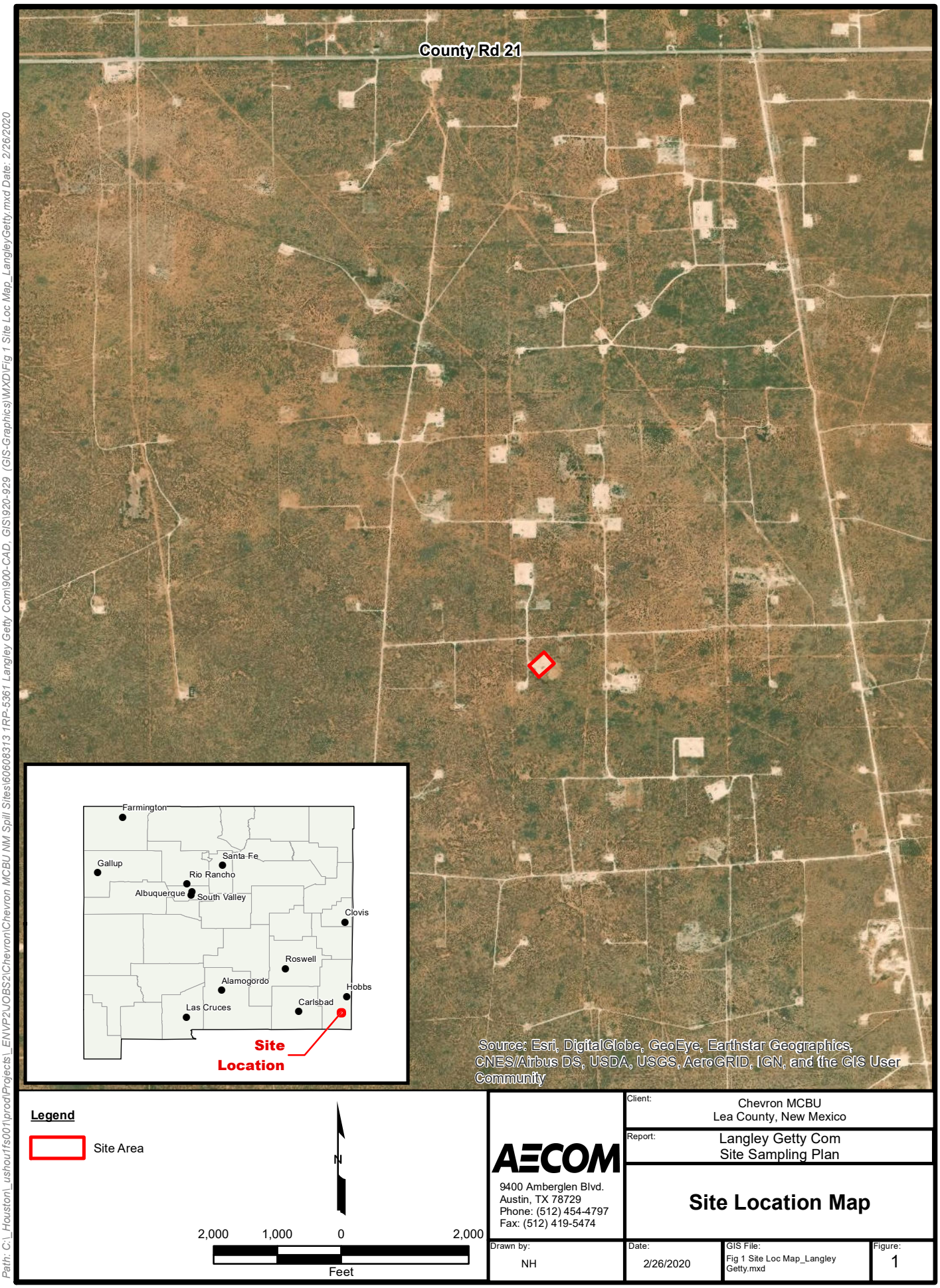
New Mexico Water Rights Reporting System (NMWRRS), Water Column/Average Depth to Water Report. http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.html .

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

Google Earth Pro.

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

Figures



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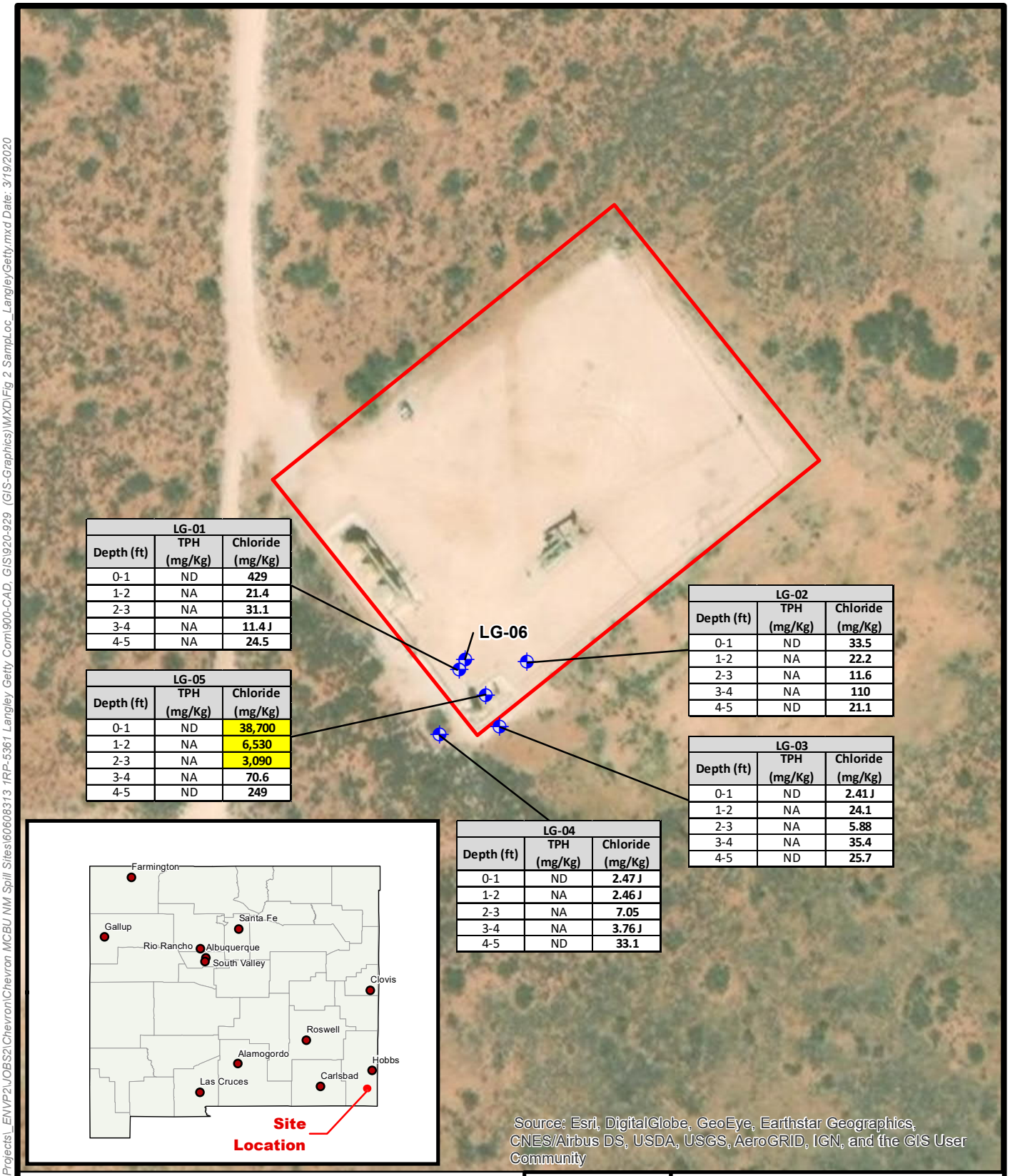
AECOM
9400 Amberglen Blvd.
Austin, TX 78729
Phone: (512) 454-4797
Fax: (512) 419-5474

Client: Chevron MCBU
Lea County, New Mexico

Report: Langley Getty Com
Site Sampling Plan

Site Location Map

Drawn by:	Date:	GIS File:	Figure:
NH	2/26/2020	Fig 1 Site Loc Map_Langley Getty.mxd	1



LG-01		
Depth (ft)	TPH (mg/Kg)	Chloride (mg/Kg)
0-1	ND	**429**
1-2	NA	**21.4**
2-3	NA	**31.1**
3-4	NA	**11.4 J**
4-5	NA	**24.5**

LG-02		
Depth (ft)	TPH (mg/Kg)	Chloride (mg/Kg)
0-1	ND	**33.5**
1-2	NA	**22.2**
2-3	NA	**11.6**
3-4	NA	**110**
4-5	ND	**21.1**

LG-05		
Depth (ft)	TPH (mg/Kg)	Chloride (mg/Kg)
0-1	ND	**38,700**
1-2	NA	**6,530**
2-3	NA	**3,090**
3-4	NA	**70.6**
4-5	ND	**249**

LG-03		
Depth (ft)	TPH (mg/Kg)	Chloride (mg/Kg)
0-1	ND	**2.41 J**
1-2	NA	**24.1**
2-3	NA	**5.88**
3-4	NA	**35.4**
4-5	ND	**25.7**

LG-04		
Depth (ft)	TPH (mg/Kg)	Chloride (mg/Kg)
0-1	ND	**2.47 J**
1-2	NA	**2.46 J**
2-3	NA	**7.05**
3-4	NA	**3.76 J**
4-5	ND	**33.1**

Legend

Soil Boring Location

Site Area

Regulatory Limits:
TPH - 100 mg/kg
Chloride - 600 mg/kg
Bold = Exceeds laboratory method reporting limits
Bold & Highlighted = Exceeds Regulatory Limit
NA - Not Analyzed
ND -Not Detected

100 50 0 100
Feet

N

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Client: Chevron MCBU
Lea County, New Mexico

Report: Langley Getty Com

Sample Location Map

Drawn by:	Date:	GIS File:	Figure:
NH	3/19/2020	Fig 2 SampLoc_LangleyGetty.mxd	2

Path: C:_Houston_ushou1fs001\prod\Projects_ENVP2\JOBS2\Chevron\Chevron MCBU NM Spill Sites\60608313 1RP-5361 Langley Getty Com\900-CAD, GIS\920-929 (GIS-Graphics)\MXD\Fig 2 SampLoc_LangleyGetty.mxd Date: 3/19/2020

Tables

Table 1
Soil Analytical Results
Langley Getty Com #002

Soil Boring	Sample Date	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons (EPA 8015B)				Volatile Organics (EPA 8260B)				Chloride (Method 9056A)
			GRO C6-C10	DRO C10-C28	MRO C28-C36	TPH GRO+DRO+MRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	
Regulatory Limits			--	--	--	*2,500*	*10*	--	--	--	*600*
LG - 01	08/01/19	0-1	NA	34.4 U	34.4 U	ND	0.000647 U	0.00142 U	0.00105 U	0.00116 U	**429**
	08/01/19	1-2	NA	NA	NA	NA	NA	NA	NA	NA	**21.4**
	08/01/19	2-3	NA	NA	NA	NA	NA	NA	NA	NA	**31.1**
	08/01/19	3-4	NA	NA	NA	NA	NA	NA	NA	NA	**11.4 J**
	08/01/19	4-5	NA	NA	NA	NA	NA	NA	NA	NA	**24.5**
LG - 02	08/01/19	0-1	NA	34 U	34 U	ND	0.000669 U	0.00146 U	0.00108 U	0.00120 U	**33.5**
	08/01/19	1-2	NA	NA	NA	NA	NA	NA	NA	NA	**22.2**
	08/01/19	2-3	NA	NA	NA	NA	NA	NA	NA	NA	**11.6**
	08/01/19	3-4	NA	NA	NA	NA	NA	NA	NA	NA	**110**
	08/01/19	4-5	NA	34 U	34 U	ND	0.00603 U	0.00132 U	0.000977 U	0.00108 U	**21.1**
LG - 03	08/01/19	0-1	NA	34.3 U	34.3 U	ND	0.00620 U	0.00136 U	0.00100 U	0.00111 U	**2.41 J**
	08/01/19	1-2	NA	NA	NA	NA	NA	NA	NA	NA	**24.1**
	08/01/19	2-3	NA	NA	NA	NA	NA	NA	NA	NA	**5.88**
	08/01/19	3-4	NA	NA	NA	NA	NA	NA	NA	NA	**35.4**
	08/01/19	4-5	NA	NA	NA	NA	NA	NA	NA	NA	**25.7**
LG - 04	08/01/19	0-1	0.0643 U	33.9 U	33.9 U	ND	0.000610 U	0.00134 U	0.000988 U	0.00109 U	**2.47 J**
	08/01/19	1-2	NA	NA	NA	NA	NA	NA	NA	NA	**2.46 J**
	08/01/19	2-3	NA	NA	NA	NA	NA	NA	NA	NA	**7.05**
	08/01/19	3-4	NA	NA	NA	NA	NA	NA	NA	NA	**3.76 J**
	08/01/19	4-5	NA	34.2 U	34.2 U	ND	0.00134 U	0.00294 U	0.00217 U	0.00240 U	**33.1**
LG - 05	08/01/19	0-1	0.0637 U	34.0 U	34.0 U	ND	0.000605 U	0.00132 U	0.000979 U	0.00108 U	**38,700**
	08/01/19	1-2	NA	NA	NA	NA	NA	NA	NA	NA	**6,530**
	08/01/19	2-3	NA	NA	NA	NA	NA	NA	NA	NA	**3,090**
	08/01/19	3-4	NA	NA	NA	NA	NA	NA	NA	NA	**70.6**
	08/01/19	4-5	0.0639 U	34.8 U	34.8 U	ND	0.000603 U	0.00132 U	0.000977 U	0.00108 U	**249**

Notes:

1. Soil analyses performed by TestAmerica Laboratories, Inc. in Houston, Texas.
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.

Appendix A

Form C-141 – Langley Getty Com #002

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NAB1904357971
District RP	1RP-5361
Facility ID	
Application ID	pAB1904357585

Release Notification

Responsible Party

Responsible Party: Chevron USA Inc.	OGRID: 4323
Contact Name: Josepha DeLeon	Contact Telephone: 575-263-0424
Contact email: jdxd@chevron.com	Incident # *(assigned by OCD)* NAB1904357971
Contact mailing address: 1616 W. Bender Blvd., Hobbs, NM 88240	

Location of Release Source

Latitude: 32.3727112 Longitude: -103.2754517
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Langley Getty Com #002	Site Type: Oil
Date Release Discovered: 01/30/2019	API# *(if applicable): 30-025-32210*

Unit Letter	Section	Township	Range	County
M	21	22S	36E	Lea

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls): 43.41 barrels	Volume Recovered (bbls): 40 barrels
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Incident ID	NAB1904357971
District RP	1RP-5361
Facility ID	
Application ID	pAB1904357585

Cause of Release:
2" by pass line had internal corrosion resulting in pin holes. Spill to land.

Calculations: Assumed soil pore space: 5%

Area	size	**Standing Liquid** Oil/Water mixture (bbl)	**In Soil**, water only no oil (bbl)	**Oil Volume** (bbl)	**Water Volume** (bbl)
1	39'x25' free liquid: ~3" depth in soil: ~1" depth	43.41	0.25	0	43.41
Total Fluid spilled				**0**	**43.41**
Total Fluid recovered				**0**	**40**

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Exceeds 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
By: Josepha DeLeon, To: Christina Hernandez, Paul Kautz, email 01/31/2019; 10:05 AM

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAB1904357971
District RP	1RP-5361
Facility ID	
Application ID	pAB1904357585

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.

Signature: JdeLeon

Date: **February 12, 2019**

Printed Name: **Josepha DeLeon**

Title: **Environmental Compliance Specialist**

email: **jdxd@chevron.com**

Telephone: **575-263-0424**

OCD Only

Received by: Amalia Bustamante

Date: 2/12/2019

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?	_____ (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

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: _____ Title: _____

Signature:_____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Appendix B

NMWRRS Water Column/Average Depth to Water

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

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 01147 POD1		CP	LE				22	22S	36E	663749	3582965	1510	25		
CP 01147 POD2		CP	LE				22	22S	36E	663749	3582965	1510	20		
CP 00485 POD1		CP	LE		3	1	22	22S	36E	663732	3583788*	1660	500		
CP 01148 POD2		CP	LE				27	22S	36E	663827	3582239	1783	40		
CP 01148 POD1		CP	LE				27	22S	36E	663840	3582232	1798	40		
CP 01148 POD3		CP	LE				27	22S	36E	663839	3582227	1800	100		
CP 00070		CP	LE	2	2	3	16	22S	36E	662604	3585071*	2046	220	170	50
CP 00070 CLW472929	O	CP	LE	2	2	3	16	22S	36E	662604	3585071*	2046	220	170	50
CP 00764 POD1		CP	LE	2	1	4	16	22S	36E	663006	3585079*	2162	4700	4000	700
CP 00609		CP	LE	1	3	4	22	22S	36E	664451	3583098*	2210	199	22	177
CP 01146 POD2		CP	LE				34	22S	36E	664041	3580954	2767	100		
CP 01146 POD3		CP	LE				34	22S	36E	664045	3580932	2786	20		
CP 01146 POD1		CP	LE				34	22S	36E	664065	3580944	2791	101		
CP 00393 POD1		CP	LE	2	2	2	27	22S	36E	665060	3582703*	2841	160		
CP 00575		CP	LE		3	4	27	22S	36E	664576	3581388*	2870	198	160	38

Average Depth to Water: **904 feet**

Minimum Depth: **22 feet**

Maximum Depth: **4000 feet**

Record Count: 15

UTMNAD83 Radius Search (in meters):

Easting (X): 662240.93 **Northing (Y):** 3583056.67 **Radius:** 3000

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

Appendix C

Photographic Documentation

Client: Chevron MCBU	**Project Number: 60608313**
Project Name: Langley Getty Com 002 Tank Battery	**Site Location: Lea County, New Mexico**

Photograph No. 1	
Photographer: J. Lovely	
Date: 7/29/2019	
Comments: Bermed area for separator and heater treater where the produced water release occurred.	

Appendix D

LG-6 Soil Boring Log

AECOM

Client: Chevron
Project Number:
Site Location: Langley Getty Battery
Coordinates: 32.372461, -103.275836 Elevation: 3,448 ft
Drilling Method: Air-Rotary
Sample Type(s): Boring Diameter: 6 in

BORING ID: LG
51 ft Boring
Sheet: 1 of 3
Monitoring Well Installed: NO
Screened Interval: N/A
Depth of Boring: 51 ft bgs
Water Level: None

Weather: Partly Cloudy, Temps in 60's
Logged By: J. Lovely
Date/Time Started: 1/8/20
Drilling Contractor: HCI
Ground Elevation:
Date/Time Finished: 1/8/20

Depth (ft)	Geologic sample ID	Sample Depth (ft)	Blows per 6"	Recovery (inches)	Headspace (ppm)	U.S.C.S	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)	Lab Sample ID	Lab Sample Depth (Ft.)
1							Caliche (Pad) 0-1 ft bgs		
2						SM	Silty Sand, Dark Reddish-Brown, Fine Grained, Dry, 1-6 ft bgs		
3									
4									
5									
6							Changes to Light Brown, Dry, 6-10 ft bgs		
7									
8									
9									
10							Caliche, 10-12 ft bgs		
11									
12							Silty Sand, Tan, Fine grained, Dry with Caliche Nodules		
13									
14									
15							Caliche Nodules Grade Out at 15 ft bgs		
16									
17									
18									
19									
20									

NOTES:

Date	Time	Depth to groundwater while drilling

Checked by Date

AECOM

Client:			BORING ID: LG 51 ft Boring
Project Number:			
Site Location:			
Coordinates:		Elevation:	Sheet: 2 of 3
Drilling Method:			Monitoring Well Installed:
Sample Type(s):		Boring Diameter:	Screened Interval:
Weather:	Logged By:	Date/Time Started:	Depth of Boring:
Drilling Contractor:	Ground Elevation:	Date/Time Finished:	Water Level:

Depth (ft)	Geologic sample ID	Sample Depth (ft)	Blows per 6"	Recovery (inches)	Headspace (ppm)	U.S.C.S	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)	Lab Sample ID	Lab Sample Depth (Ft.)
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									

NOTES:

Date	Time	Depth to groundwater while drilling

Checked by Date

AECOM

Client:		BORING ID: LG 51 ft Boring
Project Number:		
Site Location:		
Coordinates:	Elevation:	Sheet: 3 of 3
Drilling Method:		Monitoring Well Installed:
Sample Type(s):	Boring Diameter:	Screened Interval:
Weather:	Logged By: / Date/Time Started:	Depth of Boring:
Drilling Contractor:	Ground Elevation: / Date/Time Finished:	Water Level:

Depth (ft)	Geologic sample ID	Sample Depth (ft)	Blows per 6"	Recovery (inches)	Headspace (ppm)	U.S.C.S	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)	Lab Sample ID	Lab Sample Depth (Ft.)
41							changes to Reddish-Brown at 40 ft bgs. Dry		
42									
43									
44									
45									
46									
47									
48									
49									
50									
51							End of Boring at 51 ft bgs, Dry		
52									
53									
54									
55									
56									
57									
58									
59									
60									

NOTES:

Checked by Date

Date	Time	Depth to groundwater while drilling

Appendix E

Summary of Field Sample Collection and Screening Activities

Sample Collection and Screening
Langley Getty Com #002

Date	Boring ID	Depth (ft bgs)	Lithology	Time	PID (ppm)	Conductivity Probe (mS/cm)	EC Meter (mS/cm)	Chloride Lab Result (mg/kg)
8/1/2019	LG-01	0-1	Reddish brown silty sand with caliche inclusions	1000	0.0	0.350	0.140	
		1-2	Reddish brown silty sand	1005	0.0	0.071	0.050	
		2-3		1010	0.0	0.038	0.042	
		3-4		1015	0.0	0.049	0.064	
		4-5		1020	0.0	0.044	0.049	
8/1/2019	LG-02	0-1	Reddish brown silty sand with caliche inclusions	1025	0.0	0.060	0.039	
		1-2	Reddish brown silty sand	1030	0.0	0.047	0.023	
		2-3		1035	0.0	0.037	0.029	
		3-4		1040	0.0	0.035	0.017	
		4-5		1045	0.0	0.021	0.034	
8/1/2019	LG-03	0-1	Reddish brown silty sand with caliche inclusions	1050	0.0	0.026	0.014	
		1-2	Reddish brown silty sand	1055	0.0	0.019	0.022	
		2-3		1100	0.0	0.016	0.008	
		3-4		1105	0.0	0.011	0.013	
		4-5		1110	0.0	0.105	0.035	
8/1/2019	LG-04	0-1	Reddish brown silty sand	1115	0.0	0.022	0.009	
		1-2		1120	0.0	0.033	0.018	
		2-3		1125	0.0	0.025	0.020	
		3-4		1130	0.0	0.011	0.033	
		4-5		1135	0.0	0.064	0.045	
8/1/2019	LG-05	0-1	Caliche, tan silty sand	1140	1.4	3.36	2.20	
		1-2	Reddish brown silty sand	1145	0.1	3.90	1.99	
		2-3		1150	0.0	Out of Range	1.850	
		3-4		1155	0.0	0.183	0.091	
		4-5		1200	0.0	0.112	0.164	

Appendix F

Laboratory Analytical Report

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 600-189564-1
Client Project/Site: Langley Getty & central Dinkard Unit

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

Attn: Mr. Wallace Gilmore

Authorized for release by:
9/23/2019 11:18:05 AM
Jasmine Turner, Project Management Assistant I
(713)690-4444
jasmine.turner@testamericainc.com

Designee for

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

Table of Contents

Appendix A
Laboratory Data Package Cover Page - Page 1 of 4

This data package is for Eurofins TestAmerica, Houston job number 600-189564-1 and consists of:

- ☑ R1 - Field chain-of-custody documentation;
- ☑ R2 - Sample identification cross-reference;
- ☑ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  a. Items consistent with NELAC Chapter 5,
  b. dilution factors,
  c. preparation methods,
  d. cleanup methods, and
  e. if required for the project, tentatively identified compounds (TICs).
- ☑ R4 - Surrogate recovery data including:
  a. Calculated recovery (%R), and
  b. The laboratory's surrogate QC limits.
- ☑ R5 - Test reports/summary forms for blank samples;
- ☑ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  a. LCS spiking amounts,
  b. Calculated %R for each analyte, and
  c. The laboratory's LCS QC limits.
- ☑ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  a. Samples associated with the MS/MSD clearly identified,
  b. MS/MSD spiking amounts,
  c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  d. Calculated %Rs and relative percent differences (RPDs), and
  e. The laboratory's MS/MSD QC limits
- ☐ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  a. The amount of analyte measured in the duplicate,
  b. The calculated RPD, and
  c. The laboratory's QC limits for analytical duplicates.
- ☑ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☑ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Jasmine Turner, for Sachin Kudchadkar		9/23/2019
Name (printed)	Signature	Date

Senior Project Manager
Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	Eurofins TestAmerica, Houston	LRC Date:	9/23/2019
Project Name:	Langley Getty & central Dinkard Unit	Laboratory Job Number:	600-189564-1
Reviewer Name:	Jasmine Turner, for Sachin Kudchadkar		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?	X				
		If required for the project, are TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				R05D
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	Eurofins TestAmerica, Houston	LRC Date:	9/23/2019
Project Name:	Langley Getty & central Dinkard Unit	Laboratory Job Number:	600-189564-1
Reviewer Name:	Jasmine Turner, for Sachin Kudchadkar		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw data (NELAC Section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?	X				
S7	O	**Tentatively identified compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results**					
		Were percent recoveries within method QC limits?			X		
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs)**					
		Are laboratory SOPs current and on file for each method performed?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	Eurofins TestAmerica, Houston	LRC Date:	9/23/2019
Project Name:	Langley Getty & central Dinkard Unit	Laboratory Job Number:	600-189564-1
Reviewer Name:	Jasmine Turner, for Sachin Kudchadkar		

ER #[1]	Description
R05D	Method 9056A: The method blank for analytical batch 600-271834 contained chloride below the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. Method 9056A: The method blank for preparation batch 600-271758 and analytical batch 600-271834 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. Method 9056A: The method blank for preparation batch 600-271884 and analytical batch 600-271990 contained chloride below the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.
R07C	Method 9056A: 600-189564-1 MS and 600-189564-1 MSD recovered below QC limits for the following analyte: Chloride. Matrix interference is suspected. Method 9056A: 600-189564-27 MS and 600-189564-27 MSD recovered above QC limits for the following analyte: Chloride. Matrix interference is suspected. Method 9056A: 600-189564-35 MS and 600-189564-35 MSD recovered above QC limits for the following analyte: Chloride. Matrix interference is suspected. Method 9056A: 600-189564-41 MSD recovered above QC limits for the following analyte: Chloride. Matrix interference is suspected. Method 9056A: 600-189564-B-21-B MS and 600-189564-B-21-C MSD recovered below QC limits for the following analyte: Chloride. Matrix interference is suspected.

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked).

Method 8015B GRO Detection Limit Validation

Laboratory Eurofins TestAmerica, Canton

Preparation Method: 5030B_SolidNAC MDLV

Limit Group GCVOA 8015B GRO Sol P&T/Enc RL/MDL

Analysis Dates: 4/18/2019 to 4/24/2019

Analyte

C6-C10

Current		Calculations								*MDLV used - 377126-7* All values recovere
MDL	RL	Ver MDL	Spike amount	Units	Spike / MDL	Mean	Std Dev	Reps	Edit Limts?	MDLV: Pass
64.2	100	64.2	100.0	ug/Kg	1.6	82.9006	12.068924	4	N	

Lab ID	Anal Date	Batch	Samp	Analyst	Method	Prep Method	Equipment	Result	Units	Detected?
240-110308-A-3-A MD	04/18/2019	377126	7	Grossman, Lucas	8015B_GRO	5030B_SolidNAC	AFID	77.2098004	ug/Kg	Pass
240-110308-A-4-A MD	04/18/2019	377126	8	Grossman, Lucas	8015B_GRO	5030B_SolidNAC	AFID	74.6646849	ug/Kg	Pass
240-110306-A-3-A MD	04/24/2019	378036	6	Grossman, Lucas	8015B_GRO	5030B_SolidNAC	YPID	78.9146744	ug/Kg	Pass
240-110306-A-4-A MD	04/24/2019	378036	7	Grossman, Lucas	8015B_GRO	5030B_SolidNAC	YPID	100.813548	ug/Kg	Pass

Detected? Pass = result was detected ; Fail = result < = 0 . If MDLV is < MDL , verify Detection or S/N ratio
MDLV: Pass = meets Spike/MDL ratio , Spike High =Spike/MDL > ratio , Spike Low = Spike < MDL
Spike/MDL ratio = 3.00

Method 8015B DRO Detection Limit Validation

Laboratory Eurofins TestAmerica, Canton

Preparation Method: 3546 MDLV

Limit Group GCS 8015B_C DRO 3546 Solid RL/MDL

Analysis Dates: 4/1/2019 to 7/22/2019

Analyte

Diesel

Current

MDL	RL
34.58	50

Calculations

Ver MDL	Spike amount	Units	Spike / MDL	Mean	Std Dev	Reps	Edit Limts?
34.58	50.0	mg/Kg	1.4	44.6510	5.1007347	8	N

MDLV used - 386836-9 All values recovere
MDLV: Pass

Lab ID	Anal Date	Batch	Samp	Analyst	Method	Prep Method	Equipment	Result	Units	Detected?
240-110302-A-7-A MD	06/18/2019	386836	9	Bolgrin, Deborah	8015B_DRO	3546	A2HP5F	54.7914449	mg/Kg	Pass
240-110302-A-8-A MD	06/18/2019	386836	10	Bolgrin, Deborah	8015B_DRO	3546	A2HP5F	49.4051637	mg/Kg	Pass
240-110302-A-20-A MI	06/18/2019	386887	11	Bolgrin, Deborah	8015B_DRO	3546	A2HP5R	41.8150117	mg/Kg	Pass
240-110302-A-21-A MI	06/18/2019	386887	12	Bolgrin, Deborah	8015B_DRO	3546	A2HP5R	38.6871397	mg/Kg	Pass
240-110302-A-9-A MD	06/18/2019	386849	11	Bolgrin, Deborah	8015B_DRO	3546	A2HP6F	44.5286106	mg/Kg	Pass
240-110302-A-22-A MI	06/18/2019	386859	11	Bolgrin, Deborah	8015B_DRO	3546	A2HP6R	42.2728391	mg/Kg	Pass
240-110302-A-24-A MI	06/18/2019	386849	12	Bolgrin, Deborah	8015B_DRO	3546	A2HP6F	42.1637227	mg/Kg	Pass
240-110302-A-23-A MI	06/18/2019	386859	12	Bolgrin, Deborah	8015B_DRO	3546	A2HP6R	43.5445928	mg/Kg	Pass

Detected? Pass = result was detected ; Fail = result < = 0 . If MDLV is < MDL , verify Detection or S/N ratio
MDLV: Pass = meets Spike/MDL ratio , Spike High =Spike/MDL > ratio , Spike Low = Spike < MDL
Spike/MDL ratio = 3.00

Detection Check Standard EuroFins TestAmerica, Houston

Matrix: Solid
Method: SW-846 9056 / EPA 300
Prep Method: DI Leach
Date Analyzed: 9/19/2018
Job #: 600-168589
TALS Batch: 247740
Units: mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Bromide	CHWC11	1.005	2.000	2.980	4
Chloride	CHWC11	0.534	4.000	5.990	4
Fluoride	CHWC11	0.601	2.000	1.797	2
Nitrate as N	CHWC11	0.251	2.000	2.891	2
Nitrite as N	CHWC11	0.297	2.000	0.547	2
Sulfate	CHWC11	0.957	4.000	8.820	5

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Detection Check Standard EuroFins TestAmerica, Houston

Matrix: Solid
Method: 8260B
Prep Method: 5030B_SolidNAC
Date Analyzed: 4/16/2019
Job #: 600-183722
TALS Batch: 262887
Units: ug/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
1,1,1,2-Tetrachloroethane	CHVOAMS09	1.400	5.000	2.973	5
1,1,1-Trichloroethane	CHVOAMS09	0.740	2.500	2.291	5
1,1,2,2-Tetrachloroethane	CHVOAMS09	0.870	2.500	4.436	5
1,1,2-Trichloro-1,2,2-trifluoroethane	CHVOAMS09	1.440	5.000	1.787	5
1,1,2-Trichloroethane	CHVOAMS09	0.730	2.500	2.507	40
1,1-Dichloroethane	CHVOAMS09	0.870	2.500	2.114	5
1,1-Dichloroethene	CHVOAMS09	1.220	5.000	2.697	5
1,1-Dichloropropene	CHVOAMS09	0.650	2.500	2.328	5
1,2,3-Trichlorobenzene	CHVOAMS09	0.620	2.500	4.993	5
1,2,3-Trichloropropane	CHVOAMS09	1.310	2.500	5.837	5
1,2,3-Trimethylbenzene	CHVOAMS09	1.820	2.500	0.131	5
1,2,4-Trichlorobenzene	CHVOAMS09	1.970	2.500	0.414	5
1,2,4-Trimethylbenzene	CHVOAMS09	0.920	2.500	2.310	5
1,2-Dibromo-3-Chloropropane	CHVOAMS09	2.440	2.500	1.563	5
1,2-Dichlorobenzene	CHVOAMS09	0.800	2.500	0.320	5
1,2-Dichloroethane	CHVOAMS09	0.900	2.500	2.248	5
1,2-Dichloroethene, Total	CHVOAMS09	1.900	5.000	5.000	10
1,2-Dichloropropane	CHVOAMS09	0.710	2.500	2.125	5
1,3,5-Trichlorobenzene	CHVOAMS09	2.500	5.000	2.414	5
1,3,5-Trimethylbenzene	CHVOAMS09	1.600	2.500	2.173	5
1,3-Dichlorobenzene	CHVOAMS09	0.710	2.500	2.239	5
1,3-Dichloropropane	CHVOAMS09	0.630	2.500	2.265	5
1,4-Dichlorobenzene	CHVOAMS09	0.660	2.500	2.063	5
1,4-Dioxane	CHVOAMS09	62.070	50.000	21.646	500
2,2-Dichloropropane	CHVOAMS04	1.820	2.500	2.214	5
2-Butanone (MEK)	CHVOAMS09	1.900	5.000	3.640	10
2-Chloro-1,3-butadiene	CHVOAMS09	2.710	2.500	1.799	5
2-Chloroethyl vinyl ether	CHVOAMS09	0.980	5.000	4.606	10
2-Chlorotoluene	CHVOAMS09	0.680	2.500	2.155	5
2-Hexanone	CHVOAMS09	1.010	10.000	3.867	10
2-Methyl-2-propanol	CHVOAMS09	10.000	25.000	0.029	50
2-Methyltetrahydrofuran	CHVOAMS09	5.430	12.500	14.242	50
2-Methyltetrahydropyran	CHVOAMS09	4.820	12.500	15.854	50
2-Nitropropane	CHVOAMS09	24.290	5.000	4.186	50
3-Chloro-1-propene	CHVOAMS09	1.390	2.500	2.192	5
4-Chlorotoluene	CHVOAMS09	0.830	2.500	2.305	5
4-Isopropyltoluene	CHVOAMS09	1.020	2.500	0.124	5
4-Methyl-2-pentanone (MIBK)	CHVOAMS09	1.470	5.000	0.216	10
Acetone	CHVOAMS04	1.660	5.000	4.014	10
Acetonitrile	CHVOAMS09	1.390	25.000	10.912	50
Acrolein	CHVOAMS09	6.230	12.500	2.141	25
Acrylonitrile	CHVOAMS09	5.820	25.000	3.681	50
Benzene	CHVOAMS09	0.630	2.500	2.420	5
Benzyl chloride	CHVOAMS09	2.140	2.500	0.377	5
Bromobenzene	CHVOAMS09	0.990	2.500	2.602	5
Bromoform	CHVOAMS09	1.370	2.500	1.878	5
Bromomethane	CHVOAMS09	0.830	2.500	1.965	10
Butadiene	CHVOAMS09	1.250	2.500	1.845	5
Carbon disulfide	CHVOAMS04	0.550	2.500	1.935	10

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Detection Check Standard EuroFins TestAmerica, Houston

Matrix:	Solid
Method:	8260B
Prep Method:	5030B_SolidNAC
Date Analyzed:	4/16/2019
Job #:	600-183722
TALS Batch:	262887
Units:	ug/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Carbon tetrachloride	CHVOAMS09	1.130	2.500	2.146	5
Chlorobenzene	CHVOAMS09	0.960	2.500	2.539	5
Chlorobromomethane	CHVOAMS09	1.780	2.500	2.263	5
Chlorodibromomethane	CHVOAMS09	0.940	2.500	2.383	5
Chloroethane	CHVOAMS09	1.400	5.000	2.362	10
Chloroform	CHVOAMS09	0.660	2.500	2.440	10
Chloromethane	CHVOAMS09	1.660	5.000	1.375	10
cis-1,2-Dichloroethene	CHVOAMS09	0.830	2.500	2.473	5
cis-1,3-Dichloropropene	CHVOAMS09	0.540	2.500	2.335	5
Cyclohexane	CHVOAMS09	1.920	5.000	2.952	5
Dibromomethane	CHVOAMS09	0.750	2.500	2.411	5
Dichlorobromomethane	CHVOAMS09	0.660	2.500	2.590	5
Dichlorodifluoromethane	CHVOAMS09	1.540	5.000	1.951	5
Dichlorofluoromethane	CHVOAMS09	1.000	2.500	1.932	5
Ethyl acetate	CHVOAMS09	2.810	5.000	3.504	5
Ethyl acrylate	CHVOAMS09	10.660	2.500	1.638	20
Ethyl ether	CHVOAMS09	1.950	2.500	1.822	5
Ethyl methacrylate	CHVOAMS09	1.660	2.500	0.603	5
Ethylbenzene	CHVOAMS09	1.020	2.500	2.624	5
Ethylene Dibromide	CHVOAMS09	1.020	2.500	2.413	5
Hexachlorobutadiene	CHVOAMS09	1.130	2.500	2.306	5
Hexane	CHVOAMS09	1.230	2.500	1.859	5
Iodomethane	CHVOAMS09	2.500	5.000	3.118	5
Isobutyl alcohol	CHVOAMS04	17.160	62.500	76.211	125
Isooctane	CHVOAMS09	10.000	5.000	1.018	10
Isopropyl alcohol	CHVOAMS09	27.470	50.000	34.005	100
Isopropyl ether	CHVOAMS09	1.760	2.500	1.676	5
Isopropylbenzene	CHVOAMS09	0.920	2.500	2.104	5
Methacrylonitrile	CHVOAMS09	5.000	25.000	23.410	50
Methyl acetate	CHVOAMS09	2.910	5.000	2.835	5
Methyl methacrylate	CHVOAMS09	2.860	5.000	3.621	10
Methyl tert-butyl ether	CHVOAMS09	1.830	2.500	2.421	5
Methylcyclohexane	CHVOAMS09	1.460	2.500	2.552	5
Methylene Chloride	CHVOAMS09	2.190	5.000	2.227	10
m-Xylene & p-Xylene	CHVOAMS09	1.520	2.500	2.525	5
Naphthalene	CHVOAMS09	2.370	2.500	6.777	10
n-Butyl acetate	CHVOAMS09	2.370	5.000	2.147	5
n-Butylbenzene	CHVOAMS04	0.580	2.500	1.992	5
n-Heptane	CHVOAMS09	10.000	2.500	1.474	20
N-Propylbenzene	CHVOAMS09	0.950	2.500	2.016	5
o-Xylene	CHVOAMS09	1.130	5.000	2.960	5
Propionitrile	CHVOAMS09	2.360	50.000	18.349	5
sec-Butylbenzene	CHVOAMS09	0.700	2.500	0.193	5
Styrene	CHVOAMS09	0.710	2.500	2.925	5
tert-Butylbenzene	CHVOAMS09	0.950	2.500	2.237	5
Tetrachloroethene	CHVOAMS09	0.710	2.500	2.350	5
Tetrahydrofuran	CHVOAMS09	5.390	10.000	4.590	50
Tetrahydropyran	CHVOAMS09	5.220	12.500	13.469	50
Toluene	CHVOAMS09	1.380	2.500	2.561	5

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Matrix: Solid
Method: 8260B
Prep Method: 5030B_SolidNAC
Date Analyzed: 4/16/2019
Job #: 600-183722
TALS Batch: 262887
Units: ug/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
trans-1,2-Dichloroethene	CHVOAMS09	1.140	2.500	2.470	5
trans-1,3-Dichloropropene	CHVOAMS09	0.580	2.500	2.304	5
trans-1,4-Dichloro-2-butene	CHVOAMS09	1.900	2.500	4.958	5
Trichloroethene	CHVOAMS09	1.400	2.500	2.306	5
Trichlorofluoromethane	CHVOAMS09	0.660	2.500	1.842	10
Vinyl acetate	CHVOAMS09	0.930	5.000	3.262	10
Vinyl chloride	CHVOAMS04	0.900	2.500	1.917	10
Xylenes, Total	CHVOAMS09	1.130	5.000	2.500	5

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Case Narrative

Client: AECOM
Project/Site: Langley Getty & central Dinkard Unit

Job ID: 600-189564-1

Job ID: 600-189564-1

Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative
600-189564-1

Comments
No additional comments.

Receipt
The samples were received on 8/2/2019 9:52 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.2º C, 2.4º C and 2.9º C.

All applicable analytical narratives can be found in the TRRP Checklist section of this report.

Method Summary

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

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

Protocol References:

ASTM = ASTM International

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

Laboratory References:

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

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

Sample Summary

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-189564-1	LG - 01-0-1	Solid	08/01/19 10:00	08/02/19 09:52	
600-189564-2	LG - 01-1-2	Solid	08/01/19 10:05	08/02/19 09:52	
600-189564-3	LG - 01-2-3	Solid	08/01/19 10:10	08/02/19 09:52	
600-189564-4	LG - 01-3-4	Solid	08/01/19 10:15	08/02/19 09:52	
600-189564-5	LG - 01-4-5	Solid	08/01/19 10:20	08/02/19 09:52	
600-189564-6	LG - 02-0-1	Solid	08/01/19 10:25	08/02/19 09:52	
600-189564-7	LG - 02-1-2	Solid	08/01/19 10:30	08/02/19 09:52	
600-189564-8	LG - 02-2-3	Solid	08/01/19 10:35	08/02/19 09:52	
600-189564-9	LG - 02-3-4	Solid	08/01/19 10:40	08/02/19 09:52	
600-189564-10	LG - 02-4-5	Solid	08/01/19 10:45	08/02/19 09:52	
600-189564-11	LG - 03-0-1	Solid	08/01/19 10:50	08/02/19 09:52	
600-189564-12	LG - 03-1-2	Solid	08/01/19 10:55	08/02/19 09:52	
600-189564-13	LG - 03-2-3	Solid	08/01/19 11:00	08/02/19 09:52	
600-189564-14	LG - 03-3-4	Solid	08/01/19 11:05	08/02/19 09:52	
600-189564-15	LG - 03-4-5	Solid	08/01/19 11:10	08/02/19 09:52	
600-189564-16	LG - 04-0-1	Solid	08/01/19 11:15	08/02/19 09:52	
600-189564-17	LG - 04-1-2	Solid	08/01/19 11:20	08/02/19 09:52	
600-189564-18	LG - 04-2-3	Solid	08/01/19 11:25	08/02/19 09:52	
600-189564-19	LG - 04-3-4	Solid	08/01/19 11:30	08/02/19 09:52	
600-189564-20	LG - 04-4-5	Solid	08/01/19 11:35	08/02/19 09:52	
600-189564-21	LG - 05-0-1	Solid	08/01/19 11:40	08/02/19 09:52	
600-189564-22	LG - 05-1-2	Solid	08/01/19 11:45	08/02/19 09:52	
600-189564-23	LG -05-2-3	Solid	08/01/19 11:50	08/02/19 09:52	
600-189564-24	LG - 05-3-4	Solid	08/01/19 11:55	08/02/19 09:52	
600-189564-25	LG - 05-4-5	Solid	08/01/19 12:00	08/02/19 09:52	
600-189564-26	CDU - 11-0-1	Solid	08/01/19 13:20	08/02/19 09:52	
600-189564-27	CDU - 11-1-2	Solid	08/01/19 13:25	08/02/19 09:52	
600-189564-28	CDU - 11-2-3	Solid	08/01/19 13:30	08/02/19 09:52	
600-189564-29	CDU - 11-3-4	Solid	08/01/19 13:35	08/02/19 09:52	
600-189564-30	CDU - 11-4-5	Solid	08/01/19 13:40	08/02/19 09:52	
600-189564-31	CDU - 12-0-1	Solid	08/01/19 13:45	08/02/19 09:52	
600-189564-32	CDU - 12-1-2	Solid	08/01/19 13:50	08/02/19 09:52	
600-189564-33	CDU - 12-3-4	Solid	08/01/19 13:55	08/02/19 09:52	
600-189564-34	CDU - 12-4-5	Solid	08/01/19 14:05	08/02/19 09:52	
600-189564-35	CDU - 13-0-1	Solid	08/01/19 14:10	08/02/19 09:52	
600-189564-36	CDU - 13-1-2	Solid	08/01/19 14:15	08/02/19 09:52	
600-189564-37	CDU - 13-2-3	Solid	08/01/19 14:20	08/02/19 09:52	
600-189564-38	CDU - 14-0-1	Solid	08/01/19 14:30	08/02/19 09:52	
600-189564-39	CDU - 14-1-2	Solid	08/01/19 14:35	08/02/19 09:52	
600-189564-40	CDU - 14-2-3	Solid	08/01/19 14:40	08/02/19 09:52	
600-189564-41	CDU - 14-3-4	Solid	08/01/19 14:45	08/02/19 09:52	

Client Sample Results

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 01-0-1 — Lab Sample ID: 600-189564-1
Date Collected: 08/01/19 10:00 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	429	b	20.0	2.66	mg/Kg			08/15/19 08:18	5

Client Sample ID: LG - 01-1-2 — Lab Sample ID: 600-189564-2
Date Collected: 08/01/19 10:05 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.4	b	4.01	0.535	mg/Kg			08/14/19 09:17	1

Client Sample ID: LG - 01-2-3 — Lab Sample ID: 600-189564-3
Date Collected: 08/01/19 10:10 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.1	b	20.0	2.66	mg/Kg			08/14/19 09:37	5

Client Sample ID: LG - 01-3-4 — Lab Sample ID: 600-189564-4
Date Collected: 08/01/19 10:15 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.4	J b	20.0	2.66	mg/Kg			08/14/19 09:58	5

Client Sample ID: LG - 01-4-5 — Lab Sample ID: 600-189564-5
Date Collected: 08/01/19 10:20 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.5	b	3.98	0.532	mg/Kg			08/14/19 10:58	1

Client Sample ID: LG - 02-0-1 — Lab Sample ID: 600-189564-6
Date Collected: 08/01/19 10:25 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33.5	b	3.98	0.531	mg/Kg			08/14/19 11:18	1

Client Sample ID: LG - 02-1-2 — Lab Sample ID: 600-189564-7
Date Collected: 08/01/19 10:30 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.2	b	3.98	0.532	mg/Kg			08/14/19 11:38	1

Client Sample Results

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 02-2-3 — Lab Sample ID: 600-189564-8

Date Collected: 08/01/19 10:35
Date Received: 08/02/19 09:52
Matrix: Solid

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.6	b	3.98	0.531	mg/Kg			08/14/19 12:38	1

Client Sample ID: LG - 02-3-4 — Lab Sample ID: 600-189564-9

Date Collected: 08/01/19 10:40
Date Received: 08/02/19 09:52
Matrix: Solid

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110	b	3.98	0.531	mg/Kg			08/14/19 12:58	1

Client Sample ID: LG - 02-4-5 — Lab Sample ID: 600-189564-10

Date Collected: 08/01/19 10:45
Date Received: 08/02/19 09:52
Matrix: Solid

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.1	b	3.97	0.530	mg/Kg			08/14/19 13:18	1

Client Sample ID: LG - 03-0-1 — Lab Sample ID: 600-189564-11

Date Collected: 08/01/19 10:50
Date Received: 08/02/19 09:52
Matrix: Solid

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.41	J b	3.98	0.532	mg/Kg			08/14/19 13:38	1

Client Sample ID: LG - 03-1-2 — Lab Sample ID: 600-189564-12

Date Collected: 08/01/19 10:55
Date Received: 08/02/19 09:52
Matrix: Solid

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.1	b	3.96	0.529	mg/Kg			08/14/19 13:58	1

Client Sample ID: LG - 03-2-3 — Lab Sample ID: 600-189564-13

Date Collected: 08/01/19 11:00
Date Received: 08/02/19 09:52
Matrix: Solid

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.88	b	3.97	0.530	mg/Kg			08/14/19 14:58	1

Client Sample ID: LG - 03-3-4 — Lab Sample ID: 600-189564-14

Date Collected: 08/01/19 11:05
Date Received: 08/02/19 09:52
Matrix: Solid

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.4	b	3.96	0.529	mg/Kg			08/14/19 15:18	1

Client Sample Results

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 03-4-5 Lab Sample ID: 600-189564-15

Date Collected: 08/01/19 11:10 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.7	b	4.00	0.534	mg/Kg			08/14/19 15:38	1

Client Sample ID: LG - 04-0-1 Lab Sample ID: 600-189564-16

Date Collected: 08/01/19 11:15 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000610	U	0.00484	0.000610	mg/Kg		08/02/19 15:40	08/05/19 18:36	1
Ethylbenzene	0.000988	U	0.00484	0.000988	mg/Kg		08/02/19 15:40	08/05/19 18:36	1
Toluene	0.00134	U	0.00484	0.00134	mg/Kg		08/02/19 15:40	08/05/19 18:36	1
Xylenes, Total	0.00109	U	0.00484	0.00109	mg/Kg		08/02/19 15:40	08/05/19 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*85*		*61 - 130*	*08/02/19 15:40*	*08/05/19 18:36*	*1*
Dibromofluoromethane	*89*		*68 - 140*	*08/02/19 15:40*	*08/05/19 18:36*	*1*
Toluene-d8 (Surr)	*93*		*50 - 130*	*08/02/19 15:40*	*08/05/19 18:36*	*1*
4-Bromofluorobenzene	*101*		*57 - 140*	*08/02/19 15:40*	*08/05/19 18:36*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	64.3	U	100	64.3	ug/Kg		08/08/19 08:39	08/08/19 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*88*		*20 - 140*	*08/08/19 08:39*	*08/08/19 15:47*	*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]	33.9	U	49.0	33.9	mg/Kg		08/09/19 09:11	08/12/19 16:39	1
C28-C36	33.9	U	49.0	33.9	mg/Kg		08/09/19 09:11	08/12/19 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*69*		*26 - 125*	*08/09/19 09:11*	*08/12/19 16:39*	*1*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.47	J b	3.96	0.529	mg/Kg			08/14/19 16:38	1

Client Sample ID: LG - 04-1-2 Lab Sample ID: 600-189564-17

Date Collected: 08/01/19 11:20 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.46	J b	3.99	0.533	mg/Kg			08/14/19 16:58	1

Client Sample Results

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 04-2-3 Lab Sample ID: 600-189564-18

Date Collected: 08/01/19 11:25 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.05	b	3.98	0.532	mg/Kg			08/14/19 17:18	1

Client Sample ID: LG - 04-3-4 Lab Sample ID: 600-189564-19

Date Collected: 08/01/19 11:30 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.76	J b	4.00	0.534	mg/Kg			08/14/19 17:38	1

Client Sample ID: LG - 04-4-5 Lab Sample ID: 600-189564-20

Date Collected: 08/01/19 11:35 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33.1	b	4.00	0.534	mg/Kg			08/14/19 17:58	1

Client Sample ID: LG - 05-0-1 Lab Sample ID: 600-189564-21

Date Collected: 08/01/19 11:40 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000605	U	0.00480	0.000605	mg/Kg		08/02/19 15:40	08/05/19 19:01	1
Ethylbenzene	0.000979	U	0.00480	0.000979	mg/Kg		08/02/19 15:40	08/05/19 19:01	1
Toluene	0.00132	U	0.00480	0.00132	mg/Kg		08/02/19 15:40	08/05/19 19:01	1
Xylenes, Total	0.00108	U	0.00480	0.00108	mg/Kg		08/02/19 15:40	08/05/19 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*61 - 130*	*08/02/19 15:40*	*08/05/19 19:01*	*1*
Dibromofluoromethane	*91*		*68 - 140*	*08/02/19 15:40*	*08/05/19 19:01*	*1*
Toluene-d8 (Surr)	*92*		*50 - 130*	*08/02/19 15:40*	*08/05/19 19:01*	*1*
4-Bromofluorobenzene	*101*		*57 - 140*	*08/02/19 15:40*	*08/05/19 19:01*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	63.7	U	99.2	63.7	ug/Kg		08/08/19 08:39	08/08/19 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*88*		*20 - 140*	*08/08/19 08:39*	*08/08/19 16:31*	*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]	34.0	U	49.2	34.0	mg/Kg		08/09/19 09:11	08/12/19 17:07	1
C28-C36	34.0	U	49.2	34.0	mg/Kg		08/09/19 09:11	08/12/19 17:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*81*		*26 - 125*	*08/09/19 09:11*	*08/12/19 17:07*	*1*

Client Sample Results

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 05-0-1 Lab Sample ID: 600-189564-21
Date Collected: 08/01/19 11:40 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38700	b	396	52.9	mg/Kg			08/15/19 15:57	100

Client Sample ID: LG - 05-1-2 Lab Sample ID: 600-189564-22
Date Collected: 08/01/19 11:45 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6530	b	198	26.5	mg/Kg			08/14/19 21:03	50

Client Sample ID: LG -05-2-3 Lab Sample ID: 600-189564-23
Date Collected: 08/01/19 11:50 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3090	b	79.2	10.6	mg/Kg			08/14/19 21:21	20

Client Sample ID: LG - 05-3-4 Lab Sample ID: 600-189564-24
Date Collected: 08/01/19 11:55 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	70.6	b	3.96	0.529	mg/Kg			08/14/19 21:39	1

Client Sample ID: LG - 05-4-5 Lab Sample ID: 600-189564-25
Date Collected: 08/01/19 12:00 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000603	U	0.00479	0.000603	mg/Kg		08/02/19 15:40	08/06/19 18:23	1
Ethylbenzene	0.000977	U	0.00479	0.000977	mg/Kg		08/02/19 15:40	08/06/19 18:23	1
Toluene	0.00132	U	0.00479	0.00132	mg/Kg		08/02/19 15:40	08/06/19 18:23	1
Xylenes, Total	0.00108	U	0.00479	0.00108	mg/Kg		08/02/19 15:40	08/06/19 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*61 - 130*	*08/02/19 15:40*	*08/06/19 18:23*	*1*
Dibromofluoromethane	*93*		*68 - 140*	*08/02/19 15:40*	*08/06/19 18:23*	*1*
Toluene-d8 (Surr)	*93*		*50 - 130*	*08/02/19 15:40*	*08/06/19 18:23*	*1*
4-Bromofluorobenzene	*107*		*57 - 140*	*08/02/19 15:40*	*08/06/19 18:23*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	63.9	U	99.6	63.9	ug/Kg		08/08/19 08:39	08/08/19 17:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*88*		*20 - 140*	*08/08/19 08:39*	*08/08/19 17:15*	*1*

Client Sample Results

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 05-4-5 Lab Sample ID: 600-189564-25
Date Collected: 08/01/19 12:00 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10 - C28]	34.8	U	50.4	34.8	mg/Kg		08/09/19 09:11	08/12/19 17:35	1
C28-C36	34.8	U	50.4	34.8	mg/Kg		08/09/19 09:11	08/12/19 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*84*		*26 - 125*	*08/09/19 09:11*	*08/12/19 17:35*	*1*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**249**	**b**	3.96	0.529	mg/Kg			08/14/19 21:57	1

Client Sample ID: CDU - 11-0-1 Lab Sample ID: 600-189564-26
Date Collected: 08/01/19 13:20 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.1**	**b**	3.97	0.530	mg/Kg			08/14/19 22:14	1

Client Sample ID: CDU - 11-1-2 Lab Sample ID: 600-189564-27
Date Collected: 08/01/19 13:25 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**18.8**	**b**	4.00	0.534	mg/Kg			08/15/19 16:15	1

Client Sample ID: CDU - 11-2-3 Lab Sample ID: 600-189564-28
Date Collected: 08/01/19 13:30 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16.3**	**b**	3.98	0.531	mg/Kg			08/15/19 17:08	1

Client Sample ID: CDU - 11-3-4 Lab Sample ID: 600-189564-29
Date Collected: 08/01/19 13:35 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.5**	**b**	3.98	0.532	mg/Kg			08/15/19 17:26	1

Client Sample ID: CDU - 11-4-5 Lab Sample ID: 600-189564-30
Date Collected: 08/01/19 13:40 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000761	U	0.00604	0.000761	mg/Kg		08/02/19 15:40	08/06/19 18:49	1
Ethylbenzene	0.00123	U	0.00604	0.00123	mg/Kg		08/02/19 15:40	08/06/19 18:49	1
Toluene	0.00167	U	0.00604	0.00167	mg/Kg		08/02/19 15:40	08/06/19 18:49	1
Xylenes, Total	0.00136	U	0.00604	0.00136	mg/Kg		08/02/19 15:40	08/06/19 18:49	1

Client Sample Results

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: CDU - 11-4-5 Lab Sample ID: 600-189564-30

Date Collected: 08/01/19 13:40 **Matrix: Solid**
Date Received: 08/02/19 09:52

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		61 - 130	08/02/19 15:40	08/06/19 18:49	1
Dibromofluoromethane	90		68 - 140	08/02/19 15:40	08/06/19 18:49	1
Toluene-d8 (Surr)	92		50 - 130	08/02/19 15:40	08/06/19 18:49	1
4-Bromofluorobenzene	102		57 - 140	08/02/19 15:40	08/06/19 18:49	1

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	64.7	U	101	64.7	ug/Kg		08/08/19 08:39	08/08/19 17:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	84		20 - 140	08/08/19 08:39	08/08/19 17:58	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]	355		47.7	33.0	mg/Kg		08/09/19 09:11	08/12/19 18:02	1
C28-C36	249		47.7	33.0	mg/Kg		08/09/19 09:11	08/12/19 18:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	71		26 - 125	08/09/19 09:11	08/12/19 18:02	1

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.69	b	3.96	0.529	mg/Kg			08/15/19 17:44	1

Client Sample ID: CDU - 12-0-1 Lab Sample ID: 600-189564-31

Date Collected: 08/01/19 13:45 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.2	b	3.98	0.532	mg/Kg			08/15/19 18:02	1

Client Sample ID: CDU - 12-1-2 Lab Sample ID: 600-189564-32

Date Collected: 08/01/19 13:50 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.8	b	3.99	0.533	mg/Kg			08/15/19 18:56	1

Client Sample ID: CDU - 12-3-4 Lab Sample ID: 600-189564-33

Date Collected: 08/01/19 13:55 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.6	b	4.00	0.534	mg/Kg			08/15/19 19:14	1

Client Sample Results

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: CDU - 12-4-5 Lab Sample ID: 600-189564-34

Date Collected: 08/01/19 14:05 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000665	U	0.00527	0.000665	mg/Kg		08/02/19 15:40	08/06/19 19:15	1
Ethylbenzene	0.00108	U	0.00527	0.00108	mg/Kg		08/02/19 15:40	08/06/19 19:15	1
Toluene	0.00146	U	0.00527	0.00146	mg/Kg		08/02/19 15:40	08/06/19 19:15	1
Xylenes, Total	0.00119	U	0.00527	0.00119	mg/Kg		08/02/19 15:40	08/06/19 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*61 - 130*	*08/02/19 15:40*	*08/06/19 19:15*	*1*
Dibromofluoromethane	*92*		*68 - 140*	*08/02/19 15:40*	*08/06/19 19:15*	*1*
Toluene-d8 (Surr)	*94*		*50 - 130*	*08/02/19 15:40*	*08/06/19 19:15*	*1*
4-Bromofluorobenzene	*104*		*57 - 140*	*08/02/19 15:40*	*08/06/19 19:15*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	64.6	U	101	64.6	ug/Kg		08/08/19 08:39	08/08/19 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*94*		*20 - 140*	*08/08/19 08:39*	*08/08/19 18:42*	*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]	34.3	U	49.7	34.3	mg/Kg		08/09/19 09:11	08/12/19 18:58	1
C28-C36	34.3	U	49.7	34.3	mg/Kg		08/09/19 09:11	08/12/19 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*71*		*26 - 125*	*08/09/19 09:11*	*08/12/19 18:58*	*1*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.7**	**b**	3.99	0.533	mg/Kg			08/15/19 19:32	1

Client Sample ID: CDU - 13-0-1 Lab Sample ID: 600-189564-35

Date Collected: 08/01/19 14:10 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.17**	**b**	3.98	0.532	mg/Kg			08/15/19 19:50	1

Client Sample ID: CDU - 13-1-2 Lab Sample ID: 600-189564-36

Date Collected: 08/01/19 14:15 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.71**	**b**	4.00	0.534	mg/Kg			08/15/19 20:43	1

Client Sample Results

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: CDU - 13-2-3 Lab Sample ID: 600-189564-37

Date Collected: 08/01/19 14:20 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000774	U	0.00614	0.000774	mg/Kg		08/02/19 15:40	08/06/19 19:41	1
Ethylbenzene	0.00125	U	0.00614	0.00125	mg/Kg		08/02/19 15:40	08/06/19 19:41	1
Toluene	0.00170	U	0.00614	0.00170	mg/Kg		08/02/19 15:40	08/06/19 19:41	1
Xylenes, Total	0.00139	U	0.00614	0.00139	mg/Kg		08/02/19 15:40	08/06/19 19:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*61 - 130*	*08/02/19 15:40*	*08/06/19 19:41*	*1*
Dibromofluoromethane	*90*		*68 - 140*	*08/02/19 15:40*	*08/06/19 19:41*	*1*
Toluene-d8 (Surr)	*92*		*50 - 130*	*08/02/19 15:40*	*08/06/19 19:41*	*1*
4-Bromofluorobenzene	*101*		*57 - 140*	*08/02/19 15:40*	*08/06/19 19:41*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	63.4	U	98.8	63.4	ug/Kg		08/08/19 08:39	08/08/19 19:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*88*		*20 - 140*	*08/08/19 08:39*	*08/08/19 19:25*	*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]	35.0	U	50.7	35.0	mg/Kg		08/09/19 09:11	08/12/19 19:53	1
C28-C36	35.0	U	50.7	35.0	mg/Kg		08/09/19 09:11	08/12/19 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*76*		*26 - 125*	*08/09/19 09:11*	*08/12/19 19:53*	*1*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.1**	**b**	3.96	0.529	mg/Kg			08/15/19 21:01	1

Client Sample ID: CDU - 14-0-1 Lab Sample ID: 600-189564-38

Date Collected: 08/01/19 14:30 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22.4**	**b**	3.98	0.532	mg/Kg			08/15/19 21:19	1

Client Sample ID: CDU - 14-1-2 Lab Sample ID: 600-189564-39

Date Collected: 08/01/19 14:35 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30.4**	**b**	4.00	0.534	mg/Kg			08/15/19 21:37	1

Client Sample Results

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: CDU - 14-2-3 Lab Sample ID: 600-189564-40

Date Collected: 08/01/19 14:40 **Matrix: Solid**
Date Received: 08/02/19 09:52

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.6	b	4.00	0.534	mg/Kg			08/15/19 22:31	1

Client Sample ID: CDU - 14-3-4 Lab Sample ID: 600-189564-41

Date Collected: 08/01/19 14:45 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000421	U	0.00334	0.000421	mg/Kg		08/02/19 15:40	08/05/19 14:16	1
Ethylbenzene	0.000681	U	0.00334	0.000681	mg/Kg		08/02/19 15:40	08/05/19 14:16	1
Toluene	0.000921	U	0.00334	0.000921	mg/Kg		08/02/19 15:40	08/05/19 14:16	1
Xylenes, Total	0.000754	U	0.00334	0.000754	mg/Kg		08/02/19 15:40	08/05/19 14:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*61 - 130*	*08/02/19 15:40*	*08/05/19 14:16*	*1*
Dibromofluoromethane	*92*		*68 - 140*	*08/02/19 15:40*	*08/05/19 14:16*	*1*
Toluene-d8 (Surr)	*93*		*50 - 130*	*08/02/19 15:40*	*08/05/19 14:16*	*1*
4-Bromofluorobenzene	*106*		*57 - 140*	*08/02/19 15:40*	*08/05/19 14:16*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	63.1	U	98.2	63.1	ug/Kg		08/08/19 08:39	08/08/19 21:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*87*		*20 - 140*	*08/08/19 08:39*	*08/08/19 21:30*	*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]	35.2	U	50.9	35.2	mg/Kg		08/09/19 09:11	08/12/19 20:21	1
C28-C36	35.2	U	50.9	35.2	mg/Kg		08/09/19 09:11	08/12/19 20:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*70*		*26 - 125*	*08/09/19 09:11*	*08/12/19 20:21*	*1*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36.1		4.00	0.534	mg/Kg			08/15/19 23:24	1

Definitions/Glossary

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

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
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
b	The compound was found in the blank and sample
E	Result is greater then the UQL and the concentration is an estimated value.
J	Result is less than the MQL but greater than or equal to the SDL 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: Langley Getty & central Dinkard Unit

Job ID: 600-189564-1

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)
600-189564-16	LG - 04-0-1	85	89	93	101
600-189564-21	LG - 05-0-1	88	91	92	101
600-189564-25	LG - 05-4-5	88	93	93	107
600-189564-30	CDU - 11-4-5	86	90	92	102
600-189564-34	CDU - 12-4-5	87	92	94	104
600-189564-37	CDU - 13-2-3	87	90	92	101
600-189564-41	CDU - 14-3-4	89	92	93	106
LCS 600-271138/3	Lab Control Sample	79	91	101	113
LCS 600-271253/3	Lab Control Sample	88	94	97	109
LCSD 600-271138/4	Lab Control Sample Dup	80	92	100	116
LCSD 600-271253/4	Lab Control Sample Dup	86	91	94	107
MB 600-271138/6	Method Blank	97	93	95	106
MB 600-271253/6	Method Blank	101	94	94	102

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 (20-140)
180-93437-C-2-F MS	Matrix Spike	87
180-93437-C-2-G MSD	Matrix Spike Duplicate	89
600-189564-16	LG - 04-0-1	88
600-189564-21	LG - 05-0-1	88
600-189564-25	LG - 05-4-5	88
600-189564-30	CDU - 11-4-5	84
600-189564-34	CDU - 12-4-5	94
600-189564-37	CDU - 13-2-3	88
600-189564-41	CDU - 14-3-4	87
LCS 240-394979/2-A	Lab Control Sample	93
MB 240-394979/1-A	Method Blank	88

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)
600-189564-16	LG - 04-0-1	69
600-189564-21	LG - 05-0-1	81
600-189564-25	LG - 05-4-5	84
600-189564-30	CDU - 11-4-5	71

Surrogate Summary

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

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

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

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	OTPH1 (26-125)								
600-189564-34	CDU - 12-4-5	71								
600-189564-37	CDU - 13-2-3	76								
600-189564-41	CDU - 14-3-4	70								
600-189564-41 MS	CDU - 14-3-4	64								
600-189564-41 MSD	CDU - 14-3-4	74								
LCS 240-395221/13-A	Lab Control Sample	87								
MB 240-395221/12-A	Method Blank	71								

Surrogate Legend

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: AECOM
Project/Site: Langley Getty & central Dinkard Unit

Job ID: 600-189564-1

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

Lab Sample ID: MB 600-271138/6
Matrix: Solid
Analysis Batch: 271138

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			08/05/19 10:32	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			08/05/19 10:32	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			08/05/19 10:32	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			08/05/19 10:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*61 - 130*		*08/05/19 10:32*	*1*
Dibromofluoromethane	*93*		*68 - 140*		*08/05/19 10:32*	*1*
Toluene-d8 (Surr)	*95*		*50 - 130*		*08/05/19 10:32*	*1*
4-Bromofluorobenzene	*106*		*57 - 140*		*08/05/19 10:32*	*1*

Lab Sample ID: LCS 600-271138/3
Matrix: Solid
Analysis Batch: 271138

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	0.04746		mg/Kg		95	70 - 131
Ethylbenzene	0.0500	0.05092		mg/Kg		102	66 - 130
Toluene	0.0500	0.05159		mg/Kg		103	67 - 130
Xylenes, Total	0.100	0.1018		mg/Kg		102	63 - 130
m-Xylene & p-Xylene	0.0500	0.05120		mg/Kg		102	64 - 130
o-Xylene	0.0500	0.05060		mg/Kg		101	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*79*		*61 - 130*
Dibromofluoromethane	*91*		*68 - 140*
Toluene-d8 (Surr)	*101*		*50 - 130*
4-Bromofluorobenzene	*113*		*57 - 140*

Lab Sample ID: LCSD 600-271138/4
Matrix: Solid
Analysis Batch: 271138

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	0.04808		mg/Kg		96	70 - 131	1	30
Ethylbenzene	0.0500	0.05156		mg/Kg		103	66 - 130	1	30
Toluene	0.0500	0.05147		mg/Kg		103	67 - 130	0	30
Xylenes, Total	0.100	0.1027		mg/Kg		103	63 - 130	1	30
m-Xylene & p-Xylene	0.0500	0.05111		mg/Kg		102	64 - 130	0	30
o-Xylene	0.0500	0.05156		mg/Kg		103	62 - 130	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*80*		*61 - 130*
Dibromofluoromethane	*92*		*68 - 140*
Toluene-d8 (Surr)	*100*		*50 - 130*
4-Bromofluorobenzene	*116*		*57 - 140*

QC Sample Results

Client: AECOM
Project/Site: Langley Getty & central Dinkard Unit

Job ID: 600-189564-1

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

Lab Sample ID: MB 600-271253/6
Matrix: Solid
Analysis Batch: 271253

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			08/06/19 11:49	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			08/06/19 11:49	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			08/06/19 11:49	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			08/06/19 11:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*61 - 130*		*08/06/19 11:49*	*1*
Dibromofluoromethane	*94*		*68 - 140*		*08/06/19 11:49*	*1*
Toluene-d8 (Surr)	*94*		*50 - 130*		*08/06/19 11:49*	*1*
4-Bromofluorobenzene	*102*		*57 - 140*		*08/06/19 11:49*	*1*

Lab Sample ID: LCS 600-271253/3
Matrix: Solid
Analysis Batch: 271253

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	0.04202		mg/Kg		84	70 - 131
Ethylbenzene	0.0500	0.04475		mg/Kg		90	66 - 130
Toluene	0.0500	0.04289		mg/Kg		86	67 - 130
Xylenes, Total	0.100	0.08943		mg/Kg		89	63 - 130
m-Xylene & p-Xylene	0.0500	0.04537		mg/Kg		91	64 - 130
o-Xylene	0.0500	0.04406		mg/Kg		88	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*61 - 130*
Dibromofluoromethane	*94*		*68 - 140*
Toluene-d8 (Surr)	*97*		*50 - 130*
4-Bromofluorobenzene	*109*		*57 - 140*

Lab Sample ID: LCSD 600-271253/4
Matrix: Solid
Analysis Batch: 271253

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	0.04141		mg/Kg		83	70 - 131	1	30
Ethylbenzene	0.0500	0.04453		mg/Kg		89	66 - 130	0	30
Toluene	0.0500	0.04322		mg/Kg		86	67 - 130	1	30
Xylenes, Total	0.100	0.08926		mg/Kg		89	63 - 130	0	30
m-Xylene & p-Xylene	0.0500	0.04525		mg/Kg		90	64 - 130	0	30
o-Xylene	0.0500	0.04401		mg/Kg		88	62 - 130	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 130*
Dibromofluoromethane	*91*		*68 - 140*
Toluene-d8 (Surr)	*94*		*50 - 130*
4-Bromofluorobenzene	*107*		*57 - 140*

QC Sample Results

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

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

Lab Sample ID: MB 240-394979/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 394975 — **Prep Batch: 394979**

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	64.2	U	100	64.2	ug/Kg		08/08/19 08:39	08/08/19 10:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*88*		*20 - 140*	*08/08/19 08:39*	*08/08/19 10:41*	*1*

Lab Sample ID: LCS 240-394979/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 394975 — **Prep Batch: 394979**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics [C6 - C10]	800	755.4		ug/Kg		94	75 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*93*		*20 - 140*

Lab Sample ID: 180-93437-C-2-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 394975 — **Prep Batch: 394979**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics [C6 - C10]	62.9	U	792	576.9		ug/Kg		73	10 - 134

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*87*		*20 - 140*

Lab Sample ID: 180-93437-C-2-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 394975 — **Prep Batch: 394979**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	62.9	U	794	571.2		ug/Kg		72	10 - 134	1	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Trifluorotoluene (Surr)	*89*		*20 - 140*

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

Lab Sample ID: MB 240-395221/12-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 395565 — **Prep Batch: 395221**

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		08/09/19 09:11	08/12/19 14:49	1
C28-C36	34.6	U	50.0	34.6	mg/Kg		08/09/19 09:11	08/12/19 14:49	1

QC Sample Results

Client: AECOM
Project/Site: Langley Getty & central Dinkard Unit

Job ID: 600-189564-1

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

Lab Sample ID: MB 240-395221/12-A
Matrix: Solid
Analysis Batch: 395565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 395221

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	71		26 - 125	08/09/19 09:11	08/12/19 14:49	1

Lab Sample ID: LCS 240-395221/13-A
Matrix: Solid
Analysis Batch: 395565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 395221

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10 - C28]			250	208.7		mg/Kg		83	45 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	87		26 - 125

Lab Sample ID: 600-189564-41 MS
Matrix: Solid
Analysis Batch: 395565

Client Sample ID: CDU - 14-3-4
Prep Type: Total/NA
Prep Batch: 395221

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10 - C28]	35.2	U	241	149.6		mg/Kg		62	27 - 120		

Surrogate	MS %Recovery	MS Qualifier	Limits
o-Terphenyl (Surr)	64		26 - 125

Lab Sample ID: 600-189564-41 MSD
Matrix: Solid
Analysis Batch: 395565

Client Sample ID: CDU - 14-3-4
Prep Type: Total/NA
Prep Batch: 395221

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10 - C28]	35.2	U	241	174.1		mg/Kg		72	27 - 120	15	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl (Surr)	74		26 - 125

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 600-271758/1-A
Matrix: Solid
Analysis Batch: 271834

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.389	J	4.00	0.534	mg/Kg			08/14/19 07:37	1

QC Sample Results

Client: AECOM
Project/Site: Langley Getty & central Dinkard Unit

Job ID: 600-189564-1

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

Lab Sample ID: LCS 600-271758/2-A
Matrix: Solid
Analysis Batch: 271834

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			200	201.9		mg/Kg		101	90 - 110		

Lab Sample ID: 600-189564-1 MS
Matrix: Solid
Analysis Batch: 271834

Client Sample ID: LG - 01-0-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	424	E b	99.8	494.0	E 4	mg/Kg		70	80 - 120		

Lab Sample ID: 600-189564-1 MSD
Matrix: Solid
Analysis Batch: 271834

Client Sample ID: LG - 01-0-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	424	E b	99.8	491.6	E 4	mg/Kg		68	80 - 120	0	20

Lab Sample ID: 600-189564-7 MS
Matrix: Solid
Analysis Batch: 271834

Client Sample ID: LG - 02-1-2
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	22.2	b	99.6	129.2		mg/Kg		107	80 - 120		

Lab Sample ID: 600-189564-7 MSD
Matrix: Solid
Analysis Batch: 271834

Client Sample ID: LG - 02-1-2
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	22.2	b	99.6	129.4		mg/Kg		108	80 - 120	0	20

Lab Sample ID: 600-189564-15 MS
Matrix: Solid
Analysis Batch: 271834

Client Sample ID: LG - 03-4-5
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	25.7	b	100	135.9		mg/Kg		110	80 - 120		

Lab Sample ID: 600-189564-15 MSD
Matrix: Solid
Analysis Batch: 271834

Client Sample ID: LG - 03-4-5
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	25.7	b	100	134.9		mg/Kg		109	80 - 120	1	20

Lab Sample ID: MB 600-271884/1-A
Matrix: Solid
Analysis Batch: 271990

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.860	J	4.00	0.534	mg/Kg			08/14/19 19:33	1

QC Sample Results

Client: AECOM
Project/Site: Langley Getty & central Dinkard Unit

Job ID: 600-189564-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: LCS 600-271884/2-A
Matrix: Solid
Analysis Batch: 271990

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

Lab Sample ID: 600-189564-B-21-B MS
Matrix: Solid
Analysis Batch: 271990

Client Sample ID: 600-189564-B-21-B MS
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	18300	E	99.0	16750	E 4	mg/Kg		-1515	80 - 120

Lab Sample ID: 600-189564-B-21-C MSD
Matrix: Solid
Analysis Batch: 271990

Client Sample ID: 600-189564-B-21-C MSD
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	18300	E	99.0	16860	E 4	mg/Kg		-1408	80 - 120	1	20

Lab Sample ID: MB 600-271884/1-A
Matrix: Solid
Analysis Batch: 272090

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.781	J	4.00	0.534	mg/Kg			08/15/19 15:21	1

Lab Sample ID: MB 600-272123/1-A
Matrix: Solid
Analysis Batch: 272090

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			08/15/19 22:49	1

Lab Sample ID: LCS 600-271884/2-A
Matrix: Solid
Analysis Batch: 272090

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	200	213.2		mg/Kg		107	90 - 110

Lab Sample ID: LCS 600-272123/2-A
Matrix: Solid
Analysis Batch: 272090

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	200	217.2		mg/Kg		109	90 - 110

Lab Sample ID: 600-189564-27 MS
Matrix: Solid
Analysis Batch: 272090

Client Sample ID: CDU - 11-1-2
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	18.8	b	100	200.2	N1	mg/Kg		181	80 - 120

QC Sample Results

Client: AECOM
Project/Site: Langley Getty & central Dinkard Unit

Job ID: 600-189564-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 600-189564-27 MSD
Matrix: Solid
Analysis Batch: 272090

Client Sample ID: CDU - 11-1-2
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	18.8	b	100	164.3	N1	mg/Kg		145	80 - 120	20	20

Lab Sample ID: 600-189564-35 MS
Matrix: Solid
Analysis Batch: 272090

Client Sample ID: CDU - 13-0-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.17	b	99.6	143.4	N1	mg/Kg		140	80 - 120

Lab Sample ID: 600-189564-35 MSD
Matrix: Solid
Analysis Batch: 272090

Client Sample ID: CDU - 13-0-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.17	b	99.6	131.1	N1	mg/Kg		127	80 - 120	9	20

Lab Sample ID: 600-189564-41 MS
Matrix: Solid
Analysis Batch: 272090

Client Sample ID: CDU - 14-3-4
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	36.1		100	154.1		mg/Kg		118	80 - 120

Lab Sample ID: 600-189564-41 MSD
Matrix: Solid
Analysis Batch: 272090

Client Sample ID: CDU - 14-3-4
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	36.1		100	186.6	N1	mg/Kg		150	80 - 120	19	20

Unadjusted Detection Limits

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

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
Gasoline Range Organics [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 Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

GC/MS VOA

Analysis Batch: 271138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-16	LG - 04-0-1	Total/NA	Solid	8260B	271171
600-189564-21	LG - 05-0-1	Total/NA	Solid	8260B	271171
600-189564-41	CDU - 14-3-4	Total/NA	Solid	8260B	271171
MB 600-271138/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-271138/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-271138/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 271171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-16	LG - 04-0-1	Total/NA	Solid	5035	
600-189564-21	LG - 05-0-1	Total/NA	Solid	5035	
600-189564-25	LG - 05-4-5	Total/NA	Solid	5035	
600-189564-30	CDU - 11-4-5	Total/NA	Solid	5035	
600-189564-34	CDU - 12-4-5	Total/NA	Solid	5035	
600-189564-37	CDU - 13-2-3	Total/NA	Solid	5035	
600-189564-41	CDU - 14-3-4	Total/NA	Solid	5035	

Analysis Batch: 271253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-25	LG - 05-4-5	Total/NA	Solid	8260B	271171
600-189564-30	CDU - 11-4-5	Total/NA	Solid	8260B	271171
600-189564-34	CDU - 12-4-5	Total/NA	Solid	8260B	271171
600-189564-37	CDU - 13-2-3	Total/NA	Solid	8260B	271171
MB 600-271253/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-271253/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-271253/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

GC VOA

Analysis Batch: 394975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-16	LG - 04-0-1	Total/NA	Solid	8015B	394979
600-189564-21	LG - 05-0-1	Total/NA	Solid	8015B	394979
600-189564-25	LG - 05-4-5	Total/NA	Solid	8015B	394979
600-189564-30	CDU - 11-4-5	Total/NA	Solid	8015B	394979
600-189564-34	CDU - 12-4-5	Total/NA	Solid	8015B	394979
600-189564-37	CDU - 13-2-3	Total/NA	Solid	8015B	394979
600-189564-41	CDU - 14-3-4	Total/NA	Solid	8015B	394979
MB 240-394979/1-A	Method Blank	Total/NA	Solid	8015B	394979
LCS 240-394979/2-A	Lab Control Sample	Total/NA	Solid	8015B	394979
180-93437-C-2-F MS	Matrix Spike	Total/NA	Solid	8015B	394979
180-93437-C-2-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	394979

Prep Batch: 394979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-16	LG - 04-0-1	Total/NA	Solid	5030A	
600-189564-21	LG - 05-0-1	Total/NA	Solid	5030A	
600-189564-25	LG - 05-4-5	Total/NA	Solid	5030A	
600-189564-30	CDU - 11-4-5	Total/NA	Solid	5030A	
600-189564-34	CDU - 12-4-5	Total/NA	Solid	5030A	
600-189564-37	CDU - 13-2-3	Total/NA	Solid	5030A	

QC Association Summary

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

GC VOA (Continued)

Prep Batch: 394979 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-41	CDU - 14-3-4	Total/NA	Solid	5030A	
MB 240-394979/1-A	Method Blank	Total/NA	Solid	5030A	
LCS 240-394979/2-A	Lab Control Sample	Total/NA	Solid	5030A	
180-93437-C-2-F MS	Matrix Spike	Total/NA	Solid	5030A	
180-93437-C-2-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5030A	

GC Semi VOA

Prep Batch: 395221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-16	LG - 04-0-1	Total/NA	Solid	3546	
600-189564-21	LG - 05-0-1	Total/NA	Solid	3546	
600-189564-25	LG - 05-4-5	Total/NA	Solid	3546	
600-189564-30	CDU - 11-4-5	Total/NA	Solid	3546	
600-189564-34	CDU - 12-4-5	Total/NA	Solid	3546	
600-189564-37	CDU - 13-2-3	Total/NA	Solid	3546	
600-189564-41	CDU - 14-3-4	Total/NA	Solid	3546	
MB 240-395221/12-A	Method Blank	Total/NA	Solid	3546	
LCS 240-395221/13-A	Lab Control Sample	Total/NA	Solid	3546	
600-189564-41 MS	CDU - 14-3-4	Total/NA	Solid	3546	
600-189564-41 MSD	CDU - 14-3-4	Total/NA	Solid	3546	

Analysis Batch: 395565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-16	LG - 04-0-1	Total/NA	Solid	8015B	395221
600-189564-21	LG - 05-0-1	Total/NA	Solid	8015B	395221
600-189564-25	LG - 05-4-5	Total/NA	Solid	8015B	395221
600-189564-30	CDU - 11-4-5	Total/NA	Solid	8015B	395221
600-189564-34	CDU - 12-4-5	Total/NA	Solid	8015B	395221
600-189564-37	CDU - 13-2-3	Total/NA	Solid	8015B	395221
600-189564-41	CDU - 14-3-4	Total/NA	Solid	8015B	395221
MB 240-395221/12-A	Method Blank	Total/NA	Solid	8015B	395221
LCS 240-395221/13-A	Lab Control Sample	Total/NA	Solid	8015B	395221
600-189564-41 MS	CDU - 14-3-4	Total/NA	Solid	8015B	395221
600-189564-41 MSD	CDU - 14-3-4	Total/NA	Solid	8015B	395221

HPLC/IC

Leach Batch: 271758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-1	LG - 01-0-1	Soluble	Solid	DI Leach	
600-189564-2	LG - 01-1-2	Soluble	Solid	DI Leach	
600-189564-3	LG - 01-2-3	Soluble	Solid	DI Leach	
600-189564-4	LG - 01-3-4	Soluble	Solid	DI Leach	
600-189564-5	LG - 01-4-5	Soluble	Solid	DI Leach	
600-189564-6	LG - 02-0-1	Soluble	Solid	DI Leach	
600-189564-7	LG - 02-1-2	Soluble	Solid	DI Leach	
600-189564-8	LG - 02-2-3	Soluble	Solid	DI Leach	
600-189564-9	LG - 02-3-4	Soluble	Solid	DI Leach	
600-189564-10	LG - 02-4-5	Soluble	Solid	DI Leach	
600-189564-11	LG - 03-0-1	Soluble	Solid	DI Leach	
600-189564-12	LG - 03-1-2	Soluble	Solid	DI Leach	

QC Association Summary

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

HPLC/IC (Continued)

Leach Batch: 271758 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-13	LG - 03-2-3	Soluble	Solid	DI Leach	
600-189564-14	LG - 03-3-4	Soluble	Solid	DI Leach	
600-189564-15	LG - 03-4-5	Soluble	Solid	DI Leach	
600-189564-16	LG - 04-0-1	Soluble	Solid	DI Leach	
600-189564-17	LG - 04-1-2	Soluble	Solid	DI Leach	
600-189564-18	LG - 04-2-3	Soluble	Solid	DI Leach	
600-189564-19	LG - 04-3-4	Soluble	Solid	DI Leach	
600-189564-20	LG - 04-4-5	Soluble	Solid	DI Leach	
MB 600-271758/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 600-271758/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
600-189564-1 MS	LG - 01-0-1	Soluble	Solid	DI Leach	
600-189564-1 MSD	LG - 01-0-1	Soluble	Solid	DI Leach	
600-189564-7 MS	LG - 02-1-2	Soluble	Solid	DI Leach	
600-189564-7 MSD	LG - 02-1-2	Soluble	Solid	DI Leach	
600-189564-15 MS	LG - 03-4-5	Soluble	Solid	DI Leach	
600-189564-15 MSD	LG - 03-4-5	Soluble	Solid	DI Leach	

Analysis Batch: 271834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-1	LG - 01-0-1	Soluble	Solid	9056A	271758
600-189564-2	LG - 01-1-2	Soluble	Solid	9056A	271758
600-189564-3	LG - 01-2-3	Soluble	Solid	9056A	271758
600-189564-4	LG - 01-3-4	Soluble	Solid	9056A	271758
600-189564-5	LG - 01-4-5	Soluble	Solid	9056A	271758
600-189564-6	LG - 02-0-1	Soluble	Solid	9056A	271758
600-189564-7	LG - 02-1-2	Soluble	Solid	9056A	271758
600-189564-8	LG - 02-2-3	Soluble	Solid	9056A	271758
600-189564-9	LG - 02-3-4	Soluble	Solid	9056A	271758
600-189564-10	LG - 02-4-5	Soluble	Solid	9056A	271758
600-189564-11	LG - 03-0-1	Soluble	Solid	9056A	271758
600-189564-12	LG - 03-1-2	Soluble	Solid	9056A	271758
600-189564-13	LG - 03-2-3	Soluble	Solid	9056A	271758
600-189564-14	LG - 03-3-4	Soluble	Solid	9056A	271758
600-189564-15	LG - 03-4-5	Soluble	Solid	9056A	271758
600-189564-16	LG - 04-0-1	Soluble	Solid	9056A	271758
600-189564-17	LG - 04-1-2	Soluble	Solid	9056A	271758
600-189564-18	LG - 04-2-3	Soluble	Solid	9056A	271758
600-189564-19	LG - 04-3-4	Soluble	Solid	9056A	271758
600-189564-20	LG - 04-4-5	Soluble	Solid	9056A	271758
MB 600-271758/1-A	Method Blank	Soluble	Solid	9056A	271758
LCS 600-271758/2-A	Lab Control Sample	Soluble	Solid	9056A	271758
600-189564-1 MS	LG - 01-0-1	Soluble	Solid	9056A	271758
600-189564-1 MSD	LG - 01-0-1	Soluble	Solid	9056A	271758
600-189564-7 MS	LG - 02-1-2	Soluble	Solid	9056A	271758
600-189564-7 MSD	LG - 02-1-2	Soluble	Solid	9056A	271758
600-189564-15 MS	LG - 03-4-5	Soluble	Solid	9056A	271758
600-189564-15 MSD	LG - 03-4-5	Soluble	Solid	9056A	271758

Leach Batch: 271884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-21	LG - 05-0-1	Soluble	Solid	DI Leach	

QC Association Summary

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

HPLC/IC (Continued)

Leach Batch: 271884 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-22	LG - 05-1-2	Soluble	Solid	DI Leach	
600-189564-23	LG -05-2-3	Soluble	Solid	DI Leach	
600-189564-24	LG - 05-3-4	Soluble	Solid	DI Leach	
600-189564-25	LG - 05-4-5	Soluble	Solid	DI Leach	
600-189564-26	CDU - 11-0-1	Soluble	Solid	DI Leach	
600-189564-27	CDU - 11-1-2	Soluble	Solid	DI Leach	
600-189564-28	CDU - 11-2-3	Soluble	Solid	DI Leach	
600-189564-29	CDU - 11-3-4	Soluble	Solid	DI Leach	
600-189564-30	CDU - 11-4-5	Soluble	Solid	DI Leach	
600-189564-31	CDU - 12-0-1	Soluble	Solid	DI Leach	
600-189564-32	CDU - 12-1-2	Soluble	Solid	DI Leach	
600-189564-33	CDU - 12-3-4	Soluble	Solid	DI Leach	
600-189564-34	CDU - 12-4-5	Soluble	Solid	DI Leach	
600-189564-35	CDU - 13-0-1	Soluble	Solid	DI Leach	
600-189564-36	CDU - 13-1-2	Soluble	Solid	DI Leach	
600-189564-37	CDU - 13-2-3	Soluble	Solid	DI Leach	
600-189564-38	CDU - 14-0-1	Soluble	Solid	DI Leach	
600-189564-39	CDU - 14-1-2	Soluble	Solid	DI Leach	
600-189564-40	CDU - 14-2-3	Soluble	Solid	DI Leach	
MB 600-271884/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 600-271884/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
600-189564-27 MS	CDU - 11-1-2	Soluble	Solid	DI Leach	
600-189564-27 MSD	CDU - 11-1-2	Soluble	Solid	DI Leach	
600-189564-35 MS	CDU - 13-0-1	Soluble	Solid	DI Leach	
600-189564-35 MSD	CDU - 13-0-1	Soluble	Solid	DI Leach	
600-189564-B-21-B MS	600-189564-B-21-B MS	Soluble	Solid	DI Leach	
600-189564-B-21-C MSD	600-189564-B-21-C MSD	Soluble	Solid	DI Leach	

Analysis Batch: 271990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-22	LG - 05-1-2	Soluble	Solid	9056A	271884
600-189564-23	LG -05-2-3	Soluble	Solid	9056A	271884
600-189564-24	LG - 05-3-4	Soluble	Solid	9056A	271884
600-189564-25	LG - 05-4-5	Soluble	Solid	9056A	271884
600-189564-26	CDU - 11-0-1	Soluble	Solid	9056A	271884
MB 600-271884/1-A	Method Blank	Soluble	Solid	9056A	271884
LCS 600-271884/2-A	Lab Control Sample	Soluble	Solid	9056A	271884
600-189564-B-21-B MS	600-189564-B-21-B MS	Soluble	Solid	9056A	271884
600-189564-B-21-C MSD	600-189564-B-21-C MSD	Soluble	Solid	9056A	271884

Analysis Batch: 272090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-21	LG - 05-0-1	Soluble	Solid	9056A	271884
600-189564-27	CDU - 11-1-2	Soluble	Solid	9056A	271884
600-189564-28	CDU - 11-2-3	Soluble	Solid	9056A	271884
600-189564-29	CDU - 11-3-4	Soluble	Solid	9056A	271884
600-189564-30	CDU - 11-4-5	Soluble	Solid	9056A	271884
600-189564-31	CDU - 12-0-1	Soluble	Solid	9056A	271884
600-189564-32	CDU - 12-1-2	Soluble	Solid	9056A	271884
600-189564-33	CDU - 12-3-4	Soluble	Solid	9056A	271884
600-189564-34	CDU - 12-4-5	Soluble	Solid	9056A	271884

QC Association Summary

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

HPLC/IC (Continued)

Analysis Batch: 272090 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-35	CDU - 13-0-1	Soluble	Solid	9056A	271884
600-189564-36	CDU - 13-1-2	Soluble	Solid	9056A	271884
600-189564-37	CDU - 13-2-3	Soluble	Solid	9056A	271884
600-189564-38	CDU - 14-0-1	Soluble	Solid	9056A	271884
600-189564-39	CDU - 14-1-2	Soluble	Solid	9056A	271884
600-189564-40	CDU - 14-2-3	Soluble	Solid	9056A	271884
600-189564-41	CDU - 14-3-4	Soluble	Solid	9056A	272123
MB 600-271884/1-A	Method Blank	Soluble	Solid	9056A	271884
MB 600-272123/1-A	Method Blank	Soluble	Solid	9056A	272123
LCS 600-271884/2-A	Lab Control Sample	Soluble	Solid	9056A	271884
LCS 600-272123/2-A	Lab Control Sample	Soluble	Solid	9056A	272123
600-189564-27 MS	CDU - 11-1-2	Soluble	Solid	9056A	271884
600-189564-27 MSD	CDU - 11-1-2	Soluble	Solid	9056A	271884
600-189564-35 MS	CDU - 13-0-1	Soluble	Solid	9056A	271884
600-189564-35 MSD	CDU - 13-0-1	Soluble	Solid	9056A	271884
600-189564-41 MS	CDU - 14-3-4	Soluble	Solid	9056A	272123
600-189564-41 MSD	CDU - 14-3-4	Soluble	Solid	9056A	272123

Leach Batch: 272123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-41	CDU - 14-3-4	Soluble	Solid	DI Leach	
MB 600-272123/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 600-272123/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
600-189564-41 MS	CDU - 14-3-4	Soluble	Solid	DI Leach	
600-189564-41 MSD	CDU - 14-3-4	Soluble	Solid	DI Leach	

Lab Chronicle

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 01-0-1 Lab Sample ID: 600-189564-1
Date Collected: 08/01/19 10:00 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		5	271834	08/15/19 08:18	SKR	TAL HOU

Client Sample ID: LG - 01-1-2 Lab Sample ID: 600-189564-2
Date Collected: 08/01/19 10:05 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 09:17	SKR	TAL HOU

Client Sample ID: LG - 01-2-3 Lab Sample ID: 600-189564-3
Date Collected: 08/01/19 10:10 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		5	271834	08/14/19 09:37	SKR	TAL HOU

Client Sample ID: LG - 01-3-4 Lab Sample ID: 600-189564-4
Date Collected: 08/01/19 10:15 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		5	271834	08/14/19 09:58	SKR	TAL HOU

Client Sample ID: LG - 01-4-5 Lab Sample ID: 600-189564-5
Date Collected: 08/01/19 10:20 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 10:58	SKR	TAL HOU

Client Sample ID: LG - 02-0-1 Lab Sample ID: 600-189564-6
Date Collected: 08/01/19 10:25 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 11:18	SKR	TAL HOU

Lab Chronicle

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 02-1-2 Lab Sample ID: 600-189564-7
Date Collected: 08/01/19 10:30 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 11:38	SKR	TAL HOU

Client Sample ID: LG - 02-2-3 Lab Sample ID: 600-189564-8
Date Collected: 08/01/19 10:35 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 12:38	SKR	TAL HOU

Client Sample ID: LG - 02-3-4 Lab Sample ID: 600-189564-9
Date Collected: 08/01/19 10:40 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 12:58	SKR	TAL HOU

Client Sample ID: LG - 02-4-5 Lab Sample ID: 600-189564-10
Date Collected: 08/01/19 10:45 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 13:18	SKR	TAL HOU

Client Sample ID: LG - 03-0-1 Lab Sample ID: 600-189564-11
Date Collected: 08/01/19 10:50 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 13:38	SKR	TAL HOU

Client Sample ID: LG - 03-1-2 Lab Sample ID: 600-189564-12
Date Collected: 08/01/19 10:55 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 13:58	SKR	TAL HOU

Lab Chronicle

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 03-2-3 Lab Sample ID: 600-189564-13
Date Collected: 08/01/19 11:00 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 14:58	SKR	TAL HOU

Client Sample ID: LG - 03-3-4 Lab Sample ID: 600-189564-14
Date Collected: 08/01/19 11:05 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 15:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 15:18	SKR	TAL HOU

Client Sample ID: LG - 03-4-5 Lab Sample ID: 600-189564-15
Date Collected: 08/01/19 11:10 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 17:03	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 15:38	SKR	TAL HOU

Client Sample ID: LG - 04-0-1 Lab Sample ID: 600-189564-16
Date Collected: 08/01/19 11:15 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/02/19 15:40	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271138	08/05/19 18:36	WS1	TAL HOU
Total/NA	Prep	5030A			394979	08/08/19 08:39	MBB	TAL CAN
Total/NA	Analysis	8015B		1	394975	08/08/19 15:47	MBB	TAL CAN
Total/NA	Prep	3546			395221	08/09/19 09:11	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	395565	08/12/19 16:39	LKG	TAL CAN
Soluble	Leach	DI Leach			271758	08/12/19 17:03	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 16:38	SKR	TAL HOU

Client Sample ID: LG - 04-1-2 Lab Sample ID: 600-189564-17
Date Collected: 08/01/19 11:20 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 17:03	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 16:58	SKR	TAL HOU

Lab Chronicle

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 04-2-3 Lab Sample ID: 600-189564-18
Date Collected: 08/01/19 11:25 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 17:03	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 17:18	SKR	TAL HOU

Client Sample ID: LG - 04-3-4 Lab Sample ID: 600-189564-19
Date Collected: 08/01/19 11:30 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 17:03	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 17:38	SKR	TAL HOU

Client Sample ID: LG - 04-4-5 Lab Sample ID: 600-189564-20
Date Collected: 08/01/19 11:35 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271758	08/12/19 17:03	SKR	TAL HOU
Soluble	Analysis	9056A		1	271834	08/14/19 17:58	SKR	TAL HOU

Client Sample ID: LG - 05-0-1 Lab Sample ID: 600-189564-21
Date Collected: 08/01/19 11:40 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/02/19 15:40	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271138	08/05/19 19:01	WS1	TAL HOU
Total/NA	Prep	5030A			394979	08/08/19 08:39	MBB	TAL CAN
Total/NA	Analysis	8015B		1	394975	08/08/19 16:31	MBB	TAL CAN
Total/NA	Prep	3546			395221	08/09/19 09:11	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	395565	08/12/19 17:07	LKG	TAL CAN
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		100	272090	08/15/19 15:57	SKR	TAL HOU

Client Sample ID: LG - 05-1-2 Lab Sample ID: 600-189564-22
Date Collected: 08/01/19 11:45 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		50	271990	08/14/19 21:03	SKR	TAL HOU

Lab Chronicle

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG -05-2-3 Lab Sample ID: 600-189564-23

Date Collected: 08/01/19 11:50 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		20	271990	08/14/19 21:21	SKR	TAL HOU

Client Sample ID: LG - 05-3-4 Lab Sample ID: 600-189564-24

Date Collected: 08/01/19 11:55 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		1	271990	08/14/19 21:39	SKR	TAL HOU

Client Sample ID: LG - 05-4-5 Lab Sample ID: 600-189564-25

Date Collected: 08/01/19 12:00 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/02/19 15:40	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271253	08/06/19 18:23	WS1	TAL HOU
Total/NA	Prep	5030A			394979	08/08/19 08:39	MBB	TAL CAN
Total/NA	Analysis	8015B		1	394975	08/08/19 17:15	MBB	TAL CAN
Total/NA	Prep	3546			395221	08/09/19 09:11	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	395565	08/12/19 17:35	LKG	TAL CAN
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		1	271990	08/14/19 21:57	SKR	TAL HOU

Client Sample ID: CDU - 11-0-1 Lab Sample ID: 600-189564-26

Date Collected: 08/01/19 13:20 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		1	271990	08/14/19 22:14	SKR	TAL HOU

Client Sample ID: CDU - 11-1-2 Lab Sample ID: 600-189564-27

Date Collected: 08/01/19 13:25 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 16:15	SKR	TAL HOU

Lab Chronicle

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: CDU - 11-2-3 Lab Sample ID: 600-189564-28
Date Collected: 08/01/19 13:30 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 17:08	SKR	TAL HOU

Client Sample ID: CDU - 11-3-4 Lab Sample ID: 600-189564-29
Date Collected: 08/01/19 13:35 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 17:26	SKR	TAL HOU

Client Sample ID: CDU - 11-4-5 Lab Sample ID: 600-189564-30
Date Collected: 08/01/19 13:40 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/02/19 15:40	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271253	08/06/19 18:49	WS1	TAL HOU
Total/NA	Prep	5030A			394979	08/08/19 08:39	MBB	TAL CAN
Total/NA	Analysis	8015B		1	394975	08/08/19 17:58	MBB	TAL CAN
Total/NA	Prep	3546			395221	08/09/19 09:11	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	395565	08/12/19 18:02	LKG	TAL CAN
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 17:44	SKR	TAL HOU

Client Sample ID: CDU - 12-0-1 Lab Sample ID: 600-189564-31
Date Collected: 08/01/19 13:45 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 18:02	SKR	TAL HOU

Client Sample ID: CDU - 12-1-2 Lab Sample ID: 600-189564-32
Date Collected: 08/01/19 13:50 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 18:56	SKR	TAL HOU

Lab Chronicle

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: CDU - 12-3-4 Lab Sample ID: 600-189564-33
Date Collected: 08/01/19 13:55 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 19:14	SKR	TAL HOU

Client Sample ID: CDU - 12-4-5 Lab Sample ID: 600-189564-34
Date Collected: 08/01/19 14:05 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/02/19 15:40	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271253	08/06/19 19:15	WS1	TAL HOU
Total/NA	Prep	5030A			394979	08/08/19 08:39	MBB	TAL CAN
Total/NA	Analysis	8015B		1	394975	08/08/19 18:42	MBB	TAL CAN
Total/NA	Prep	3546			395221	08/09/19 09:11	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	395565	08/12/19 18:58	LKG	TAL CAN
Soluble	Leach	DI Leach			271884	08/13/19 17:26	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 19:32	SKR	TAL HOU

Client Sample ID: CDU - 13-0-1 Lab Sample ID: 600-189564-35
Date Collected: 08/01/19 14:10 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:32	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 19:50	SKR	TAL HOU

Client Sample ID: CDU - 13-1-2 Lab Sample ID: 600-189564-36
Date Collected: 08/01/19 14:15 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:32	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 20:43	SKR	TAL HOU

Client Sample ID: CDU - 13-2-3 Lab Sample ID: 600-189564-37
Date Collected: 08/01/19 14:20 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/02/19 15:40	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271253	08/06/19 19:41	WS1	TAL HOU
Total/NA	Prep	5030A			394979	08/08/19 08:39	MBB	TAL CAN
Total/NA	Analysis	8015B		1	394975	08/08/19 19:25	MBB	TAL CAN
Total/NA	Prep	3546			395221	08/09/19 09:11	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	395565	08/12/19 19:53	LKG	TAL CAN
Soluble	Leach	DI Leach			271884	08/13/19 17:32	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 21:01	SKR	TAL HOU

Eurofins TestAmerica, Houston

Lab Chronicle

Client: AECOM Job ID: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: CDU - 14-0-1 Lab Sample ID: 600-189564-38

Date Collected: 08/01/19 14:30 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:32	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 21:19	SKR	TAL HOU

Client Sample ID: CDU - 14-1-2 Lab Sample ID: 600-189564-39

Date Collected: 08/01/19 14:35 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:36	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 21:37	SKR	TAL HOU

Client Sample ID: CDU - 14-2-3 Lab Sample ID: 600-189564-40

Date Collected: 08/01/19 14:40 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			271884	08/13/19 17:36	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 22:31	SKR	TAL HOU

Client Sample ID: CDU - 14-3-4 Lab Sample ID: 600-189564-41

Date Collected: 08/01/19 14:45 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/02/19 15:40	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271138	08/05/19 14:16	WS1	TAL HOU
Total/NA	Prep	5030A			394979	08/08/19 08:39	MBB	TAL CAN
Total/NA	Analysis	8015B		1	394975	08/08/19 21:30	MBB	TAL CAN
Total/NA	Prep	3546			395221	08/09/19 09:11	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	395565	08/12/19 20:21	LKG	TAL CAN
Soluble	Leach	DI Leach			272123	08/15/19 17:51	SKR	TAL HOU
Soluble	Analysis	9056A		1	272090	08/15/19 23:24	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: 600-189564-1
Project/Site: Langley Getty & central Dinkard Unit

Laboratory: Eurofins TestAmerica, Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704223-18-23	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	Identification Number	Expiration Date
California	State	2927	02-23-20
California	State Program	2927	02-23-20
Connecticut	State	PH-0590	12-31-19
Connecticut	State Program	PH-0590	12-31-19
Florida	NELAP	E87225	06-30-20
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20
Georgia	State Program	N/A	02-23-20
Illinois	NELAP	200004	07-31-20
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-20
Iowa	State Program	421	06-01-21
Kansas	NELAP	E-10336	04-30-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (UST)	State Program	58	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Kentucky (WW)	State Program	98016	12-31-19
Minnesota	NELAP	039-999-348	12-31-19 *
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
New Jersey	NELAP	OH001	06-30-20
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Ohio VAP	State Program	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20
Oregon	NELAP	4062	02-23-20
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-19-11	08-31-20
USDA	Federal	P330-16-00404	12-28-19
USDA	US Federal Programs	P330-16-00404	12-28-19
Virginia	NELAP	460175	09-14-20
Washington	State	C971	01-12-20
Washington	State Program	C971	01-12-20 *
West Virginia DEP	State	210	12-31-19
West Virginia DEP	State Program	210	12-31-19

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

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

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information	Sampler: James Lovely	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-70018-19143.1
Client Contact: Mr. Wallace Gilmore	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 1
Company: AECOM				Job #:
Address: 19219 Katy Freeway Suite 100	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77094				
Phone: 713-520-990(Tel) 713-520-680(Fax)	PO #: Purchase Order Requested			
Email: wallace.gilmore@aecom.com	WO #:			
Project Name: Chevron	Project #: 60008660			
Site: Langley Getty + Central Dorkard Unit	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9056_ORGFM_28D - Chloride	8260B - BTEX Only	8015B_GRO -	8015B_DRO - (MOD) Diesel Range Organics [C10-C28]	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		N		
LG-01-0-1	8/1/19	1000	G	Solid			X	X	X	X		Hold all but chloride
LG-01-1-2		1005		Solid			X					
LG-01-2-3		1010		Solid			X					
LG-01-3-4		1015		Solid			X					
LG-01-4-5		1020		Solid			X	X	X	X		Hold all but chloride
LG-02-0-1		1025		Solid			X	X	X	X		Hold all but chloride
LG-02-1-2		1030		Solid			X					
LG-02-2-3		1035		Solid			X					
LG-02-3-4		1040		Solid			X					
LG-02-4-5		1045		Solid			X	X	X	X		Hold all but chloride
LG-03-0-1		1050		Solid								Hold all but chloride

600-189564 Chain of Custody

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Seth Frederick	8/1/19 @1800-1700	AECOM	[signature]	8/2/19 952	TAH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-70018-19143.1
Client Contact: Mr. Wallace Gilmore	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 2
Company: AECOM				Job #:

Address: 19219 Katy Freeway Suite 100	Due Date Requested:
City: Houston	TAT Requested (days):
State, Zip: TX, 77094	
Phone: 713-520-990(Tel) 713-520-680(Fax)	PO #: Purchase Order Requested
Email: wallace.gilmore@aecom.com	WO #:
Project Name: Chevron	Project #: 60008660
Site:	SSOW#:

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9056_ORGFM_28D - Chloride	8260B - BTEX Only	8015B_GRO -	8015B_DRO - (MOD) Diesel Range Organics [C10-C28]	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		N		
LG-03-1-2	8/1/19	1055	G	Solid			X	X				
LG-03-2-3		1100		Solid			X					
LG-03-3-4		1105		Solid			X					
LG-03-4-5		1110		Solid			X	X	X	X		Hold all but chloride
LG-04-0-1		1115		Solid			X	X	X	X		
LG-04-1-2		1120		Solid			X					
LG-04-2-3		1125		Solid			X					
LG-04-3-4		1130		Solid			X					
LG-04-4-5		1135		Solid			X	X	X	X		Hold all but chloride
LG-05-0-1		1140		Solid			X	X	X	X		
LG-05-1-2		1145		Solid			X					

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by: Seth Frederick	Date/Time: 8/1/19 @ 1700	Company: AECOM	Received by: YGRS	Date/Time: 8/2/19 0952	Company: TAH
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

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

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-70018-19143.1
Client Contact: Mr. Wallace Gilmore	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 3
Company: AECOM				Job #:
Address: 19219 Katy Freeway Suite 100	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77094				
Phone: 713-520-990(Tel) 713-520-680(Fax)	PO #: Purchase Order Requested			
Email: wallace.gilmore@aecom.com	WO #:			
Project Name: Chevron	Project #: 60008660			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9056_ORGFM_28D - Chloride	8260B - BTEX Only	8015B_GRO -	8015B_DRO - (MOD) Diesel Range Organics [C10-C28]	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		N		
LG-05-2-3	8/1/19	1150	G	Solid			X					
LG-05-3-4		1155		Solid			X					
LG-05-4-5		1200		Solid			X	X	X	X		
CDU-11-0-1		1320		Solid			X					
CDU-11-1-2		1325		Solid			X					
CDU-11-2-3		1330		Solid			X					
CDU-11-3-4		1335		Solid			X					
CDU-11-4-5		1340		Solid			X	X	X	X		
CDU-12-0-1		1345		Solid			X					
CDU-12-1-2		1350		Solid			X					
CDU-12-3-4		1355		Solid			X					

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Seth Frederick	8/1/19 @ 1700	AECOM	YERS	8/2/19 952	TA H
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 01/16/2019

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

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-70018-19143.1
Client Contact: Mr. Wallace Gilmore	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page
Company: AECOM				Job #:
Address: 19219 Katy Freeway Suite 100	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77094				
Phone: 713-520-990(Tel) 713-520-680(Fax)	PO #: Purchase Order Requested			
Email: wallace.gilmore@aecom.com	WO #:			
Project Name: Chevron	Project #: 60008660			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9056_ORGFM_28D - Chloride	8260B - BTEX Only	8015B_GRO -	8015B_DRO - (MOD) Diesel Range Organics [C10-C28]	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		N		
CDU-12-4-5	8/1/19	1405	G	Solid			X	X	X	X		
CDU-13-0-1		1410		Solid			X					
CDU-13-1-2		1415		Solid			X					
CDU-13-2-3		1420		Solid			X	X	X	X		
CDU-14-0-1		1430		Solid			X					
CDU-14-1-2		1435		Solid			X					
CDU-14-2-3		1440		Solid			X					
CDU-14-3-4		1445		Solid			X	X	X	X		
				Solid								
				Solid								
				Solid								

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Seth Frederick	8/1/19 @ 1700	AECOM	YCRS	8/2/19 952	TAH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 01/16/2019

TestAmerica Houston

Loc: 600
189564

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

'19 AUG 2 9:52

Sample Receipt Checklist

Date/Time Received: _____

JOB NUMBER: _____ CLIENT: Accom

UNPACKED BY: YP CARRIER/DRIVER: Fedex

Custody Seal Present: ☒ YES ☐ NO Number of Coolers Received: 3

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
WB	Y / N	Y / N	2.1	678	+0.1	2.2
WB	Y / N	Y / N	2.8			2.9
WB	Y / N	Y / N	2.3			2.4
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

YP 8/2/19

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:

YP 8/2/19

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

1 of 3
TRK# 0201 7888 5084 3590
MASTER
AB LKSA
FRI – 02 AUG 10:30A
PRIORITY OVERNIGHT
77040
TX–US IAH

600-189564 Waybill

2 of 3
MPS# 0263 7888 5084 3605
Mstr# 7888 5084 3590
0201
AB LKSA
FRI – 02 AUG 10:30A
PRIORITY OVERNIGHT
77040
TX–US IAH

3 of 3
MPS# 0263 7888 5084 3616
Mstr# 7888 5084 3590
0201
AB LKSA
FRI – 02 AUG 10:30A
PRIORITY OVERNIGHT
77040
TX–US IAH

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-41148.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com	State of Origin: Texas	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-189564-1
Address: 4101 Shuffel Street NW, ,	Due Date Requested: 8/9/2019			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Langley Getty & central Dinkard Unit	Project #: 60008660			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

GC, C45

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO/3546 (MOD) Diesel Range Organics [C10-C28]	8015B_GRO/5035A_FM (MOD) Copy Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
LG - 04-0-1 (600-189564-16)	8/1/19	11:15 Central		Solid			X	X	4	
LG - 05-0-1 (600-189564-21)	8/1/19	11:40 Central		Solid			X	X	4	
LG - 05-4-5 (600-189564-25)	8/1/19	12:00 Central		Solid			X	X	4	
CDU - 11-4-5 (600-189564-30)	8/1/19	13:40 Central		Solid			X	X	4	
CDU - 12-4-5 (600-189564-34)	8/1/19	14:05 Central		Solid			X	X	3	
CDU - 13-2-3 (600-189564-37)	8/1/19	14:20 Central		Solid			X	X	4	
CDU - 14-3-4 (600-189564-41)	8/1/19	14:45 Central		Solid			X	X	4	

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

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

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

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	8/5/19 1800			8/6/19 930	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client TA Houston Site Name _____ Cooler unpacked by:
Cooler Received on 8/6/19 Opened on 8/6/19
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

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

TestAmerica Cooler # 16 Foam Box Client Cooler Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp. 1.0 °C Corrected Cooler Temp. 1.1 °C
IR GUN #36 (CF +0.6°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
-Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC984738
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

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

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

Concerning _____

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

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

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

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-41314.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com	State of Origin: Texas	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-189564-2
Address: 4101 Shuffel Street NW, .	Due Date Requested: 8/9/2019			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Langley Getty & central Dinkard Unit	Project #: 60008660			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

C94

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO/3546 (MOD) Diesel Range Organics [C10-C28]	8015B_GRO/5035A_FM (MOD) Copy Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
LG - 01-0-1 (600-189564-1)	8/1/19	10:00 Central		Solid			X	X	1	
LG - 01-4-5 (600-189564-5)	8/1/19	10:20 Central		Solid			X	X	1	
LG - 02-0-1 (600-189564-6)	8/1/19	10:25 Central		Solid			X	X	1	
LG - 02-4-5 (600-189564-10)	8/1/19	10:45 Central		Solid			X	X	1	
LG - 03-0-1 (600-189564-11)	8/1/19	10:50 Central		Solid			X	X	1	
LG - 03-4-5 (600-189564-15)	8/1/19	11:10 Central		Solid			X	X	1	
LG - 04-4-5 (600-189564-20)	8/1/19	11:35 Central		Solid			X	X	1	

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

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

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	8/14/19 1600	ETA	[signature]	8-15-19 915	ETA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # :_____
Canton Facility

Client ETA Site Name_____ Cooler unpacked by: Ryan Cribley

Cooler Received on 8-15-19 Opened on 8-15-19 915

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off TestAmerica Courier Other_____

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

TestAmerica Cooler # T4 Foam Box Client Cooler Box Other_____

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other_____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp. 1.4 °C Corrected Cooler Temp. 1.5 °C
   IR GUN #36 (CF +0.6°C) Observed Cooler Temp._____ °C Corrected Cooler Temp._____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? (Yes) No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# HC984738
13. Were VOAs on the COC? Yes (No)
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No (NA)
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes (No)
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

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

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

Concerning _____

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

18. SAMPLE CONDITION

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

19. SAMPLE PRESERVATION

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

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: AECOM Job Number: 600-189564-1

Login Number: 189564 **List Source: Eurofins TestAmerica, Houston**
List Number: 1
Creator: Rubio, Yuri

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2,2.9,2.4
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.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 600-189564-2
Client Project/Site: Langley Getty & central Dinkard Unit

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

Attn: Mr. Wallace Gilmore

Authorized for release by:
8/21/2019 11:10:19 AM
Jasmine Turner, Project Management Assistant I
(713)690-4444
jasmine.turner@testamericainc.com

Designee for

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

Table of Contents

Appendix A
Laboratory Data Package Cover Page - Page 1 of 4

This data package is for Eurofins TestAmerica, Houston job number 600-189564-2 and consists of:

- ☑ R1 - Field chain-of-custody documentation;
- ☑ R2 - Sample identification cross-reference;
- ☑ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  a. Items consistent with NELAC Chapter 5,
  b. dilution factors,
  c. preparation methods,
  d. cleanup methods, and
  e. if required for the project, tentatively identified compounds (TICs).
- ☑ R4 - Surrogate recovery data including:
  a. Calculated recovery (%R), and
  b. The laboratory's surrogate QC limits.
- ☑ R5 - Test reports/summary forms for blank samples;
- ☑ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  a. LCS spiking amounts,
  b. Calculated %R for each analyte, and
  c. The laboratory's LCS QC limits.
- ☑ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  a. Samples associated with the MS/MSD clearly identified,
  b. MS/MSD spiking amounts,
  c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  d. Calculated %Rs and relative percent differences (RPDs), and
  e. The laboratory's MS/MSD QC limits
- ☐ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  a. The amount of analyte measured in the duplicate,
  b. The calculated RPD, and
  c. The laboratory's QC limits for analytical duplicates.
- ☑ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☑ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Jasmine Turner, for Sachin Kudchadkar		8/21/2019
Name (printed)	Signature	Date

Senior Project Manager
Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	Eurofins TestAmerica, Houston	LRC Date:	8/21/2019
Project Name:	Langley Getty & central Dinkard Unit	Laboratory Job Number:	600-189564-2
Reviewer Name:	Jasmine Turner, for Sachin Kudchadkar		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?	X				
		If required for the project, are TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	Eurofins TestAmerica, Houston	LRC Date:	8/21/2019
Project Name:	Langley Getty & central Dinkard Unit	Laboratory Job Number:	600-189564-2
Reviewer Name:	Jasmine Turner, for Sachin Kudchadkar		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw data (NELAC Section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?	X				
S7	O	**Tentatively identified compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results**					
		Were percent recoveries within method QC limits?			X		
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs)**					
		Are laboratory SOPs current and on file for each method performed?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
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4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	Eurofins TestAmerica, Houston	LRC Date:	8/21/2019
Project Name:	Langley Getty & central Dinkard Unit	Laboratory Job Number:	600-189564-2
Reviewer Name:	Jasmine Turner, for Sachin Kudchadkar		

ER #[1]	Description
Misc	The following sample was preserved via freezing on 08/02/19 at 3:40 pm: LG - 02-4-5 (600-189564-10) . This is outside the 48 hour time frame required by the method. The following samples were preserved via freezing on 08/02/19 at 3:40 pm: LG - 03-0-1 (600-189564-11), LG - 03-4-5 (600-189564-15) and LG - 04-4-5 (600-189564-20) . This is outside the 48 hour time frame required by the method.

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked).

Method 8015B DRO Detection Limit Validation

Laboratory Eurofins TestAmerica, Canton

Preparation Method: 3546 MDLV

Limit Group GCS 8015B_C DRO 3546 Solid RL/MDL

Analysis Dates: 4/1/2019 to 7/22/2019

Analyte

Diesel

Current

MDL	RL
34.58	50

Calculations

Ver MDL	Spike amount	Units	Spike / MDL	Mean	Std Dev	Reps	Edit Limts?
34.58	50.0	mg/Kg	1.4	44.6510	5.1007347	8	N

MDLV used - 386836-9 All values recovere
MDLV: Pass

Lab ID	Anal Date	Batch	Samp	Analyst	Method	Prep Method	Equipment	Result	Units	Detected?
240-110302-A-7-A MD	06/18/2019	386836	9	Bolgrin, Deborah	8015B_DRO	3546	A2HP5F	54.7914449	mg/Kg	Pass
240-110302-A-8-A MD	06/18/2019	386836	10	Bolgrin, Deborah	8015B_DRO	3546	A2HP5F	49.4051637	mg/Kg	Pass
240-110302-A-20-A MI	06/18/2019	386887	11	Bolgrin, Deborah	8015B_DRO	3546	A2HP5R	41.8150117	mg/Kg	Pass
240-110302-A-21-A MI	06/18/2019	386887	12	Bolgrin, Deborah	8015B_DRO	3546	A2HP5R	38.6871397	mg/Kg	Pass
240-110302-A-9-A MD	06/18/2019	386849	11	Bolgrin, Deborah	8015B_DRO	3546	A2HP6F	44.5286106	mg/Kg	Pass
240-110302-A-22-A MI	06/18/2019	386859	11	Bolgrin, Deborah	8015B_DRO	3546	A2HP6R	42.2728391	mg/Kg	Pass
240-110302-A-24-A MI	06/18/2019	386849	12	Bolgrin, Deborah	8015B_DRO	3546	A2HP6F	42.1637227	mg/Kg	Pass
240-110302-A-23-A MI	06/18/2019	386859	12	Bolgrin, Deborah	8015B_DRO	3546	A2HP6R	43.5445928	mg/Kg	Pass

Detected? Pass = result was detected ; Fail = result < = 0 . If MDLV is < MDL , verify Detection or S/N ratio
MDLV: Pass = meets Spike/MDL ratio , Spike High =Spike/MDL > ratio , Spike Low = Spike < MDL
Spike/MDL ratio = 3.00

Detection Check Standard EuroFins TestAmerica, Houston

Matrix: Solid
Method: 8260B
Prep Method: 5030B_SolidNAC
Date Analyzed: 4/16/2019
Job #: 600-183722
TALS Batch: 262887
Units: ug/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
1,1,1,2-Tetrachloroethane	CHVOAMS09	1.400	5.000	2.973	5
1,1,1-Trichloroethane	CHVOAMS09	0.740	2.500	2.291	5
1,1,2,2-Tetrachloroethane	CHVOAMS09	0.870	2.500	4.436	5
1,1,2-Trichloro-1,2,2-trifluoroethane	CHVOAMS09	1.440	5.000	1.787	5
1,1,2-Trichloroethane	CHVOAMS09	0.730	2.500	2.507	40
1,1-Dichloroethane	CHVOAMS09	0.870	2.500	2.114	5
1,1-Dichloroethene	CHVOAMS09	1.220	5.000	2.697	5
1,1-Dichloropropene	CHVOAMS09	0.650	2.500	2.328	5
1,2,3-Trichlorobenzene	CHVOAMS09	0.620	2.500	4.993	5
1,2,3-Trichloropropane	CHVOAMS09	1.310	2.500	5.837	5
1,2,3-Trimethylbenzene	CHVOAMS09	1.820	2.500	0.131	5
1,2,4-Trichlorobenzene	CHVOAMS09	1.970	2.500	0.414	5
1,2,4-Trimethylbenzene	CHVOAMS09	0.920	2.500	2.310	5
1,2-Dibromo-3-Chloropropane	CHVOAMS09	2.440	2.500	1.563	5
1,2-Dichlorobenzene	CHVOAMS09	0.800	2.500	0.320	5
1,2-Dichloroethane	CHVOAMS09	0.900	2.500	2.248	5
1,2-Dichloroethene, Total	CHVOAMS09	1.900	5.000	5.000	10
1,2-Dichloropropane	CHVOAMS09	0.710	2.500	2.125	5
1,3,5-Trichlorobenzene	CHVOAMS09	2.500	5.000	2.414	5
1,3,5-Trimethylbenzene	CHVOAMS09	1.600	2.500	2.173	5
1,3-Dichlorobenzene	CHVOAMS09	0.710	2.500	2.239	5
1,3-Dichloropropane	CHVOAMS09	0.630	2.500	2.265	5
1,4-Dichlorobenzene	CHVOAMS09	0.660	2.500	2.063	5
1,4-Dioxane	CHVOAMS09	62.070	50.000	21.646	500
2,2-Dichloropropane	CHVOAMS04	1.820	2.500	2.214	5
2-Butanone (MEK)	CHVOAMS09	1.900	5.000	3.640	10
2-Chloro-1,3-butadiene	CHVOAMS09	2.710	2.500	1.799	5
2-Chloroethyl vinyl ether	CHVOAMS09	0.980	5.000	4.606	10
2-Chlorotoluene	CHVOAMS09	0.680	2.500	2.155	5
2-Hexanone	CHVOAMS09	1.010	10.000	3.867	10
2-Methyl-2-propanol	CHVOAMS09	10.000	25.000	0.029	50
2-Methyltetrahydrofuran	CHVOAMS09	5.430	12.500	14.242	50
2-Methyltetrahydropyran	CHVOAMS09	4.820	12.500	15.854	50
2-Nitropropane	CHVOAMS09	24.290	5.000	4.186	50
3-Chloro-1-propene	CHVOAMS09	1.390	2.500	2.192	5
4-Chlorotoluene	CHVOAMS09	0.830	2.500	2.305	5
4-Isopropyltoluene	CHVOAMS09	1.020	2.500	0.124	5
4-Methyl-2-pentanone (MIBK)	CHVOAMS09	1.470	5.000	0.216	10
Acetone	CHVOAMS04	1.660	5.000	4.014	10
Acetonitrile	CHVOAMS09	1.390	25.000	10.912	50
Acrolein	CHVOAMS09	6.230	12.500	2.141	25
Acrylonitrile	CHVOAMS09	5.820	25.000	3.681	50
Benzene	CHVOAMS09	0.630	2.500	2.420	5
Benzyl chloride	CHVOAMS09	2.140	2.500	0.377	5
Bromobenzene	CHVOAMS09	0.990	2.500	2.602	5
Bromoform	CHVOAMS09	1.370	2.500	1.878	5
Bromomethane	CHVOAMS09	0.830	2.500	1.965	10
Butadiene	CHVOAMS09	1.250	2.500	1.845	5
Carbon disulfide	CHVOAMS04	0.550	2.500	1.935	10

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Detection Check Standard EuroFins TestAmerica, Houston

Matrix: Solid
Method: 8260B
Prep Method: 5030B_SolidNAC
Date Analyzed: 4/16/2019
Job #: 600-183722
TALS Batch: 262887
Units: ug/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Carbon tetrachloride	CHVOAMS09	1.130	2.500	2.146	5
Chlorobenzene	CHVOAMS09	0.960	2.500	2.539	5
Chlorobromomethane	CHVOAMS09	1.780	2.500	2.263	5
Chlorodibromomethane	CHVOAMS09	0.940	2.500	2.383	5
Chloroethane	CHVOAMS09	1.400	5.000	2.362	10
Chloroform	CHVOAMS09	0.660	2.500	2.440	10
Chloromethane	CHVOAMS09	1.660	5.000	1.375	10
cis-1,2-Dichloroethene	CHVOAMS09	0.830	2.500	2.473	5
cis-1,3-Dichloropropene	CHVOAMS09	0.540	2.500	2.335	5
Cyclohexane	CHVOAMS09	1.920	5.000	2.952	5
Dibromomethane	CHVOAMS09	0.750	2.500	2.411	5
Dichlorobromomethane	CHVOAMS09	0.660	2.500	2.590	5
Dichlorodifluoromethane	CHVOAMS09	1.540	5.000	1.951	5
Dichlorofluoromethane	CHVOAMS09	1.000	2.500	1.932	5
Ethyl acetate	CHVOAMS09	2.810	5.000	3.504	5
Ethyl acrylate	CHVOAMS09	10.660	2.500	1.638	20
Ethyl ether	CHVOAMS09	1.950	2.500	1.822	5
Ethyl methacrylate	CHVOAMS09	1.660	2.500	0.603	5
Ethylbenzene	CHVOAMS09	1.020	2.500	2.624	5
Ethylene Dibromide	CHVOAMS09	1.020	2.500	2.413	5
Hexachlorobutadiene	CHVOAMS09	1.130	2.500	2.306	5
Hexane	CHVOAMS09	1.230	2.500	1.859	5
Iodomethane	CHVOAMS09	2.500	5.000	3.118	5
Isobutyl alcohol	CHVOAMS04	17.160	62.500	76.211	125
Isooctane	CHVOAMS09	10.000	5.000	1.018	10
Isopropyl alcohol	CHVOAMS09	27.470	50.000	34.005	100
Isopropyl ether	CHVOAMS09	1.760	2.500	1.676	5
Isopropylbenzene	CHVOAMS09	0.920	2.500	2.104	5
Methacrylonitrile	CHVOAMS09	5.000	25.000	23.410	50
Methyl acetate	CHVOAMS09	2.910	5.000	2.835	5
Methyl methacrylate	CHVOAMS09	2.860	5.000	3.621	10
Methyl tert-butyl ether	CHVOAMS09	1.830	2.500	2.421	5
Methylcyclohexane	CHVOAMS09	1.460	2.500	2.552	5
Methylene Chloride	CHVOAMS09	2.190	5.000	2.227	10
m-Xylene & p-Xylene	CHVOAMS09	1.520	2.500	2.525	5
Naphthalene	CHVOAMS09	2.370	2.500	6.777	10
n-Butyl acetate	CHVOAMS09	2.370	5.000	2.147	5
n-Butylbenzene	CHVOAMS04	0.580	2.500	1.992	5
n-Heptane	CHVOAMS09	10.000	2.500	1.474	20
N-Propylbenzene	CHVOAMS09	0.950	2.500	2.016	5
o-Xylene	CHVOAMS09	1.130	5.000	2.960	5
Propionitrile	CHVOAMS09	2.360	50.000	18.349	5
sec-Butylbenzene	CHVOAMS09	0.700	2.500	0.193	5
Styrene	CHVOAMS09	0.710	2.500	2.925	5
tert-Butylbenzene	CHVOAMS09	0.950	2.500	2.237	5
Tetrachloroethene	CHVOAMS09	0.710	2.500	2.350	5
Tetrahydrofuran	CHVOAMS09	5.390	10.000	4.590	50
Tetrahydropyran	CHVOAMS09	5.220	12.500	13.469	50
Toluene	CHVOAMS09	1.380	2.500	2.561	5

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Matrix: Solid
Method: 8260B
Prep Method: 5030B_SolidNAC
Date Analyzed: 4/16/2019
Job #: 600-183722
TALS Batch: 262887
Units: ug/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
trans-1,2-Dichloroethene	CHVOAMS09	1.140	2.500	2.470	5
trans-1,3-Dichloropropene	CHVOAMS09	0.580	2.500	2.304	5
trans-1,4-Dichloro-2-butene	CHVOAMS09	1.900	2.500	4.958	5
Trichloroethene	CHVOAMS09	1.400	2.500	2.306	5
Trichlorofluoromethane	CHVOAMS09	0.660	2.500	1.842	10
Vinyl acetate	CHVOAMS09	0.930	5.000	3.262	10
Vinyl chloride	CHVOAMS04	0.900	2.500	1.917	10
Xylenes, Total	CHVOAMS09	1.130	5.000	2.500	5

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Case Narrative

Client: AECOM
Project/Site: Langley Getty & central Dinkard Unit

Job ID: 600-189564-2

Job ID: 600-189564-2

Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative
600-189564-2

Comments
No additional comments.

Receipt
The samples were received on 8/2/2019 9:52 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.2º C, 2.4º C and 2.9º C.

All applicable analytical narratives can be found in the TRRP Checklist section of this report.

Method Summary

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL CAN
3546	Microwave Extraction	SW846	TAL CAN
5035	Closed System Purge & Trap/Laboratory Preservation	SW846	TAL HOU

Protocol References:

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

Laboratory References:

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

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

Sample Summary

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-189564-1	LG - 01-0-1	Solid	08/01/19 10:00	08/02/19 09:52	
600-189564-5	LG - 01-4-5	Solid	08/01/19 10:20	08/02/19 09:52	
600-189564-6	LG - 02-0-1	Solid	08/01/19 10:25	08/02/19 09:52	
600-189564-10	LG - 02-4-5	Solid	08/01/19 10:45	08/02/19 09:52	
600-189564-11	LG - 03-0-1	Solid	08/01/19 10:50	08/02/19 09:52	
600-189564-15	LG - 03-4-5	Solid	08/01/19 11:10	08/02/19 09:52	
600-189564-20	LG - 04-4-5	Solid	08/01/19 11:35	08/02/19 09:52	

Client Sample Results

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 01-0-1 Lab Sample ID: 600-189564-1

Date Collected: 08/01/19 10:00 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000647	U	0.00513	0.000647	mg/Kg		08/02/19 15:40	08/13/19 22:16	1
Ethylbenzene	0.00105	U	0.00513	0.00105	mg/Kg		08/02/19 15:40	08/13/19 22:16	1
Toluene	0.00142	U	0.00513	0.00142	mg/Kg		08/02/19 15:40	08/13/19 22:16	1
Xylenes, Total	0.00116	U	0.00513	0.00116	mg/Kg		08/02/19 15:40	08/13/19 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*61 - 130*	*08/02/19 15:40*	*08/13/19 22:16*	*1*
Dibromofluoromethane	*82*		*68 - 140*	*08/02/19 15:40*	*08/13/19 22:16*	*1*
Toluene-d8 (Surr)	*90*		*50 - 130*	*08/02/19 15:40*	*08/13/19 22:16*	*1*
4-Bromofluorobenzene	*118*		*57 - 140*	*08/02/19 15:40*	*08/13/19 22:16*	*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]	33.8	U	48.9	33.8	mg/Kg		08/15/19 12:00	08/16/19 17:17	1
C28-C36	33.8	U	48.9	33.8	mg/Kg		08/15/19 12:00	08/16/19 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*72*		*26 - 125*	*08/15/19 12:00*	*08/16/19 17:17*	*1*

Client Sample ID: LG - 01-4-5 Lab Sample ID: 600-189564-5

Date Collected: 08/01/19 10:20 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000592	U	0.00470	0.000592	mg/Kg		08/02/19 15:40	08/13/19 22:42	1
Ethylbenzene	0.000959	U	0.00470	0.000959	mg/Kg		08/02/19 15:40	08/13/19 22:42	1
Toluene	0.00130	U	0.00470	0.00130	mg/Kg		08/02/19 15:40	08/13/19 22:42	1
Xylenes, Total	0.00106	U	0.00470	0.00106	mg/Kg		08/02/19 15:40	08/13/19 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*61 - 130*	*08/02/19 15:40*	*08/13/19 22:42*	*1*
Dibromofluoromethane	*83*		*68 - 140*	*08/02/19 15:40*	*08/13/19 22:42*	*1*
Toluene-d8 (Surr)	*90*		*50 - 130*	*08/02/19 15:40*	*08/13/19 22:42*	*1*
4-Bromofluorobenzene	*117*		*57 - 140*	*08/02/19 15:40*	*08/13/19 22:42*	*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]	34.4	U	49.8	34.4	mg/Kg		08/15/19 12:00	08/16/19 17:45	1
C28-C36	34.4	U	49.8	34.4	mg/Kg		08/15/19 12:00	08/16/19 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*74*		*26 - 125*	*08/15/19 12:00*	*08/16/19 17:45*	*1*

Client Sample ID: LG - 02-0-1 Lab Sample ID: 600-189564-6

Date Collected: 08/01/19 10:25 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000669	U	0.00531	0.000669	mg/Kg		08/02/19 15:40	08/13/19 23:07	1
Ethylbenzene	0.00108	U	0.00531	0.00108	mg/Kg		08/02/19 15:40	08/13/19 23:07	1

Client Sample Results

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 02-0-1 Lab Sample ID: 600-189564-6

Date Collected: 08/01/19 10:25 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	0.00146	U	0.00531	0.00146	mg/Kg		08/02/19 15:40	08/13/19 23:07	1
Xylenes, Total	0.00120	U	0.00531	0.00120	mg/Kg		08/02/19 15:40	08/13/19 23:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 130*	*08/02/19 15:40*	*08/13/19 23:07*	*1*
Dibromofluoromethane	*85*		*68 - 140*	*08/02/19 15:40*	*08/13/19 23:07*	*1*
Toluene-d8 (Surr)	*91*		*50 - 130*	*08/02/19 15:40*	*08/13/19 23:07*	*1*
4-Bromofluorobenzene	*120*		*57 - 140*	*08/02/19 15:40*	*08/13/19 23:07*	*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]	34.0	U	49.2	34.0	mg/Kg		08/15/19 12:00	08/16/19 18:12	1
C28-C36	34.0	U	49.2	34.0	mg/Kg		08/15/19 12:00	08/16/19 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*76*		*26 - 125*	*08/15/19 12:00*	*08/16/19 18:12*	*1*

Client Sample ID: LG - 02-4-5 Lab Sample ID: 600-189564-10

Date Collected: 08/01/19 10:45 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000603	U H	0.00479	0.000603	mg/Kg		08/13/19 15:57	08/13/19 23:32	1
Ethylbenzene	0.000977	U H	0.00479	0.000977	mg/Kg		08/13/19 15:57	08/13/19 23:32	1
Toluene	0.00132	U H	0.00479	0.00132	mg/Kg		08/13/19 15:57	08/13/19 23:32	1
Xylenes, Total	0.00108	U H	0.00479	0.00108	mg/Kg		08/13/19 15:57	08/13/19 23:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*85*		*61 - 130*	*08/13/19 15:57*	*08/13/19 23:32*	*1*
Dibromofluoromethane	*86*		*68 - 140*	*08/13/19 15:57*	*08/13/19 23:32*	*1*
Toluene-d8 (Surr)	*92*		*50 - 130*	*08/13/19 15:57*	*08/13/19 23:32*	*1*
4-Bromofluorobenzene	*115*		*57 - 140*	*08/13/19 15:57*	*08/13/19 23:32*	*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]	34.0	U	49.2	34.0	mg/Kg		08/15/19 12:00	08/16/19 18:40	1
C28-C36	34.0	U	49.2	34.0	mg/Kg		08/15/19 12:00	08/16/19 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*78*		*26 - 125*	*08/15/19 12:00*	*08/16/19 18:40*	*1*

Client Sample ID: LG - 03-0-1 Lab Sample ID: 600-189564-11

Date Collected: 08/01/19 10:50 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000620	U H	0.00492	0.000620	mg/Kg		08/13/19 15:57	08/14/19 12:02	1
Ethylbenzene	0.00100	U H	0.00492	0.00100	mg/Kg		08/13/19 15:57	08/14/19 12:02	1
Toluene	0.00136	U H	0.00492	0.00136	mg/Kg		08/13/19 15:57	08/14/19 12:02	1
Xylenes, Total	0.00111	U H	0.00492	0.00111	mg/Kg		08/13/19 15:57	08/14/19 12:02	1

Client Sample Results

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 03-0-1 Lab Sample ID: 600-189564-11

Date Collected: 08/01/19 10:50 **Matrix: Solid**
Date Received: 08/02/19 09:52

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		61 - 130	08/13/19 15:57	08/14/19 12:02	1
Dibromofluoromethane	85		68 - 140	08/13/19 15:57	08/14/19 12:02	1
Toluene-d8 (Surr)	90		50 - 130	08/13/19 15:57	08/14/19 12:02	1
4-Bromofluorobenzene	115		57 - 140	08/13/19 15:57	08/14/19 12:02	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]	34.3	U	49.6	34.3	mg/Kg		08/15/19 12:00	08/16/19 19:35	1
C28-C36	34.3	U	49.6	34.3	mg/Kg		08/15/19 12:00	08/16/19 19:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	75		26 - 125	08/15/19 12:00	08/16/19 19:35	1

Client Sample ID: LG - 03-4-5 Lab Sample ID: 600-189564-15

Date Collected: 08/01/19 11:10 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000599	U H	0.00475	0.000599	mg/Kg		08/13/19 15:57	08/14/19 12:29	1
Ethylbenzene	0.000970	U H	0.00475	0.000970	mg/Kg		08/13/19 15:57	08/14/19 12:29	1
Toluene	0.00131	U H	0.00475	0.00131	mg/Kg		08/13/19 15:57	08/14/19 12:29	1
Xylenes, Total	0.00107	U H	0.00475	0.00107	mg/Kg		08/13/19 15:57	08/14/19 12:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		61 - 130	08/13/19 15:57	08/14/19 12:29	1
Dibromofluoromethane	87		68 - 140	08/13/19 15:57	08/14/19 12:29	1
Toluene-d8 (Surr)	93		50 - 130	08/13/19 15:57	08/14/19 12:29	1
4-Bromofluorobenzene	120		57 - 140	08/13/19 15:57	08/14/19 12:29	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]	33.2	U	48.0	33.2	mg/Kg		08/15/19 12:00	08/16/19 20:03	1
C28-C36	33.2	U	48.0	33.2	mg/Kg		08/15/19 12:00	08/16/19 20:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	77		26 - 125	08/15/19 12:00	08/16/19 20:03	1

Client Sample ID: LG - 04-4-5 Lab Sample ID: 600-189564-20

Date Collected: 08/01/19 11:35 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00134	U H	0.0106	0.00134	mg/Kg		08/13/19 15:57	08/14/19 12:56	1
Ethylbenzene	0.00217	U H	0.0106	0.00217	mg/Kg		08/13/19 15:57	08/14/19 12:56	1
Toluene	0.00294	U H	0.0106	0.00294	mg/Kg		08/13/19 15:57	08/14/19 12:56	1
Xylenes, Total	0.00240	U H	0.0106	0.00240	mg/Kg		08/13/19 15:57	08/14/19 12:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		61 - 130	08/13/19 15:57	08/14/19 12:56	1
Dibromofluoromethane	87		68 - 140	08/13/19 15:57	08/14/19 12:56	1

Client Sample Results

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 04-4-5 Lab Sample ID: 600-189564-20

Date Collected: 08/01/19 11:35 **Matrix: Solid**
Date Received: 08/02/19 09:52

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*50 - 130*	*08/13/19 15:57*	*08/14/19 12:56*	*1*
4-Bromofluorobenzene	*122*		*57 - 140*	*08/13/19 15:57*	*08/14/19 12:56*	*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]	34.2	U	49.4	34.2	mg/Kg		08/15/19 12:00	08/16/19 20:30	1
C28-C36	34.2	U	49.4	34.2	mg/Kg		08/15/19 12:00	08/16/19 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*80*		*26 - 125*	*08/15/19 12:00*	*08/16/19 20:30*	*1*

Definitions/Glossary

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
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.

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
Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

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)
600-189564-1	LG - 01-0-1	82	82	90	118
600-189564-5	LG - 01-4-5	84	83	90	117
600-189564-6	LG - 02-0-1	86	85	91	120
600-189564-10	LG - 02-4-5	85	86	92	115
600-189564-11	LG - 03-0-1	85	85	90	115
600-189564-15	LG - 03-4-5	84	87	93	120
600-189564-20	LG - 04-4-5	84	87	92	122
LCS 600-271800/3	Lab Control Sample	75	87	101	124
LCS 600-271908/3	Lab Control Sample	80	89	96	127
LCSD 600-271800/4	Lab Control Sample Dup	70	85	101	129
LCSD 600-271908/4	Lab Control Sample Dup	76	86	94	123
MB 600-271800/6	Method Blank	83	86	95	116
MB 600-271908/6	Method Blank	90	87	93	117

Surrogate Legend

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

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)
600-189372-A-8-D MS	Matrix Spike	79
600-189372-A-8-E MSD	Matrix Spike Duplicate	77
600-189564-1	LG - 01-0-1	72
600-189564-5	LG - 01-4-5	74
600-189564-6	LG - 02-0-1	76
600-189564-10	LG - 02-4-5	78
600-189564-11	LG - 03-0-1	75
600-189564-15	LG - 03-4-5	77
600-189564-20	LG - 04-4-5	80
LCS 240-396217/2-A	Lab Control Sample	78
MB 240-396217/1-A	Method Blank	65

Surrogate Legend

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: AECOM
Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

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

Lab Sample ID: MB 600-271800/6
Matrix: Solid
Analysis Batch: 271800

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			08/13/19 16:50	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			08/13/19 16:50	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			08/13/19 16:50	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			08/13/19 16:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*83*		*61 - 130*		*08/13/19 16:50*	*1*
Dibromofluoromethane	*86*		*68 - 140*		*08/13/19 16:50*	*1*
Toluene-d8 (Surr)	*95*		*50 - 130*		*08/13/19 16:50*	*1*
4-Bromofluorobenzene	*116*		*57 - 140*		*08/13/19 16:50*	*1*

Lab Sample ID: LCS 600-271800/3
Matrix: Solid
Analysis Batch: 271800

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	0.04722		mg/Kg		94	70 - 131
Ethylbenzene	0.0500	0.04716		mg/Kg		94	66 - 130
Toluene	0.0500	0.04980		mg/Kg		100	67 - 130
Xylenes, Total	0.100	0.09130		mg/Kg		91	63 - 130
m-Xylene & p-Xylene	0.0500	0.04569		mg/Kg		91	64 - 130
o-Xylene	0.0500	0.04561		mg/Kg		91	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*75*		*61 - 130*
Dibromofluoromethane	*87*		*68 - 140*
Toluene-d8 (Surr)	*101*		*50 - 130*
4-Bromofluorobenzene	*124*		*57 - 140*

Lab Sample ID: LCSD 600-271800/4
Matrix: Solid
Analysis Batch: 271800

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	0.04739		mg/Kg		95	70 - 131	0	30
Ethylbenzene	0.0500	0.04754		mg/Kg		95	66 - 130	1	30
Toluene	0.0500	0.05063		mg/Kg		101	67 - 130	2	30
Xylenes, Total	0.100	0.09190		mg/Kg		92	63 - 130	1	30
m-Xylene & p-Xylene	0.0500	0.04564		mg/Kg		91	64 - 130	0	30
o-Xylene	0.0500	0.04626		mg/Kg		93	62 - 130	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*70*		*61 - 130*
Dibromofluoromethane	*85*		*68 - 140*
Toluene-d8 (Surr)	*101*		*50 - 130*
4-Bromofluorobenzene	*129*		*57 - 140*

QC Sample Results

Client: AECOM
Project/Site: Langley Getty & central Dinkard Unit

Job ID: 600-189564-2

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

Lab Sample ID: MB 600-271908/6
Matrix: Solid
Analysis Batch: 271908

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			08/14/19 11:35	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			08/14/19 11:35	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			08/14/19 11:35	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			08/14/19 11:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*61 - 130*		*08/14/19 11:35*	*1*
Dibromofluoromethane	*87*		*68 - 140*		*08/14/19 11:35*	*1*
Toluene-d8 (Surr)	*93*		*50 - 130*		*08/14/19 11:35*	*1*
4-Bromofluorobenzene	*117*		*57 - 140*		*08/14/19 11:35*	*1*

Lab Sample ID: LCS 600-271908/3
Matrix: Solid
Analysis Batch: 271908

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	0.05008		mg/Kg		100	70 - 131
Ethylbenzene	0.0500	0.04670		mg/Kg		93	66 - 130
Toluene	0.0500	0.04855		mg/Kg		97	67 - 130
Xylenes, Total	0.100	0.09131		mg/Kg		91	63 - 130
m-Xylene & p-Xylene	0.0500	0.04521		mg/Kg		90	64 - 130
o-Xylene	0.0500	0.04610		mg/Kg		92	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*80*		*61 - 130*
Dibromofluoromethane	*89*		*68 - 140*
Toluene-d8 (Surr)	*96*		*50 - 130*
4-Bromofluorobenzene	*127*		*57 - 140*

Lab Sample ID: LCSD 600-271908/4
Matrix: Solid
Analysis Batch: 271908

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	0.04912		mg/Kg		98	70 - 131	2	30
Ethylbenzene	0.0500	0.04579		mg/Kg		92	66 - 130	2	30
Toluene	0.0500	0.04797		mg/Kg		96	67 - 130	1	30
Xylenes, Total	0.100	0.09021		mg/Kg		90	63 - 130	1	30
m-Xylene & p-Xylene	0.0500	0.04470		mg/Kg		89	64 - 130	1	30
o-Xylene	0.0500	0.04551		mg/Kg		91	62 - 130	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*76*		*61 - 130*
Dibromofluoromethane	*86*		*68 - 140*
Toluene-d8 (Surr)	*94*		*50 - 130*
4-Bromofluorobenzene	*123*		*57 - 140*

QC Sample Results

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

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

Lab Sample ID: MB 240-396217/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 396355 — **Prep Batch: 396217**

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		08/15/19 12:00	08/16/19 14:58	1
C28-C36	34.6	U	50.0	34.6	mg/Kg		08/15/19 12:00	08/16/19 14:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*65*		*26 - 125*	*08/15/19 12:00*	*08/16/19 14:58*	*1*

Lab Sample ID: LCS 240-396217/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 396355 — **Prep Batch: 396217**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10 - C28]	250	192.5		mg/Kg		77	45 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*78*		*26 - 125*

Lab Sample ID: 600-189372-A-8-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 396355 — **Prep Batch: 396217**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10 - C28]	34.2	U	245	190.4		mg/Kg		78	27 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl (Surr)	*79*		*26 - 125*

Lab Sample ID: 600-189372-A-8-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 396355 — **Prep Batch: 396217**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10 - C28]	34.2	U	242	185.4		mg/Kg		77	27 - 120	3	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl (Surr)	*77*		*26 - 125*

Unadjusted Detection Limits

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

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 - 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

QC Association Summary

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

GC/MS VOA

Prep Batch: 271171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-1	LG - 01-0-1	Total/NA	Solid	5035	
600-189564-5	LG - 01-4-5	Total/NA	Solid	5035	
600-189564-6	LG - 02-0-1	Total/NA	Solid	5035	
600-189564-10	LG - 02-4-5	Total/NA	Solid	5035	
600-189564-11	LG - 03-0-1	Total/NA	Solid	5035	
600-189564-15	LG - 03-4-5	Total/NA	Solid	5035	
600-189564-20	LG - 04-4-5	Total/NA	Solid	5035	

Analysis Batch: 271800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-1	LG - 01-0-1	Total/NA	Solid	8260B	271171
600-189564-5	LG - 01-4-5	Total/NA	Solid	8260B	271171
600-189564-6	LG - 02-0-1	Total/NA	Solid	8260B	271171
600-189564-10	LG - 02-4-5	Total/NA	Solid	8260B	271171
MB 600-271800/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-271800/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-271800/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

Analysis Batch: 271908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-11	LG - 03-0-1	Total/NA	Solid	8260B	271171
600-189564-15	LG - 03-4-5	Total/NA	Solid	8260B	271171
600-189564-20	LG - 04-4-5	Total/NA	Solid	8260B	271171
MB 600-271908/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-271908/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-271908/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

GC Semi VOA

Prep Batch: 396217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-1	LG - 01-0-1	Total/NA	Solid	3546	
600-189564-5	LG - 01-4-5	Total/NA	Solid	3546	
600-189564-6	LG - 02-0-1	Total/NA	Solid	3546	
600-189564-10	LG - 02-4-5	Total/NA	Solid	3546	
600-189564-11	LG - 03-0-1	Total/NA	Solid	3546	
600-189564-15	LG - 03-4-5	Total/NA	Solid	3546	
600-189564-20	LG - 04-4-5	Total/NA	Solid	3546	
MB 240-396217/1-A	Method Blank	Total/NA	Solid	3546	
LCS 240-396217/2-A	Lab Control Sample	Total/NA	Solid	3546	
600-189372-A-8-D MS	Matrix Spike	Total/NA	Solid	3546	
600-189372-A-8-E MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	

Analysis Batch: 396355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-1	LG - 01-0-1	Total/NA	Solid	8015B	396217
600-189564-5	LG - 01-4-5	Total/NA	Solid	8015B	396217
600-189564-6	LG - 02-0-1	Total/NA	Solid	8015B	396217
600-189564-10	LG - 02-4-5	Total/NA	Solid	8015B	396217
600-189564-11	LG - 03-0-1	Total/NA	Solid	8015B	396217
600-189564-15	LG - 03-4-5	Total/NA	Solid	8015B	396217

QC Association Summary

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

GC Semi VOA (Continued)

Analysis Batch: 396355 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-189564-20	LG - 04-4-5	Total/NA	Solid	8015B	396217
MB 240-396217/1-A	Method Blank	Total/NA	Solid	8015B	396217
LCS 240-396217/2-A	Lab Control Sample	Total/NA	Solid	8015B	396217
600-189372-A-8-D MS	Matrix Spike	Total/NA	Solid	8015B	396217
600-189372-A-8-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	396217

Lab Chronicle

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 01-0-1 Lab Sample ID: 600-189564-1
Date Collected: 08/01/19 10:00 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/02/19 15:40	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271800	08/13/19 22:16	WS1	TAL HOU
Total/NA	Prep	3546			396217	08/15/19 12:00	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	396355	08/16/19 17:17	LKG	TAL CAN

Client Sample ID: LG - 01-4-5 Lab Sample ID: 600-189564-5
Date Collected: 08/01/19 10:20 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/02/19 15:40	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271800	08/13/19 22:42	WS1	TAL HOU
Total/NA	Prep	3546			396217	08/15/19 12:00	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	396355	08/16/19 17:45	LKG	TAL CAN

Client Sample ID: LG - 02-0-1 Lab Sample ID: 600-189564-6
Date Collected: 08/01/19 10:25 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/02/19 15:40	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271800	08/13/19 23:07	WS1	TAL HOU
Total/NA	Prep	3546			396217	08/15/19 12:00	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	396355	08/16/19 18:12	LKG	TAL CAN

Client Sample ID: LG - 02-4-5 Lab Sample ID: 600-189564-10
Date Collected: 08/01/19 10:45 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/13/19 15:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271800	08/13/19 23:32	WS1	TAL HOU
Total/NA	Prep	3546			396217	08/15/19 12:00	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	396355	08/16/19 18:40	LKG	TAL CAN

Client Sample ID: LG - 03-0-1 Lab Sample ID: 600-189564-11
Date Collected: 08/01/19 10:50 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/13/19 15:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271908	08/14/19 12:02	WS1	TAL HOU
Total/NA	Prep	3546			396217	08/15/19 12:00	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	396355	08/16/19 19:35	LKG	TAL CAN

Lab Chronicle

Client: AECOM Job ID: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

Client Sample ID: LG - 03-4-5 Lab Sample ID: 600-189564-15

Date Collected: 08/01/19 11:10 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/13/19 15:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271908	08/14/19 12:29	WS1	TAL HOU
Total/NA	Prep	3546			396217	08/15/19 12:00	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	396355	08/16/19 20:03	LKG	TAL CAN

Client Sample ID: LG - 04-4-5 Lab Sample ID: 600-189564-20

Date Collected: 08/01/19 11:35 **Matrix: Solid**
Date Received: 08/02/19 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			271171	08/13/19 15:57	WS1	TAL HOU
Total/NA	Analysis	8260B		1	271908	08/14/19 12:56	WS1	TAL HOU
Total/NA	Prep	3546			396217	08/15/19 12:00	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	396355	08/16/19 20:30	LKG	TAL CAN

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: 600-189564-2
Project/Site: Langley Getty & central Dinkard Unit

Laboratory: Eurofins TestAmerica, Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704223-18-23	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	Identification Number	Expiration Date
California	State	2927	02-23-20
California	State Program	2927	02-23-20
Connecticut	State	PH-0590	12-31-19
Connecticut	State Program	PH-0590	12-31-19
Florida	NELAP	E87225	06-30-20
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20
Georgia	State Program	N/A	02-23-20
Illinois	NELAP	200004	07-31-20
Iowa	State Program	421	06-01-21
Kansas	NELAP	E-10336	04-30-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State Program	58	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Kentucky (WW)	State Program	98016	12-31-19
Minnesota	NELAP	039-999-348	12-31-19 *
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
New Jersey	NELAP	OH001	06-30-20
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Ohio VAP	State Program	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20
Oregon	NELAP	4062	02-23-20
Pennsylvania	NELAP	68-00340	08-31-19 *
Pennsylvania	NELAP	68-00340	08-31-19
Texas	NELAP	T104704517-19-11	08-31-20
Texas	NELAP	T104704517-18-10	08-31-19
USDA	Federal	P330-16-00404	12-28-19
Virginia	NELAP	460175	09-14-19 *
Virginia	NELAP	010101	09-14-19
Washington	State	C971	01-12-20
Washington	State Program	C971	01-12-20 *
West Virginia DEP	State	210	12-31-19
West Virginia DEP	State Program	210	12-31-19

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

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

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information	Sampler: James Lovely	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-70018-19143.1
Client Contact: Mr. Wallace Gilmore	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 1
Company: AECOM				Job #:
Address: 19219 Katy Freeway Suite 100	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77094				
Phone: 713-520-990(Tel) 713-520-680(Fax)	PO #: Purchase Order Requested			
Email: wallace.gilmore@aecom.com	WO #:			
Project Name: Chevron	Project #: 60008660			
Site: Langley Getty + Central Drinkard Unit	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9056_ORGFM_28D - Chloride	8260B - BTEX Only	8015B_GRO -	8015B_DRO - (MOD) Diesel Range Organics [C10-C28]	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		N		
LG-01-0-1	8/1/19	1000	G	Solid			X	X	X	X		Hold all but chloride
LG-01-1-2		1005		Solid			X					
LG-01-2-3		1010		Solid			X					
LG-01-3-4		1015		Solid			X					
LG-01-4-5		1020		Solid			X	X	X	X		Hold all but chloride
LG-02-0-1		1025		Solid			X	X	X	X		Hold all but chloride
LG-02-1-2		1030		Solid			X					
LG-02-2-3		1035		Solid			X					
LG-02-3-4		1040		Solid			X					
LG-02-4-5		1045		Solid			X	X	X	X		Hold all but chloride
LG-03-0-1		1050		Solid								Hold all but chloride

600-189564 Chain of Custody

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Seth Frederick	8/1/19 @1800-1700	AECOM	[signature]	8/2/19 952	TAH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-70018-19143.1
Client Contact: Mr. Wallace Gilmore	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 2
Company: AECOM				Job #:

Address: 19219 Katy Freeway Suite 100	Due Date Requested:
City: Houston	TAT Requested (days):
State, Zip: TX, 77094	
Phone: 713-520-990(Tel) 713-520-680(Fax)	PO #: Purchase Order Requested
Email: wallace.gilmore@aecom.com	WO #:
Project Name: Chevron	Project #: 60008660
Site:	SSOW#:

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9056_ORGFM_28D - Chloride	8260B - BTEX Only	8015B_GRO -	8015B_DRO - (MOD) Diesel Range Organics [C10-C28]	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		N		
LG-03-1-2	8/1/19	1055	G	Solid			X	X				
LG-03-2-3		1100		Solid			X					
LG-03-3-4		1105		Solid			X					
LG-03-4-5		1110		Solid			X	X	X	X		Hold all but chloride
LG-04-0-1		1115		Solid			X	X	X	X		
LG-04-1-2		1120		Solid			X					
LG-04-2-3		1125		Solid			X					
LG-04-3-4		1130		Solid			X					
LG-04-4-5		1135		Solid			X	X	X	X		Hold all but chloride
LG-05-0-1		1140		Solid			X	X	X	X		
LG-05-1-2		1145		Solid			X					

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by: Seth Frederick	Date/Time: 8/1/19 @ 1700	Company: AECOM	Received by: YGRS	Date/Time: 8/2/19 0952	Company: TAH
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

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

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-70018-19143.1
Client Contact: Mr. Wallace Gilmore	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 3
Company: AECOM				Job #:
Address: 19219 Katy Freeway Suite 100	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77094				
Phone: 713-520-990(Tel) 713-520-680(Fax)	PO #: Purchase Order Requested			
Email: wallace.gilmore@aecom.com	WO #:			
Project Name: Chevron	Project #: 60008660			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9056_ORGFM_28D - Chloride	8260B - BTEX Only	8015B_GRO -	8015B_DRO - (MOD) Diesel Range Organics [C10-C28]	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		N		
LG-05-2-3	8/1/19	1150	G	Solid			X					
LG-05-3-4		1155		Solid			X					
LG-05-4-5		1200		Solid			X	X	X	X		
CDU-11-0-1		1320		Solid			X					
CDU-11-1-2		1325		Solid			X					
CDU-11-2-3		1330		Solid			X					
CDU-11-3-4		1335		Solid			X					
CDU-11-4-5		1340		Solid			X	X	X	X		
CDU-12-0-1		1345		Solid			X					
CDU-12-1-2		1350		Solid			X					
CDU-12-3-4		1355		Solid			X					

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Seth Frederick	8/1/19 @ 1700	AECOM	YERS	8/2/19 952	TA H
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 01/16/2019

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

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-70018-19143.1
Client Contact: Mr. Wallace Gilmore	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page
Company: AECOM				Job #:
Address: 19219 Katy Freeway Suite 100	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77094				
Phone: 713-520-990(Tel) 713-520-680(Fax)	PO #: Purchase Order Requested			
Email: wallace.gilmore@aecom.com	WO #:			
Project Name: Chevron	Project #: 60008660			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9056_ORGFM_28D - Chloride	8260B - BTEX Only	8015B_GRO -	8015B_DRO - (MOD) Diesel Range Organics [C10-C28]	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		N		
CDU-12-4-5	8/1/19	1405	G	Solid			X	X	X	X		
CDU-13-0-1		1410		Solid			X					
CDU-13-1-2		1415		Solid			X					
CDU-13-2-3		1420		Solid			X	X	X	X		
CDU-14-0-1		1430		Solid			X					
CDU-14-1-2		1435		Solid			X					
CDU-14-2-3		1440		Solid			X					
CDU-14-3-4		1445		Solid			X	X	X	X		
				Solid								
				Solid								
				Solid								

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Seth Frederick	8/1/19 @ 1700	AECOM	YCRS	8/2/19 952	TAH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 01/16/2019

TestAmerica Houston

Loc: 600
189564

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

'19 AUG 2 9:52

Sample Receipt Checklist

Date/Time Received: _____

JOB NUMBER: _____ CLIENT: Accom

UNPACKED BY: YP CARRIER/DRIVER: Fedex

Custody Seal Present: ☒ YES ☐ NO Number of Coolers Received: 3

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
WB	Y / N	Y / N	2.1	678	+0.1	2.2
WB	Y / N	Y / N	2.8			2.9
WB	Y / N	Y / N	2.3			2.4
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

YP 8/2/19

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:

YP 8/2/19

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

1 of 3
TRK# 0201 7888 5084 3590
MASTER
AB LKSA
FRI – 02 AUG 10:30A
PRIORITY OVERNIGHT
77040
TX–US IAH

600-189564 Waybill

2 of 3
MPS# 0263 7888 5084 3605
Mstr# 7888 5084 3590
0201
AB LKSA
FRI – 02 AUG 10:30A
PRIORITY OVERNIGHT
77040
TX–US IAH

3 of 3
MPS# 0263 7888 5084 3616
Mstr# 7888 5084 3590
0201
AB LKSA
FRI – 02 AUG 10:30A
PRIORITY OVERNIGHT
77040
TX–US IAH

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-41148.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com	State of Origin: Texas	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-189564-1
Address: 4101 Shuffel Street NW, ,	Due Date Requested: 8/9/2019			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Langley Getty & central Dinkard Unit	Project #: 60008660			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

GC, C45

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO/3546 (MOD) Diesel Range Organics [C10-C28]	8015B_GRO/5035A_FM (MOD) Copy Analytes	Total Number of containers	Special Instructions/Note:
				Preservation Code:						
LG - 04-0-1 (600-189564-16)	8/1/19	11:15 Central		Solid			X	X	4	
LG - 05-0-1 (600-189564-21)	8/1/19	11:40 Central		Solid			X	X	4	
LG - 05-4-5 (600-189564-25)	8/1/19	12:00 Central		Solid			X	X	4	
CDU - 11-4-5 (600-189564-30)	8/1/19	13:40 Central		Solid			X	X	4	
CDU - 12-4-5 (600-189564-34)	8/1/19	14:05 Central		Solid			X	X	3	
CDU - 13-2-3 (600-189564-37)	8/1/19	14:20 Central		Solid			X	X	4	
CDU - 14-3-4 (600-189564-41)	8/1/19	14:45 Central		Solid			X	X	4	

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

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

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		8/5/19 1800			8/6/19 930	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client TA Houston Site Name _____ Cooler unpacked by:
Cooler Received on 8/6/19 Opened on 8/6/19
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

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

TestAmerica Cooler # 16 Foam Box Client Cooler Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp. 1.0 °C Corrected Cooler Temp. 1.1 °C
IR GUN #36 (CF +0.6°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
-Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC984738
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

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

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

Concerning _____

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

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

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

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-41314.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sachin.kudchadkar@testamericainc.com	State of Origin: Texas	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-189564-2
Address: 4101 Shuffel Street NW, .	Due Date Requested: 8/9/2019			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Langley Getty & central Dinkard Unit	Project #: 60008660			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

C94

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO/3546 (MOD) Diesel Range Organics [C10-C28]	8015B_GRO/5035A_FM (MOD) Copy Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
LG - 01-0-1 (600-189564-1)	8/1/19	10:00 Central		Solid			X	X	1	
LG - 01-4-5 (600-189564-5)	8/1/19	10:20 Central		Solid			X	X	1	
LG - 02-0-1 (600-189564-6)	8/1/19	10:25 Central		Solid			X	X	1	
LG - 02-4-5 (600-189564-10)	8/1/19	10:45 Central		Solid			X	X	1	
LG - 03-0-1 (600-189564-11)	8/1/19	10:50 Central		Solid			X	X	1	
LG - 03-4-5 (600-189564-15)	8/1/19	11:10 Central		Solid			X	X	1	
LG - 04-4-5 (600-189564-20)	8/1/19	11:35 Central		Solid			X	X	1	

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

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

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	8/14/19 1600	ETA	[signature]	8-15-19 915	ETA
2						
3						

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

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # :_____
Canton Facility

Client ETA Site Name_____ Cooler unpacked by: Ryan Cribley

Cooler Received on 8-15-19 Opened on 8-15-19 915

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off TestAmerica Courier Other_____

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

TestAmerica Cooler # T4 Foam Box Client Cooler Box Other_____

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other_____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp. 1.4 °C Corrected Cooler Temp. 1.5 °C
   IR GUN #36 (CF +0.6°C) Observed Cooler Temp._____ °C Corrected Cooler Temp._____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? (Yes) No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# HC984738
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No (NA)
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes (No)
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

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

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

Concerning _____

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

18. SAMPLE CONDITION

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

19. SAMPLE PRESERVATION

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

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: AECOM Job Number: 600-189564-2

Login Number: 189564 **List Source: Eurofins TestAmerica, Houston**
List Number: 1
Creator: Rubio, Yuri

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2,2.9,2.4
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.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.