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Delineation Report and Remediation Plan

Cotton Hills 23 26 27 Federal Com #001H
New Mexico Oil Conservation Division (NMOCD) Incident ID #NRM1936556814

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

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Delineation Report and Remediation Plan

Cotton Hills 23 26 27 Federal Com #001H
Produced Water Spill Site
Eddy County, New Mexico
NMOCD Incident ID #NRM1936556814

Chevron Mid-Continent Business Unit (MCBU)

July 2021

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1. Introduction

On behalf of Chevron Mid-Continent Business Unit (MCBU), AECOM Technical Services, Inc. (AECOM) has prepared this *Delineation Report and Remediation Plan* to describe soil sampling results and proposed remediation activities to address soil impacts resulting from two produced water releases that occurred at the Cotton Hills 23 26 27 Federal Com #001H site in Eddy County, New Mexico ("the Site").

2. Background

The Site is located at Latitude 32.0345573° North, Longitude 104.1587753° West in Eddy County, New Mexico (**Figure 1**).

It is noted that two separate releases occurred at this location in 2019 from the same source (pump jack) and which overlapped one another (release upon a release). Therefore, a copy of this report has been submitted separately for each release incident ID, however the delineation sampling and remediation plan are the same for both. The two releases are described as follows.

On May 15, 2019, approximately 14.29 barrels (bbls) of produced water with a dissolved chloride concentration greater than 10,000 milligrams per liter (mg/L) were reported to have been released to an unlined well pad. The release was associated with a pumping unit packing failure. Approximately 10 bbls of produced water were reported to have been recovered.

Subsequently, on October 22, 2019, a wellhead stuffing box failure resulted in approximately 18.01 bbls of produced water and 0.62 bbls of oil being released to the unlined well pad within the same area as the May 2019 release. Approximately 10.5 bbls of produced water and 0.5 bbls of oil were reported to have been recovered.

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 releases 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 10 bbls of produced water in May 2019, and approximately 10.5 bbls of produced water and 0.5 bbls of oil in October 2019.

Release Notification C-141 Forms dated May 22, 2019 and November 4, 2019 were 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. The NMOCD assigned Incident ID #NAB1915130679 to the May 2019 release and #NRM1936556814 to the October 2019 release. Updated C-141 Forms for the October release are provided in **Appendix A**.

3. 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 located 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**. As described below in *Section 4*, soil boring PCH-15 was drilled to a depth of 51 feet below ground surface (ft bgs) on December 18, 2019 to evaluate the potential presence of

groundwater to that depth. No groundwater was observed to a depth of 51 ft bgs in boring PCH-15 (**Appendix C**).

- 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 greater than 10 miles from the Site.
- There are no known 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.
- No incorporated municipal boundaries or defined municipal fresh water well fields are located within 14 miles of the Site, which is the approximate distance from the Site to Malaga, NM northeast 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.
- A 100-year floodplain was identified at the Owl Draw, approximately 0.5 miles south of 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.

4. Soil Delineation

The following soil assessment/delineation activities have been conducted at the Site.

- In June 2019, seven initial hand auger borings (CH-01 through CH-07) were drilled to a depth of 1 ft bgs at the Site. The hand auger borings were terminated due to auger refusal in caliche well pad material. The shallow soil assessment activities were documented in the *Initial Site Assessment/Characterization Report* dated August 2019. On September 10, 2019, the NMOCD issued email approval of the report, along with a request for additional delineation of impacts to soil and a submittal of a Remediation Plan for the Site.

- In December 2019, seven air rotary delineation borings (PCH-8 through PCH-14) were drilled and sampled to depths of 5 to 10 ft bgs. In addition, soil boring PCH-15 was drilled to a depth of 51 ft bgs to evaluate the potential presence of groundwater to that depth. No groundwater was observed to a depth of 51 ft bgs in boring PCH-15. The log for soil boring PCH-15 is provided in **Appendix C**.

- In July 2020, four air rotary borings (CH-16 through CH-19) were drilled and sampled for additional horizontal delineation of impacted soil. Based on the soil sampling data collected, the extent of petroleum hydrocarbon and chloride regulatory exceedences was delineated to the south, west and east.

- In April 2021, hand auger borings CH-20 through CH-22 were drilled and sampled for horizontal delineation of impacted soil north of boring CH-17. The 0 to 1 and 1 to 2 ft bgs soil samples from boring CH-20 were analyzed for chloride. The samples collected from borings CH-21 and CH-22 were placed on hold and not analyzed by the laboratory based on the results for the CH-20 samples, which demonstrated horizontal delineation of chloride soil impacts north of boring CH-17.

Soil boring locations are shown on **Figure 2**.

At the time of sampling, the surface area affected by the spills appeared as a stained area that was noticeably darker than the remainder of the well pad surface. Site photographs from June 2019 are provided in **Appendix D**.

The soils underlying the silty sand/caliche well pad (1 to 2 ft thick) are comprised of calcareous clay with silty sand seams to approximately 5 ft bgs. In boring PCH-15, the calcareous clay is underlain by calcareous sandstone to a depth of 15 ft bgs. Silty calcareous clay and caliche are present from approximately 15 to 28 ft bgs, which is underlain by calcareous sandstone to a depth of approximately 35 ft bgs. Calcareous clay with abundant caliche seams is present between 35 ft bgs and the total depth of the boring at a depth of 51 ft bgs.

Soil samples were collected from each of the borings and field-screened using a photoionization detector (PID) to measure volatile organic vapor concentrations. Summaries of Field Sample Collection and Screening Activities are provided in **Appendix C**.

Soil samples from the delineation borings 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 TestAmerica in Houston, Texas (June 2019 samples), ALS Environmental laboratory in Houston, Texas (December 2019 and July 2020 samples), and the Eurofins Xenco laboratory in Midland, Texas (April 2021 samples). Select samples were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Methods 8260B and 8021B, total petroleum hydrocarbons (TPH) by EPA Method 8015B and chloride by EPA Methods 9056A and 300.0. The laboratory results are summarized in **Table 1** and the laboratory analytical reports are provided in **Appendix E**.

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

4.1 Soil Delineation 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
≤ 50 feet bgs	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
51 feet – 100 feet bgs	Chloride	10,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg

The regulatory limits in Table I above are associated with protection of sensitive receptors, which are primarily water resources for the Site. As described above in *Section 3*, it is currently anticipated that depth to groundwater is between 51 and 100 ft bgs beneath the Site. The TPH concentrations reported

for initial hand auger assessment borings CH-01, CH-04, and CH-05 exceeded the regulatory limit of 2,500 milligrams per kilogram (mg/kg) as shown in **Table 1**. The highest TPH concentration of 38,084 mg/kg was reported for sample CH-04 0-1 ft. Only the chloride concentration of 24,000 mg/kg for hand auger boring CH-04 0-1 ft exceeded the regulatory limit of 10,000 mg/kg for sites where groundwater occurs at a depth of 51 to 100 ft bgs.

Laboratory analytical results for the air rotary delineation borings drilled in December 2019 and July 2020 indicated that chloride concentrations were below the regulatory limit of 10,000 mg/kg for all samples and that only the TPH concentration of 3,000 mg/kg for boring PCH-14 (1 – 2 ft bgs) exceeded the regulatory limit of 2,500 mg/kg for sites where groundwater occurs at a depth of 51 to 100 ft bgs.

The soil analytical results for the Site were also compared to the chloride regulatory limit of 600 mg/kg and the TPH regulatory limit of 100 mg/kg specified for the upper four feet of soil under 19.15.29.13.D.(1) NMAC for *RESTORATION, RECLAMATION AND RE-VEGETATION*. The reported TPH and chloride concentrations exceeded the soil reclamation limits for hand auger borings CH-01 through CH-05. The TPH concentration for boring PCH-14 and the chloride concentrations for borings PCH-10, PCH-11, PCH-13, PCH-14, PCH-15, and CH-17 also exceeded reclamation limits for the upper four feet of soil.

As shown on **Figure 3**, The horizontal extent of elevated TPH and chloride concentrations in soil is delineated to the north by borings PCH-12 and CH-20; to the east by borings PCH-08 and CH-18; to the south by borings PCH-09 and CH-19; and to the west by boring CH-16. Since no TPH and/or chloride concentrations below 4 ft bgs exceed the regulatory limits for sites where groundwater occurs at a depth of 51 to 100 ft bgs, vertical delineation requirements have been met for the Site. Therefore, the release impacts appear to be fully delineated.

5. Site Assessment/Delineation Sampling Conclusions

The Site assessment and soil delineation results include the following:

- No sensitive environmental and/or ecological receptors were identified within the search criteria distances described in 19.15.29.11 and 19.15.29.12.C.(4) NMAC.
- BTEX concentrations were reported below the sample detection limit for all samples collected and analyzed.
- Chloride and TPH concentrations in soil below 4 ft bgs are below the applicable regulatory limits based on anticipated depth to groundwater between 51 and 100 ft bgs beneath the Site as described above in *Section 3*.
- The release impacts have been fully delineated both vertically and horizontally.

6. Proposed 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

If required by the NMOCD to address the upper four feet, soil remediation is proposed for the area encompassing borings CH-01 through CH-05, PCH-10, PCH-11, PCH-13, PCH-14, PCH-15, and CH-17 to a maximum depth of 4 ft bgs. The approximate lateral extent of the proposed soil remediation area is

shown on **Figure 4**. Soil remediation will be conducted through excavation and offsite disposal as further described below in *Section 5.2*.

Soil excavation will not be conducted within 10 feet of subsurface lines or 30 feet of surface structures as shown on **Figure 4**. Chevron MCBU requests NMOCD approval for deferral of remediation/reclamation for impacted soil within these setback areas in accordance with 19.15.29.12(C)(2) NMAC.

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

Remediation/reclamation will be performed by excavation and off-site disposal of impacted soil. The impacted soil will be excavated to depths of 2 to 4 ft bgs in the approximate area shown on **Figure 4** and it is currently estimated that approximately 1,600 cubic of yards of impacted soil will be removed. The actual extent of the soil excavation will be determined based on the laboratory analytical results for confirmation soil samples collected from the walls and bottom of the excavation as described below. The excavated soil will be characterized and 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 300.0 and TPH by Method 8015B. 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 Eurofins Xenco in Midland, Texas for laboratory analysis.

Excavation activities will continue as necessary until confirmation sample results are within the required regulatory limits. A liner will then be placed within the area of the excavation footprint and clean fill will be used to backfill the excavated areas and photos will be taken prior to backfilling.

6.3 Site Closure Report

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

6.4 Schedule

Depending on receipt of approval from the NMOCD, the soil remediation/reclamation activities will be scheduled for the third or fourth quarter of 2021, unless deferral to a later date would be acceptable for all the area on the well pad. The schedule for future soil remediation/reclamation of the other deferred setback areas will be determined once the production well has been taken out of service.

7. References

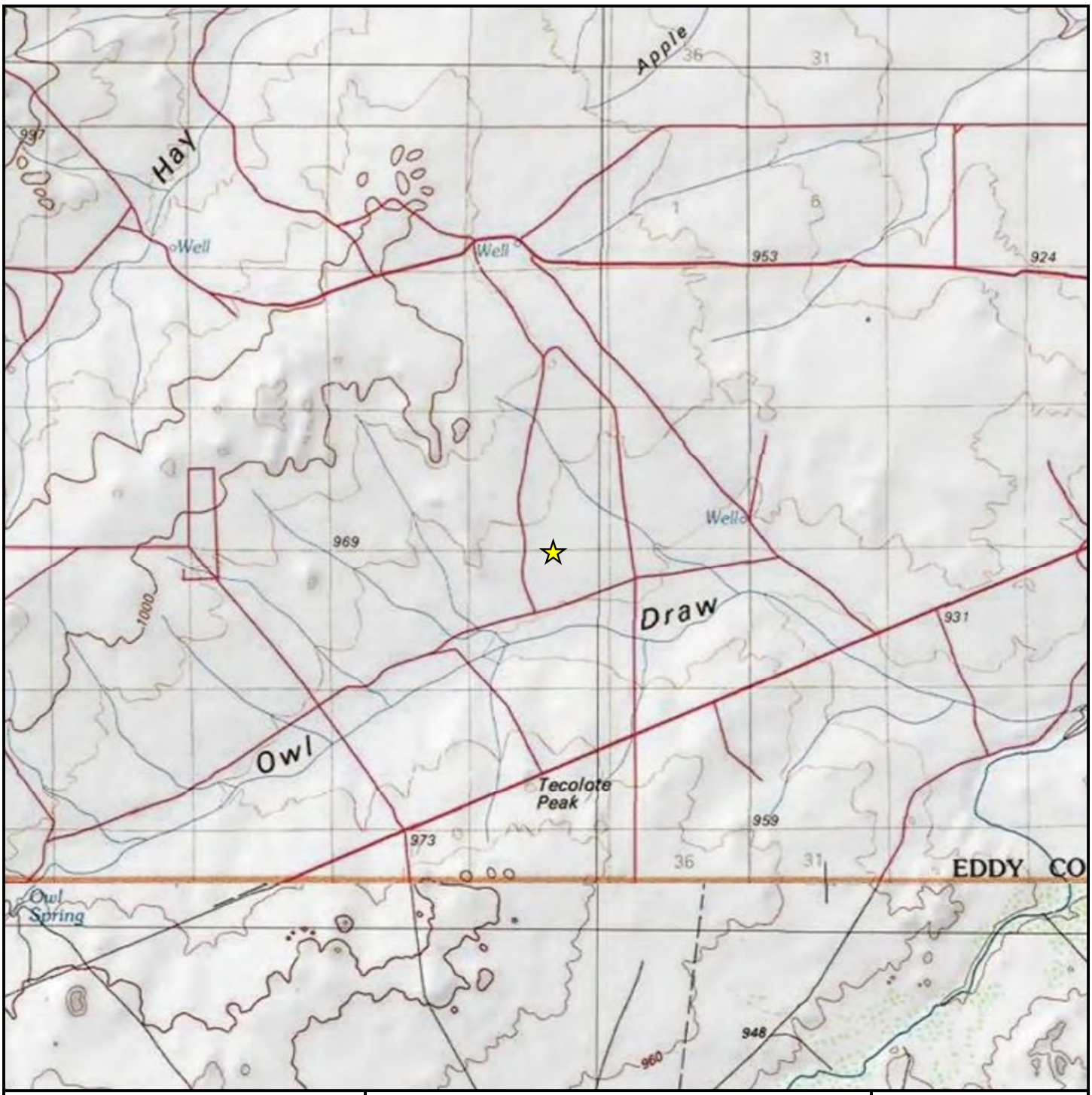
New Mexico Water Rights Reporting System (NMWRRS), Water Column/Average Depth To Water Report. http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.html .

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



Legend

☆ Site Location

Map Location

Site Location Map

Cotton Hills
Eddy County, New Mexico
Chevron MCBU

N

0 0.75 1.5 2.25 3 Miles

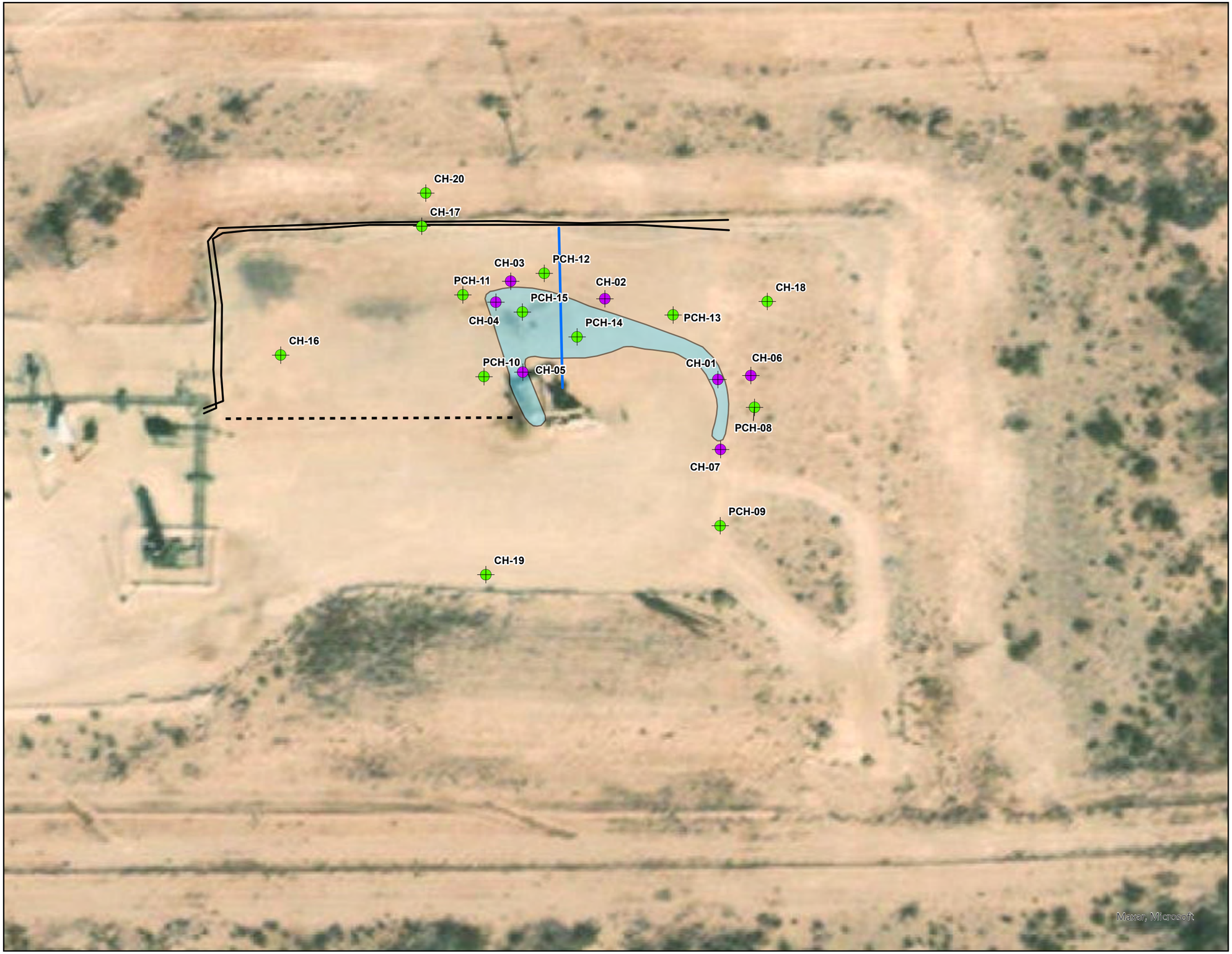
Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere

AECOM

Figure 1

Date: June 2021

Project #: 60657072



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Legend

- Soil Delineation Boring
- Initial Hand Auger Assessment Boring
- Approximate Release Area
- Above Ground Flow Lines
- Subsurface Flow Lines
- Subsurface Electrical Line

0 25 50 100 Feet

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Sample Location Map

Chevron MCBU
Cotton Hills
Eddy County, New Mexico

Date:	Proj. No.:	Figure:
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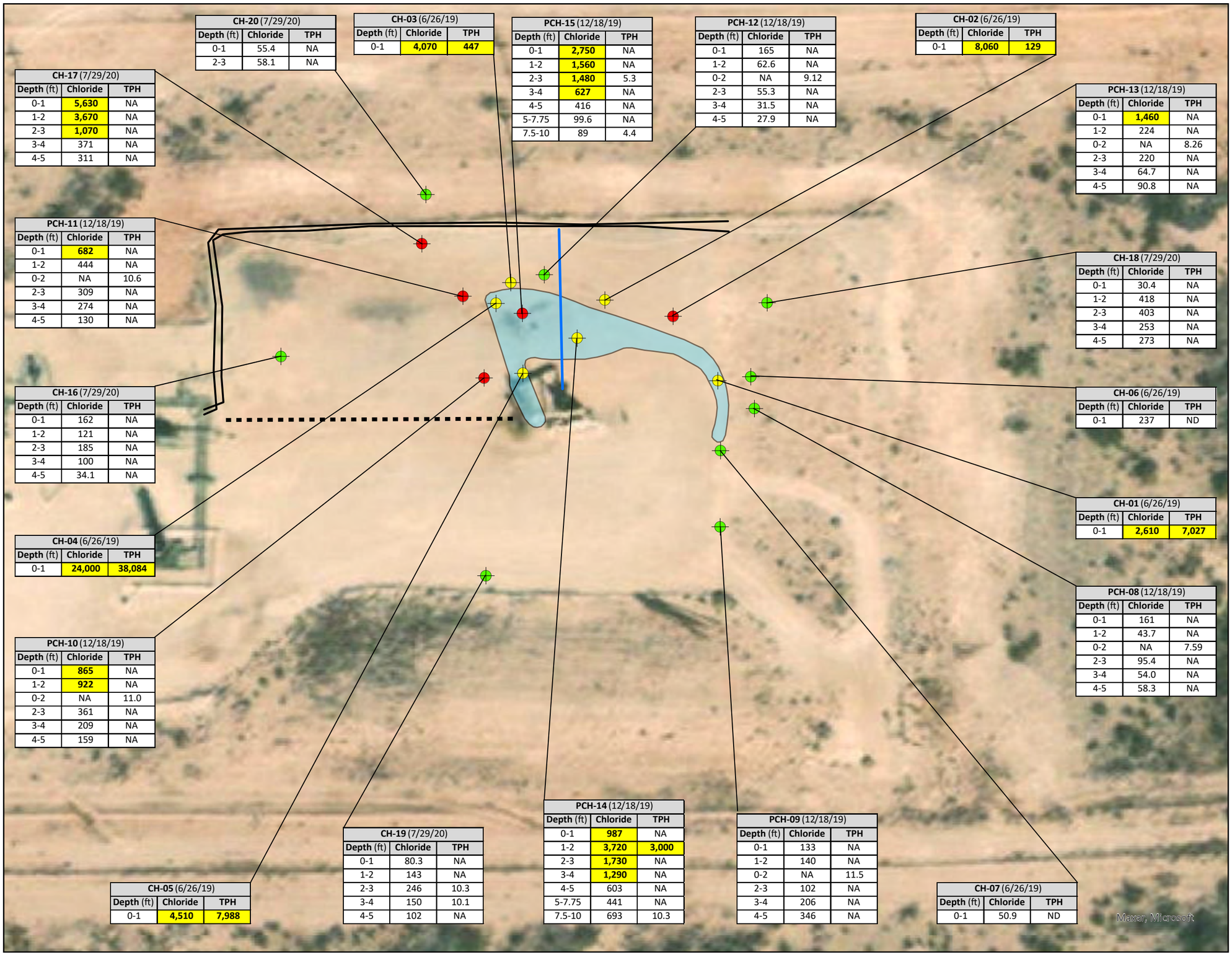

CH-20 (7/29/20)

Depth (ft)	Chloride	TPH
0-1	55.4	NA
2-3	58.1	NA

CH-03 (6/26/19)

Depth (ft)	Chloride	TPH
0-1	**4,070**	**447**

PCH-15 (12/18/19)

Depth (ft)	Chloride	TPH
0-1	**2,750**	NA
1-2	**1,560**	NA
2-3	**1,480**	5.3
3-4	**627**	NA
4-5	416	NA
5-7.75	99.6	NA
7.5-10	89	4.4

PCH-12 (12/18/19)

Depth (ft)	Chloride	TPH
0-1	165	NA
1-2	62.6	NA
0-2	NA	9.12
2-3	55.3	NA
3-4	31.5	NA
4-5	27.9	NA

CH-02 (6/26/19)

Depth (ft)	Chloride	TPH
0-1	**8,060**	**129**

CH-17 (7/29/20)

Depth (ft)	Chloride	TPH
0-1	**5,630**	NA
1-2	**3,670**	NA
2-3	**1,070**	NA
3-4	371	NA
4-5	311	NA

PCH-13 (12/18/19)

Depth (ft)	Chloride	TPH
0-1	**1,460**	NA
1-2	224	NA
0-2	NA	8.26
2-3	220	NA
3-4	64.7	NA
4-5	90.8	NA

PCH-11 (12/18/19)

Depth (ft)	Chloride	TPH
0-1	**682**	NA
1-2	444	NA
0-2	NA	10.6
2-3	309	NA
3-4	274	NA
4-5	130	NA

CH-18 (7/29/20)

Depth (ft)	Chloride	TPH
0-1	30.4	NA
1-2	418	NA
2-3	403	NA
3-4	253	NA
4-5	273	NA

CH-16 (7/29/20)

Depth (ft)	Chloride	TPH
0-1	162	NA
1-2	121	NA
2-3	185	NA
3-4	100	NA
4-5	34.1	NA

CH-06 (6/26/19)

Depth (ft)	Chloride	TPH
0-1	237	ND

CH-01 (6/26/19)

Depth (ft)	Chloride	TPH
0-1	**2,610**	**7,027**

CH-04 (6/26/19)

Depth (ft)	Chloride	TPH
0-1	**24,000**	**38,084**

PCH-08 (12/18/19)

Depth (ft)	Chloride	TPH
0-1	161	NA
1-2	43.7	NA
0-2	NA	7.59
2-3	95.4	NA
3-4	54.0	NA
4-5	58.3	NA

PCH-10 (12/18/19)

Depth (ft)	Chloride	TPH
0-1	**865**	NA
1-2	**922**	NA
0-2	NA	11.0
2-3	361	NA
3-4	209	NA
4-5	159	NA

CH-19 (7/29/20)

Depth (ft)	Chloride	TPH
0-1	80.3	NA
1-2	143	NA
2-3	246	10.3
3-4	150	10.1
4-5	102	NA

PCH-14 (12/18/19)

Depth (ft)	Chloride	TPH
0-1	**987**	NA
1-2	**3,720**	**3,000**
2-3	**1,730**	NA
3-4	**1,290**	NA
4-5	603	NA
5-7.75	441	NA
7.5-10	693	10.3

PCH-09 (12/18/19)

Depth (ft)	Chloride	TPH
0-1	133	NA
1-2	140	NA
0-2	NA	11.5
2-3	102	NA
3-4	206	NA
4-5	346	NA

CH-05 (6/26/19)

Depth (ft)	Chloride	TPH
0-1	**4,510**	**7,988**

CH-07 (6/26/19)

Depth (ft)	Chloride	TPH
0-1	50.9	ND

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Legend

- Soil Boring with no exceedance
- Soil Boring with chloride exceedance
- Soil Boring with TPH and Chloride exceedance
- Approximate Release Area
- Above Ground Flow Lines
- Subsurface Flow Lines
- Subsurface Electrical Line

NA Not Analyzed

Regulatory Limits:

TPH (0-4 ft bgs) = 100 mg/kg
TPH (> 4 ft bgs) = 2,500 mg/kg
Chloride (0-4 bgs) = 600 mg/kg
Chloride (>4) ft bgs) = 10,000 mg/kg

Bold & Highlighted Exceeds Regulatory Limit

0 25 50 100 Feet

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Soil Analytical Results Map

Chevron MCBU
Cotton Hills
Eddy County, New Mexico

Date:	Proj. No.:	Figure:
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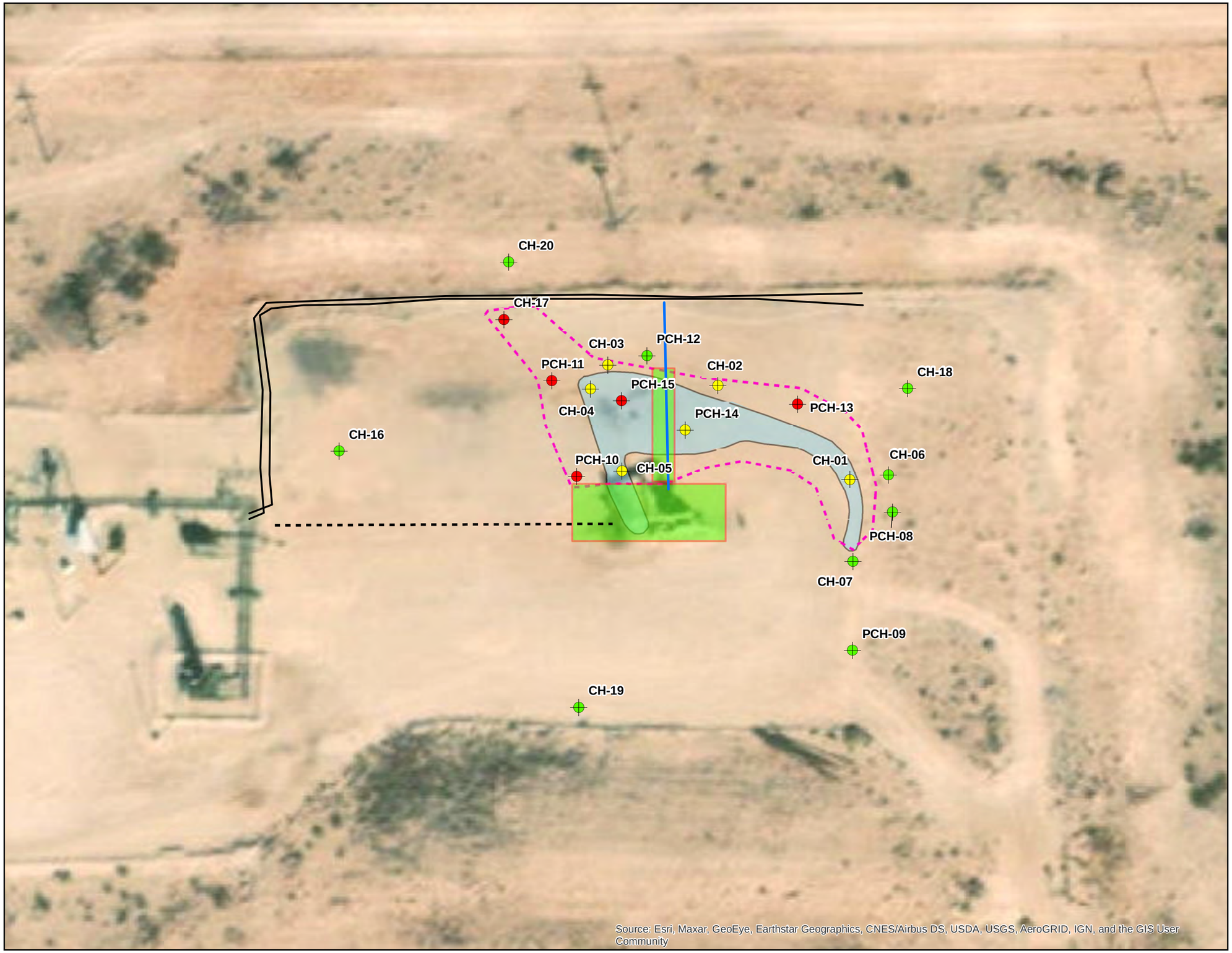

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Legend

- Soil Boring with no exceedance
- Soil Boring with chloride exceedance
- Soil Boring with TPH and Chloride exceedance
- Approximate Release Area
- Area 1 - Proposed Deferral Area
- Area 2 - Proposed Excavation Area (0-4')
- Above Ground Flow Lines
- Subsurface Flow Lines
- Subsurface Electrical Line

0 25 50 100 Feet

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Dallas, TX 75240

Proposed Remedian Plan Map

Chevron MCBU
Cotton Hills
Eddy County, New Mexico

Date:	Proj. No.:	Figure:
6/7/2021	60657072	4

Tables

Table 1
Cotton Hills - Soil Analytical Results
Chevron MCBU Spill Sites
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Total Petroleum Hydrocarbons (EPA 8015 NM)				Volatile Organics (EPA 8260B)				Chloride (Methods 9056A, 9250 and 300.0)
			GRO (C6-C10)	DRO (C10-C28)	MRO (C28-C36)	TPH GRO+DRO+MRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	
Regulatory Limits (mg/kg)		0 - 4	--	--	--	100	10	--	--	--	600
		> 4	--	--	--	2,500	--	--	--	--	10,000
CH-01 - 0-1	06/26/19	0-1	**327**	**5,490**	**1210**	**7,027**	0.000582 U	**0.0103**	**0.00496**	**0.230**	**2,610**
CH-02 - 0-1	06/26/19	0-1	**0.0834 J**	**70.8**	**58**	**129**	0.000574 U	0.00126 U	0.00929 U	0.00103 U	**8,060**
CH-03 - 0-1	06/26/19	0-1	0.065 U	**303**	**144**	**447**	0.000578 U	0.00127 U	0.000936 U	0.00104 U	**4,070**
CH-04 - 0-1	06/26/19	0-1	**174 E**	**30,500**	**7410**	**38,084**	**0.001340** J	**1.50**	**0.848**	**19.2**	**24,000**
CH-05 - 0-1	06/26/19	0-1	**168**	**6,700**	**1,120**	**7,988**	0.005630 U	**0.00215 J**	**0.00224 J**	**0.189**	**4,510**
CH-06 - 0-1	06/26/19	0-1	0.0631 U	34.6 U	34.6 U	ND	0.000618 U	0.00135 U	0.001 U	0.00111 U	**237**
CH-07 - 0-1	06/26/19	0-1	0.0631 U	34.3 U	34.3 U	ND	0.000667 U	0.00146 U	0.00108 U	0.0012 U	**50.9**
PCH-8	12/18/19	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**161**
		1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	**43.7**
		0'-2'	0.016 U	**0.89 J**	**6.7**	**7.59**	NA	NA	NA	NA	NA
		2'-3'	NA	NA	NA	NA	NA	NA	NA	NA	**95.4**
		3'-4'	NA	NA	NA	NA	NA	NA	NA	NA	**54.0**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**58.3**
PCH-9	12/18/19	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**133**
		1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	**140**
		0-2'	0.012 U	**3.8**	**7.7**	**11.5**	NA	NA	NA	NA	NA
		2-3'	NA	NA	NA	NA	NA	NA	NA	NA	**102**
		3'-4'	NA	NA	NA	NA	NA	NA	NA	NA	**206**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**346**
PCH-10	12/18/19	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**865**
		1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	**922**
		0-2'	0.012 U	**1.0 J**	**10**	**11.0**	NA	NA	NA	NA	NA
		2'-3'	NA	NA	NA	NA	NA	NA	NA	NA	**361**
		3'-4'	NA	NA	NA	NA	NA	NA	NA	NA	**209**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**159**
PCH-11	12/18/19	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**682**
		1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	**444**
		0-2'	0.012 U	**1.3 J**	**9.3**	**10.6**	NA	NA	NA	NA	NA
		2'-3'	NA	NA	NA	NA	NA	NA	NA	NA	**309**
		3'-4'	NA	NA	NA	NA	NA	NA	NA	NA	**274**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**130**
PCH-12	12/18/19	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**165**
		1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	**62.6**
		0-2'	0.012 U	**0.62 J**	**8.5**	**9.12**	NA	NA	NA	NA	NA
		2'-3'	NA	NA	NA	NA	NA	NA	NA	NA	**55.3**
		3'-4'	NA	NA	NA	NA	NA	NA	NA	NA	**31.5**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**27.9**
PCH-13	12/18/19	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**1,460**
		1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	**224**
		0-2'	0.011 U	**0.96 J**	**7.3**	**8.26**	NA	NA	NA	NA	NA
		2'-3'	NA	NA	NA	NA	NA	NA	NA	NA	**220**
		3'-4'	NA	NA	NA	NA	NA	NA	NA	NA	**64.7**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**90.8**
PCH-14	12/18/19	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**987**
		1'-2'	0.012 U	**1500**	**1500**	**3,000**	NA	NA	NA	NA	**3,720**
		2'-3'	NA	NA	NA	NA	NA	NA	NA	NA	**1,730**
		3'-4'	NA	NA	NA	NA	NA	NA	NA	NA	**1,290**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**603**
		5'-7.75'	NA	NA	NA	NA	NA	NA	NA	NA	**441**
		7.5'-10'	0.011 U	**4.1**	**6.2**	**10.3**	NA	NA	NA	NA	**693**
PCH-15	12/18/19	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**2,750**
		1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	**1,560**
		2'-3'	0.012 U	**1.2 J**	**4.1**	**5.3**	NA	NA	NA	NA	**1,480**
		3'-4'	NA	NA	NA	NA	NA	NA	NA	NA	**627**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**416**
		5'-7.5'	NA	NA	NA	NA	NA	NA	NA	NA	**99.6**
		7.5'-10'	0.011 U	**1.1 J**	**3.3 J**	**4.4**	NA	NA	NA	NA	**89**
CH-16	07/29/20	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**162**
		1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	**121**
		2'-3'	NA	NA	NA	NA	NA	NA	NA	NA	**185**
		3'-4'	NA	NA	NA	NA	NA	NA	NA	NA	**100**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**34.1**
CH-17	07/29/20	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**5,630**
		1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	**3,670**
		2'-3'	NA	NA	NA	NA	NA	NA	NA	NA	**1,070**
		3'-4'	NA	NA	NA	NA	NA	NA	NA	NA	**371**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**311**
CH-18	07/29/20	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**30.4**
		1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	**418**
		2'-3'	NA	NA	NA	NA	NA	NA	NA	NA	**403**
		3'-4'	NA	NA	NA	NA	NA	NA	NA	NA	**253**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**273**
CH-19	07/29/20	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**80.3**
		1'-2'	NA	NA	NA	NA	NA	NA	NA	NA	**143**
		2'-3'	0.012 U	**1.2 J**	**9.1**	**10.3**	0.00054 U	0.00065 U	0.00076 U	0.0011 U	**246**
		3'-4'	NA	**2.3**	**7.8**	**10.1**	NA	NA	NA	NA	**150**
		4'-5'	NA	NA	NA	NA	NA	NA	NA	NA	**102**
CH-20	04/30/21	0-1'	NA	NA	NA	NA	NA	NA	NA	NA	**55.4**
		1-2'	NA	NA	NA	NA	NA	NA	NA	NA	**58.1**

Notes:

1. Soil analyses performed by TestAmerica Laboratories, Inc. in Houston, TX (June 2019 samples), ALS Environmental in Houston, TX (December 2019 and July 2020 samples), and Eurofins Xenco Laboratories, LLC in Midland, TX (April 2021 samples).
2. Units for all analytical data provided are mg/kg (milligrams per kilogram).
3. Regulatory Limits are from 19.15.29 New Mexico Administrative Code (NMAC).
4. "ft bgs" - feet below ground surface.
5. "NA" - Not Analyzed
6. "ND" - Not Detected
7. "GRO" - Gasoline Range Organic Compounds
8. "DRO" - Diesel Range Organic Compounds
9. "MRO" - Motor Oil/Lube Range Organic Compounds
10. J - Indicates that the result is less than the Method Quantitation Limit (MQL) but greater than or equal to the Sample Detection Limit (SDL).
11. U - Indicates that the analyte was analyzed but not detected at or above the laboratory SDL.
12. E - Indicates that the result is greater than the MQL and the concentration is an estimated value.
13. **Bold** - Detectable concentration that exceeds laboratory method reporting limits.
14. **Bold and Shaded** - Reported concentration exceeds Regulatory Limits for 0-4' bgs.
15. **Bold and Shaded** - Reported concentration exceeds Regulatory Limits for > 4' bgs.
16. "--" Indicates that no applicable regulatory limit exists for that analyte.

Appendix A

Form C-141 – Cotton Hills 23 26 27 Federal Com #001H

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	NRM1936556814
District RP	
Facility ID	
Application ID	

Release Notification

VCDEV-191107-C-1410

Responsible Party

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

Location of Release Source

Latitude 32.0345573 Longitude -104.1587753
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Cotton Hills 23 26 27 Fed Com #001H	Site Type: Gas
Date Release Discovered: 10/22/2019	API# *(if applicable): 30-=015-41535*

Unit Letter	Section	Township	Range	County
B	23	26S	27E	Eddy

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): 0.62 barrels	Volume Recovered (bbls): 0.5 barrels
☒ Produced Water	Volume Released (bbls): 18.01 barrels	Volume Recovered (bbls): 10.5 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)

Cause of Release:

Stuffing box failure. Spill to land.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM1936556814
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

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.

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: Josepha Deleon Date: November 4, 2019

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

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

OCD Only

Received by: Ramona Marcus Date: 12/31/2019

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	NRM1936556814
District RP	
Facility ID	
Application ID	

Incident Date			10/22/2019		
Incident Time			Start Time	End Time	
			12:00pm	5:00pm	
Location			Cotton Hills 23-26-27 #1		
Area	Standing Liquid	In Soil	size	Oil Volume	Water Volume
1	0.0208	0.68	21.0417 X 58	0	2.9
2	0.0833	0	36 x 3.0417	0.62	1
3	0.0521	3.39	(3.14)22^2	0	14.11
4					
5					
			Total Fluid	0.62	18.01
			Fluid Recovered	Oil Volume	Water Volume
				.5 Barrels	10.5 Barrel

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NRM1936556814
District RP	
Facility ID	
Application ID	

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Page 5

State of New Mexico
Oil Conservation Division

Incident ID	NRM1936556814
District RP	
Facility ID	
Application ID	

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State of New Mexico
Oil Conservation Division

Incident ID	NRM1936556814
District RP	
Facility ID	
Application ID	

State of New Mexico
Oil Conservation Division

Incident ID	NRM1936556814
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?	unknown (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: Amy Barnhill Title: Water Specialist

Signature: Date: 7-9-2021

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NRM1936556814
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

- [X] Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- [X] Extents of contamination must be fully delineated.
- [X] Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Amy Barnhill Title: Water Specialist

Signature: Amy Barnhill Date: 7-9-2021

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

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Appendix B

NMWRRS Water Column/Average Depth to Water Report

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

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

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 579429.64 **Northing (Y):** 3544575.38 **Radius:** 1000

7/26/19 3:33 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Appendix C

Summary of Field Sample Collection and Screening Activities

Sample Collection and Screening
Cotton Hills 23 26 27 Federal Com #001H

Date	Boring ID	Depth (ft bgs)	Time	Lithology	PID (ppm)	Conductivity Probe (mS/cm)	ChlorideTest Strip (ppm Cl-)	ChlorideTest Strip (%NaCl)	EC Meter (mS/cm)
6/26/2019	CH-01	0-1	1050	0-1 ft bgs:Caliche with some fine to coarse sand	655.3	0.50	ND	ND	15.4
6/26/2019	CH-02	0-1	1105	0-1 ft bgs:Caliche with some fine to coarse sand	2.3	0.13	1275.00	2.1	23.1
6/26/2019	CH-03	0-1	1115	0-1 ft bgs:Caliche with some fine to coarse sand	6.8	0.33	725.00	0.12	14.9
6/26/2019	CH-04	0-1	1125	0-1 ft bgs:Caliche with some fine to coarse sand	898.7	0.19	3015.00	0.495	37.9
6/26/2019	CH-05	0-1	1135	0-1 ft bgs:Caliche with some fine to coarse sand	504.2	1.84	2805.00	0.46	25.25
6/26/2019	CH-06	0-1	1145	0-1 ft bgs:Caliche with some fine to coarse sand	4.3	0.07	160.00	0.025	11.85
6/26/2019	CH-07	0-1	1155	0-1 ft bgs:Caliche with some fine to coarse sand	0.1	0.03	ND	ND	11.6

Sample Collection and Screening
Cotton Hills 23 26 27 Federal Com #001H

Date	Boring ID	Depth (ft bgs)	Lithology	Time	PID (ppm)	Conductivity Probe (mS/cm)	Chloride Lab Result (mg/kg)
12/18/2019	PCH-8	0-1	(0-2') Reddish yellow (5YR,6/8) Silty Sand (SM) with abundant caliche seams. (2'-5') Red (2.5YR,4/8) calcareous clay (CL) with abundant silty sand seams. No odors.	1515	0.2	2.43	161
		1-2		1520	0.1	1.12	43.7
		2-3		1525	0.8	2.08	95.4
		3-4		1530	0.5	1.19	54
		4-5		1535	0.1	1.73	58.3
12/18/2019	PCH-9	0-1	(0-2') Reddish Yellow (5YR,6/8) Silty Sand (SM) with abundant caliche seams. (2'-5') Red (2.5YR,4/8) calcareous clay (CL) with abundant silty sand and caliche seams. No odors.	1550	0.6	1.11	133
		1-2		1555	0.5	1.22	140
		2-3		1600	0.4	0.99	102
		3-4		1605	0.2	1.08	206
		4-5		1610	0.1	1.09	346
12/18/2019	PCH-10	0-1	(0-2') Reddish Yellow (5YR,6/8) Silty Sand (SM) with abundant caliche seams. (2'-5') Red (2.5YR, 4/8) calcareous clay (CL) with abundant silty sand seams. No odors.	1305	0.1	1.31	865
		1-2		1310	0.2	1.41	922
		2-3		1315	0.1	1.36	361
		3-4		1320	0.3	1.27	209
		4-5		1325	0.1	1.12	159
12/18/2019	PCH-11	0-1	(0-2') Reddish Yellow (5YR,6/8) Silty Sand (SM) with abundant caliche seams. (2'-5') Red (2.5YR, 4/8) calcareous clay (CL) with abundant silty sand seams. No odors.	1340	0.2	1.11	682
		1-2		1345	0.3	1.11	444
		2-3		1350	0.4	1.3	309
		3-4		1355	0.3	1.27	274
		4-5		1400	0.1	1.2	130
12/18/2019	PCH-12	0-1	(0-2') Reddish Yellow (5YR,6/8) Silty Sand (SM) with abundant caliche seams. (2'-5') Red (2.5YR, 4/8) calcareous clay (CL) with abundant silty sand seams. No odors.	1410	0.1	2.06	165
		1-2		1415	0.3	1.16	62.2
		2-3		1420	0.3	0.98	55.3
		3-4		1425	0.2	1.11	31.5
		4-5		1430	0.1	2.16	27.9

Sample Collection and Screening
Cotton Hills 23 26 27 Federal Com #001H

Date	Boring ID	Depth (ft bgs)	Lithology	Time	PID (ppm)	Conductivity Probe (mS/cm)	Chloride Lab Result (mg/kg)
12/18/2019	PCH-13	0-1	(0-2') Reddish Yellow (5YR,6/8) Silty Sand (SM) with abundant caliche seams. (2'-5') Red (2.5YR, 4/8) calcareous clay (CL) with abundant silty sand seams. No odors.	1440	0.3	1.11	1460
		1-2		1445	0.4	1.11	224
		2-3		1450	0.1	1.16	220
		3-4		1455	0.2	1.41	64.7
		4-5		1500	0.3	1.43	90.8
12/18/2019	PCH-14	0-1	(0-2') Reddish Yellow (5YR,6/8) Silty Sand (SM) with abundant caliche seams. (2'-5') Red (2.5YR, 4/8) calcareous clay (CL) with abundant silty sand seams. (5'-10) White calcareous sanstone, friable, some red (2.5YR,4/8) clay seams. Some odors.	1030	1.2	6.32	987
		1-2		1035	21.3	7.03	3720
		2-3		1040	8.1	4.01	1730
		3-4		1045	2.6	3.12	1290
		4-5		1050	1	2.93	603
		5-7.5		1055	0.8	2.81	441
		7.5-10		1100	0.9	2.35	693
12/18/2019	PCH-15	0-1	(0-2') Reddish Yellow (5YR,6/8) poorly graded sand (SP) with abundant caliche seams. (4'-5') Red (2.5YR,4/8) calcareous clay (CL). (5'-10') Whie calcareous sanstone, friable, some red (2.5YR,6/8) clay seams. Some odors.	1120	1.6	5.12	2750
		1-2		1125	2.8	4.61	1560
		2-3		1130	24.1	4.08	1480
		3-4		1135	3.1	3.1	627
		4-5		1140	1.6	2.96	416
		5-7.5		1145	0.9	3.1	99.6
		7.5-10		1200	0.8	2.11	99.6

LOG OF SOIL BORING: PCH-15

CLIENT: Chevron Mid-Continental Business Unit (MCBU)
JOB No.: 60620394
DATE: December 18, 2019

SITE: Cotton Hills
LOCATION: Eddy County, New Mexico

DRILLING CONTRACTOR: HCI
BOREHOLE DIA.: 4"
MONITOR WELL DIA.: N/A

SAMPLING METHOD: Air Rotary
COORDINATES (NM83 - EAST FEET): N: N/A
E: N/A

RIG TYPE: Truck-mounted
GROUND SURFACE ELEV.: N/A
TOP OF CASING ELEV.: N/A

DRILLER:
INITIAL GROUNDWATER DEPTH (BTOC): N/A
TOTAL DEPTH OF BORING: 51'

LOGGED BY: Mike Zappa
DRILLING STARTED: 1630
DRILLING COMPLETED: 1700
WELL INSTALLED: No

CONDITION: ---
PAGE: 1 OF 3

DEPTH IN FEET	WELL COMPLETION DIAGRAM	METHOD OF SAMPLING	INCHES DRIVEN / INCHES RECOVERED	SAMPLE NO. / SAMPLE DEPTH	FILTERED OVA READING (ppm)	NET OVA READING (ppm)	UNIFIED SOIL CLASSIFICATION	SOIL GRAPH	LITHOLOGIC DESCRIPTION
5	No Monitoring Well installed in borehole upon completion of sampling	AR	60/60						
		AR	60/60						
10		AR	60/60			1.1 0.9 0.2 0.1	SS		Weathered calcareous SANDSTONE, friable, some red (2.5YR,4/8) clay seams, no odors
15		AR	60/60			0.1 0.0 0.2	CL		Red (2.5YR,4/8) calcareous CLAY, silty with abundant calcareous caliche seams

FILE: O:\Projects\ENV2060620394_ChevCotton\900_CAD_GIS\910_CADLogs\PCH 15.dwg ; SAVED: Tuesday, January 21, 2020 6:56:37 AM ; PLOTTED: Tuesday, January 21, 2020 6:57:44 AM

SAMPLER KEY:

SPT	STANDARD PENETRATION TEST SAMPLER	AR	AIR ROTARY SAMPLING
		BGS	BELOW GROUND SURFACE
CB	CORE BARREL SAMPLER	BTOC	BELOW TOP OF CASING
SB	SPLIT BARREL SAMPLER (5' IN LENGTH)	N/A	NOT APPLICABLE or NOT AVAILABLE
SS	SPLIT-SPOON SAMPLER	NM	NOT MEASURED
ST	SHELBY TUBE SAMPLER	▽	INITIAL WATER LEVEL DURING DRILLING
HA	HAND AUGER SAMPLER	▼	STATIC WATER LEVEL
GS	GEOPROBE / DIRECT-PUSH SAMPLER		

AECOM

LOG OF SOIL BORING: PCH-15 (CONT.)

CLIENT: Chevron Mid-Continental Business Unit (MCBU) JOB No.: 60620394 DATE: December 18, 2019

SITE: Cotton Hills LOCATION: Eddy County, New Mexico

DRILLING CONTRACTOR: HCI BOREHOLE DIA.: 4" MONITOR WELL DIA.: N/A

SAMPLING METHOD: Air Rotary COORDINATES (NM83 - EAST FEET): N: N/A E: N/A

RIG TYPE: Truck-mounted GROUND SURFACE ELEV.: N/A TOP OF CASING ELEV.: N/A

DRILLER: INITIAL GROUNDWATER DEPTH (BTOC): N/A TOTAL DEPTH OF BORING: 51'

LOGGED BY: Mike Zappa DRILLING STARTED: 1630 DRILLING COMPLETED: 1700 WELL INSTALLED: No

CONDITION: --- PAGE: 2 OF 3

DEPTH IN FEET	WELL COMPLETION DIAGRAM	METHOD OF SAMPLING	INCHES DRIVEN / INCHES RECOVERED	SAMPLE NO. / SAMPLE DEPTH	FILTERED OVA READING (ppm)	NET OVA READING (ppm)	UNIFIED SOIL CLASSIFICATION	SOIL GRAPH	LITHOLOGIC DESCRIPTION
20	No Monitoring Well installed in borehole upon completion of sampling	AR	60/60			0.3 0.4 0.1			
		AR	60/60			0.2 0.1 0.2 0.1 0.0	CL		- very silty
25		AR	60/60			0.0 0.1 0.2 0.1 0.1	SS		White weathered calcareous SANDSTONE, friable with abundant red (2.5YR,4/8) clay seams
30		AR	60/60			0.1 0.2 0.3 0.2			- no odors
35						0.1			

FILE: O:\Projects\ENV20\60620394_ChevCotton\900_CAD_GIS\910_CADLogs\PCH 15.dwg ; SAVED: Tuesday, January 21, 2020 6:56:37 AM ; PLOTTED: Tuesday, January 21, 2020 6:57:46 AM

SAMPLER KEY:

SPT	STANDARD PENETRATION TEST SAMPLER	AR	AIR ROTARY SAMPLING
CB	CORE BARREL SAMPLER	BGS	BELOW GROUND SURFACE
SB	SPLIT BARREL SAMPLER (5' IN LENGTH)	BTOC	BELOW TOP OF CASING
SS	SPLIT-SPOON SAMPLER	N/A	NOT APPLICABLE or NOT AVAILABLE
ST	SHELBY TUBE SAMPLER	NM	NOT MEASURED
HA	HAND AUGER SAMPLER	▽	INITIAL WATER LEVEL DURING DRILLING
GS	GEOPROBE / DIRECT-PUSH SAMPLER	▼	STATIC WATER LEVEL

AECOM

LOG OF SOIL BORING: PCH-15 (CONT.)

CLIENT: Chevron Mid-Continental Business Unit (MCBU)
JOB No.: 60620394 DATE: December 18, 2019
SITE: Cotton Hills
LOCATION: Eddy County, New Mexico
DRILLING CONTRACTOR: HCI
BOREHOLE DIA.: 4" MONITOR WELL DIA.: N/A
SAMPLING METHOD: Air Rotary
COORDINATES (NM83 - EAST FEET): N: N/A E: N/A
RIG TYPE: Truck-mounted
GROUND SURFACE ELEV.: N/A TOP OF CASING ELEV.: N/A
DRILLER:
INITIAL GROUNDWATER DEPTH (BTOC): N/A TOTAL DEPTH OF BORING: 51'
LOGGED BY: Mike Zappa DRILLING STARTED: 1630 DRILLING COMPLETED: 1700 WELL INSTALLED: No
CONDITION: --- PAGE: 3 OF 3

DEPTH IN FEET	WELL COMPLETION DIAGRAM	METHOD OF SAMPLING	INCHES DRIVEN / INCHES RECOVERED	SAMPLE NO. / SAMPLE DEPTH	FILTERED OVA READING (ppm)	NET OVA READING (ppm)	UNIFIED SOIL CLASSIFICATION	SOIL GRAPH	LITHOLOGIC DESCRIPTION
						0.2	SS		
		AR	60/60			0.1			Red (2.5YR,4/8) calcareous CLAY, very silty with abundant white calcareous caliche seams
						0.0			
						0.1			
40						0.0			
						0.1			- very silty
		AR	60/60			0.1			
						0.3	CL		
						0.1			
45						0.1			
						0.1			- no odors
		AR	60/60			0.1			
						0.1			
						0.2			- very silty
50						0.1			
									Boring terminated at 51 feet below ground surface. No groundwater encountered. Backfilled with bentonite upon sampling completion.

No Monitoring Well installed in borehole upon completion of sampling

SAMPLER KEY:

SPT	STANDARD PENETRATION TEST SAMPLER	AR	AIR ROTARY SAMPLING
CB	CORE BARREL SAMPLER	BGS	BELOW GROUND SURFACE
SB	SPLIT BARREL SAMPLER (5' IN LENGTH)	BTOC	BELOW TOP OF CASING
SS	SPLIT-SPOON SAMPLER	N/A	NOT APPLICABLE or NOT AVAILABLE
ST	SHELBY TUBE SAMPLER	NM	NOT MEASURED
HA	HAND AUGER SAMPLER	▽	INITIAL WATER LEVEL DURING DRILLING
GS	GEOPROBE / DIRECT-PUSH SAMPLER	▼	STATIC WATER LEVEL

AECOM

FILE: O:\Projects\ENV\206062039 4_ChevCotton\900_CAD_GIS\910_CAD\Logs\PCH 15.dwg ; SAVED: Tuesday, January 21, 2020 6:56:37 AM ; PLOTTED: Tuesday, January 21, 2020 6:57:47 AM

Sample Collection and Screening Cotton Hills									
Date	**Boring ID**	**Depth (ft bgs)**	**Lithology**	**Time**	**PID (ppm)**	**Conductivity Probe (mS/cm)**	**EC Meter (mS/cm)**	**Latitude**	**Longitude**
7/29/2020	CH-16	0-1	Caliche (pad)	11:20	6.1	1.8	0.86	32.034623*N	104.159166*W
		1-2	SAA	11:25	8.2	3.6	1.0		
		2-3	Reddish-brown silty sand (dark)	11:30	7.5	22.7	2.36		
		3-4	SAA	11:35	6.2	29.1	2.4		
		4-5	SAA	11:40	6.1	17.5	2.05		
7/29/2020	CH-17	0-1	Caliche (pad)	10:45	3.5	143	2.47	32.034854*N	104.159166*W
		1-2	Reddish-brown silty sand with caliche nodules	10:50	5.8	215.1	2.51		
		2-3	Dark reddish-brown silty sand	10:55	5.4	180.5	2.53		
		3-4	SAA	11:00	7.1	122.3	2.36		
		4-5	SAA	11:05	6.2	75.7	2.11		
7/29/2020	CH-18	0-1	Brown silty sand, fine grained	10:10	2.0	0.2	2.14	32.034783*N	104.158238*W
		1-2	SAA	10:15	6.5	3.0	1.98		
		2-3	Reddish-brown silty sand, fine-grained	10:20	5.6	15.0	2.15		
		3-4	SAA	10:25	7.8	38.0	2.07		
		4-5	SAA	10:30	6.7	52.2	2.2		
7/29/2020	CH-19	0-1	Caliche (pad)	12:00	5.8	1.5	1.95	32.034324*N	104.158879*W
		1-2	SAA and dark brown silty sand	12:05	4.2	11.5	0.86		
		2-3	Dark brown silty sand, fine-grained	12:10	6.5	67.1	0.65		
		3-4	SAA	12:15	3.0	69.9	0.70		
		4-5	SAA	12:20	2.2	71.2	0.62		

Appendix D

Photographic Documentation

Client: Chevron MCBU	**Project Number: 60608301**
Project Name: Cotton Hills 23 26 27 Federal Com #001H	**Site Location: Eddy County, New Mexico**

SPILL AREA	
Photograph No. 1 **Photographer:** L. Harris **Date:** 6/26/2019 **Comments:** Looking west at western extent of spill area.	
SPILL AREA	
Photograph No. 2 **Photographer:** L. Harris **Date:** 6/26/2019 **Comments:** Looking southwest at the spill area.	

Client: Chevron MCBU	Project Number: 60608301
Project Name: Cotton Hills 23 26 27 Federal Com #001H	Site Location: Eddy County, New Mexico

SPILL AREA

Photograph No. 3	
Photographer: L. Harris	
Date: 6/26/2019	
Comments: Looking south at spill area. The red flags on the left mark an electrical line. The white flags on the right show boring locations CH-03 and CH-04.	

SPILL AREA

Photograph No. 4	
Photographer: L. Harris	
Date: 6/26/2019	
Comments: Looking southeast at the spill area.	

Appendix E

Laboratory Analytical Reports

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 600-187716-1
Client Project/Site: Cotton Hills

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

Attn: Mr. Wallace Gilmore

Authorized for release by:
7/16/2019 11:23:17 AM

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

Client: AECOM
Project/Site: Cotton Hills

Laboratory Job ID: 600-187716-1

Table of Contents

Case Narrative

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

Job ID: 600-187716-1

Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative
600-187716-1

Comments
No additional comments.

Receipt
The samples were received on 6/27/2019 9:57 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2º C.

Receipt Exceptions

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

GC/MS VOA
Method(s) 8260B: Internal standard response for (1,4-Dichlorobenzene-d4) for the following sample was outside acceptance criteria: CH - 01 - 0 - 1 (600-187716-1). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method(s) 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: CH - 04 - 0 - 1 (600-187716-4). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: CH - 04 - 0 - 1 (600-187716-4). Elevated reporting limits (RLs) are provided.

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

GC VOA
Method(s) 8015B: The following sample required a dilution due to the nature of the sample matrix: CH - 01 - 0 - 1 (600-187716-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8015B: Sample was originally prepped as a low level solid with 0.5g and exceeded the calibration range. Per the SOP sample was prepped as a MeOH extract and was ND. Non-homogenization of the sample is suspected and both set of data have been reported.

CH - 04 - 0 - 1 (600-187716-4)

Method(s) 8015B: Sample was prepped at a MeOH and was ND. Non-homogenized sample is suspected, both sets of data have been reported.

CH - 04 - 0 - 1 (600-187716-4)

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

GC Semi VOA
Method(s) 8015B: The following sample required a dilution due to the nature of the sample matrix: CH - 04 - 0 - 1 (600-187716-4). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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

Case Narrative

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

Job ID: 600-187716-1 (Continued)

Laboratory: Eurofins TestAmerica, Houston (Continued)

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

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

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

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

Method Summary

Client: AECOM Job ID: 600-187716-1
Project/Site: Cotton Hills

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
5030B	Purge and Trap	SW846	TAL CAN
5030B	Purge and Trap	SW846	TAL HOU
5035	Closed System Purge & Trap/Field Methanol	SW846	TAL HOU
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: 600-187716-1

Project/Site: Cotton Hills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-187716-1	CH - 01 - 0 - 1	Solid	06/26/19 10:50	06/27/19 09:57	
600-187716-2	CH - 02 - 0 - 1	Solid	06/26/19 11:05	06/27/19 09:57	
600-187716-3	CH - 03 - 0 - 1	Solid	06/26/19 11:15	06/27/19 09:57	
600-187716-4	CH - 04 - 0 - 1	Solid	06/26/19 11:25	06/27/19 09:57	
600-187716-5	CH - 05 - 0 - 1	Solid	06/26/19 11:35	06/27/19 09:57	
600-187716-6	CH - 06 - 0 - 1	Solid	06/26/19 11:45	06/27/19 09:57	
600-187716-7	CH - 07 - 0 - 1	Solid	06/26/19 11:55	06/27/19 09:57	
600-187716-8	TRIP BLANK	Water	06/26/19 00:00	06/27/19 09:57	

Client Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

Client Sample ID: CH - 01 - 0 - 1

Lab Sample ID: 600-187716-1

Date Collected: 06/26/19 10:50

Matrix: Solid

Date Received: 06/27/19 09:57

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000582	U	0.00462	0.000582	mg/Kg		06/27/19 13:58	07/01/19 12:14	1
Ethylbenzene	**0.00496**		0.00462	0.000943	mg/Kg		06/27/19 13:58	07/01/19 12:14	1
Toluene	**0.0103**		0.00462	0.00128	mg/Kg		06/27/19 13:58	07/01/19 12:14	1
Xylenes, Total	**0.230**		0.00462	0.00104	mg/Kg		06/27/19 13:58	07/01/19 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*61 - 130*	*06/27/19 13:58*	*07/01/19 12:14*	*1*
Dibromofluoromethane	*105*		*68 - 140*	*06/27/19 13:58*	*07/01/19 12:14*	*1*
Toluene-d8 (Surr)	*96*		*50 - 130*	*06/27/19 13:58*	*07/01/19 12:14*	*1*
4-Bromofluorobenzene	*116*	*	*57 - 140*	*06/27/19 13:58*	*07/01/19 12:14*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	**327000**		99800	53000	ug/Kg		07/05/19 13:55	07/08/19 10:00	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*15*	*X*	*36 - 157*	*07/05/19 13:55*	*07/08/19 10:00*	*20*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10 - C28]	**5490**		991	685	mg/Kg		07/10/19 12:12	07/12/19 21:26	20
C28-C36	**1210**		991	685	mg/Kg		07/10/19 12:12	07/12/19 21:26	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*91*		*26 - 125*	*07/10/19 12:12*	*07/12/19 21:26*	*20*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2610**		399	53.3	mg/Kg			07/06/19 01:08	100

Client Sample ID: CH - 02 - 0 - 1

Lab Sample ID: 600-187716-2

Date Collected: 06/26/19 11:05

Matrix: Solid

Date Received: 06/27/19 09:57

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000574	U	0.00455	0.000574	mg/Kg		06/27/19 13:58	06/29/19 21:01	1
Ethylbenzene	0.000929	U	0.00455	0.000929	mg/Kg		06/27/19 13:58	06/29/19 21:01	1
Toluene	0.00126	U	0.00455	0.00126	mg/Kg		06/27/19 13:58	06/29/19 21:01	1
Xylenes, Total	0.00103	U	0.00455	0.00103	mg/Kg		06/27/19 13:58	06/29/19 21:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*61 - 130*	*06/27/19 13:58*	*06/29/19 21:01*	*1*
Dibromofluoromethane	*103*		*68 - 140*	*06/27/19 13:58*	*06/29/19 21:01*	*1*
Toluene-d8 (Surr)	*102*		*50 - 130*	*06/27/19 13:58*	*06/29/19 21:01*	*1*
4-Bromofluorobenzene	*96*		*57 - 140*	*06/27/19 13:58*	*06/29/19 21:01*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	**83.4**	**J**	99.8	64.1	ug/Kg		07/01/19 09:46	07/01/19 23:18	1

Client Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

Client Sample ID: CH - 02 - 0 - 1

Lab Sample ID: 600-187716-2

Date Collected: 06/26/19 11:05
Matrix: Solid
Date Received: 06/27/19 09:57

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	*88*		*43 - 120*	*07/01/19 09:46*	*07/01/19 23:18*	*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]	**70.8**		49.9	34.5	mg/Kg		07/10/19 12:12	07/12/19 21:53	1
C28-C36	**58.0**		49.9	34.5	mg/Kg		07/10/19 12:12	07/12/19 21:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	*85*		*26 - 125*	*07/10/19 12:12*	*07/12/19 21:53*	*1*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8060**		398	53.2	mg/Kg			07/06/19 01:26	100

Client Sample ID: CH - 03 - 0 - 1

Lab Sample ID: 600-187716-3

Date Collected: 06/26/19 11:15
Matrix: Solid
Date Received: 06/27/19 09:57

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000578	U	0.00459	0.000578	mg/Kg		06/27/19 13:58	06/29/19 21:24	1
Ethylbenzene	0.000936	U	0.00459	0.000936	mg/Kg		06/27/19 13:58	06/29/19 21:24	1
Toluene	0.00127	U	0.00459	0.00127	mg/Kg		06/27/19 13:58	06/29/19 21:24	1
Xylenes, Total	0.00104	U	0.00459	0.00104	mg/Kg		06/27/19 13:58	06/29/19 21:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*104*		*61 - 130*	*06/27/19 13:58*	*06/29/19 21:24*	*1*
Dibromofluoromethane	*106*		*68 - 140*	*06/27/19 13:58*	*06/29/19 21:24*	*1*
Toluene-d8 (Surr)	*105*		*50 - 130*	*06/27/19 13:58*	*06/29/19 21:24*	*1*
4-Bromofluorobenzene	*94*		*57 - 140*	*06/27/19 13:58*	*06/29/19 21:24*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	65.0	U	101	65.0	ug/Kg		07/01/19 09:46	07/01/19 23:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	*90*		*43 - 120*	*07/01/19 09:46*	*07/01/19 23:59*	*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]	**303**		51.4	35.5	mg/Kg		07/10/19 12:12	07/12/19 22:20	1
C28-C36	**144**		51.4	35.5	mg/Kg		07/10/19 12:12	07/12/19 22:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	*77*		*26 - 125*	*07/10/19 12:12*	*07/12/19 22:20*	*1*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4070**		396	52.9	mg/Kg			07/06/19 01:44	100

Client Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

Client Sample ID: CH - 04 - 0 - 1

Date Collected: 06/26/19 11:25
Date Received: 06/27/19 09:57

Lab Sample ID: 600-187716-4

Matrix: Solid

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00134**	**J**	0.00498	0.000627	mg/Kg		06/27/19 13:58	06/29/19 22:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*61 - 130*	*06/27/19 13:58*	*06/29/19 22:56*	*1*
Dibromofluoromethane	*110*		*68 - 140*	*06/27/19 13:58*	*06/29/19 22:56*	*1*
Toluene-d8 (Surr)	*104*		*50 - 130*	*06/27/19 13:58*	*06/29/19 22:56*	*1*
4-Bromofluorobenzene	*96*		*57 - 140*	*06/27/19 13:58*	*06/29/19 22:56*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	**0.848**		0.256	0.0521	mg/Kg		06/27/19 13:58	07/02/19 18:17	1
Toluene	**1.50**		0.256	0.0706	mg/Kg		06/27/19 13:58	07/02/19 18:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*61 - 130*	*06/27/19 13:58*	*07/02/19 18:17*	*1*
Dibromofluoromethane	*96*		*68 - 140*	*06/27/19 13:58*	*07/02/19 18:17*	*1*
Toluene-d8 (Surr)	*99*		*50 - 130*	*06/27/19 13:58*	*07/02/19 18:17*	*1*
4-Bromofluorobenzene	*89*		*57 - 140*	*06/27/19 13:58*	*07/02/19 18:17*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL2

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	**19.2**		1.28	0.289	mg/Kg		06/27/19 13:58	07/03/19 15:26	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*61 - 130*	*06/27/19 13:58*	*07/03/19 15:26*	*5*
Dibromofluoromethane	*97*		*68 - 140*	*06/27/19 13:58*	*07/03/19 15:26*	*5*
Toluene-d8 (Surr)	*94*		*50 - 130*	*06/27/19 13:58*	*07/03/19 15:26*	*5*
4-Bromofluorobenzene	*95*		*57 - 140*	*06/27/19 13:58*	*07/03/19 15:26*	*5*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	2630	U	4960	2630	ug/Kg		07/05/19 13:55	07/06/19 06:30	1
C6-C10	**174000**	**E**	1000	642	ug/Kg		07/08/19 09:36	07/09/19 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*42*		*36 - 157*	*07/05/19 13:55*	*07/06/19 06:30*	*1*
Trifluorotoluene (Surr)	*81*		*43 - 120*	*07/08/19 09:36*	*07/09/19 01:10*	*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]	**30500**		4900	3390	mg/Kg		07/10/19 12:12	07/12/19 22:47	100
C28-C36	**7410**		4900	3390	mg/Kg		07/10/19 12:12	07/12/19 22:47	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*157*	*X*	*26 - 125*	*07/10/19 12:12*	*07/12/19 22:47*	*100*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24000**		2000	266	mg/Kg			07/06/19 02:01	500

Client Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

Client Sample ID: CH - 05 - 0 - 1

Lab Sample ID: 600-187716-5

Date Collected: 06/26/19 11:35
Matrix: Solid
Date Received: 06/27/19 09:57

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000563	U	0.00446	0.000563	mg/Kg		06/27/19 13:58	07/01/19 11:51	1
Ethylbenzene	**0.00224**	**J**	0.00446	0.000911	mg/Kg		06/27/19 13:58	07/01/19 11:51	1
Toluene	**0.00215**	**J**	0.00446	0.00123	mg/Kg		06/27/19 13:58	07/01/19 11:51	1
Xylenes, Total	**0.189**		0.00446	0.00101	mg/Kg		06/27/19 13:58	07/01/19 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*61 - 130*	*06/27/19 13:58*	*07/01/19 11:51*	*1*
Dibromofluoromethane	*87*		*68 - 140*	*06/27/19 13:58*	*07/01/19 11:51*	*1*
Toluene-d8 (Surr)	*85*		*50 - 130*	*06/27/19 13:58*	*07/01/19 11:51*	*1*
4-Bromofluorobenzene	*107*		*57 - 140*	*06/27/19 13:58*	*07/01/19 11:51*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	**168000**		5100	2710	ug/Kg		07/05/19 13:55	07/06/19 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*36*		*36 - 157*	*07/05/19 13:55*	*07/06/19 08:25*	*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]	**6700**		1000	692	mg/Kg		07/10/19 09:48	07/12/19 18:33	20
C28-C36	**1120**		1000	692	mg/Kg		07/10/19 09:48	07/12/19 18:33	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*93*		*26 - 125*	*07/10/19 09:48*	*07/12/19 18:33*	*20*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4510**		397	53.0	mg/Kg			07/06/19 02:19	100

Client Sample ID: CH - 06 - 0 - 1

Lab Sample ID: 600-187716-6

Date Collected: 06/26/19 11:45
Matrix: Solid
Date Received: 06/27/19 09:57

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000618	U	0.00490	0.000618	mg/Kg		06/27/19 13:58	06/29/19 21:47	1
Ethylbenzene	0.00100	U	0.00490	0.00100	mg/Kg		06/27/19 13:58	06/29/19 21:47	1
Toluene	0.00135	U	0.00490	0.00135	mg/Kg		06/27/19 13:58	06/29/19 21:47	1
Xylenes, Total	0.00111	U	0.00490	0.00111	mg/Kg		06/27/19 13:58	06/29/19 21:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*61 - 130*	*06/27/19 13:58*	*06/29/19 21:47*	*1*
Dibromofluoromethane	*104*		*68 - 140*	*06/27/19 13:58*	*06/29/19 21:47*	*1*
Toluene-d8 (Surr)	*103*		*50 - 130*	*06/27/19 13:58*	*06/29/19 21:47*	*1*
4-Bromofluorobenzene	*98*		*57 - 140*	*06/27/19 13:58*	*06/29/19 21:47*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	63.1	U	98.2	63.1	ug/Kg		07/03/19 11:14	07/04/19 15:06	1

Client Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

Client Sample ID: CH - 06 - 0 - 1

Lab Sample ID: 600-187716-6

Date Collected: 06/26/19 11:45
Matrix: Solid
Date Received: 06/27/19 09:57

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	*90*		*43 - 120*	*07/03/19 11:14*	*07/04/19 15:06*	*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]	34.6	U	50.1	34.6	mg/Kg		07/10/19 09:48	07/11/19 23:21	1
C28-C36	34.6	U	50.1	34.6	mg/Kg		07/10/19 09:48	07/11/19 23:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	*69*		*26 - 125*	*07/10/19 09:48*	*07/11/19 23:21*	*1*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**237**		200	26.6	mg/Kg			07/08/19 15:52	50

Client Sample ID: CH - 07 - 0 - 1

Lab Sample ID: 600-187716-7

Date Collected: 06/26/19 11:55
Matrix: Solid
Date Received: 06/27/19 09:57

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000667	U	0.00530	0.000667	mg/Kg		06/27/19 13:58	06/29/19 22:10	1
Ethylbenzene	0.00108	U	0.00530	0.00108	mg/Kg		06/27/19 13:58	06/29/19 22:10	1
Toluene	0.00146	U	0.00530	0.00146	mg/Kg		06/27/19 13:58	06/29/19 22:10	1
Xylenes, Total	0.00120	U	0.00530	0.00120	mg/Kg		06/27/19 13:58	06/29/19 22:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*108*		*61 - 130*	*06/27/19 13:58*	*06/29/19 22:10*	*1*
Dibromofluoromethane	*106*		*68 - 140*	*06/27/19 13:58*	*06/29/19 22:10*	*1*
Toluene-d8 (Surr)	*107*		*50 - 130*	*06/27/19 13:58*	*06/29/19 22:10*	*1*
4-Bromofluorobenzene	*96*		*57 - 140*	*06/27/19 13:58*	*06/29/19 22:10*	*1*

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	63.1	U	98.2	63.1	ug/Kg		07/01/19 09:46	07/02/19 02:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	*87*		*43 - 120*	*07/01/19 09:46*	*07/02/19 02:43*	*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		07/10/19 09:48	07/12/19 00:44	1
C28-C36	34.3	U	49.7	34.3	mg/Kg		07/10/19 09:48	07/12/19 00:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	*68*		*26 - 125*	*07/10/19 09:48*	*07/12/19 00:44*	*1*

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.9**		3.98	0.532	mg/Kg			07/09/19 17:09	1

Client Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 600-187716-8

Date Collected: 06/26/19 00:00

Matrix: Water

Date Received: 06/27/19 09:57

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			06/30/19 15:10	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			06/30/19 15:10	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			06/30/19 15:10	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			06/30/19 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*122*		*50 - 134*		*06/30/19 15:10*	*1*
Dibromofluoromethane	*115*		*62 - 130*		*06/30/19 15:10*	*1*
Toluene-d8 (Surr)	*86*		*70 - 130*		*06/30/19 15:10*	*1*
4-Bromofluorobenzene	*89*		*67 - 139*		*06/30/19 15:10*	*1*

Definitions/Glossary

Client: AECOM Job ID: 600-187716-1
Project/Site: Cotton Hills

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
U	Analyte was not detected at or above the SDL.

GC VOA

Qualifier	Qualifier Description
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.
U	Analyte was not detected at or above the SDL.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
X	Surrogate is outside control limits

HPLC/IC

Qualifier	Qualifier Description
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.
N2	RPD of the MS and MSD exceeds the 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: Cotton Hills

Job ID: 600-187716-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(61-130)	(68-140)	(50-130)	(57-140)
600-187716-1	CH - 01 - 0 - 1	114	105	96	116 *
600-187716-2	CH - 02 - 0 - 1	108	103	102	96
600-187716-3	CH - 03 - 0 - 1	104	106	105	94
600-187716-4	CH - 04 - 0 - 1	113	110	104	96
600-187716-4 - DL	CH - 04 - 0 - 1	97	96	99	89
600-187716-4 - DL2	CH - 04 - 0 - 1	102	97	94	95
600-187716-5	CH - 05 - 0 - 1	84	87	85	107
600-187716-6	CH - 06 - 0 - 1	109	104	103	98
600-187716-7	CH - 07 - 0 - 1	108	106	107	96
LCS 600-268339/4	Lab Control Sample	101	100	102	93
LCS 600-268395/3	Lab Control Sample	73	80	83	95
LCS 600-268517/1-A	Lab Control Sample	95	93	97	92
LCSD 600-268339/5	Lab Control Sample Dup	114	107	99	92
LCSD 600-268395/4	Lab Control Sample Dup	77	81	83	95
LCSD 600-268517/2-A	Lab Control Sample Dup	87	87	90	82
MB 600-268339/7	Method Blank	107	104	103	94
MB 600-268395/6	Method Blank	99	90	79	91
MB 600-268517/3-A	Method Blank	103	98	96	99

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(50-134)	(62-130)	(70-130)	(67-139)
600-187716-8	TRIP BLANK	122	115	86	89
LCS 600-268365/4	Lab Control Sample	116	109	82	83
LCSD 600-268365/5	Lab Control Sample Dup	115	110	84	84
MB 600-268365/7	Method Blank	114	111	83	83

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)	
		TFT2	TFT2
Lab Sample ID	Client Sample ID	(43-120)	(43-120)
240-115438-B-1-B MS	Matrix Spike	94	94
240-115438-B-1-C MSD	Matrix Spike Duplicate	77	77
600-187716-2	CH - 02 - 0 - 1	88	88

Surrogate Summary

Client: AECOM Job ID: 600-187716-1
Project/Site: Cotton Hills

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	TFT2 (43-120)	TFT2 (43-120)								
600-187716-3	CH - 03 - 0 - 1	90	90								
600-187716-4	CH - 04 - 0 - 1	81	81								
600-187716-6	CH - 06 - 0 - 1	90	90								
600-187716-7	CH - 07 - 0 - 1	87	87								
LCS 240-389163/2-A	Lab Control Sample	101	101								
LCS 240-389621/2-A	Lab Control Sample	97	97								
LCS 240-390100/2-A	Lab Control Sample	93	93								
MB 240-389163/1-A	Method Blank	89	89								
MB 240-389621/1-A	Method Blank	90	90								
MB 240-390100/1-A	Method Blank	91	91								

Surrogate Legend

TFT = Trifluorotoluene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	TFT2 (36-157)									
600-187716-1	CH - 01 - 0 - 1	15 X									
600-187716-4	CH - 04 - 0 - 1	42									
600-187716-4 MS	CH - 04 - 0 - 1	47									
600-187716-4 MSD	CH - 04 - 0 - 1	46									
600-187716-5	CH - 05 - 0 - 1	36									
LCS 240-389898/2-A	Lab Control Sample	50									
MB 240-389898/1-A	Method Blank	54									

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)									
600-187716-1	CH - 01 - 0 - 1	91									
600-187716-2	CH - 02 - 0 - 1	85									
600-187716-3	CH - 03 - 0 - 1	77									
600-187716-4	CH - 04 - 0 - 1	157 X									
600-187716-5	CH - 05 - 0 - 1	93									
600-187716-6	CH - 06 - 0 - 1	69									
600-187716-7	CH - 07 - 0 - 1	68									
600-187822-A-11-B MS	Matrix Spike	76									
600-187822-A-11-C MSD	Matrix Spike Duplicate	82									
LCS 240-390478/19-A	Lab Control Sample	69									
LCS 240-390514/12-A	Lab Control Sample	86									
MB 240-390478/18-A	Method Blank	69									
MB 240-390514/11-A	Method Blank	73									

Surrogate Legend

Surrogate Summary

Client: AECOM

Job ID: 600-187716-1

Project/Site: Cotton Hills

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

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

Lab Sample ID: MB 600-268339/7
Matrix: Solid
Analysis Batch: 268339

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			06/29/19 14:03	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			06/29/19 14:03	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			06/29/19 14:03	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			06/29/19 14:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*61 - 130*		*06/29/19 14:03*	*1*
Dibromofluoromethane	*104*		*68 - 140*		*06/29/19 14:03*	*1*
Toluene-d8 (Surr)	*103*		*50 - 130*		*06/29/19 14:03*	*1*
4-Bromofluorobenzene	*94*		*57 - 140*		*06/29/19 14:03*	*1*

Lab Sample ID: LCS 600-268339/4
Matrix: Solid
Analysis Batch: 268339

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	0.05084		mg/Kg		102	70 - 131
Ethylbenzene	0.0500	0.05101		mg/Kg		102	66 - 130
Toluene	0.0500	0.04956		mg/Kg		99	67 - 130
Xylenes, Total	0.100	0.1079		mg/Kg		108	63 - 130
m-Xylene & p-Xylene	0.0500	0.05339		mg/Kg		107	64 - 130
o-Xylene	0.0500	0.05447		mg/Kg		109	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*61 - 130*
Dibromofluoromethane	*100*		*68 - 140*
Toluene-d8 (Surr)	*102*		*50 - 130*
4-Bromofluorobenzene	*93*		*57 - 140*

Lab Sample ID: LCSD 600-268339/5
Matrix: Solid
Analysis Batch: 268339

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	0.05408		mg/Kg		108	70 - 131	6	30
Ethylbenzene	0.0500	0.05173		mg/Kg		103	66 - 130	1	30
Toluene	0.0500	0.05012		mg/Kg		100	67 - 130	1	30
Xylenes, Total	0.100	0.1089		mg/Kg		109	63 - 130	1	30
m-Xylene & p-Xylene	0.0500	0.05333		mg/Kg		107	64 - 130	0	30
o-Xylene	0.0500	0.05557		mg/Kg		111	62 - 130	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*114*		*61 - 130*
Dibromofluoromethane	*107*		*68 - 140*
Toluene-d8 (Surr)	*99*		*50 - 130*
4-Bromofluorobenzene	*92*		*57 - 140*

QC Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

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

Lab Sample ID: MB 600-268365/7
Matrix: Water
Analysis Batch: 268365

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

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000176	U	0.00100	0.000176	mg/L			06/30/19 14:42	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			06/30/19 14:42	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			06/30/19 14:42	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			06/30/19 14:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*50 - 134*		*06/30/19 14:42*	*1*
Dibromofluoromethane	*111*		*62 - 130*		*06/30/19 14:42*	*1*
Toluene-d8 (Surr)	*83*		*70 - 130*		*06/30/19 14:42*	*1*
4-Bromofluorobenzene	*83*		*67 - 139*		*06/30/19 14:42*	*1*

Lab Sample ID: LCS 600-268365/4
Matrix: Water
Analysis Batch: 268365

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0100	0.01002		mg/L		100	70 - 130
Ethylbenzene	0.0100	0.008261		mg/L		83	70 - 130
Toluene	0.0100	0.008150		mg/L		82	70 - 130
Xylenes, Total	0.0200	0.01810		mg/L		91	70 - 130
o-Xylene	0.0100	0.008986		mg/L		90	70 - 130
m-Xylene & p-Xylene	0.0100	0.009115		mg/L		91	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*116*		*50 - 134*
Dibromofluoromethane	*109*		*62 - 130*
Toluene-d8 (Surr)	*82*		*70 - 130*
4-Bromofluorobenzene	*83*		*67 - 139*

Lab Sample ID: LCSD 600-268365/5
Matrix: Water
Analysis Batch: 268365

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	0.0100	0.009532		mg/L		95	70 - 130	5	20
Ethylbenzene	0.0100	0.008629		mg/L		86	70 - 130	4	20
Toluene	0.0100	0.008104		mg/L		81	70 - 130	1	20
Xylenes, Total	0.0200	0.01744		mg/L		87	70 - 130	4	20
o-Xylene	0.0100	0.008645		mg/L		86	70 - 130	4	20
m-Xylene & p-Xylene	0.0100	0.008795		mg/L		88	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*115*		*50 - 134*
Dibromofluoromethane	*110*		*62 - 130*
Toluene-d8 (Surr)	*84*		*70 - 130*
4-Bromofluorobenzene	*84*		*67 - 139*

QC Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

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

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

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

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

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

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

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

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

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

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

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.04824		mg/Kg		96	70 - 131	2	30
Ethylbenzene	0.0500	0.04884		mg/Kg		98	66 - 130	2	30
Toluene	0.0500	0.04683		mg/Kg		94	67 - 130	1	30
Xylenes, Total	0.100	0.09857		mg/Kg		99	63 - 130	3	30
m-Xylene & p-Xylene	0.0500	0.04926		mg/Kg		99	64 - 130	3	30
o-Xylene	0.0500	0.04931		mg/Kg		99	62 - 130	3	30

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

QC Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

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

Lab Sample ID: MB 600-268517/3-A
Matrix: Solid
Analysis Batch: 268524

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 268517

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0788	U	0.625	0.0788	mg/Kg		07/02/19 10:00	07/02/19 14:46	1
Ethylbenzene	0.128	U	0.625	0.128	mg/Kg		07/02/19 10:00	07/02/19 14:46	1
Toluene	0.173	U	0.625	0.173	mg/Kg		07/02/19 10:00	07/02/19 14:46	1
Xylenes, Total	0.141	U	0.625	0.141	mg/Kg		07/02/19 10:00	07/02/19 14:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*61 - 130*	*07/02/19 10:00*	*07/02/19 14:46*	*1*
Dibromofluoromethane	*98*		*68 - 140*	*07/02/19 10:00*	*07/02/19 14:46*	*1*
Toluene-d8 (Surr)	*96*		*50 - 130*	*07/02/19 10:00*	*07/02/19 14:46*	*1*
4-Bromofluorobenzene	*99*		*57 - 140*	*07/02/19 10:00*	*07/02/19 14:46*	*1*

Lab Sample ID: LCS 600-268517/1-A
Matrix: Solid
Analysis Batch: 268524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 268517

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.25	5.305		mg/Kg		85	70 - 131
Ethylbenzene	6.25	5.470		mg/Kg		88	66 - 130
Toluene	6.25	5.395		mg/Kg		86	67 - 130
Xylenes, Total	12.5	11.25		mg/Kg		90	63 - 130
m-Xylene & p-Xylene	6.25	5.479		mg/Kg		88	64 - 130
o-Xylene	6.25	5.774		mg/Kg		92	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*61 - 130*
Dibromofluoromethane	*93*		*68 - 140*
Toluene-d8 (Surr)	*97*		*50 - 130*
4-Bromofluorobenzene	*92*		*57 - 140*

Lab Sample ID: LCSD 600-268517/2-A
Matrix: Solid
Analysis Batch: 268524

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 268517

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	6.25	4.806		mg/Kg		77	70 - 131	10	30
Ethylbenzene	6.25	5.011		mg/Kg		80	66 - 130	9	30
Toluene	6.25	4.842		mg/Kg		77	67 - 130	11	30
Xylenes, Total	12.5	10.10		mg/Kg		81	63 - 130	11	30
m-Xylene & p-Xylene	6.25	4.950		mg/Kg		79	64 - 130	10	30
o-Xylene	6.25	5.153		mg/Kg		82	62 - 130	11	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*61 - 130*
Dibromofluoromethane	*87*		*68 - 140*
Toluene-d8 (Surr)	*90*		*50 - 130*
4-Bromofluorobenzene	*82*		*57 - 140*

QC Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

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

Lab Sample ID: MB 240-389163/1-A
Matrix: Solid
Analysis Batch: 389182

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 389163

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	64.2	U	100	64.2	ug/Kg		07/01/19 09:46	07/01/19 13:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*89*		*43 - 120*	*07/01/19 09:46*	*07/01/19 13:23*	*1*

Lab Sample ID: LCS 240-389163/2-A
Matrix: Solid
Analysis Batch: 389182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 389163

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	800	890.3		ug/Kg		111	76 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*101*		*43 - 120*

Lab Sample ID: MB 240-389621/1-A
Matrix: Solid
Analysis Batch: 389626

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 389621

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	64.2	U	100	64.2	ug/Kg		07/03/19 11:14	07/04/19 06:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*90*		*43 - 120*	*07/03/19 11:14*	*07/04/19 06:09*	*1*

Lab Sample ID: LCS 240-389621/2-A
Matrix: Solid
Analysis Batch: 389626

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 389621

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	800	786.0		ug/Kg		98	76 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*97*		*43 - 120*

Lab Sample ID: MB 240-389898/1-A
Matrix: Solid
Analysis Batch: 389903

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 389898

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	2650	U	5000	2650	ug/Kg		07/05/19 13:55	07/06/19 04:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*54*		*36 - 157*	*07/05/19 13:55*	*07/06/19 04:34*	*1*

QC Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

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

Lab Sample ID: LCS 240-389898/2-A
Matrix: Solid
Analysis Batch: 389903

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 389898

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10			40000	36430		ug/Kg		91	65 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*50*		*36 - 157*

Lab Sample ID: 600-187716-4 MS
Matrix: Solid
Analysis Batch: 389903

Client Sample ID: CH - 04 - 0 - 1
Prep Type: Total/NA
Prep Batch: 389898

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10	2630	U	40200	32330		ug/Kg		80	32 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*47*		*36 - 157*

Lab Sample ID: 600-187716-4 MSD
Matrix: Solid
Analysis Batch: 389903

Client Sample ID: CH - 04 - 0 - 1
Prep Type: Total/NA
Prep Batch: 389898

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	2630	U	40900	32300		ug/Kg		79	32 - 120	0	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Trifluorotoluene (Surr)	*46*		*36 - 157*

Lab Sample ID: MB 240-390100/1-A
Matrix: Solid
Analysis Batch: 390038

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 390100

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	64.2	U	100	64.2	ug/Kg		07/08/19 09:36	07/08/19 10:04	1
C6-C10	64.2	U	100	64.2	ug/Kg		07/08/19 09:36	07/08/19 10:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*91*		*43 - 120*	*07/08/19 09:36*	*07/08/19 10:04*	*1*
Trifluorotoluene (Surr)	*91*		*43 - 120*	*07/08/19 09:36*	*07/08/19 10:04*	*1*

Lab Sample ID: LCS 240-390100/2-A
Matrix: Solid
Analysis Batch: 390038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 390100

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10			800	848.8		ug/Kg		106	76 - 120		
C6-C10			800	848.8		ug/Kg		106	76 - 120		

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

QC Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

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

Lab Sample ID: LCS 240-390100/2-A
Matrix: Solid
Analysis Batch: 390115

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 390100

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

Lab Sample ID: 240-115438-B-1-B MS
Matrix: Solid
Analysis Batch: 390038

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 390100

Surrogate	MS %Recovery	MS Qualifier	Limits
Trifluorotoluene (Surr)	94		43 - 120

Lab Sample ID: 240-115438-B-1-C MSD
Matrix: Solid
Analysis Batch: 390038

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 390100

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Trifluorotoluene (Surr)	77		43 - 120

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

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

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

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

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

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

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

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

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

Lab Sample ID: MB 240-390514/11-A
Matrix: Solid
Analysis Batch: 390979

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 390514

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10 - C28]	34.6	U	50.0	34.6	mg/Kg		07/10/19 12:12	07/12/19 20:32	1
C28-C36	34.6	U	50.0	34.6	mg/Kg		07/10/19 12:12	07/12/19 20:32	1

QC Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

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

Lab Sample ID: MB 240-390514/11-A
Matrix: Solid
Analysis Batch: 390979

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 390514

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	73		26 - 125	07/10/19 12:12	07/12/19 20:32	1

Lab Sample ID: LCS 240-390514/12-A
Matrix: Solid
Analysis Batch: 390979

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 390514

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10 - C28]			250	203.0		mg/Kg		81	45 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	86		26 - 125

Lab Sample ID: 600-187822-A-11-B MS
Matrix: Solid
Analysis Batch: 390979

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 390514

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10 - C28]	35.6	U	241	179.8		mg/Kg		75	27 - 120		

Surrogate	MS %Recovery	MS Qualifier	Limits
o-Terphenyl (Surr)	76		26 - 125

Lab Sample ID: 600-187822-A-11-C MSD
Matrix: Solid
Analysis Batch: 390979

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 390514

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10 - C28]	35.6	U	244	190.6		mg/Kg		78	27 - 120	6	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl (Surr)	82		26 - 125

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 600-268802/1-A
Matrix: Solid
Analysis Batch: 268797

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.534	U	4.00	0.534	mg/Kg			07/05/19 17:16	1

QC Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

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

Lab Sample ID: LCS 600-268802/2-A
Matrix: Solid
Analysis Batch: 268797

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			200	197.6		mg/Kg		99	90 - 110		

Lab Sample ID: 600-187699-A-2-B MS
Matrix: Solid
Analysis Batch: 268797

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	2590		4990	6399	N1	mg/Kg		76	80 - 120		

Lab Sample ID: 600-187699-A-2-C MSD
Matrix: Solid
Analysis Batch: 268797

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2590		4990	6387	N1	mg/Kg		76	80 - 120	0	20

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

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.534	U	4.00	0.534	mg/Kg			07/08/19 15:17	1

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

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

Lab Sample ID: 600-187716-6 MS
Matrix: Solid
Analysis Batch: 268878

Client Sample ID: CH - 06 - 0 - 1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	237		4990	5040		mg/Kg		96	80 - 120		

Lab Sample ID: 600-187716-6 MSD
Matrix: Solid
Analysis Batch: 268878

Client Sample ID: CH - 06 - 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	237		4990	6219	N2	mg/Kg		120	80 - 120	21	20

Unadjusted Detection Limits

Client: AECOM Job ID: 600-187716-1
Project/Site: Cotton Hills

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

Analyte	MQL	MDL	Units
Benzene	0.00100	0.000176	mg/L
Ethylbenzene	0.00100	0.000212	mg/L
Toluene	0.00100	0.000198	mg/L
Xylenes, Total	0.00100	0.000366	mg/L

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

Prep: 5035

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

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

Prep: 5030A

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

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

Prep: 5030B

Analyte	MQL	MDL	Units
C6-C10	5000	2650	ug/Kg

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

Prep: 3546

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

Method: 9056A - Anions, Ion Chromatography - Soluble

Leach: DI Leach

Analyte	MQL	MDL	Units
Chloride	4.00	0.534	mg/Kg

QC Association Summary

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

GC/MS VOA

Analysis Batch: 268339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-2	CH - 02 - 0 - 1	Total/NA	Solid	8260B	268347
600-187716-3	CH - 03 - 0 - 1	Total/NA	Solid	8260B	268347
600-187716-4	CH - 04 - 0 - 1	Total/NA	Solid	8260B	268347
600-187716-6	CH - 06 - 0 - 1	Total/NA	Solid	8260B	268347
600-187716-7	CH - 07 - 0 - 1	Total/NA	Solid	8260B	268347
MB 600-268339/7	Method Blank	Total/NA	Solid	8260B	
LCS 600-268339/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-268339/5	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 268347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-1	CH - 01 - 0 - 1	Total/NA	Solid	5035	
600-187716-2	CH - 02 - 0 - 1	Total/NA	Solid	5035	
600-187716-3	CH - 03 - 0 - 1	Total/NA	Solid	5035	
600-187716-4	CH - 04 - 0 - 1	Total/NA	Solid	5035	
600-187716-5	CH - 05 - 0 - 1	Total/NA	Solid	5035	
600-187716-6	CH - 06 - 0 - 1	Total/NA	Solid	5035	
600-187716-7	CH - 07 - 0 - 1	Total/NA	Solid	5035	

Analysis Batch: 268365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-8	TRIP BLANK	Total/NA	Water	8260B	
MB 600-268365/7	Method Blank	Total/NA	Water	8260B	
LCS 600-268365/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-268365/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 268395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-1	CH - 01 - 0 - 1	Total/NA	Solid	8260B	268347
600-187716-5	CH - 05 - 0 - 1	Total/NA	Solid	8260B	268347
MB 600-268395/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-268395/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-268395/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 268517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-268517/3-A	Method Blank	Total/NA	Solid	5030B	
LCS 600-268517/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 600-268517/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

Prep Batch: 268519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-4 - DL	CH - 04 - 0 - 1	Total/NA	Solid	5035	
600-187716-4 - DL2	CH - 04 - 0 - 1	Total/NA	Solid	5035	

Analysis Batch: 268524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-4 - DL	CH - 04 - 0 - 1	Total/NA	Solid	8260B	268519
MB 600-268517/3-A	Method Blank	Total/NA	Solid	8260B	268517
LCS 600-268517/1-A	Lab Control Sample	Total/NA	Solid	8260B	268517
LCSD 600-268517/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	268517

QC Association Summary

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

GC/MS VOA

Analysis Batch: 268654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-4 - DL2	CH - 04 - 0 - 1	Total/NA	Solid	8260B	268519

GC VOA

Prep Batch: 389163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-2	CH - 02 - 0 - 1	Total/NA	Solid	5030A	
600-187716-3	CH - 03 - 0 - 1	Total/NA	Solid	5030A	
600-187716-7	CH - 07 - 0 - 1	Total/NA	Solid	5030A	
MB 240-389163/1-A	Method Blank	Total/NA	Solid	5030A	
LCS 240-389163/2-A	Lab Control Sample	Total/NA	Solid	5030A	

Analysis Batch: 389182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-2	CH - 02 - 0 - 1	Total/NA	Solid	8015B	389163
600-187716-3	CH - 03 - 0 - 1	Total/NA	Solid	8015B	389163
600-187716-7	CH - 07 - 0 - 1	Total/NA	Solid	8015B	389163
MB 240-389163/1-A	Method Blank	Total/NA	Solid	8015B	389163
LCS 240-389163/2-A	Lab Control Sample	Total/NA	Solid	8015B	389163

Prep Batch: 389621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-6	CH - 06 - 0 - 1	Total/NA	Solid	5030A	
MB 240-389621/1-A	Method Blank	Total/NA	Solid	5030A	
LCS 240-389621/2-A	Lab Control Sample	Total/NA	Solid	5030A	

Analysis Batch: 389626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-6	CH - 06 - 0 - 1	Total/NA	Solid	8015B	389621
MB 240-389621/1-A	Method Blank	Total/NA	Solid	8015B	389621
LCS 240-389621/2-A	Lab Control Sample	Total/NA	Solid	8015B	389621

Prep Batch: 389898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-1	CH - 01 - 0 - 1	Total/NA	Solid	5030B	
600-187716-4	CH - 04 - 0 - 1	Total/NA	Solid	5030B	
600-187716-5	CH - 05 - 0 - 1	Total/NA	Solid	5030B	
MB 240-389898/1-A	Method Blank	Total/NA	Solid	5030B	
LCS 240-389898/2-A	Lab Control Sample	Total/NA	Solid	5030B	
600-187716-4 MS	CH - 04 - 0 - 1	Total/NA	Solid	5030B	
600-187716-4 MSD	CH - 04 - 0 - 1	Total/NA	Solid	5030B	

Analysis Batch: 389903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-4	CH - 04 - 0 - 1	Total/NA	Solid	8015B	389898
600-187716-5	CH - 05 - 0 - 1	Total/NA	Solid	8015B	389898
MB 240-389898/1-A	Method Blank	Total/NA	Solid	8015B	389898
LCS 240-389898/2-A	Lab Control Sample	Total/NA	Solid	8015B	389898
600-187716-4 MS	CH - 04 - 0 - 1	Total/NA	Solid	8015B	389898
600-187716-4 MSD	CH - 04 - 0 - 1	Total/NA	Solid	8015B	389898

QC Association Summary

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

GC VOA

Analysis Batch: 390037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-1	CH - 01 - 0 - 1	Total/NA	Solid	8015B	389898

Analysis Batch: 390038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-390100/1-A	Method Blank	Total/NA	Solid	8015B	390100
LCS 240-390100/2-A	Lab Control Sample	Total/NA	Solid	8015B	390100
240-115438-B-1-B MS	Matrix Spike	Total/NA	Solid	8015B	390100
240-115438-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	390100

Prep Batch: 390100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-4	CH - 04 - 0 - 1	Total/NA	Solid	5030A	
MB 240-390100/1-A	Method Blank	Total/NA	Solid	5030A	
LCS 240-390100/2-A	Lab Control Sample	Total/NA	Solid	5030A	
240-115438-B-1-B MS	Matrix Spike	Total/NA	Solid	5030A	
240-115438-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5030A	

Analysis Batch: 390115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-4	CH - 04 - 0 - 1	Total/NA	Solid	8015B	390100
MB 240-390100/1-A	Method Blank	Total/NA	Solid	8015B	390100
LCS 240-390100/2-A	Lab Control Sample	Total/NA	Solid	8015B	390100

GC Semi VOA

Prep Batch: 390478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-5	CH - 05 - 0 - 1	Total/NA	Solid	3546	
600-187716-6	CH - 06 - 0 - 1	Total/NA	Solid	3546	
600-187716-7	CH - 07 - 0 - 1	Total/NA	Solid	3546	
MB 240-390478/18-A	Method Blank	Total/NA	Solid	3546	
LCS 240-390478/19-A	Lab Control Sample	Total/NA	Solid	3546	

Prep Batch: 390514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-1	CH - 01 - 0 - 1	Total/NA	Solid	3546	
600-187716-2	CH - 02 - 0 - 1	Total/NA	Solid	3546	
600-187716-3	CH - 03 - 0 - 1	Total/NA	Solid	3546	
600-187716-4	CH - 04 - 0 - 1	Total/NA	Solid	3546	
MB 240-390514/11-A	Method Blank	Total/NA	Solid	3546	
LCS 240-390514/12-A	Lab Control Sample	Total/NA	Solid	3546	
600-187822-A-11-B MS	Matrix Spike	Total/NA	Solid	3546	
600-187822-A-11-C MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	

Analysis Batch: 390809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-6	CH - 06 - 0 - 1	Total/NA	Solid	8015B	390478
600-187716-7	CH - 07 - 0 - 1	Total/NA	Solid	8015B	390478
MB 240-390478/18-A	Method Blank	Total/NA	Solid	8015B	390478
LCS 240-390478/19-A	Lab Control Sample	Total/NA	Solid	8015B	390478

QC Association Summary

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

GC Semi VOA

Analysis Batch: 390979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-1	CH - 01 - 0 - 1	Total/NA	Solid	8015B	390514
600-187716-2	CH - 02 - 0 - 1	Total/NA	Solid	8015B	390514
600-187716-3	CH - 03 - 0 - 1	Total/NA	Solid	8015B	390514
600-187716-4	CH - 04 - 0 - 1	Total/NA	Solid	8015B	390514
MB 240-390514/11-A	Method Blank	Total/NA	Solid	8015B	390514
LCS 240-390514/12-A	Lab Control Sample	Total/NA	Solid	8015B	390514
600-187822-A-11-B MS	Matrix Spike	Total/NA	Solid	8015B	390514
600-187822-A-11-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	390514

Analysis Batch: 390987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-5	CH - 05 - 0 - 1	Total/NA	Solid	8015B	390478

HPLC/IC

Analysis Batch: 268797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-1	CH - 01 - 0 - 1	Soluble	Solid	9056A	268802
600-187716-2	CH - 02 - 0 - 1	Soluble	Solid	9056A	268802
600-187716-3	CH - 03 - 0 - 1	Soluble	Solid	9056A	268802
600-187716-4	CH - 04 - 0 - 1	Soluble	Solid	9056A	268802
600-187716-5	CH - 05 - 0 - 1	Soluble	Solid	9056A	268802
MB 600-268802/1-A	Method Blank	Soluble	Solid	9056A	268802
LCS 600-268802/2-A	Lab Control Sample	Soluble	Solid	9056A	268802
600-187699-A-2-B MS	Matrix Spike	Soluble	Solid	9056A	268802
600-187699-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	9056A	268802

Leach Batch: 268802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-1	CH - 01 - 0 - 1	Soluble	Solid	DI Leach	
600-187716-2	CH - 02 - 0 - 1	Soluble	Solid	DI Leach	
600-187716-3	CH - 03 - 0 - 1	Soluble	Solid	DI Leach	
600-187716-4	CH - 04 - 0 - 1	Soluble	Solid	DI Leach	
600-187716-5	CH - 05 - 0 - 1	Soluble	Solid	DI Leach	
MB 600-268802/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 600-268802/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
600-187699-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
600-187699-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 268878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-6	CH - 06 - 0 - 1	Soluble	Solid	9056A	268903
MB 600-268903/1-A	Method Blank	Soluble	Solid	9056A	268903
LCS 600-268903/2-A	Lab Control Sample	Soluble	Solid	9056A	268903
600-187716-6 MS	CH - 06 - 0 - 1	Soluble	Solid	9056A	268903
600-187716-6 MSD	CH - 06 - 0 - 1	Soluble	Solid	9056A	268903

Leach Batch: 268903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-6	CH - 06 - 0 - 1	Soluble	Solid	DI Leach	
600-187716-7	CH - 07 - 0 - 1	Soluble	Solid	DI Leach	

QC Association Summary

Client: AECOM Job ID: 600-187716-1
Project/Site: Cotton Hills

HPLC/IC (Continued)

Leach Batch: 268903 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-268903/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 600-268903/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
600-187716-6 MS	CH - 06 - 0 - 1	Soluble	Solid	DI Leach	
600-187716-6 MSD	CH - 06 - 0 - 1	Soluble	Solid	DI Leach	

Analysis Batch: 268963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187716-7	CH - 07 - 0 - 1	Soluble	Solid	9056A	268903

Lab Chronicle

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

Client Sample ID: CH - 01 - 0 - 1

Lab Sample ID: 600-187716-1
Matrix: Solid
Date Collected: 06/26/19 10:50
Date Received: 06/27/19 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			268347	06/27/19 13:58	KLV	TAL HOU
Total/NA	Analysis	8260B		1	268395	07/01/19 12:14	WS1	TAL HOU
Total/NA	Prep	5030B			389898	07/05/19 13:55	KMG	TAL CAN
Total/NA	Analysis	8015B		20	390037	07/08/19 10:00	KMG	TAL CAN
Total/NA	Prep	3546			390514	07/10/19 12:12	EMB	TAL CAN
Total/NA	Analysis	8015B		20	390979	07/12/19 21:26	DEB	TAL CAN
Soluble	Leach	DI Leach			268802	07/05/19 18:31	SKR	TAL HOU
Soluble	Analysis	9056A		100	268797	07/06/19 01:08	SKR	TAL HOU

Client Sample ID: CH - 02 - 0 - 1

Lab Sample ID: 600-187716-2
Matrix: Solid
Date Collected: 06/26/19 11:05
Date Received: 06/27/19 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			268347	06/27/19 13:58	KLV	TAL HOU
Total/NA	Analysis	8260B		1	268339	06/29/19 21:01	KLV	TAL HOU
Total/NA	Prep	5030A			389163	07/01/19 09:46	LKG	TAL CAN
Total/NA	Analysis	8015B		1	389182	07/01/19 23:18	LKG	TAL CAN
Total/NA	Prep	3546			390514	07/10/19 12:12	EMB	TAL CAN
Total/NA	Analysis	8015B		1	390979	07/12/19 21:53	DEB	TAL CAN
Soluble	Leach	DI Leach			268802	07/05/19 18:31	SKR	TAL HOU
Soluble	Analysis	9056A		100	268797	07/06/19 01:26	SKR	TAL HOU

Client Sample ID: CH - 03 - 0 - 1

Lab Sample ID: 600-187716-3
Matrix: Solid
Date Collected: 06/26/19 11:15
Date Received: 06/27/19 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			268347	06/27/19 13:58	KLV	TAL HOU
Total/NA	Analysis	8260B		1	268339	06/29/19 21:24	KLV	TAL HOU
Total/NA	Prep	5030A			389163	07/01/19 09:46	LKG	TAL CAN
Total/NA	Analysis	8015B		1	389182	07/01/19 23:59	LKG	TAL CAN
Total/NA	Prep	3546			390514	07/10/19 12:12	EMB	TAL CAN
Total/NA	Analysis	8015B		1	390979	07/12/19 22:20	DEB	TAL CAN
Soluble	Leach	DI Leach			268802	07/05/19 18:31	SKR	TAL HOU
Soluble	Analysis	9056A		100	268797	07/06/19 01:44	SKR	TAL HOU

Client Sample ID: CH - 04 - 0 - 1

Lab Sample ID: 600-187716-4
Matrix: Solid
Date Collected: 06/26/19 11:25
Date Received: 06/27/19 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			268347	06/27/19 13:58	KLV	TAL HOU
Total/NA	Analysis	8260B		1	268339	06/29/19 22:56	KLV	TAL HOU

Lab Chronicle

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

Client Sample ID: CH - 04 - 0 - 1

Date Collected: 06/26/19 11:25
Date Received: 06/27/19 09:57

Lab Sample ID: 600-187716-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035	DL		268519	06/27/19 13:58	KLV	TAL HOU
Total/NA	Analysis	8260B	DL	1	268524	07/02/19 18:17	KLV	TAL HOU
Total/NA	Prep	5035	DL2		268519	06/27/19 13:58	KLV	TAL HOU
Total/NA	Analysis	8260B	DL2	5	268654	07/03/19 15:26	KLV	TAL HOU
Total/NA	Prep	5030B			389898	07/05/19 13:55	KMG	TAL CAN
Total/NA	Analysis	8015B		1	389903	07/06/19 06:30	KMG	TAL CAN
Total/NA	Prep	5030A			390100	07/08/19 09:36	KMG	TAL CAN
Total/NA	Analysis	8015B		1	390115	07/09/19 01:10	KMG	TAL CAN
Total/NA	Prep	3546			390514	07/10/19 12:12	EMB	TAL CAN
Total/NA	Analysis	8015B		100	390979	07/12/19 22:47	DEB	TAL CAN
Soluble	Leach	DI Leach			268802	07/05/19 18:31	SKR	TAL HOU
Soluble	Analysis	9056A		500	268797	07/06/19 02:01	SKR	TAL HOU

Client Sample ID: CH - 05 - 0 - 1

Date Collected: 06/26/19 11:35
Date Received: 06/27/19 09:57

Lab Sample ID: 600-187716-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			268347	06/27/19 13:58	KLV	TAL HOU
Total/NA	Analysis	8260B		1	268395	07/01/19 11:51	WS1	TAL HOU
Total/NA	Prep	5030B			389898	07/05/19 13:55	KMG	TAL CAN
Total/NA	Analysis	8015B		1	389903	07/06/19 08:25	KMG	TAL CAN
Total/NA	Prep	3546			390478	07/10/19 09:48	ZMF	TAL CAN
Total/NA	Analysis	8015B		20	390987	07/12/19 18:33	DEB	TAL CAN
Soluble	Leach	DI Leach			268802	07/05/19 18:31	SKR	TAL HOU
Soluble	Analysis	9056A		100	268797	07/06/19 02:19	SKR	TAL HOU

Client Sample ID: CH - 06 - 0 - 1

Date Collected: 06/26/19 11:45
Date Received: 06/27/19 09:57

Lab Sample ID: 600-187716-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			268347	06/27/19 13:58	KLV	TAL HOU
Total/NA	Analysis	8260B		1	268339	06/29/19 21:47	KLV	TAL HOU
Total/NA	Prep	5030A			389621	07/03/19 11:14	LKG	TAL CAN
Total/NA	Analysis	8015B		1	389626	07/04/19 15:06	KMG	TAL CAN
Total/NA	Prep	3546			390478	07/10/19 09:48	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	390809	07/11/19 23:21	DEB	TAL CAN
Soluble	Leach	DI Leach			268903	07/08/19 14:57	SKR	TAL HOU
Soluble	Analysis	9056A		50	268878	07/08/19 15:52	SKR	TAL HOU

Lab Chronicle

Client: AECOM
Project/Site: Cotton Hills

Job ID: 600-187716-1

Client Sample ID: CH - 07 - 0 - 1

Lab Sample ID: 600-187716-7

Date Collected: 06/26/19 11:55
Matrix: Solid
Date Received: 06/27/19 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			268347	06/27/19 13:58	KLV	TAL HOU
Total/NA	Analysis	8260B		1	268339	06/29/19 22:10	KLV	TAL HOU
Total/NA	Prep	5030A			389163	07/01/19 09:46	LKG	TAL CAN
Total/NA	Analysis	8015B		1	389182	07/02/19 02:43	LKG	TAL CAN
Total/NA	Prep	3546			390478	07/10/19 09:48	ZMF	TAL CAN
Total/NA	Analysis	8015B		1	390809	07/12/19 00:44	DEB	TAL CAN
Soluble	Leach	DI Leach			268903	07/08/19 14:57	SKR	TAL HOU
Soluble	Analysis	9056A		1	268963	07/09/19 17:09	SKR	TAL HOU

Client Sample ID: TRIP BLANK

Lab Sample ID: 600-187716-8

Date Collected: 06/26/19 00:00
Matrix: Water
Date Received: 06/27/19 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	268365	06/30/19 15:10	PXS	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
Project/Site: Cotton Hills

Job ID: 600-187716-1

Laboratory: Eurofins TestAmerica, Houston

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

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

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

Analysis Method	Prep Method	Matrix	Analyte

Laboratory: Eurofins TestAmerica, Canton

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

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

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

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: SF	Lab PM: Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No: 600-69310-18903.1
Client Contact: Mr. Wallace Gilmore	Phone: 505 699 3257	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page 1/1
Company: AECOM				Job #:
Address: 19219 Katy Freeway Suite 100	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77094				
Phone: 713-520-990(Tel) 713-520-680(Fax)	PO #:			
Email: wallace.gilmore@aecom.com	WO #:			
Project Name: Chevron	Project #: 60008660			
Site: Cotton Hills	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)	TX_1005 - (TPH	8260B - BTEX Only	9056_ORGFM_28D - Chloride	1311/6010B, 7470A- TCLP metals	moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N	N		
CH-01-0-1	6/26/19	1050	G	Solid			2	3	1		1		
CH-02-0-1	6/26/19	1105	G	Solid			2	3	1		1		
CH-03-0-1	6/26/19	1115	G	Solid			2	3	1		1		
CH-04-0-1	6/26/19	1125	G	Solid			2	3	1		1		
CH-05-0-1	6/26/19	1135	G	Solid			2	3	1		1		
CH-06-0-1	6/26/19	1145	G	Solid			2	3	1		1		
CH-07-0-1	6/26/19	1155	G	Solid			2	3	1		1		
				Solid									
				Solid									
				Solid									
				Solid									

600-187716 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: [signature]	Date/Time: 6/25/19 @ 1630	Company: AECOM	Received by: [signature]	Date/Time: 6/27/19 957	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

Loc: 600
187716

TestAmerica Houston

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Receipt Checklist

'19 JUN 27 9:57

Date/Time Received: _____

JOB NUMBER: _____ CLIENT: Aecom

UNPACKED BY: [illegible] CARRIER/DRIVER: FedEx

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

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
WB	~~Y~~ / N	~~Y~~ / N	2.1	078	+0.1	2.2
	Y / N	Y / N				
	Y / N	Y / N				
	~~Y~~ / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / ~~N~~	Y / ~~N~~				
	~~Y~~ / N	Y / N				
	Y / N	Y / N				

YR 6/27/19

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:

YR 6/27/19

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

600-187716 Waybill

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: 600-40347.1
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 #: 600-187716-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 7/11/2019			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Chevron	Project #: 60008660			
Site:	SSOW#:			

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:

Analysis Requested

C155 GC

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_GRO/5030B_SolidNAC (MOD) Copy Analytes	8015B_DRO/3546 (MOD) Diesel Range Organics [C10-C28]	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
CH - 01 - 0 - 1 (600-187716-1)	6/26/19	10:50 Central		Solid			X	X	3	
CH - 02 - 0 - 1 (600-187716-2)	6/26/19	11:05 Central		Solid			X	X	3	
CH - 03 - 0 - 1 (600-187716-3)	6/26/19	11:15 Central		Solid			X	X	3	
CH - 04 - 0 - 1 (600-187716-4)	6/26/19	11:25 Central		Solid			X	X	3	
CH - 05 - 0 - 1 (600-187716-5)	6/26/19	11:35 Central		Solid			X	X	3	
CH - 06 - 0 - 1 (600-187716-6)	6/26/19	11:45 Central		Solid			X	X	3	
CH - 07 - 0 - 1 (600-187716-7)	6/26/19	11:55 Central		Solid			X	X	3	

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
					6-28-19 915	ETAC
	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 ETA Houston Site Name _____ Cooler unpacked by: MM
Cooler Received on 6-28-19 Opened on 6-28-19
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

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

TestAmerica Cooler # TA 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. 2.4 °C Corrected Cooler Temp. 2.5 °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: 600-187716-1

Login Number: 187716 **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
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

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

January 14, 2020

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

Work Order: **HS19121258**

Laboratory Results for: **Cotton Hills NM**

Dear Wallace,

ALS Environmental received 52 sample(s) on Dec 21, 2019 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

Generated By: DANE.WACASEY
Dane J. Wacasey

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Work Order: HS19121258

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS19121258-01	PCH-14, 0'-1'	Soil		18-Dec-2019 10:30	21-Dec-2019 10:10	
HS19121258-02	PCH-14, 1'-2'	Soil		18-Dec-2019 10:35	21-Dec-2019 10:10	
HS19121258-03	PCH-14, 2'-3'	Soil		18-Dec-2019 10:40	21-Dec-2019 10:10	
HS19121258-04	PCH-14, 3'-4'	Soil		18-Dec-2019 10:45	21-Dec-2019 10:10	
HS19121258-05	PCH-14, 4'-5'	Soil		18-Dec-2019 10:50	21-Dec-2019 10:10	
HS19121258-06	PCH-14, 5'-7.5'	Soil		18-Dec-2019 10:55	21-Dec-2019 10:10	
HS19121258-07	PCH-14, 7.5'-10'	Soil		18-Dec-2019 11:00	21-Dec-2019 10:10	
HS19121258-08	PCH-15, 0'-1'	Soil		18-Dec-2019 11:20	21-Dec-2019 10:10	
HS19121258-09	PCH-15, 1'-2'	Soil		18-Dec-2019 11:25	21-Dec-2019 10:10	
HS19121258-10	PCH-15, 2'-3'	Soil		18-Dec-2019 11:30	21-Dec-2019 10:10	
HS19121258-11	PCH-15, 3'-4'	Soil		18-Dec-2019 11:35	21-Dec-2019 10:10	
HS19121258-12	PCH-15, 4'-5'	Soil		18-Dec-2019 11:40	21-Dec-2019 10:10	
HS19121258-13	PCH-15, 5'-7.5'	Soil		18-Dec-2019 11:45	21-Dec-2019 10:10	
HS19121258-14	PCH-15, 7.5'-10'	Soil		18-Dec-2019 12:00	21-Dec-2019 10:10	
HS19121258-15	PCH-10, 0'-1'	Soil		18-Dec-2019 13:05	21-Dec-2019 10:10	
HS19121258-16	PCH-10, 1'-2'	Soil		18-Dec-2019 13:10	21-Dec-2019 10:10	
HS19121258-17	PCH-10, 0'-2'	Soil		18-Dec-2019 13:10	21-Dec-2019 10:10	
HS19121258-18	PCH-10, 2'-3'	Soil		18-Dec-2019 13:15	21-Dec-2019 10:10	
HS19121258-19	PCH-10, 3'-4'	Soil		18-Dec-2019 13:20	21-Dec-2019 10:10	
HS19121258-20	PCH-10, 4'-5'	Soil		18-Dec-2019 13:25	21-Dec-2019 10:10	
HS19121258-21	PCH-11, 0'-1'	Soil		18-Dec-2019 13:40	21-Dec-2019 10:10	
HS19121258-22	PCH-11, 1'-2'	Soil		18-Dec-2019 13:45	21-Dec-2019 10:10	
HS19121258-23	PCH-11, 0'-2'	Soil		18-Dec-2019 13:45	21-Dec-2019 10:10	
HS19121258-24	PCH-11, 2'-3'	Soil		18-Dec-2019 13:50	21-Dec-2019 10:10	
HS19121258-25	PCH-11, 3'-4'	Soil		18-Dec-2019 13:55	21-Dec-2019 10:10	
HS19121258-26	PCH-11, 4'-5'	Soil		18-Dec-2019 14:00	21-Dec-2019 10:10	

Revision:1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Work Order: HS19121258

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS19121258-27	PCH-12, 0'-1'	Soil		18-Dec-2019 14:10	21-Dec-2019 10:10	
HS19121258-28	PCH-12, 1'-2'	Soil		18-Dec-2019 14:15	21-Dec-2019 10:10	
HS19121258-29	PCH-12, 0'-2'	Soil		18-Dec-2019 14:15	21-Dec-2019 10:10	
HS19121258-30	PCH-12, 2'-3'	Soil		18-Dec-2019 14:20	21-Dec-2019 10:10	
HS19121258-31	PCH-12, 3'-4'	Soil		18-Dec-2019 14:25	21-Dec-2019 10:10	
HS19121258-32	PCH-12, 4'-5'	Soil		18-Dec-2019 14:30	21-Dec-2019 10:10	
HS19121258-33	PCH-13, 0'-1'	Soil		18-Dec-2019 14:40	21-Dec-2019 10:10	
HS19121258-34	PCH-13, 1'-2'	Soil		18-Dec-2019 14:45	21-Dec-2019 10:10	
HS19121258-35	PCH-13, 0'-2'	Soil		18-Dec-2019 14:50	21-Dec-2019 10:10	
HS19121258-36	PCH-13, 2'-3'	Soil		18-Dec-2019 14:50	21-Dec-2019 10:10	
HS19121258-37	PCH-13, 3'-4'	Soil		18-Dec-2019 14:55	21-Dec-2019 10:10	
HS19121258-38	PCH-13, 4'-5'	Soil		18-Dec-2019 15:00	21-Dec-2019 10:10	
HS19121258-39	PCH-8, 0'-1'	Soil		18-Dec-2019 15:15	21-Dec-2019 10:10	
HS19121258-40	PCH-8, 1'-2'	Soil		18-Dec-2019 15:20	21-Dec-2019 10:10	
HS19121258-41	PCH-8, 0'-2'	Soil		18-Dec-2019 15:20	21-Dec-2019 10:10	
HS19121258-42	PCH-8, 2'-3'	Soil		18-Dec-2019 15:25	21-Dec-2019 10:10	
HS19121258-43	PCH-8, 3'-4'	Soil		18-Dec-2019 15:30	21-Dec-2019 10:10	
HS19121258-44	PCH-8, 4'-5'	Soil		18-Dec-2019 15:35	21-Dec-2019 10:10	
HS19121258-45	PCH-9, 0'-1'	Soil		18-Dec-2019 15:50	21-Dec-2019 10:10	
HS19121258-46	PCH-9, 1'-2'	Soil		18-Dec-2019 15:55	21-Dec-2019 10:10	
HS19121258-47	PCH-9, 0'-2'	Soil		18-Dec-2019 15:55	21-Dec-2019 10:10	
HS19121258-48	PCH-9, 2'-3'	Soil		18-Dec-2019 16:00	21-Dec-2019 10:10	
HS19121258-49	PCH-9, 3'-4'	Soil		18-Dec-2019 16:05	21-Dec-2019 10:10	
HS19121258-50	PCH-9, 4'-5'	Soil		18-Dec-2019 16:10	21-Dec-2019 10:10	
HS19121258-51	Trip Blank CG-11519-418	Water		18-Dec-2019 00:00	21-Dec-2019 10:10	
HS19121258-52	Trip Blank CG-11519-417	Water		18-Dec-2019 00:00	21-Dec-2019 10:10	

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM **CASE NARRATIVE**
Project: Cotton Hills NM
Work Order: HS19121258

Work Order Comments

- This report was revised January 14, 2020 in order to adjust the reporting format to include dry weight correction and to report results to the MDL.

GC Semivolatiles by Method SW8015M

Batch ID: 149213

Sample ID: PCH-14, 1'-2' (HS19121258-02)

- Surrogate recoveries were outside of the control limits due to matrix interference.

GC Volatiles by Method SW8015

Batch ID: R353467

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

GCMS Volatiles by Method SW8260

Batch ID: R353488

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

WetChemistry by Method ASTM D2216

Batch ID: R353944,R353946,R354056

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

WetChemistry by Method SW9250

Batch ID: 149185,149190,149196

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

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-14, 0'-1'
Collection Date: 18-Dec-2019 10:30

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-01
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**26.0**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**987**		**18.1**	**66.1**	**mg/Kg-dry**	5	06-Jan-2020 12:52

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-14, 1'-2'
Collection Date: 18-Dec-2019 10:35

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-02
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.012		0.012	0.062	mg/Kg-dry	1	24-Dec-2019 14:36
Surr: 4-Bromofluorobenzene	*120*			*70-123*	*%REC*	*1*	*24-Dec-2019 14:36*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Dec-2019		Analyst: GR
TPH (Diesel Range)	**1,500**		**15**	**50**	**mg/Kg-dry**	25	30-Dec-2019 18:25
TPH (Motor Oil Range)	**1,500**		**15**	**100**	**mg/Kg-dry**	25	30-Dec-2019 18:25
Surr: 2-Fluorobiphenyl	*184*	*S*		*60-129*	*%REC*	*25*	*30-Dec-2019 18:25*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**15.6**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**3,720**		**32.1**	**117**	**mg/Kg-dry**	10	06-Jan-2020 12:52

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-14, 2'-3'
Collection Date: 18-Dec-2019 10:40

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-03
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**15.4**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**1,730**		**31.8**	**116**	**mg/Kg-dry**	10	06-Jan-2020 12:52

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-14, 3'-4'
Collection Date: 18-Dec-2019 10:45

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-04
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**12.4**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**1,290**		**31.1**	**113**	**mg/Kg-dry**	10	06-Jan-2020 12:52

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-14, 4'-5'
Collection Date: 18-Dec-2019 10:50

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-05
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**28.7**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**603**		**3.74**	**13.6**	**mg/Kg-dry**	1	06-Jan-2020 10:54

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-14, 5'-7.5'
Collection Date: 18-Dec-2019 10:55

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-06
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**31.2**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**441**		**3.94**	**14.4**	**mg/Kg-dry**	1	06-Jan-2020 11:30

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-14, 7.5'-10'
Collection Date: 18-Dec-2019 11:00

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-07
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.057	mg/Kg-dry	1	24-Dec-2019 14:52
Surr: 4-Bromofluorobenzene	*118*			*70-123*	*%REC*	*1*	*24-Dec-2019 14:52*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Dec-2019		Analyst: GR
TPH (Diesel Range)	**4.1**		**0.60**	**2.0**	**mg/Kg-dry**	1	30-Dec-2019 18:50
TPH (Motor Oil Range)	**6.2**		**0.60**	**4.1**	**mg/Kg-dry**	1	30-Dec-2019 18:50
Surr: 2-Fluorobiphenyl	*70.6*			*60-129*	*%REC*	*1*	*30-Dec-2019 18:50*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.9**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**693**		**16.4**	**60.0**	**mg/Kg-dry**	5	06-Jan-2020 12:00

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-15, 0'-1'
Collection Date: 18-Dec-2019 11:20

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-08
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.2**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**2,750**		**31.2**	**114**	**mg/Kg-dry**	10	06-Jan-2020 12:00

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-15, 1'-2'
Collection Date: 18-Dec-2019 11:25

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-09
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**17.8**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**1,560**		**33.2**	**121**	**mg/Kg-dry**	10	06-Jan-2020 12:00

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-15, 2'-3'
Collection Date: 18-Dec-2019 11:30

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-10
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.012		0.012	0.060	mg/Kg-dry	1	24-Dec-2019 15:08
Surr: 4-Bromofluorobenzene	*116*			*70-123*	*%REC*	*1*	*24-Dec-2019 15:08*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Dec-2019		Analyst: GR
TPH (Diesel Range)	**1.2**	J	**0.60**	**2.0**	**mg/Kg-dry**	1	30-Dec-2019 19:14
TPH (Motor Oil Range)	**4.1**		**0.60**	**4.1**	**mg/Kg-dry**	1	30-Dec-2019 19:14
Surr: 2-Fluorobiphenyl	*78.0*			*60-129*	*%REC*	*1*	*30-Dec-2019 19:14*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.6**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**1,480**		**32.7**	**119**	**mg/Kg-dry**	10	06-Jan-2020 12:00

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-15, 3'-4'
Collection Date: 18-Dec-2019 11:35

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-11
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.9**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**627**		**16.4**	**60.0**	**mg/Kg-dry**	5	06-Jan-2020 12:00

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-15, 4'-5'
Collection Date: 18-Dec-2019 11:40

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-12
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**17.0**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**416**		**3.27**	**11.9**	**mg/Kg-dry**	1	06-Jan-2020 11:31

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-15, 5'-7.5'
Collection Date: 18-Dec-2019 11:45

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-13
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.6**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**99.6**		**3.14**	**11.5**	**mg/Kg-dry**	1	06-Jan-2020 10:55

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-15, 7.5'-10'
Collection Date: 18-Dec-2019 12:00

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-14
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.057	mg/Kg-dry	1	24-Dec-2019 15:24
Surr: 4-Bromofluorobenzene	*120*			*70-123*	*%REC*	*1*	*24-Dec-2019 15:24*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Dec-2019		Analyst: GR
TPH (Diesel Range)	**1.1**	J	**0.58**	**2.0**	**mg/Kg-dry**	1	30-Dec-2019 19:39
TPH (Motor Oil Range)	**3.3**	J	**0.58**	**3.9**	**mg/Kg-dry**	1	30-Dec-2019 19:39
Surr: 2-Fluorobiphenyl	*88.0*			*60-129*	*%REC*	*1*	*30-Dec-2019 19:39*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.6**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**89.0**		**3.15**	**11.5**	**mg/Kg-dry**	1	06-Jan-2020 10:55

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-10, 0'-1'
Collection Date: 18-Dec-2019 13:05

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-15
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.5**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**865**		**15.7**	**57.3**	**mg/Kg-dry**	5	06-Jan-2020 12:52

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-10, 1'-2'
Collection Date: 18-Dec-2019 13:10

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-16
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.5**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**922**		**15.8**	**57.6**	**mg/Kg-dry**	5	06-Jan-2020 12:52

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-10, 0'-2'
Collection Date: 18-Dec-2019 13:10

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-17
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.012		0.012	0.059	mg/Kg-dry	1	24-Dec-2019 15:39
Surr: 4-Bromofluorobenzene	*118*			*70-123*	*%REC*	*1*	*24-Dec-2019 15:39*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Dec-2019		Analyst: GR
TPH (Diesel Range)	**1.0**	J	**0.58**	**2.0**	**mg/Kg-dry**	1	30-Dec-2019 15:11
TPH (Motor Oil Range)	**10**		**0.58**	**3.9**	**mg/Kg-dry**	1	30-Dec-2019 15:11
Surr: 2-Fluorobiphenyl	*77.6*			*60-129*	*%REC*	*1*	*30-Dec-2019 15:11*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.8**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-10, 2'-3'
Collection Date: 18-Dec-2019 13:15

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-18
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.1**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**361**		**3.13**	**11.4**	**mg/Kg-dry**	1	06-Jan-2020 10:55

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-10, 3'-4'
Collection Date: 18-Dec-2019 13:20

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-19
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.5**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**209**		**3.16**	**11.5**	**mg/Kg-dry**	1	06-Jan-2020 10:55

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-10, 4'-5'
Collection Date: 18-Dec-2019 13:25

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-20
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**12.4**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**159**		**3.08**	**11.2**	**mg/Kg-dry**	1	06-Jan-2020 12:25

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-11, 0'-1'
Collection Date: 18-Dec-2019 13:40

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-21
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**18.3**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**682**		**16.5**	**60.3**	**mg/Kg-dry**	5	06-Jan-2020 16:51

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-11, 1'-2'
Collection Date: 18-Dec-2019 13:45

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-22
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**14.9**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**444**		**3.17**	**11.6**	**mg/Kg-dry**	1	06-Jan-2020 16:19

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-11, 0'-2'
Collection Date: 18-Dec-2019 13:45

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-23
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.012		0.012	0.058	mg/Kg-dry	1	24-Dec-2019 15:55
Surr: 4-Bromofluorobenzene	*118*			*70-123*	*%REC*	*1*	*24-Dec-2019 15:55*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Dec-2019		Analyst: GR
TPH (Diesel Range)	**1.3**	J	**0.58**	**2.0**	**mg/Kg-dry**	1	30-Dec-2019 15:35
TPH (Motor Oil Range)	**9.3**		**0.58**	**3.9**	**mg/Kg-dry**	1	30-Dec-2019 15:35
Surr: 2-Fluorobiphenyl	*81.6*			*60-129*	*%REC*	*1*	*30-Dec-2019 15:35*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.3**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-11, 2'-3'
Collection Date: 18-Dec-2019 13:50

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-24
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**14.4**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**309**		**3.20**	**11.7**	**mg/Kg-dry**	1	06-Jan-2020 16:19

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-11, 3'-4'
Collection Date: 18-Dec-2019 13:55

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-25
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.3**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**274**		**3.25**	**11.9**	**mg/Kg-dry**	1	06-Jan-2020 16:20

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-11, 4'-5'
Collection Date: 18-Dec-2019 14:00

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-26
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**15.1**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**130**		**3.19**	**11.6**	**mg/Kg-dry**	1	06-Jan-2020 16:20

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-12, 0'-1'
Collection Date: 18-Dec-2019 14:10

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-27
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**9.05**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**165**		**3.00**	**10.9**	**mg/Kg-dry**	1	06-Jan-2020 16:20

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-12, 1'-2'
Collection Date: 18-Dec-2019 14:15

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-28
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**15.7**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**62.6**		**3.21**	**11.7**	**mg/Kg-dry**	1	06-Jan-2020 16:20

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-12, 0'-2'
Collection Date: 18-Dec-2019 14:15

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-29
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.012		0.012	0.061	mg/Kg-dry	1	24-Dec-2019 16:11
Surr: 4-Bromofluorobenzene	*118*			*70-123*	*%REC*	*1*	*24-Dec-2019 16:11*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Dec-2019		Analyst: GR
TPH (Diesel Range)	**0.62**	J	**0.59**	**2.0**	**mg/Kg-dry**	1	30-Dec-2019 15:59
TPH (Motor Oil Range)	**8.5**		**0.59**	**4.0**	**mg/Kg-dry**	1	30-Dec-2019 15:59
Surr: 2-Fluorobiphenyl	*76.3*			*60-129*	*%REC*	*1*	*30-Dec-2019 15:59*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**15.9**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-12, 2'-3'
Collection Date: 18-Dec-2019 14:20

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-30
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.6**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**55.3**		**3.21**	**11.7**	**mg/Kg-dry**	1	06-Jan-2020 16:20

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-12, 3'-4'
Collection Date: 18-Dec-2019 14:25

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-31
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**17.5**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**31.5**		**3.31**	**12.1**	**mg/Kg-dry**	1	06-Jan-2020 16:21

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-12, 4'-5'
Collection Date: 18-Dec-2019 14:30

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-32
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**17.8**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**27.9**		**3.27**	**11.9**	**mg/Kg-dry**	1	06-Jan-2020 16:21

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-13, 0'-1'
Collection Date: 18-Dec-2019 14:40

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-33
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**4.55**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**1,460**		**28.5**	**104**	**mg/Kg-dry**	10	06-Jan-2020 16:52

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-13, 1'-2'
Collection Date: 18-Dec-2019 14:45

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-34
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**16.4**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**224**		**3.26**	**11.9**	**mg/Kg-dry**	1	06-Jan-2020 16:21

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-13, 0'-2'
Collection Date: 18-Dec-2019 14:50

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-35
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.011		0.011	0.053	mg/Kg-dry	1	24-Dec-2019 16:27
Surr: 4-Bromofluorobenzene	*118*			*70-123*	*%REC*	*1*	*24-Dec-2019 16:27*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Dec-2019		Analyst: GR
TPH (Diesel Range)	**0.96**	J	**0.52**	**1.8**	**mg/Kg-dry**	1	30-Dec-2019 16:23
TPH (Motor Oil Range)	**7.3**		**0.52**	**3.6**	**mg/Kg-dry**	1	30-Dec-2019 16:23
Surr: 2-Fluorobiphenyl	*72.6*			*60-129*	*%REC*	*1*	*30-Dec-2019 16:23*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**4.44**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-13, 2'-3'
Collection Date: 18-Dec-2019 14:50

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-36
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**14.9**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**220**		**3.20**	**11.7**	**mg/Kg-dry**	1	06-Jan-2020 16:21

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-13, 3'-4'
Collection Date: 18-Dec-2019 14:55

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-37
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.5**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**64.7**		**3.11**	**11.4**	**mg/Kg-dry**	1	06-Jan-2020 16:21

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-13, 4'-5'
Collection Date: 18-Dec-2019 15:00

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-38
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**8.90**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**90.8**		**2.96**	**10.8**	**mg/Kg-dry**	1	06-Jan-2020 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-8, 0'-1'
Collection Date: 18-Dec-2019 15:15

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-39
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**12.2**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**161**		**3.07**	**11.2**	**mg/Kg-dry**	1	06-Jan-2020 16:22

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-8, 1'-2'
Collection Date: 18-Dec-2019 15:20

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-40
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**15.0**		**0.0100**	**0.0100**	**wt%**	1	06-Jan-2020 08:55
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**43.7**		**3.19**	**11.7**	**mg/Kg-dry**	1	06-Jan-2020 16:22

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-8, 0'-2'
Collection Date: 18-Dec-2019 15:20

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-41
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.016		0.016	0.081	mg/Kg-dry	1	24-Dec-2019 16:43
Surr: 4-Bromofluorobenzene	*117*			*70-123*	*%REC*	*1*	*24-Dec-2019 16:43*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Dec-2019		Analyst: GR
TPH (Diesel Range)	**0.89**	J	**0.78**	**2.6**	**mg/Kg-dry**	1	30-Dec-2019 16:48
TPH (Motor Oil Range)	**6.7**		**0.78**	**5.3**	**mg/Kg-dry**	1	30-Dec-2019 16:48
Surr: 2-Fluorobiphenyl	*70.9*			*60-129*	*%REC*	*1*	*30-Dec-2019 16:48*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**35.6**		**0.0100**	**0.0100**	**wt%**	1	07-Jan-2020 11:02

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-8, 2'-3'
Collection Date: 18-Dec-2019 15:25

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-42
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**14.7**		**0.0100**	**0.0100**	**wt%**	1	07-Jan-2020 11:02
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**95.4**		**3.21**	**11.7**	**mg/Kg-dry**	1	06-Jan-2020 16:22

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-8, 3'-4'
Collection Date: 18-Dec-2019 15:30

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-43
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.9**		**0.0100**	**0.0100**	**wt%**	1	07-Jan-2020 11:02
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**54.0**		**3.15**	**11.5**	**mg/Kg-dry**	1	06-Jan-2020 16:22

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-8, 4'-5'
Collection Date: 18-Dec-2019 15:35

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-44
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**13.5**		**0.0100**	**0.0100**	**wt%**	1	07-Jan-2020 11:02
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**58.3**		**3.14**	**11.5**	**mg/Kg-dry**	1	06-Jan-2020 16:23

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-9, 0'-1'
Collection Date: 18-Dec-2019 15:50

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-45
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**13.7**		**0.0100**	**0.0100**	**wt%**	1	07-Jan-2020 11:02
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**133**		**3.15**	**11.5**	**mg/Kg-dry**	1	07-Jan-2020 11:40

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-9, 1'-2'
Collection Date: 18-Dec-2019 15:55

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-46
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**12.2**		**0.0100**	**0.0100**	**wt%**	1	07-Jan-2020 11:02
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**140**		**3.10**	**11.3**	**mg/Kg-dry**	1	07-Jan-2020 11:40

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-9, 0'-2'
Collection Date: 18-Dec-2019 15:55

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-47
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.012		0.012	0.058	mg/Kg-dry	1	24-Dec-2019 16:59
Surr: 4-Bromofluorobenzene	*117*			*70-123*	*%REC*	*1*	*24-Dec-2019 16:59*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 30-Dec-2019		Analyst: GR
TPH (Diesel Range)	**3.8**		**0.56**	**1.9**	**mg/Kg-dry**	1	30-Dec-2019 17:12
TPH (Motor Oil Range)	**7.7**		**0.56**	**3.8**	**mg/Kg-dry**	1	30-Dec-2019 17:12
Surr: 2-Fluorobiphenyl	*70.5*			*60-129*	*%REC*	*1*	*30-Dec-2019 17:12*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**11.9**		**0.0100**	**0.0100**	**wt%**	1	07-Jan-2020 11:02

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-9, 2'-3'
Collection Date: 18-Dec-2019 16:00

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-48
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**12.2**		**0.0100**	**0.0100**	**wt%**	1	07-Jan-2020 11:02
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**102**		**3.09**	**11.3**	**mg/Kg-dry**	1	07-Jan-2020 11:40

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-9, 3'-4'
Collection Date: 18-Dec-2019 16:05

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-49
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**10.9**		**0.0100**	**0.0100**	**wt%**	1	07-Jan-2020 11:02
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**206**		**3.07**	**11.2**	**mg/Kg-dry**	1	07-Jan-2020 11:40

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: PCH-9, 4'-5'
Collection Date: 18-Dec-2019 16:10

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-50
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: DFF
Percent Moisture	**12.2**		**0.0100**	**0.0100**	**wt%**	1	07-Jan-2020 11:02
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 27-Dec-2019		Analyst: KVL
Chloride	**346**		**3.08**	**11.2**	**mg/Kg-dry**	1	07-Jan-2020 11:41

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

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: Trip Blank CG-11519-418
Collection Date: 18-Dec-2019 00:00

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-51
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C	**Method:SW8260**						Analyst: PC
Benzene	< 0.60		0.60	5.0	ug/L	1	30-Dec-2019 03:15
Ethylbenzene	< 0.50		0.50	5.0	ug/L	1	30-Dec-2019 03:15
Toluene	< 0.50		0.50	5.0	ug/L	1	30-Dec-2019 03:15
Xylenes, Total	< 0.50		0.50	5.0	ug/L	1	30-Dec-2019 03:15
Surr: 1,2-Dichloroethane-d4	*99.8*			*70-126*	*%REC*	*1*	*30-Dec-2019 03:15*
Surr: 4-Bromofluorobenzene	*97.0*			*82-124*	*%REC*	*1*	*30-Dec-2019 03:15*
Surr: Dibromofluoromethane	*97.6*			*77-123*	*%REC*	*1*	*30-Dec-2019 03:15*
Surr: Toluene-d8	*99.3*			*82-127*	*%REC*	*1*	*30-Dec-2019 03:15*

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
Sample ID: Trip Blank CG-11519-417
Collection Date: 18-Dec-2019 00:00

ANALYTICAL REPORT
WorkOrder:HS19121258
Lab ID:HS19121258-52
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C	**Method:SW8260**						Analyst: PC
Benzene	< 0.60		0.60	5.0	ug/L	1	30-Dec-2019 03:40
Ethylbenzene	< 0.50		0.50	5.0	ug/L	1	30-Dec-2019 03:40
Toluene	< 0.50		0.50	5.0	ug/L	1	30-Dec-2019 03:40
Xylenes, Total	< 0.50		0.50	5.0	ug/L	1	30-Dec-2019 03:40
Surr: 1,2-Dichloroethane-d4	*101*			*70-126*	*%REC*	*1*	*30-Dec-2019 03:40*
Surr: 4-Bromofluorobenzene	*97.4*			*82-124*	*%REC*	*1*	*30-Dec-2019 03:40*
Surr: Dibromofluoromethane	*98.0*			*77-123*	*%REC*	*1*	*30-Dec-2019 03:40*
Surr: Toluene-d8	*101*			*82-127*	*%REC*	*1*	*30-Dec-2019 03:40*

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

ALS Houston, US

Date: 14-Jan-20

Weight / Prep Log

Client: AECOM
Project: Cotton Hills NM
WorkOrder: HS19121258

Batch ID: 3538 **Start Date:** 24 Dec 2019 11:22 **End Date:** 24 Dec 2019 11:22
Method: GASOLINE RANGE ORGANICS BY SW8015C **Prep Code:**

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS19121258-02	1	4.746 (g)	5 (mL)	1.05	Bulk (5030B)
HS19121258-07	1	5.313 (g)	5 (mL)	0.94	Bulk (5030B)
HS19121258-10	1	4.995 (g)	5 (mL)	1	Bulk (5030B)
HS19121258-14	1	5.075 (g)	5 (mL)	0.99	Bulk (5030B)
HS19121258-17	1	4.97 (g)	5 (mL)	1.01	Bulk (5030B)
HS19121258-23	1	4.994 (g)	5 (mL)	1	Bulk (5030B)
HS19121258-29	1	4.849 (g)	5 (mL)	1.03	Bulk (5030B)
HS19121258-35	1	4.946 (g)	5 (mL)	1.01	Bulk (5030B)
HS19121258-41	1	4.789 (g)	5 (mL)	1.04	Bulk (5030B)
HS19121258-47	1	4.883 (g)	5 (mL)	1.02	Bulk (5030B)

Batch ID: 149185 **Start Date:** 06 Jan 2020 08:30 **End Date:** 06 Jan 2020 10:30
Method: SOLID CHLORIDE PREP **Prep Code:** CHLORIDE LEACH

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19121258-01		5.1117 (grams)	50 (mL)	9.781
HS19121258-02		5.0613 (grams)	50 (mL)	9.879
HS19121258-03		5.0894 (grams)	50 (mL)	9.824
HS19121258-04		5.0317 (grams)	50 (mL)	9.937
HS19121258-05		5.1421 (grams)	50 (mL)	9.724
HS19121258-06		5.0541 (grams)	50 (mL)	9.893
HS19121258-07		5.0174 (grams)	50 (mL)	9.965
HS19121258-08		5.0555 (grams)	50 (mL)	9.89
HS19121258-09		5.0246 (grams)	50 (mL)	9.951
HS19121258-10		5.0306 (grams)	50 (mL)	9.939
HS19121258-11		5.0128 (grams)	50 (mL)	9.974
HS19121258-12		5.0471 (grams)	50 (mL)	9.907
HS19121258-13		5.0476 (grams)	50 (mL)	9.906
HS19121258-14		5.0262 (grams)	50 (mL)	9.948
HS19121258-15		5.0478 (grams)	50 (mL)	9.905
HS19121258-16		5.0169 (grams)	50 (mL)	9.966
HS19121258-18		5.0346 (grams)	50 (mL)	9.931
HS19121258-19		5.0114 (grams)	50 (mL)	9.977
HS19121258-20		5.0766 (grams)	50 (mL)	9.849

Revision: 1

Weight / Prep Log

Client: AECOM
Project: Cotton Hills NM
WorkOrder: HS19121258

Batch ID: 149190 **Start Date:** 06 Jan 2020 08:30 **End Date:** 06 Jan 2020 12:00
Method: SOLID CHLORIDE PREP **Prep Code:** CHLORIDE LEACH

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19121258-21		5.0754 (grams)	50 (mL)	9.851
HS19121258-22		5.0792 (grams)	50 (mL)	9.844
HS19121258-24		5.0038 (grams)	50 (mL)	9.992
HS19121258-25		5.0307 (grams)	50 (mL)	9.939
HS19121258-26		5.0624 (grams)	50 (mL)	9.877
HS19121258-27		5.0259 (grams)	50 (mL)	9.948
HS19121258-28		5.0558 (grams)	50 (mL)	9.89
HS19121258-30		5.1101 (grams)	50 (mL)	9.785
HS19121258-31		5.0229 (grams)	50 (mL)	9.954
HS19121258-32		5.0951 (grams)	50 (mL)	9.813
HS19121258-33		5.0322 (grams)	50 (mL)	9.936
HS19121258-34		5.0234 (grams)	50 (mL)	9.953
HS19121258-36		5.0276 (grams)	50 (mL)	9.945
HS19121258-37		5.0883 (grams)	50 (mL)	9.826
HS19121258-38		5.087 (grams)	50 (mL)	9.829
HS19121258-39		5.0769 (grams)	50 (mL)	9.849
HS19121258-40		5.0481 (grams)	50 (mL)	9.905
HS19121258-42		5.004 (grams)	50 (mL)	9.992
HS19121258-43		5.0575 (grams)	50 (mL)	9.886
HS19121258-44		5.0418 (grams)	50 (mL)	9.917

Batch ID: 149196 **Start Date:** 07 Jan 2020 09:30 **End Date:** 07 Jan 2020 11:30
Method: SOLID CHLORIDE PREP **Prep Code:** CHLORIDE LEACH

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19121258-45		5.0468 (grams)	50 (mL)	9.907
HS19121258-46		5.0399 (grams)	50 (mL)	9.921
HS19121258-48		5.0464 (grams)	50 (mL)	9.908
HS19121258-49		5.0043 (grams)	50 (mL)	9.991
HS19121258-50		5.0707 (grams)	50 (mL)	9.861

Revision: 1

ALS Houston, US

Date: 14-Jan-20

Weight / Prep Log

Client: AECOM
Project: Cotton Hills NM
WorkOrder: HS19121258

Batch ID: 149213 **Start Date:** 30 Dec 2019 07:40 **End Date:** 30 Dec 2019 11:30
Method: SOPREP: 3541 TPH **Prep Code:** 8015SPR_LL

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19121258-02	1	30 (g)	1 (mL)	0.03333
HS19121258-07	1	30.06 (g)	1 (mL)	0.03327
HS19121258-10	1	30.01 (g)	1 (mL)	0.03332
HS19121258-14	1	30.01 (g)	1 (mL)	0.03332
HS19121258-17	1	30.02 (g)	1 (mL)	0.03331
HS19121258-23	1	30.04 (g)	1 (mL)	0.03329
HS19121258-29	1	30.15 (g)	1 (mL)	0.03317
HS19121258-35	1	30.011 (g)	1 (mL)	0.03332
HS19121258-41	1	30.05 (g)	1 (mL)	0.03328
HS19121258-47	1	30.18 (g)	1 (mL)	0.03313

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
WorkOrder: HS19121258

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 149185 (0)	**Test Name :** CHLORIDE BY SW-846 9250				**Matrix:** Soil	
HS19121258-01	PCH-14, 0'-1'	18 Dec 2019 10:30		27 Dec 2019 12:23	06 Jan 2020 12:52	5
HS19121258-02	PCH-14, 1'-2'	18 Dec 2019 10:35		27 Dec 2019 12:23	06 Jan 2020 12:52	10
HS19121258-03	PCH-14, 2'-3'	18 Dec 2019 10:40		27 Dec 2019 12:23	06 Jan 2020 12:52	10
HS19121258-04	PCH-14, 3'-4'	18 Dec 2019 10:45		27 Dec 2019 12:23	06 Jan 2020 12:52	10
HS19121258-05	PCH-14, 4'-5'	18 Dec 2019 10:50		27 Dec 2019 12:23	06 Jan 2020 10:54	1
HS19121258-06	PCH-14, 5'-7.5'	18 Dec 2019 10:55		27 Dec 2019 12:23	06 Jan 2020 11:30	1
HS19121258-07	PCH-14, 7.5'-10'	18 Dec 2019 11:00		27 Dec 2019 12:23	06 Jan 2020 12:00	5
HS19121258-08	PCH-15, 0'-1'	18 Dec 2019 11:20		27 Dec 2019 12:23	06 Jan 2020 12:00	10
HS19121258-09	PCH-15, 1'-2'	18 Dec 2019 11:25		27 Dec 2019 12:23	06 Jan 2020 12:00	10
HS19121258-10	PCH-15, 2'-3'	18 Dec 2019 11:30		27 Dec 2019 12:23	06 Jan 2020 12:00	10
HS19121258-11	PCH-15, 3'-4'	18 Dec 2019 11:35		27 Dec 2019 12:23	06 Jan 2020 12:00	5
HS19121258-12	PCH-15, 4'-5'	18 Dec 2019 11:40		27 Dec 2019 12:23	06 Jan 2020 11:31	1
HS19121258-13	PCH-15, 5'-7.5'	18 Dec 2019 11:45		27 Dec 2019 12:23	06 Jan 2020 10:55	1
HS19121258-14	PCH-15, 7.5'-10'	18 Dec 2019 12:00		27 Dec 2019 12:23	06 Jan 2020 10:55	1
HS19121258-15	PCH-10, 0'-1'	18 Dec 2019 13:05		27 Dec 2019 12:23	06 Jan 2020 12:52	5
HS19121258-16	PCH-10, 1'-2'	18 Dec 2019 13:10		27 Dec 2019 12:23	06 Jan 2020 12:52	5
HS19121258-18	PCH-10, 2'-3'	18 Dec 2019 13:15		27 Dec 2019 12:23	06 Jan 2020 10:55	1
HS19121258-19	PCH-10, 3'-4'	18 Dec 2019 13:20		27 Dec 2019 12:23	06 Jan 2020 10:55	1
HS19121258-20	PCH-10, 4'-5'	18 Dec 2019 13:25		27 Dec 2019 12:23	06 Jan 2020 12:25	1

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
WorkOrder: HS19121258

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 149190 (0)	**Test Name :** CHLORIDE BY SW-846 9250				**Matrix:** Soil	
HS19121258-21	PCH-11, 0'-1'	18 Dec 2019 13:40		27 Dec 2019 14:21	06 Jan 2020 16:51	5
HS19121258-22	PCH-11, 1'-2'	18 Dec 2019 13:45		27 Dec 2019 14:21	06 Jan 2020 16:19	1
HS19121258-24	PCH-11, 2'-3'	18 Dec 2019 13:50		27 Dec 2019 14:21	06 Jan 2020 16:19	1
HS19121258-25	PCH-11, 3'-4'	18 Dec 2019 13:55		27 Dec 2019 14:21	06 Jan 2020 16:20	1
HS19121258-26	PCH-11, 4'-5'	18 Dec 2019 14:00		27 Dec 2019 14:21	06 Jan 2020 16:20	1
HS19121258-27	PCH-12, 0'-1'	18 Dec 2019 14:10		27 Dec 2019 14:21	06 Jan 2020 16:20	1
HS19121258-28	PCH-12, 1'-2'	18 Dec 2019 14:15		27 Dec 2019 14:21	06 Jan 2020 16:20	1
HS19121258-30	PCH-12, 2'-3'	18 Dec 2019 14:20		27 Dec 2019 14:21	06 Jan 2020 16:20	1
HS19121258-31	PCH-12, 3'-4'	18 Dec 2019 14:25		27 Dec 2019 14:21	06 Jan 2020 16:21	1
HS19121258-32	PCH-12, 4'-5'	18 Dec 2019 14:30		27 Dec 2019 14:21	06 Jan 2020 16:21	1
HS19121258-33	PCH-13, 0'-1'	18 Dec 2019 14:40		27 Dec 2019 14:21	06 Jan 2020 16:52	10
HS19121258-34	PCH-13, 1'-2'	18 Dec 2019 14:45		27 Dec 2019 14:21	06 Jan 2020 16:21	1
HS19121258-36	PCH-13, 2'-3'	18 Dec 2019 14:50		27 Dec 2019 14:21	06 Jan 2020 16:21	1
HS19121258-37	PCH-13, 3'-4'	18 Dec 2019 14:55		27 Dec 2019 14:21	06 Jan 2020 16:21	1
HS19121258-38	PCH-13, 4'-5'	18 Dec 2019 15:00		27 Dec 2019 14:21	06 Jan 2020 16:22	1
HS19121258-39	PCH-8, 0'-1'	18 Dec 2019 15:15		27 Dec 2019 14:21	06 Jan 2020 16:22	1
HS19121258-40	PCH-8, 1'-2'	18 Dec 2019 15:20		27 Dec 2019 14:21	06 Jan 2020 16:22	1
HS19121258-42	PCH-8, 2'-3'	18 Dec 2019 15:25		27 Dec 2019 14:21	06 Jan 2020 16:22	1
HS19121258-43	PCH-8, 3'-4'	18 Dec 2019 15:30		27 Dec 2019 14:21	06 Jan 2020 16:22	1
HS19121258-44	PCH-8, 4'-5'	18 Dec 2019 15:35		27 Dec 2019 14:21	06 Jan 2020 16:23	1
Batch ID: 149196 (0)	**Test Name :** CHLORIDE BY SW-846 9250				**Matrix:** Soil	
HS19121258-45	PCH-9, 0'-1'	18 Dec 2019 15:50		27 Dec 2019 15:27	07 Jan 2020 11:40	1
HS19121258-46	PCH-9, 1'-2'	18 Dec 2019 15:55		27 Dec 2019 15:27	07 Jan 2020 11:40	1
HS19121258-48	PCH-9, 2'-3'	18 Dec 2019 16:00		27 Dec 2019 15:27	07 Jan 2020 11:40	1
HS19121258-49	PCH-9, 3'-4'	18 Dec 2019 16:05		27 Dec 2019 15:27	07 Jan 2020 11:40	1
HS19121258-50	PCH-9, 4'-5'	18 Dec 2019 16:10		27 Dec 2019 15:27	07 Jan 2020 11:41	1
Batch ID: 149213 (0)	**Test Name :** TPH DRO/ORO BY SW8015C				**Matrix:** Soil	
HS19121258-02	PCH-14, 1'-2'	18 Dec 2019 10:35		30 Dec 2019 07:40	30 Dec 2019 18:25	25
HS19121258-07	PCH-14, 7.5'-10'	18 Dec 2019 11:00		30 Dec 2019 07:40	30 Dec 2019 18:50	1
HS19121258-10	PCH-15, 2'-3'	18 Dec 2019 11:30		30 Dec 2019 07:40	30 Dec 2019 19:14	1
HS19121258-14	PCH-15, 7.5'-10'	18 Dec 2019 12:00		30 Dec 2019 07:40	30 Dec 2019 19:39	1
HS19121258-17	PCH-10, 0'-2'	18 Dec 2019 13:10		30 Dec 2019 07:40	30 Dec 2019 15:11	1
HS19121258-23	PCH-11, 0'-2'	18 Dec 2019 13:45		30 Dec 2019 07:40	30 Dec 2019 15:35	1
HS19121258-29	PCH-12, 0'-2'	18 Dec 2019 14:15		30 Dec 2019 07:40	30 Dec 2019 15:59	1
HS19121258-35	PCH-13, 0'-2'	18 Dec 2019 14:50		30 Dec 2019 07:40	30 Dec 2019 16:23	1
HS19121258-41	PCH-8, 0'-2'	18 Dec 2019 15:20		30 Dec 2019 07:40	30 Dec 2019 16:48	1
HS19121258-47	PCH-9, 0'-2'	18 Dec 2019 15:55		30 Dec 2019 07:40	30 Dec 2019 17:12	1

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DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R353467 (0)	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C				**Matrix:** Soil	
HS19121258-02	PCH-14, 1'-2'	18 Dec 2019 10:35			24 Dec 2019 14:36	1
HS19121258-07	PCH-14, 7.5'-10'	18 Dec 2019 11:00			24 Dec 2019 14:52	1
HS19121258-10	PCH-15, 2'-3'	18 Dec 2019 11:30			24 Dec 2019 15:08	1
HS19121258-14	PCH-15, 7.5'-10'	18 Dec 2019 12:00			24 Dec 2019 15:24	1
HS19121258-17	PCH-10, 0'-2'	18 Dec 2019 13:10			24 Dec 2019 15:39	1
HS19121258-23	PCH-11, 0'-2'	18 Dec 2019 13:45			24 Dec 2019 15:55	1
HS19121258-29	PCH-12, 0'-2'	18 Dec 2019 14:15			24 Dec 2019 16:11	1
HS19121258-35	PCH-13, 0'-2'	18 Dec 2019 14:50			24 Dec 2019 16:27	1
HS19121258-41	PCH-8, 0'-2'	18 Dec 2019 15:20			24 Dec 2019 16:43	1
HS19121258-47	PCH-9, 0'-2'	18 Dec 2019 15:55			24 Dec 2019 16:59	1
Batch ID: R353488 (0)	**Test Name :** VOLATILES - SW8260C				**Matrix:** Water	
HS19121258-51	Trip Blank CG-11519-418	18 Dec 2019 00:00			30 Dec 2019 03:15	1
HS19121258-52	Trip Blank CG-11519-417	18 Dec 2019 00:00			30 Dec 2019 03:40	1
Batch ID: R353944 (0)	**Test Name :** MOISTURE - ASTM D2216				**Matrix:** Soil	
HS19121258-01	PCH-14, 0'-1'	18 Dec 2019 10:30			06 Jan 2020 08:53	1
HS19121258-02	PCH-14, 1'-2'	18 Dec 2019 10:35			06 Jan 2020 08:53	1
HS19121258-03	PCH-14, 2'-3'	18 Dec 2019 10:40			06 Jan 2020 08:53	1
HS19121258-04	PCH-14, 3'-4'	18 Dec 2019 10:45			06 Jan 2020 08:53	1
HS19121258-05	PCH-14, 4'-5'	18 Dec 2019 10:50			06 Jan 2020 08:53	1
HS19121258-06	PCH-14, 5'-7.5'	18 Dec 2019 10:55			06 Jan 2020 08:53	1
HS19121258-07	PCH-14, 7.5'-10'	18 Dec 2019 11:00			06 Jan 2020 08:53	1
HS19121258-08	PCH-15, 0'-1'	18 Dec 2019 11:20			06 Jan 2020 08:53	1
HS19121258-09	PCH-15, 1'-2'	18 Dec 2019 11:25			06 Jan 2020 08:53	1
HS19121258-10	PCH-15, 2'-3'	18 Dec 2019 11:30			06 Jan 2020 08:53	1
HS19121258-11	PCH-15, 3'-4'	18 Dec 2019 11:35			06 Jan 2020 08:53	1
HS19121258-12	PCH-15, 4'-5'	18 Dec 2019 11:40			06 Jan 2020 08:53	1
HS19121258-13	PCH-15, 5'-7.5'	18 Dec 2019 11:45			06 Jan 2020 08:53	1
HS19121258-14	PCH-15, 7.5'-10'	18 Dec 2019 12:00			06 Jan 2020 08:53	1
HS19121258-15	PCH-10, 0'-1'	18 Dec 2019 13:05			06 Jan 2020 08:53	1
HS19121258-16	PCH-10, 1'-2'	18 Dec 2019 13:10			06 Jan 2020 08:53	1
HS19121258-17	PCH-10, 0'-2'	18 Dec 2019 13:10			06 Jan 2020 08:53	1
HS19121258-18	PCH-10, 2'-3'	18 Dec 2019 13:15			06 Jan 2020 08:53	1
HS19121258-19	PCH-10, 3'-4'	18 Dec 2019 13:20			06 Jan 2020 08:53	1
HS19121258-20	PCH-10, 4'-5'	18 Dec 2019 13:25			06 Jan 2020 08:53	1

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DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R353946 (0)	**Test Name :** MOISTURE - ASTM D2216				**Matrix:** Soil	
HS19121258-21	PCH-11, 0'-1'	18 Dec 2019 13:40			06 Jan 2020 08:55	1
HS19121258-22	PCH-11, 1'-2'	18 Dec 2019 13:45			06 Jan 2020 08:55	1
HS19121258-23	PCH-11, 0'-2'	18 Dec 2019 13:45			06 Jan 2020 08:55	1
HS19121258-24	PCH-11, 2'-3'	18 Dec 2019 13:50			06 Jan 2020 08:55	1
HS19121258-25	PCH-11, 3'-4'	18 Dec 2019 13:55			06 Jan 2020 08:55	1
HS19121258-26	PCH-11, 4'-5'	18 Dec 2019 14:00			06 Jan 2020 08:55	1
HS19121258-27	PCH-12, 0'-1'	18 Dec 2019 14:10			06 Jan 2020 08:55	1
HS19121258-28	PCH-12, 1'-2'	18 Dec 2019 14:15			06 Jan 2020 08:55	1
HS19121258-29	PCH-12, 0'-2'	18 Dec 2019 14:15			06 Jan 2020 08:55	1
HS19121258-30	PCH-12, 2'-3'	18 Dec 2019 14:20			06 Jan 2020 08:55	1
HS19121258-31	PCH-12, 3'-4'	18 Dec 2019 14:25			06 Jan 2020 08:55	1
HS19121258-32	PCH-12, 4'-5'	18 Dec 2019 14:30			06 Jan 2020 08:55	1
HS19121258-33	PCH-13, 0'-1'	18 Dec 2019 14:40			06 Jan 2020 08:55	1
HS19121258-34	PCH-13, 1'-2'	18 Dec 2019 14:45			06 Jan 2020 08:55	1
HS19121258-35	PCH-13, 0'-2'	18 Dec 2019 14:50			06 Jan 2020 08:55	1
HS19121258-36	PCH-13, 2'-3'	18 Dec 2019 14:50			06 Jan 2020 08:55	1
HS19121258-37	PCH-13, 3'-4'	18 Dec 2019 14:55			06 Jan 2020 08:55	1
HS19121258-38	PCH-13, 4'-5'	18 Dec 2019 15:00			06 Jan 2020 08:55	1
HS19121258-39	PCH-8, 0'-1'	18 Dec 2019 15:15			06 Jan 2020 08:55	1
HS19121258-40	PCH-8, 1'-2'	18 Dec 2019 15:20			06 Jan 2020 08:55	1
Batch ID: R354056 (0)	**Test Name :** MOISTURE - ASTM D2216				**Matrix:** Soil	
HS19121258-41	PCH-8, 0'-2'	18 Dec 2019 15:20			07 Jan 2020 11:02	1
HS19121258-42	PCH-8, 2'-3'	18 Dec 2019 15:25			07 Jan 2020 11:02	1
HS19121258-43	PCH-8, 3'-4'	18 Dec 2019 15:30			07 Jan 2020 11:02	1
HS19121258-44	PCH-8, 4'-5'	18 Dec 2019 15:35			07 Jan 2020 11:02	1
HS19121258-45	PCH-9, 0'-1'	18 Dec 2019 15:50			07 Jan 2020 11:02	1
HS19121258-46	PCH-9, 1'-2'	18 Dec 2019 15:55			07 Jan 2020 11:02	1
HS19121258-47	PCH-9, 0'-2'	18 Dec 2019 15:55			07 Jan 2020 11:02	1
HS19121258-48	PCH-9, 2'-3'	18 Dec 2019 16:00			07 Jan 2020 11:02	1
HS19121258-49	PCH-9, 3'-4'	18 Dec 2019 16:05			07 Jan 2020 11:02	1
HS19121258-50	PCH-9, 4'-5'	18 Dec 2019 16:10			07 Jan 2020 11:02	1

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QC BATCH REPORT

Batch ID: 149213 (0) **Instrument: FID-7** **Method: TPH DRO/ORO BY SW8015C**

MBLK Sample ID: **MBLK-149213** Units: **mg/Kg** Analysis Date: **30-Dec-2019 13:09**
Client ID: Run ID: **FID-7_353714** SeqNo: **5420925** PrepDate: **30-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	< 0.50	1.7								
TPH (Motor Oil Range)	< 0.50	3.4								
Surr: 2-Fluorobiphenyl	*3.006*	*0.10*	*3.33*	*0*	*90.3*	*70 - 130*				

LCS Sample ID: **LCS-149213** Units: **mg/Kg** Analysis Date: **30-Dec-2019 13:33**
Client ID: Run ID: **FID-7_353714** SeqNo: **5420926** PrepDate: **30-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	32.42	1.7	33.33	0	97.3	70 - 130				
TPH (Motor Oil Range)	27.25	3.4	33.33	0	81.8	70 - 130				
Surr: 2-Fluorobiphenyl	*2.933*	*0.10*	*3.33*	*0*	*88.1*	*70 - 130*				

MS Sample ID: **HS19121004-01MS** Units: **mg/Kg** Analysis Date: **30-Dec-2019 14:22**
Client ID: Run ID: **FID-7_353714** SeqNo: **5420928** PrepDate: **30-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	38.21	1.7	33.27	1.266	111	70 - 130				
TPH (Motor Oil Range)	37.95	3.4	33.27	3.789	103	70 - 130				
Surr: 2-Fluorobiphenyl	*3.203*	*0.10*	*3.324*	*0*	*96.4*	*60 - 129*				

MSD Sample ID: **HS19121004-01MSD** Units: **mg/Kg** Analysis Date: **30-Dec-2019 14:46**
Client ID: Run ID: **FID-7_353714** SeqNo: **5420929** PrepDate: **30-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	35.77	1.7	33.31	1.266	104	70 - 130	38.21	6.61	30	
TPH (Motor Oil Range)	31.18	3.4	33.31	3.789	82.2	70 - 130	37.95	19.6	30	
Surr: 2-Fluorobiphenyl	*2.934*	*0.10*	*3.328*	*0*	*88.2*	*60 - 129*	*3.203*	*8.76*	*30*	

The following samples were analyzed in this batch:

HS19121258-02	HS19121258-07	HS19121258-10	HS19121258-14
HS19121258-17	HS19121258-23	HS19121258-29	HS19121258-35
HS19121258-41	HS19121258-47		

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QC BATCH REPORT

Batch ID: R353467 (0) **Instrument: FID-14** **Method: GASOLINE RANGE ORGANICS BY SW8015C**

MBLK Sample ID: **MBLK-191224** Units: **mg/Kg** Analysis Date: **24-Dec-2019 10:58**
Client ID: Run ID: **FID-14_353467** SeqNo: **5414332** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	< 0.010	0.050								
Surr: 4-Bromofluorobenzene	*0.1098*	*0.0050*	*0.1*	*0*	*110*	*75 - 121*				

LCS Sample ID: **LCS-191224** Units: **mg/Kg** Analysis Date: **24-Dec-2019 10:42**
Client ID: Run ID: **FID-14_353467** SeqNo: **5414331** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9736	0.050	1	0	97.4	72 - 121				
Surr: 4-Bromofluorobenzene	*0.0851*	*0.0050*	*0.1*	*0*	*85.1*	*75 - 121*				

MS Sample ID: **HS19121259-02MS** Units: **mg/Kg** Analysis Date: **24-Dec-2019 13:19**
Client ID: Run ID: **FID-14_353467** SeqNo: **5414339** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.008	0.052	1.04	0	96.9	70 - 130				
Surr: 4-Bromofluorobenzene	*0.08234*	*0.0052*	*0.104*	*0*	*79.2*	*70 - 123*				

MSD Sample ID: **HS19121259-02MSD** Units: **mg/Kg** Analysis Date: **24-Dec-2019 13:35**
Client ID: Run ID: **FID-14_353467** SeqNo: **5414340** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9817	0.053	1.06	0	92.6	70 - 130	1.008	2.63	30	
Surr: 4-Bromofluorobenzene	*0.0814*	*0.0053*	*0.106*	*0*	*76.8*	*70 - 123*	*0.08234*	*1.15*	*30*	

The following samples were analyzed in this batch:

HS19121258-02	HS19121258-07	HS19121258-10	HS19121258-14
HS19121258-17	HS19121258-23	HS19121258-29	HS19121258-35
HS19121258-41	HS19121258-47		

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Client: AECOM
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QC BATCH REPORT

Batch ID: R353488 (0) **Instrument:** VOA9 **Method:** VOLATILES - SW8260C

MBLK Sample ID: **VBLKW-191229** Units: **ug/L** Analysis Date: **30-Dec-2019 00:50**
Client ID: Run ID: **VOA9_353488** SeqNo: **5414766** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	< 0.60	5.0								
Ethylbenzene	< 0.50	5.0								
Toluene	< 0.50	5.0								
Xylenes, Total	< 0.50	5.0								
Surr: 1,2-Dichloroethane-d4	*49.24*	*0*	*50*	*0*	*98.5*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*48.2*	*0*	*50*	*0*	*96.4*	*82 - 115*				
Surr: Dibromofluoromethane	*49.5*	*0*	*50*	*0*	*99.0*	*73 - 126*				
Surr: Toluene-d8	*49.91*	*0*	*50*	*0*	*99.8*	*81 - 120*				

LCS Sample ID: **VLCSW-191229** Units: **ug/L** Analysis Date: **30-Dec-2019 00:01**
Client ID: Run ID: **VOA9_353488** SeqNo: **5414765** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.75	5.0	20	0	98.8	74 - 120				
Ethylbenzene	19.69	5.0	20	0	98.5	77 - 117				
Toluene	19.85	5.0	20	0	99.2	77 - 118				
Xylenes, Total	59.61	5.0	60	0	99.3	75 - 122				
Surr: 1,2-Dichloroethane-d4	*48.18*	*0*	*50*	*0*	*96.4*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*49.41*	*0*	*50*	*0*	*98.8*	*82 - 115*				
Surr: Dibromofluoromethane	*49.96*	*0*	*50*	*0*	*99.9*	*73 - 126*				
Surr: Toluene-d8	*49.87*	*0*	*50*	*0*	*99.7*	*81 - 120*				

MS Sample ID: **HS19121150-01MS** Units: **ug/L** Analysis Date: **30-Dec-2019 02:02**
Client ID: Run ID: **VOA9_353488** SeqNo: **5414769** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.9	5.0	20	0	109	70 - 127				
Ethylbenzene	22.68	5.0	20	0	113	70 - 124				
Toluene	22.3	5.0	20	0	112	70 - 123				
Xylenes, Total	67.76	5.0	60	0	113	70 - 130				
Surr: 1,2-Dichloroethane-d4	*49.3*	*0*	*50*	*0*	*98.6*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*50.42*	*0*	*50*	*0*	*101*	*82 - 124*				
Surr: Dibromofluoromethane	*50.92*	*0*	*50*	*0*	*102*	*77 - 123*				
Surr: Toluene-d8	*49.66*	*0*	*50*	*0*	*99.3*	*82 - 127*				

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QC BATCH REPORT

Batch ID: R353488 (0) **Instrument: VOA9** **Method: VOLATILES - SW8260C**

MSD Sample ID: **HS19121150-01MSD** Units: **ug/L** Analysis Date: **30-Dec-2019 02:27**
Client ID: Run ID: **VOA9_353488** SeqNo: **5414770** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	20.95	5.0	20	0	105	70 - 127	21.9	4.44	20	
Ethylbenzene	21.47	5.0	20	0	107	70 - 124	22.68	5.52	20	
Toluene	21.16	5.0	20	0	106	70 - 123	22.3	5.24	20	
Xylenes, Total	65.1	5.0	60	0	109	70 - 130	67.76	3.99	20	
Surr: 1,2-Dichloroethane-d4	*48.31*	*0*	*50*	*0*	*96.6*	*70 - 126*	*49.3*	*2.03*	*20*	
Surr: 4-Bromofluorobenzene	*50.14*	*0*	*50*	*0*	*100*	*82 - 124*	*50.42*	*0.558*	*20*	
Surr: Dibromofluoromethane	*49.54*	*0*	*50*	*0*	*99.1*	*77 - 123*	*50.92*	*2.73*	*20*	
Surr: Toluene-d8	*50.25*	*0*	*50*	*0*	*101*	*82 - 127*	*49.66*	*1.17*	*20*	

The following samples were analyzed in this batch: HS19121258-51 HS19121258-52

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Project: Cotton Hills NM
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QC BATCH REPORT

Batch ID: 149185 (0) **Instrument: Gall01** **Method: CHLORIDE BY SW-846 9250**

MBLK Sample ID: **MBLK-149185** Units: **mg/Kg** Analysis Date: **06-Jan-2020 10:53**
Client ID: Run ID: **Gall01_353928** SeqNo: **5426055** PrepDate: **27-Dec-2019** DF: **1**

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

LCS Sample ID: **LCS-149185** Units: **mg/Kg** Analysis Date: **06-Jan-2020 10:54**
Client ID: Run ID: **Gall01_353928** SeqNo: **5426057** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	195.3	10.0	200	0	97.6	80 - 120				

MS Sample ID: **HS19121258-20MS** Units: **mg/Kg** Analysis Date: **06-Jan-2020 12:26**
Client ID: **PCH-10, 4'-5'** Run ID: **Gall01_353928** SeqNo: **5426074** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	307.8	9.97	199.4	139.3	84.5	80 - 120				

MSD Sample ID: **HS19121258-20MSD** Units: **mg/Kg** Analysis Date: **06-Jan-2020 12:26**
Client ID: **PCH-10, 4'-5'** Run ID: **Gall01_353928** SeqNo: **5426075** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	305.4	9.89	197.8	139.3	84.0	80 - 120	307.8	0.753	30	

The following samples were analyzed in this batch:

HS19121258-01	HS19121258-02	HS19121258-03	HS19121258-04
HS19121258-05	HS19121258-06	HS19121258-07	HS19121258-08
HS19121258-09	HS19121258-10	HS19121258-11	HS19121258-12
HS19121258-13	HS19121258-14	HS19121258-15	HS19121258-16
HS19121258-18	HS19121258-19	HS19121258-20	

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Client: AECOM
Project: Cotton Hills NM
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QC BATCH REPORT

Batch ID: 149190 (0) **Instrument: Gall01** **Method: CHLORIDE BY SW-846 9250**

MBLK Sample ID: **MBLK-149190** Units: **mg/Kg** Analysis Date: **06-Jan-2020 16:19**
Client ID: Run ID: **Gall01_353930** SeqNo: **5426110** PrepDate: **27-Dec-2019** DF: **1**

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

LCS Sample ID: **LCS-149190** Units: **mg/Kg** Analysis Date: **06-Jan-2020 16:19**
Client ID: Run ID: **Gall01_353930** SeqNo: **5426111** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	203.5	10.0	200	0	102	80 - 120				

MS Sample ID: **HS19121258-44MS** Units: **mg/Kg** Analysis Date: **06-Jan-2020 16:27**
Client ID: **PCH-8, 4'-5'** Run ID: **Gall01_353930** SeqNo: **5426134** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	231.1	9.97	199.4	50.44	90.6	80 - 120				

MSD Sample ID: **HS19121258-44MSD** Units: **mg/Kg** Analysis Date: **06-Jan-2020 16:27**
Client ID: **PCH-8, 4'-5'** Run ID: **Gall01_353930** SeqNo: **5426135** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	229	9.86	197.2	50.44	90.6	80 - 120	231.1	0.912	30	

The following samples were analyzed in this batch:

HS19121258-21	HS19121258-22	HS19121258-24	HS19121258-25
HS19121258-26	HS19121258-27	HS19121258-28	HS19121258-30
HS19121258-31	HS19121258-32	HS19121258-33	HS19121258-34
HS19121258-36	HS19121258-37	HS19121258-38	HS19121258-39
HS19121258-40	HS19121258-42	HS19121258-43	HS19121258-44

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
WorkOrder: HS19121258

QC BATCH REPORT

Batch ID: 149196 (0) **Instrument: Gall01** **Method: CHLORIDE BY SW-846 9250**

MBLK Sample ID: **MBLK-149196** Units: **mg/Kg** Analysis Date: **07-Jan-2020 11:40**
Client ID: Run ID: **Gall01_353983** SeqNo: **5427361** PrepDate: **27-Dec-2019** DF: **1**

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

LCS Sample ID: **LCS-149196** Units: **mg/Kg** Analysis Date: **07-Jan-2020 11:40**
Client ID: Run ID: **Gall01_353983** SeqNo: **5427362** PrepDate: **27-Dec-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	197.8	10.0	200	0	98.9	80 - 120				

MS Sample ID: **HS19121259-17MS** Units: **mg/Kg** Analysis Date: **07-Jan-2020 13:29**
Client ID: Run ID: **Gall01_353983** SeqNo: **5427389** PrepDate: **27-Dec-2019** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1352	49.6	992.9	380.3	97.8	80 - 120				

MSD Sample ID: **HS19121259-17MSD** Units: **mg/Kg** Analysis Date: **07-Jan-2020 13:29**
Client ID: Run ID: **Gall01_353983** SeqNo: **5427390** PrepDate: **27-Dec-2019** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1357	49.8	996.8	380.3	97.9	80 - 120	1352	0.364	30	

The following samples were analyzed in this batch: HS19121258-45 HS19121258-46 HS19121258-48 HS19121258-49 HS19121258-50

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
WorkOrder: HS19121258

QC BATCH REPORT

Batch ID: R353944 (0) **Instrument:** Balance1 **Method:** MOISTURE - ASTM D2216

DUP Sample ID: **HS19121258-20DUP** Units: **wt%** Analysis Date: **06-Jan-2020 08:53**
Client ID: **PCH-10, 4'-5'** Run ID: **Balance1_353944** SeqNo: **5426612** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	13.6	0.0100					12.4	9.23	20	

The following samples were analyzed in this batch:

HS19121258-01	HS19121258-02	HS19121258-03	HS19121258-04
HS19121258-05	HS19121258-06	HS19121258-07	HS19121258-08
HS19121258-09	HS19121258-10	HS19121258-11	HS19121258-12
HS19121258-13	HS19121258-14	HS19121258-15	HS19121258-16
HS19121258-17	HS19121258-18	HS19121258-19	HS19121258-20

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
WorkOrder: HS19121258

QC BATCH REPORT

Batch ID: R353946 (0) **Instrument:** Balance1 **Method:** MOISTURE - ASTM D2216

DUP Sample ID: **HS19121258-40DUP** Units: **wt%** Analysis Date: **06-Jan-2020 08:55**
Client ID: **PCH-8, 1'-2'** Run ID: **Balance1_353946** SeqNo: **5426661** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	14.8	0.0100					15	1.34	20	

The following samples were analyzed in this batch:

HS19121258-21	HS19121258-22	HS19121258-23	HS19121258-24
HS19121258-25	HS19121258-26	HS19121258-27	HS19121258-28
HS19121258-29	HS19121258-30	HS19121258-31	HS19121258-32
HS19121258-33	HS19121258-34	HS19121258-35	HS19121258-36
HS19121258-37	HS19121258-38	HS19121258-39	HS19121258-40

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
WorkOrder: HS19121258

QC BATCH REPORT

Batch ID: R354056 (0) **Instrument:** Balance1 **Method:** MOISTURE - ASTM D2216

DUP Sample ID: **HS19121258-50DUP** Units: **wt%** Analysis Date: **07-Jan-2020 11:02**
Client ID: **PCH-9, 4'-5'** Run ID: **Balance1_354056** SeqNo: **5428935** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	11.6	0.0100					12.2	5.04	20	

The following samples were analyzed in this batch:

HS19121258-41	HS19121258-42	HS19121258-43	HS19121258-44
HS19121258-45	HS19121258-46	HS19121258-47	HS19121258-48
HS19121258-49	HS19121258-50		

Revision: 1

ALS Houston, US Date: 14-Jan-20

Client: AECOM
Project: Cotton Hills NM
WorkOrder: **HS19121258**

QUALIFIERS, ACRONYMS, UNITS

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

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

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

ALS Houston, US Date: 14-Jan-20

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	19-028-0	27-Mar-2020
California	2919, 2019-2020	30-Apr-2020
Dept of Defense	ANAB L2231	20-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322019-2	09-May-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Kentucky	123043, 2019-2020	30-Apr-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Dakota	R-193 2019-2020	30-Apr-2020
Oklahoma	2019-067	31-Aug-2020
Texas	TX104704231-19-23	30-Apr-2020

ALS Houston, US Date: 14-Jan-20

Sample Receipt Checklist

Client Name: AECOM-Houston Date/Time Received: **21-Dec-2019 10:10**

Work Order: HS19121258 Received by: **JRM**

Checklist completed by: *Nilesh D. Ranchod* eSignature 22-Dec-2019 Date

Reviewed by: *Dane J. Wacasey* eSignature 24-Dec-2019 Date

Matrices: **SOIL** Carrier name: **Client**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	6 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:216302/301/300/297/298 /299
	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.7C/0.7C, 0.5C/0.5C UC/C	IR#11
Cooler(s)/Kit(s):	45359, 45315	
Date/Time sample(s) sent to storage:	12/21/2019 13:00	

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

Login Notes:
Sample Label IDs differ; confirmed IDs using sample time
COC= PCH-14,4'-5' Label=PCH-4'-5'
COC= PCH-13,1'-2' Label=PCH-1'-2'
COC= PCH-13,0'-2' Label=PCH-13
COC= PCH-13,3'-3' Label=PCH-2'-3'
COC= PCH-13,3'-4' Label=PCH-3'-4'

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Cincinnati, OH +1 513 733 5336
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Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

Chain of Custody Form

Page 1 of 6

COC ID: 216302

HS19121258
AECOM
Cotton Hills NM

ALS Project Manager:

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

- A 8260_S (8260 BTEX)
- B 8015_GRO_S (8015 TPH-GRO)
- C 8015M_S_LL (8015 TPH-DRO/ORO)
- D 300_S (E300 Chloride (IC))
- E MOIST_ASTM (D2216 Moisture %)
- F 8260_W (TBLK: 8260 BTEX)
- G 1311_METALS_HS (TCLP RCRA 8)
- H 300_S (E300 Cl, SO4, NO2,NO3)
- I
- J

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	PCH-14, 0'-1'	12/18/19	1030	SOIL	8	1				X	X						
2	PCH-14, 1'-2'	12/18/19	1035	SOIL	8	2		X	X	X	X						
3	PCH-14, 2'-3'	12/18/19	1040	SOIL	8	1				X	X						
4	PCH-14, 3'-4'	12/18/19	1045	SOIL	8	1				X	X						
5	PCH-14, 4'-5'	12/18/19	1050	SOIL	8	1				X	X						
6	PCH-14, 5'-7.5'	12/18/19	1055	SOIL	8	1				X	X						
7	PCH-14, 7.5'-10'	12/18/19	1100	SOIL	8	2		X	X	X	X						
8	PCH-15, 0'-1'	12/18/19	1120	SOIL	8	1				X	X						
9	PCH-15, 1'-2'	12/18/19	1125	SOIL	8	1				X	X						
10	PCH-15, 2'-3'	12/18/19	1130	SOIL	8	2		X	X	X	X						

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

Shipment Method: HAND DELIVERED

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

Results Due Date:

Relinquished by: [signature] Date: 12/21/19 Time: 1030 Received by:

Relinquished by: Date: 12/21/19 Time: 10:10 Received by (Laboratory): [signature]

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

Notes: AECOM Cotton Hills NM, AllSampled 12/18-21/19

Cooler ID	Cooler Temp.
	IR
45159	0.7
45315	0.5
~~45626~~	~~0.4~~
N/A	

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

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

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

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Chain of Custody Form

Page 2 of 6

COC ID: 216301

HS19121258
WV
AECOM
Cotton Hills NM

ALS Project Manager:

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

	Analysis
A	8260_S (8260 BTEX)
B	8015_GRO_S (8015 TPH-GRO)
C	8015M_S_LL (8015 TPH-DRO/ORO)
D	300_S (E300 Chloride (IC))
E	MOIST_ASTM (D2216 Moisture %)
F	8260_W (TBLK: 8260 BTEX)
G	1311_METALS_HS (TCLP RCRA 8)
H	300_S (E300 Cl, SO4, NO2,NO3)
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	PCH-15, 3'-4'	12/18/19	1135	SOIL	8	1				X	X						
2	PCH-15, 4'-5'	12/18/19	1140	SOIL	8	1				X	X						
3	PCH-15, 5'-7.5'	12/18/19	1145	SOIL	8	1				X	X						
4	PCH-15, 7.5'-10'	12/18/19	1200	SOIL	8	2		X	X	X	X						
5	PCH-10, 0'-1'	12/18/19	1305	SOIL	8	1				X	X						
6	PCH-10, 1'-2'	12/18/19	1310	SOIL	8	1				X	X						
7	PCH-10, 0'-2'	12/18/19	1310	SOIL	8	1		X	X								
8	PCH-10, 2'-3'	12/18/19	1315	SOIL	8	1				X	X						
9	PCH-10, 3'-4'	12/18/19	1320	SOIL	8	1				X	X						
10	PCH-10, 4'-5'	12/18/19	1325	SOIL	8	1				X	X						

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

Shipment Method: HAND DELIVERED

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

Results Due Date:

Relinquished by:	Date: 12/21/19	Time: 10:10	Received by:
Relinquished by:	Date: 12/21/19	Time: 10:10	Received by (Laboratory): J [signature]
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: AECOM Cotton Hills NM, All Samples Collected 12/18-12/19

Cooler ID	Cooler Temp.

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

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

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

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Chain of Custody Form

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COC ID: 216300

HS19121258

AECOM
Cotton Hills NM

WV

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	Cotton Hills	Project Name	Cotton Hills NM
Work Order		Project Number	
Company Name	AECOM	Bill To Company	AECOM
Send Report To	Wallace Gilmore	Invoice Attn	USAPImaging - A/P
Address	19219 Katy Freeway Suite 100	Address	PO Box 203970
City/State/Zip	Houston, TX 77094	City/State/Zip	Austin TX 78720
Phone	(281) -54-6-24	Phone	(512) 419-6825
Fax	(713) 780-0838	Fax	
e-Mail Address	Wallace.Gilmore@aecom.com	e-Mail Address	USAPImaging@aecom.com

A	8260_S (8260 BTEX)
B	8015_GRO_S (8015 TPH-GRO)
C	8015M_S_LL (8015 TPH-DRO/ORO)
D	300_S (E300 Chloride (IC))
E	MOIST_ASTM (D2216 Moisture %)
F	8260_W (TBLK: 8260 BTEX)
G	1311_METALS_HS (TCLP RCRA 8)
H	300_S (E300 Cl, SO4, NO2,NO3)
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	PCH-11, 0'-1'	12/18/19	1340	SOIL	S	1				X	X						
2	PCH-11, 1'-2'	12/18/19	1345	SOIL	S	1				X	X						
3	PCH-11, 0'-2'	12/18/19	1345	SOIL	S	1		X	X								
4	PCH-11, 2'-3'	12/18/19	1350	SOIL	S	1				X	X						
5	PCH-11, 3'-4'	12/18/19	1353	SOIL	S	1				X	X						
6	PCH-11, 4'-5'	12/18/19	1400	SOIL	S	1				X	X						
7	PCH-12, 0'-1'	12/18/19	1410	SOIL	S	1				X	X						
8	PCH-12, 1'-2'	12/18/19	1415	SOIL	S	1				X	X						
9	PCH-12, 0'-2'	12/18/19	1415	SOIL	S	1		X	X								
10	PCH-12, 2'-3'	12/18/19	1420	SOIL	S	1				X	X						

Sampler(s) Please Print & Sign: MIKE ZAMORA

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) [X] STD 10 Wk Days [ ] 5 Wk Days [ ] 2 Wk Days [ ] 1 Wk Days [ ] Other

Results Due Date:

Relinquished by: Date: 12/19/19 Time: 12:10 Received by:

Relinquished by: Date: 12/21/19 Time: 10:10 Received by (Laboratory):

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

Notes: AECOM Cotton Hills NM SAMPLES ON ICE 12/18-21/19

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

[X] Level II Std QC
[ ] Level II Std QC/Raw Data
[ ] Level III Std QC/TRRP
[ ] TRRP Checklist
[ ] TRRP Level IV

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

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

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COC ID: 216297

HS19121258
AECOM
Cotton Hills NM

ALS Project Manager:

Customer Information		Project Information			
Purchase Order	Cotton Hills	Project Name	Cotton Hills NM	A	8260_S (8260 BTEX)
Work Order		Project Number		B	8015_GRO_S (8015 TPH GRO)
Company Name	AECOM	Bill To Company	AECOM	C	8015M_S_LL (8015 TPH-DRO/ORO)
Send Report To	Wallace Gilmore	Invoice Attn	USAPImaging - A/P	D	300_S (E300 Chloride (IC))
Address	19219 Katy Freeway Suite 100	Address	PO Box 203970	E	MOIST_ASTM (D2216 Moisture %)
				F	8260_W (TBLK: 8260 BTEX)
City/State/Zip	Houston, TX 77094	City/State/Zip	Austin TX 78720	G	1311_METALS_HS (TCLP RCRA 8)
Phone	(281) -64-6-24	Phone	(512) 419-6825	H	300_S (E300 Cl, SO4, NO2,NO3)
Fax	(713) 780-0338	Fax		I	
e-Mail Address	Wallace.Gilmore@aecom.com	e-Mail Address	USAPImaging@aecom.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	PCH-12, 3'-4'	12/18/19	1425	SOIL	8	1				X	X						
2	PCH-12, 4'-5'	12/18/19	1430	SOIL	8	1				X	X						
3	PCH-13, 0-1'	12/18/19	1440	SOIL	8	1				X	X						
4	PCH-13, 1'-2'	12/18/19	1445	SOIL	8	1				X	X						
5	PCH-13, 0-2	12/18/19	1450	SOIL	8	1		X	X								
6	PCH-13, 2'-3'	12/18/19	1450	SOIL	8	1				X	X						
7	PCH-13, 3'-4'	12/18/19	1455	SOIL	8	1				X	X						
8	PCH-13, 4'-5'	12/18/19	1500	SOIL	8	1				X	X						
9	PCH-8, 0-1'	12/18/19	1515	SOIL	8	1				X	X						
10	PCH-8, 1'-2'	12/18/19	1520	SOIL	8	1				X	X						

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

Shipment Method: HAND DELIVERED

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

Results Due Date:

Relinquished by: [signature] Date: 12/21/19 Time: 10:20 Received by:

Relinquished by: Date: 12/21/19 Time: 10:20 Received by (Laboratory): [signature]

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

Notes: AECOM Cotton Hills NM, A13 samples collected 12/18-21/19

Cooler ID	Cooler Temp.

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

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

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

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Holland, MI +1 616 399 6070

Chain of Custody Form

Page 1 of 2

COC ID: 216298

HS19121258

AECOM
Cotton Hills NM

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

ALS Project Manager:

A	8260_S (8260 BTEX)
B	8015_GRO_S (8015 TPH-GRO)
C	8015M_S_LL (8015 TPH-DRO/ORO)
D	300_S (E300 Chloride (IC))
E	MOIST_ASTM (D2216 Moisture %)
F	8260_W (TBLK: 8260 BTEX)
G	1311_METALS_HS (TCLP RCRA 8)
H	300_S (E300 Cl, SO4, NO2,NO3)
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	PCH-8, 0'-2'	12/18/19	1520	SOIL	8	1		X	X								
2	PCH-8, 2'-3'	12/18/19	1525	SOIL	8	1				X	X						
3	PCH-8, 3'-4'	12/18/19	1530	SOIL	8	1				X	X						
4	PCH-8, 4'-5'	12/18/19	1535	SOIL	8	1				X	X						
5	PCH-8, 0'-1'	12/18/19	1550	SOIL	8	1				X	X						
6	PCH-9, 1'-2'	12/18/19	1555	SOIL	8	1				X	X						
7	PCH-9, 0'-2'	12/18/19	1555	SOIL	8	1				X	X						
8	PCH-9, 2'-3'	12/18/19	1600	SOIL	8	1		X	X								
9	PCH-9, 3'-4'	12/18/19	1605	SOIL	8	1				X	X						
10	PCH-9, 4'-5'	12/18/19	1610	SOIL	8	1				X	X						

Sampler(s) Please Print & Sign

Shipment Method: HAND DELIVERED

Required Turnaround Time: (Check Box) [X] STD 10 Wk Days [ ] 5 Wk Days [ ] 3 Wk Days [ ] 24 Hour [ ] Other

Results Due Date:

Relinquished by: Date: 12/20/19 Time: 2000 Received by:

Relinquished by: Date: 12/21/19 Time: 1010 Received by (Laboratory):

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

Notes: AECOM Cotton Hills NM ALL SAMPLES ONICE 12/18-21/19

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

[X] Level II Std QC
[ ] Level III Std QC/Raw Data
[ ] Level IV SW846/CLP
[ ] TRRP Checklist
[ ] TRRP Level IV

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

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

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Holland, MI +1 616 399 6070

Chain of Custody Form

Page 6 of 6

COC ID: 216299

HS19121258

AECOM

Cotton Hills NM

, WV

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	Cotton Hills	Project Name	Cotton Hills NM
Work Order		Project Number	
Company Name	AECOM	Bill To Company	AECOM
Send Report To	Wallace Gilmore	Invoice Attn	USAPImaging - A/P
Address	19219 Katy Freeway Suite 100	Address	PO Box 203970
City/State/Zip	Houston, TX 77094	City/State/Zip	Austin TX 78720
Phone	(281) -64-6-24	Phone	(512) 419-6325
Fax	(713) 780-0338	Fax	
e-Mail Address	Wallace.Gilmore@aecom.com	e-Mail Address	USAPImaging@aecom.com

	Analysis
A	8260_S (8260 BTEX)
B	8015_GRO_S (8015 TPH-GRO)
C	8015M_S_LL (8015 TPH-DRO/ORO)
D	300_S (E300 Chloride (IC))
E	MOIST_ASTM (D2216 Moisture %)
F	8260_W (TBLK: 8260 BTEX)
G	1311_METALS_HS (TCLP RCRA 8)
H	300_S (E300 Cl, SO4, NO2,NO3)
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	TRIP BLANK S	—	—	WATER	1,8	2						X					
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

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

Shipment Method: HAND DELIVERED

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

Results Due Date:

Relinquished by: [signature] Date: 12/21/19 Time: 10:10 Received by:

Relinquished by: Date: 12/21/19 Time: 10:10 Received by (Laboratory): J. [signature]

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

Notes: AECOM Cotton Hills NM All samples on ice 12/18-21/19

Cooler ID	Cooler Temp.

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

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

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

ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887 45359	CUSTODY SEAL Date: 12/21/19 Time: 0800 Name: [illegible] Company: AECOM	Seal Broken By: SM Date: 12/21/19

45359 DEC 2 1 2019

ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887 45315	CUSTODY SEAL Date: 12/21/19 Time: 0800 Name: [illegible] Company: AECOM	Seal Broken By: SM Date: 12/21/19

45315 DEC 2 1 2019

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

August 13, 2020

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

Work Order: **HS20071363**

Laboratory Results for: **60620394 Cotton Hills**

Dear Wallace Gilmore,

ALS Environmental received 20 sample(s) on Jul 30, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
Dane J. Wacasey

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Work Order: HS20071363

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20071363-01	CH-18 0-1	Soil		29-Jul-2020 10:10	30-Jul-2020 09:05	☐
HS20071363-02	CH-18 1-2	Soil		29-Jul-2020 10:15	30-Jul-2020 09:05	☐
HS20071363-03	CH-18 2-3	Soil		29-Jul-2020 10:20	30-Jul-2020 09:05	☐
HS20071363-04	CH-18 3-4	Soil		29-Jul-2020 10:25	30-Jul-2020 09:05	☐
HS20071363-05	CH-18 4-5	Soil		29-Jul-2020 10:30	30-Jul-2020 09:05	☐
HS20071363-06	CH-17 0-1	Soil		29-Jul-2020 10:45	30-Jul-2020 09:05	☐
HS20071363-07	CH-17 1-2	Soil		29-Jul-2020 10:50	30-Jul-2020 09:05	☐
HS20071363-08	CH-17 2-3	Soil		29-Jul-2020 10:55	30-Jul-2020 09:05	☐
HS20071363-09	CH-17 3-4	Soil		29-Jul-2020 11:00	30-Jul-2020 09:05	☐
HS20071363-10	CH-17 4-5	Soil		29-Jul-2020 11:05	30-Jul-2020 09:05	☐
HS20071363-11	CH-16 0-1	Soil		29-Jul-2020 11:20	30-Jul-2020 09:05	☐
HS20071363-12	CH-16 1-2	Soil		29-Jul-2020 11:25	30-Jul-2020 09:05	☐
HS20071363-13	CH-16 2-3	Soil		29-Jul-2020 11:30	30-Jul-2020 09:05	☐
HS20071363-14	CH-16 3-4	Soil		29-Jul-2020 11:35	30-Jul-2020 09:05	☐
HS20071363-15	CH-16 4-5	Soil		29-Jul-2020 11:40	30-Jul-2020 09:05	☐
HS20071363-16	CH-19 0-1	Soil		29-Jul-2020 12:00	30-Jul-2020 09:05	☐
HS20071363-17	CH-19 1-2	Soil		29-Jul-2020 12:05	30-Jul-2020 09:05	☐
HS20071363-18	CH-19 2-3	Soil		29-Jul-2020 12:10	30-Jul-2020 09:05	☐
HS20071363-19	CH-19 3-4	Soil		29-Jul-2020 12:15	30-Jul-2020 09:05	☐
HS20071363-20	CH-19 4-5	Soil		29-Jul-2020 12:20	30-Jul-2020 09:05	☐

ALS Houston, US Date: 13-Aug-20

Client: AECOM **CASE NARRATIVE**
Project: 60620394 Cotton Hills
Work Order: HS20071363

GC Semivolatiles by Method SW8015M

Batch ID: 156023

Sample ID: HS20071413-01MS

- MS and MSD are for an unrelated sample

Batch ID: 156200

Sample ID: HS20071460-02MS

- MS and MSD are for an unrelated sample

GC Volatiles by Method SW8015

Batch ID: R366092

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

GCMS Volatiles by Method SW8260

Batch ID: R365972

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

WetChemistry by Method ASTM D2216

Batch ID: R366304,R366305

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

WetChemistry by Method SW9250

Batch ID: 155995

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-18 0-1
Collection Date: 29-Jul-2020 10:10

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-01
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**11.4**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**30.4**		**3.09**	**11.3**	**mg/Kg-dry**	1	06-Aug-2020 09:56

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-18 1-2
Collection Date: 29-Jul-2020 10:15

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-02
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: JAC
Percent Moisture	**14.4**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**418**		**3.18**	**11.6**	**mg/Kg-dry**	1	06-Aug-2020 09:56

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-18 2-3
Collection Date: 29-Jul-2020 10:20

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-03
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**15.7**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**403**		**3.19**	**11.7**	**mg/Kg-dry**	1	06-Aug-2020 09:56

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-18 3-4
Collection Date: 29-Jul-2020 10:25

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-04
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**12.1**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**253**		**3.08**	**11.2**	**mg/Kg-dry**	1	06-Aug-2020 09:56

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-18 4-5
Collection Date: 29-Jul-2020 10:30

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-05
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**9.84**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**273**		**3.03**	**11.0**	**mg/Kg-dry**	1	06-Aug-2020 09:56

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-17 0-1
Collection Date: 29-Jul-2020 10:45

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-06
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**3.63**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**5,630**		**142**	**518**	**mg/Kg-dry**	50	06-Aug-2020 09:57

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-17 1-2
Collection Date: 29-Jul-2020 10:50

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-07
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: JAC
Percent Moisture	**10.2**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**3,670**		**60.7**	**222**	**mg/Kg-dry**	20	06-Aug-2020 09:57

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-17 2-3
Collection Date: 29-Jul-2020 10:55

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-08
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**15.7**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**1,070**		**32.4**	**118**	**mg/Kg-dry**	10	06-Aug-2020 09:57

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-17 3-4
Collection Date: 29-Jul-2020 11:00

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-09
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: JAC
Percent Moisture	**17.0**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**371**		**3.28**	**12.0**	**mg/Kg-dry**	1	06-Aug-2020 09:57

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-17 4-5
Collection Date: 29-Jul-2020 11:05

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-10
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: JAC
Percent Moisture	**15.4**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**311**		**3.18**	**11.6**	**mg/Kg-dry**	1	06-Aug-2020 09:57

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-16 0-1
Collection Date: 29-Jul-2020 11:20

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-11
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**1.20**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**162**		**2.73**	**9.97**	**mg/Kg-dry**	1	06-Aug-2020 09:58

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-16 1-2
Collection Date: 29-Jul-2020 11:25

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-12
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**3.35**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 14:53
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**121**		**2.82**	**10.3**	**mg/Kg-dry**	1	06-Aug-2020 09:58

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-16 2-3
Collection Date: 29-Jul-2020 11:30

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-13
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**7.35**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 17:34
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**185**		**2.95**	**10.8**	**mg/Kg-dry**	1	06-Aug-2020 09:58

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-16 3-4
Collection Date: 29-Jul-2020 11:35

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-14
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**8.34**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 17:34
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**100**		**2.96**	**10.8**	**mg/Kg-dry**	1	06-Aug-2020 09:58

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-16 4-5
Collection Date: 29-Jul-2020 11:40

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-15
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216	**Method:ASTM D2216**						Analyst: JAC
Percent Moisture	**11.2**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 17:34
CHLORIDE BY SW-846 9250	**Method:SW9250**				Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**34.1**		**3.06**	**11.2**	**mg/Kg-dry**	1	06-Aug-2020 09:58

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-19 0-1
Collection Date: 29-Jul-2020 12:00

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-16
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**3.76**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 17:34
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**80.3**		**2.80**	**10.2**	**mg/Kg-dry**	1	06-Aug-2020 09:58

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-19 1-2
Collection Date: 29-Jul-2020 12:05

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-17
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**9.72**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 17:34
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**143**		**3.03**	**11.1**	**mg/Kg-dry**	1	06-Aug-2020 09:58

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-19 2-3
Collection Date: 29-Jul-2020 12:10

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-18
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: WLR
Benzene	< 0.00054		0.00054	0.0054	mg/Kg-dry	1	31-Jul-2020 11:56
Ethylbenzene	< 0.00076		0.00076	0.0054	mg/Kg-dry	1	31-Jul-2020 11:56
Toluene	< 0.00065		0.00065	0.0054	mg/Kg-dry	1	31-Jul-2020 11:56
Xylenes, Total	< 0.0011		0.0011	0.0054	mg/Kg-dry	1	31-Jul-2020 11:56
Surr: 1,2-Dichloroethane-d4	*104*			*70-126*	*%REC*	*1*	*31-Jul-2020 11:56*
Surr: 4-Bromofluorobenzene	*103*			*70-130*	*%REC*	*1*	*31-Jul-2020 11:56*
Surr: Dibromofluoromethane	*100*			*70-130*	*%REC*	*1*	*31-Jul-2020 11:56*
Surr: Toluene-d8	*108*			*70-130*	*%REC*	*1*	*31-Jul-2020 11:56*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: QX
Gasoline Range Organics	< 0.012		0.012	0.058	mg/Kg-dry	1	03-Aug-2020 18:30
Surr: 4-Bromofluorobenzene	*105*			*70-123*	*%REC*	*1*	*03-Aug-2020 18:30*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 04-Aug-2020		Analyst: PVL
TPH (Diesel Range)	**1.2**	J	**0.55**	**1.9**	**mg/Kg-dry**	1	04-Aug-2020 16:02
TPH (Motor Oil Range)	**9.1**		**0.55**	**3.7**	**mg/Kg-dry**	1	04-Aug-2020 16:02
Surr: 2-Fluorobiphenyl	*69.3*			*60-129*	*%REC*	*1*	*04-Aug-2020 16:02*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**10.0**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 17:34
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**246**		**3.00**	**11.0**	**mg/Kg-dry**	1	06-Aug-2020 09:59

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-19 3-4
Collection Date: 29-Jul-2020 12:15

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-19
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3541 / 10-Aug-2020		Analyst: PVL
TPH (Diesel Range)	**2.3**		**0.55**	**1.9**	**mg/Kg-dry**	1	11-Aug-2020 16:35
TPH (Motor Oil Range)	**7.8**		**0.55**	**3.7**	**mg/Kg-dry**	1	11-Aug-2020 16:35
Surr: 2-Fluorobiphenyl	*85.2*			*60-129*	*%REC*	*1*	*11-Aug-2020 16:35*
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**9.96**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 17:34
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**150**		**3.01**	**11.0**	**mg/Kg-dry**	1	06-Aug-2020 09:59

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

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
Sample ID: CH-19 4-5
Collection Date: 29-Jul-2020 12:20

ANALYTICAL REPORT
WorkOrder:HS20071363
Lab ID:HS20071363-20
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: JAC
Percent Moisture	**9.32**		**0.0100**	**0.0100**	**wt%**	1	05-Aug-2020 17:34
CHLORIDE BY SW-846 9250		**Method:SW9250**			Prep:ASTM Leachate / 03-Aug-2020		Analyst: YP
Chloride	**102**		**3.00**	**10.9**	**mg/Kg-dry**	1	06-Aug-2020 10:03

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

Weight / Prep Log

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

Batch ID: 3840 **Start Date:** 30 Jul 2020 08:51 **End Date:** 30 Jul 2020 08:51
Method: VOLATILES BY SW8260C

Sample ID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS20071363-18	1	5.113 (g)	5 (mL)	0.98	Bulk (5030B)

Batch ID: 3842 **Start Date:** 03 Aug 2020 12:56 **End Date:** 03 Aug 2020 12:56
Method: GASOLINE RANGE ORGANICS BY SW8015C **Prep Code:**

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20071363-18	1	4.744 (g)	5 (mL)	1.05	Bulk (5030B)

Batch ID: 155995 **Start Date:** 03 Aug 2020 13:48 **End Date:** 03 Aug 2020 16:30
Method: SOLID CHLORIDE PREP **Prep Code:** CHLORIDE LEACH

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20071363-01		5.0034 (grams)	50 (mL)	9.993
HS20071363-02		5.0342 (grams)	50 (mL)	9.932
HS20071363-03		5.0898 (grams)	50 (mL)	9.824
HS20071363-04		5.0594 (grams)	50 (mL)	9.883
HS20071363-05		5.0193 (grams)	50 (mL)	9.962
HS20071363-06		5.0105 (grams)	50 (mL)	9.979
HS20071363-07		5.0235 (grams)	50 (mL)	9.953
HS20071363-08		5.0143 (grams)	50 (mL)	9.971
HS20071363-09		5.038 (grams)	50 (mL)	9.925
HS20071363-10		5.0866 (grams)	50 (mL)	9.83
HS20071363-11		5.0771 (grams)	50 (mL)	9.848
HS20071363-12		5.0332 (grams)	50 (mL)	9.934
HS20071363-13		5.0091 (grams)	50 (mL)	9.982
HS20071363-14		5.0577 (grams)	50 (mL)	9.886
HS20071363-15		5.0371 (grams)	50 (mL)	9.926
HS20071363-16		5.0853 (grams)	50 (mL)	9.832
HS20071363-17		5.0012 (grams)	50 (mL)	9.998
HS20071363-18		5.0686 (grams)	50 (mL)	9.865
HS20071363-19		5.051 (grams)	50 (mL)	9.899
HS20071363-20		5.0384 (grams)	50 (mL)	9.924

ALS Houston, US

Date: 13-Aug-20

Weight / Prep Log

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

Batch ID: 156023 **Start Date:** 04 Aug 2020 11:11 **End Date:** 04 Aug 2020 13:55
Method: SOPREP: 3541 TPH **Prep Code:** 8015SPR_LL

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20071363-18	1	30.25 (g)	1 (mL)	0.03306

Batch ID: 156200 **Start Date:** 10 Aug 2020 10:00 **End Date:** 10 Aug 2020 16:30
Method: SOPREP: 3541 TPH **Prep Code:** 8015SPR_LL

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20071363-19		30.49 (g)	1 (mL)	0.0328

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 155995 (0)	**Test Name :** CHLORIDE BY SW-846 9250				**Matrix:** Soil	
HS20071363-01	CH-18 0-1	29 Jul 2020 10:10		03 Aug 2020 13:48	06 Aug 2020 09:56	1
HS20071363-02	CH-18 1-2	29 Jul 2020 10:15		03 Aug 2020 13:48	06 Aug 2020 09:56	1
HS20071363-03	CH-18 2-3	29 Jul 2020 10:20		03 Aug 2020 13:48	06 Aug 2020 09:56	1
HS20071363-04	CH-18 3-4	29 Jul 2020 10:25		03 Aug 2020 13:48	06 Aug 2020 09:56	1
HS20071363-05	CH-18 4-5	29 Jul 2020 10:30		03 Aug 2020 13:48	06 Aug 2020 09:56	1
HS20071363-06	CH-17 0-1	29 Jul 2020 10:45		03 Aug 2020 13:48	06 Aug 2020 09:57	50
HS20071363-07	CH-17 1-2	29 Jul 2020 10:50		03 Aug 2020 13:48	06 Aug 2020 09:57	20
HS20071363-08	CH-17 2-3	29 Jul 2020 10:55		03 Aug 2020 13:48	06 Aug 2020 09:57	10
HS20071363-09	CH-17 3-4	29 Jul 2020 11:00		03 Aug 2020 13:48	06 Aug 2020 09:57	1
HS20071363-10	CH-17 4-5	29 Jul 2020 11:05		03 Aug 2020 13:48	06 Aug 2020 09:57	1
HS20071363-11	CH-16 0-1	29 Jul 2020 11:20		03 Aug 2020 13:48	06 Aug 2020 09:58	1
HS20071363-12	CH-16 1-2	29 Jul 2020 11:25		03 Aug 2020 13:48	06 Aug 2020 09:58	1
HS20071363-13	CH-16 2-3	29 Jul 2020 11:30		03 Aug 2020 13:48	06 Aug 2020 09:58	1
HS20071363-14	CH-16 3-4	29 Jul 2020 11:35		03 Aug 2020 13:48	06 Aug 2020 09:58	1
HS20071363-15	CH-16 4-5	29 Jul 2020 11:40		03 Aug 2020 13:48	06 Aug 2020 09:58	1
HS20071363-16	CH-19 0-1	29 Jul 2020 12:00		03 Aug 2020 13:48	06 Aug 2020 09:58	1
HS20071363-17	CH-19 1-2	29 Jul 2020 12:05		03 Aug 2020 13:48	06 Aug 2020 09:58	1
HS20071363-18	CH-19 2-3	29 Jul 2020 12:10		03 Aug 2020 13:48	06 Aug 2020 09:59	1
HS20071363-19	CH-19 3-4	29 Jul 2020 12:15		03 Aug 2020 13:48	06 Aug 2020 09:59	1
HS20071363-20	CH-19 4-5	29 Jul 2020 12:20		03 Aug 2020 13:48	06 Aug 2020 10:03	1
Batch ID: 156023 (0)	**Test Name :** TPH DRO/ORO BY SW8015C				**Matrix:** Soil	
HS20071363-18	CH-19 2-3	29 Jul 2020 12:10		04 Aug 2020 11:11	04 Aug 2020 16:02	1
Batch ID: 156200 (0)	**Test Name :** TPH DRO/ORO BY SW8015C				**Matrix:** Soil	
HS20071363-19	CH-19 3-4	29 Jul 2020 12:15		10 Aug 2020 10:00	11 Aug 2020 16:35	1
Batch ID: R365972 (0)	**Test Name :** VOLATILES BY SW8260C				**Matrix:** Soil	
HS20071363-18	CH-19 2-3	29 Jul 2020 12:10			31 Jul 2020 11:56	1
Batch ID: R366092 (0)	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C				**Matrix:** Soil	
HS20071363-18	CH-19 2-3	29 Jul 2020 12:10			03 Aug 2020 18:30	1

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R366304 (0)	**Test Name :** MOISTURE - ASTM D2216				**Matrix:** Soil	
HS20071363-01	CH-18 0-1	29 Jul 2020 10:10			05 Aug 2020 14:53	1
HS20071363-02	CH-18 1-2	29 Jul 2020 10:15			05 Aug 2020 14:53	1
HS20071363-03	CH-18 2-3	29 Jul 2020 10:20			05 Aug 2020 14:53	1
HS20071363-04	CH-18 3-4	29 Jul 2020 10:25			05 Aug 2020 14:53	1
HS20071363-05	CH-18 4-5	29 Jul 2020 10:30			05 Aug 2020 14:53	1
HS20071363-06	CH-17 0-1	29 Jul 2020 10:45			05 Aug 2020 14:53	1
HS20071363-07	CH-17 1-2	29 Jul 2020 10:50			05 Aug 2020 14:53	1
HS20071363-08	CH-17 2-3	29 Jul 2020 10:55			05 Aug 2020 14:53	1
HS20071363-09	CH-17 3-4	29 Jul 2020 11:00			05 Aug 2020 14:53	1
HS20071363-10	CH-17 4-5	29 Jul 2020 11:05			05 Aug 2020 14:53	1
HS20071363-11	CH-16 0-1	29 Jul 2020 11:20			05 Aug 2020 14:53	1
HS20071363-12	CH-16 1-2	29 Jul 2020 11:25			05 Aug 2020 14:53	1
Batch ID: R366305 (0)	**Test Name :** MOISTURE - ASTM D2216				**Matrix:** Soil	
HS20071363-13	CH-16 2-3	29 Jul 2020 11:30			05 Aug 2020 17:34	1
HS20071363-14	CH-16 3-4	29 Jul 2020 11:35			05 Aug 2020 17:34	1
HS20071363-15	CH-16 4-5	29 Jul 2020 11:40			05 Aug 2020 17:34	1
HS20071363-16	CH-19 0-1	29 Jul 2020 12:00			05 Aug 2020 17:34	1
HS20071363-17	CH-19 1-2	29 Jul 2020 12:05			05 Aug 2020 17:34	1
HS20071363-18	CH-19 2-3	29 Jul 2020 12:10			05 Aug 2020 17:34	1
HS20071363-19	CH-19 3-4	29 Jul 2020 12:15			05 Aug 2020 17:34	1
HS20071363-20	CH-19 4-5	29 Jul 2020 12:20			05 Aug 2020 17:34	1

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

QC BATCH REPORT

Batch ID: 156023 (0) **Instrument: FID-7** **Method: TPH DRO/ORO BY SW8015C**

MBLK Sample ID: **MBLK-156023** Units: **mg/Kg** Analysis Date: **04-Aug-2020 14:01**
Client ID: Run ID: **FID-7_366168** SeqNo: **5684941** PrepDate: **04-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	< 0.50	1.7								
TPH (Motor Oil Range)	< 0.50	3.4								
Surr: 2-Fluorobiphenyl	*2.34*	*0.10*	*3.33*	*0*	*70.3*	*70 - 130*				

LCS Sample ID: **LCS-156023** Units: **mg/Kg** Analysis Date: **04-Aug-2020 14:25**
Client ID: Run ID: **FID-7_366168** SeqNo: **5684942** PrepDate: **04-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	27.63	1.7	33.33	0	82.9	70 - 130				
TPH (Motor Oil Range)	23.77	3.4	33.33	0	71.3	70 - 130				
Surr: 2-Fluorobiphenyl	*2.447*	*0.10*	*3.33*	*0*	*73.5*	*70 - 130*				

MS Sample ID: **HS20071413-01MS** Units: **mg/Kg** Analysis Date: **04-Aug-2020 15:14**
Client ID: Run ID: **FID-7_366168** SeqNo: **5684944** PrepDate: **04-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	23.73	1.7	32.76	0	72.4	70 - 130				
TPH (Motor Oil Range)	18.75	3.3	32.76	3.493	46.6	70 - 130				S
Surr: 2-Fluorobiphenyl	*2.333*	*0.098*	*3.273*	*0*	*71.3*	*60 - 129*				

MSD Sample ID: **HS20071413-01MSD** Units: **mg/Kg** Analysis Date: **04-Aug-2020 15:38**
Client ID: Run ID: **FID-7_366168** SeqNo: **5684945** PrepDate: **04-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	24.11	1.7	32.97	0	73.1	70 - 130	23.73	1.61	30	
TPH (Motor Oil Range)	19.19	3.4	32.97	3.493	47.6	70 - 130	18.75	2.29	30	S
Surr: 2-Fluorobiphenyl	*2.36*	*0.099*	*3.294*	*0*	*71.6*	*60 - 129*	*2.333*	*1.15*	*30*	

The following samples were analyzed in this batch: HS20071363-18

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

QC BATCH REPORT

Batch ID: 156200 (0) **Instrument: FID-8** **Method: TPH DRO/ORO BY SW8015C**

MBLK Sample ID: **MBLK-156200** Units: **mg/Kg** Analysis Date: **11-Aug-2020 15:46**
Client ID: Run ID: **FID-8_366615** SeqNo: **5697585** PrepDate: **10-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	< 0.50	1.7								
TPH (Motor Oil Range)	< 0.50	3.4								
Surr: 2-Fluorobiphenyl	*2.609*	*0.10*	*3.33*	*0*	*78.3*	*70 - 130*				

LCS Sample ID: **LCS-156200** Units: **mg/Kg** Analysis Date: **11-Aug-2020 16:10**
Client ID: Run ID: **FID-8_366615** SeqNo: **5697586** PrepDate: **10-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	31.39	1.7	33.33	0	94.2	70 - 130				
TPH (Motor Oil Range)	23.73	3.4	33.33	0	71.2	70 - 130				
Surr: 2-Fluorobiphenyl	*2.857*	*0.10*	*3.33*	*0*	*85.8*	*70 - 130*				

MS Sample ID: **HS20071460-02MS** Units: **mg/Kg** Analysis Date: **11-Aug-2020 17:48**
Client ID: Run ID: **FID-8_366615** SeqNo: **5697590** PrepDate: **10-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	57.11	1.7	32.95	0.6881	171	70 - 130				S
TPH (Motor Oil Range)	55.07	3.4	32.95	4.133	155	70 - 130				S
Surr: 2-Fluorobiphenyl	*2.699*	*0.099*	*3.292*	*0*	*82.0*	*60 - 129*				

MSD Sample ID: **HS20071460-02MSD** Units: **mg/Kg** Analysis Date: **11-Aug-2020 18:13**
Client ID: Run ID: **FID-8_366615** SeqNo: **5697591** PrepDate: **10-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	19.68	1.7	33.21	0.6881	57.2	70 - 130	57.11	97.5	30	SR
TPH (Motor Oil Range)	20.03	3.4	33.21	4.133	47.9	70 - 130	55.07	93.3	30	SR
Surr: 2-Fluorobiphenyl	*1.885*	*0.10*	*3.318*	*0*	*56.8*	*60 - 129*	*2.699*	*35.5*	*30*	SR

The following samples were analyzed in this batch: HS20071363-19

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

QC BATCH REPORT

Batch ID: R366092 (0) **Instrument:** FID-14 **Method:** GASOLINE RANGE ORGANICS BY SW8015C

MBLK Sample ID: **MBLK-080320** Units: **mg/Kg** Analysis Date: **03-Aug-2020 13:33**
Client ID: Run ID: **FID-14_366092** SeqNo: **5683542** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	< 0.010	0.050								
Surr: 4-Bromofluorobenzene	*0.09854*	*0.0050*	*0.1*	*0*	*98.5*	*75 - 121*				

LCS Sample ID: **LCS-080320** Units: **mg/Kg** Analysis Date: **03-Aug-2020 13:17**
Client ID: Run ID: **FID-14_366092** SeqNo: **5683541** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.126	0.050	1	0	113	72 - 121				
Surr: 4-Bromofluorobenzene	*0.09823*	*0.0050*	*0.1*	*0*	*98.2*	*75 - 121*				

MS Sample ID: **HS20071456-10MS** Units: **mg/Kg** Analysis Date: **03-Aug-2020 15:25**
Client ID: Run ID: **FID-14_366092** SeqNo: **5683549** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8971	0.048	0.96	0	93.4	70 - 130				
Surr: 4-Bromofluorobenzene	*0.0789*	*0.0048*	*0.096*	*0*	*82.2*	*70 - 123*				

MSD Sample ID: **HS20071456-10MSD** Units: **mg/Kg** Analysis Date: **03-Aug-2020 15:41**
Client ID: Run ID: **FID-14_366092** SeqNo: **5683550** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9061	0.050	0.99	0	91.5	70 - 130	0.8971	0.999	30	
Surr: 4-Bromofluorobenzene	*0.07967*	*0.0050*	*0.099*	*0*	*80.5*	*70 - 123*	*0.0789*	*0.978*	*30*	

The following samples were analyzed in this batch: HS20071363-18

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

QC BATCH REPORT

Batch ID: R365972 (0) **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

MBLK Sample ID: **VBLKS1-073120** Units: **ug/Kg** Analysis Date: **31-Jul-2020 10:12**
Client ID: Run ID: **VOA5_365972** SeqNo: **5681097** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	< 0.50	5.0							
Ethylbenzene	< 0.70	5.0							
Toluene	< 0.60	5.0							
Xylenes, Total	< 1.0	5.0							
Surr: 1,2-Dichloroethane-d4	*49.9*	*0*	*50*	*0*	*99.8*	*76 - 125*			
Surr: 4-Bromofluorobenzene	*50.15*	*0*	*50*	*0*	*100*	*80 - 120*			
Surr: Dibromofluoromethane	*49.38*	*0*	*50*	*0*	*98.8*	*80 - 119*			
Surr: Toluene-d8	*53.43*	*0*	*50*	*0*	*107*	*81 - 118*			

LCS Sample ID: **VLCSS1-073120** Units: **ug/Kg** Analysis Date: **31-Jul-2020 09:20**
Client ID: Run ID: **VOA5_365972** SeqNo: **5681096** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	51.41	5.0	50	0	103	75 - 124			
Ethylbenzene	52.1	5.0	50	0	104	70 - 123			
Toluene	49.25	5.0	50	0	98.5	76 - 122			
Xylenes, Total	153.5	5.0	150	0	102	77 - 128			
Surr: 1,2-Dichloroethane-d4	*52.67*	*0*	*50*	*0*	*105*	*76 - 125*			
Surr: 4-Bromofluorobenzene	*53.04*	*0*	*50*	*0*	*106*	*80 - 120*			
Surr: Dibromofluoromethane	*52.93*	*0*	*50*	*0*	*106*	*80 - 119*			
Surr: Toluene-d8	*54.22*	*0*	*50*	*0*	*108*	*81 - 118*			

MS Sample ID: **HS20071401-01MS** Units: **ug/Kg** Analysis Date: **31-Jul-2020 12:23**
Client ID: Run ID: **VOA5_365972** SeqNo: **5681465** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	51.18	4.7	47	0	109	70 - 130			
Ethylbenzene	51.47	4.7	47	0	110	70 - 130			
Toluene	48.77	4.7	47	0	104	70 - 130			
Xylenes, Total	150.9	4.7	141	0	107	70 - 130			
Surr: 1,2-Dichloroethane-d4	*49.81*	*0*	*47*	*0*	*106*	*70 - 126*			
Surr: 4-Bromofluorobenzene	*49.69*	*0*	*47*	*0*	*106*	*70 - 130*			
Surr: Dibromofluoromethane	*50*	*0*	*47*	*0*	*106*	*70 - 130*			
Surr: Toluene-d8	*51.25*	*0*	*47*	*0*	*109*	*70 - 130*			

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

QC BATCH REPORT

Batch ID: R365972 (0) **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

MSD Sample ID: **HS20071401-01MSD** Units: **ug/Kg** Analysis Date: **31-Jul-2020 12:49**
Client ID: Run ID: **VOA5_365972** SeqNo: **5681466** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	51.63	4.7	47	0	110	70 - 130	51.18	0.868	30	
Ethylbenzene	51.72	4.7	47	0	110	70 - 130	51.47	0.482	30	
Toluene	48.67	4.7	47	0	104	70 - 130	48.77	0.219	30	
Xylenes, Total	151.6	4.7	141	0	108	70 - 130	150.9	0.436	30	
Surr: 1,2-Dichloroethane-d4	*49.2*	*0*	*47*	*0*	*105*	*70 - 126*	*49.81*	*1.23*	*30*	
Surr: 4-Bromofluorobenzene	*49.48*	*0*	*47*	*0*	*105*	*70 - 130*	*49.69*	*0.431*	*30*	
Surr: Dibromofluoromethane	*50.18*	*0*	*47*	*0*	*107*	*70 - 130*	*50*	*0.371*	*30*	
Surr: Toluene-d8	*50.97*	*0*	*47*	*0*	*108*	*70 - 130*	*51.25*	*0.553*	*30*	

The following samples were analyzed in this batch: HS20071363-18

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

QC BATCH REPORT

Batch ID: 155995 (0) **Instrument: GalI01** **Method: CHLORIDE BY SW-846 9250**

MBLK Sample ID: **MBLK-155995** Units: **mg/Kg** Analysis Date: **06-Aug-2020 09:55**
Client ID: Run ID: **GalI01_366283** SeqNo: **5686990** PrepDate: **03-Aug-2020** DF: **1**

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

LCS Sample ID: **LCS-155995** Units: **mg/Kg** Analysis Date: **06-Aug-2020 09:55**
Client ID: Run ID: **GalI01_366283** SeqNo: **5686991** PrepDate: **03-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	211	10.0	200	0	106	80 - 120				

LCSD Sample ID: **LCSD-155995** Units: **mg/Kg** Analysis Date: **06-Aug-2020 09:56**
Client ID: Run ID: **GalI01_366283** SeqNo: **5686992** PrepDate: **03-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	211.2	10.0	200	0	106	80 - 120	211	0.0674	30	

MS Sample ID: **HS20071363-20MS** Units: **mg/Kg** Analysis Date: **06-Aug-2020 10:04**
Client ID: **CH-19 4-5** Run ID: **GalI01_366283** SeqNo: **5687017** PrepDate: **03-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	280.6	9.89	197.9	92.5	95.1	80 - 120				

MSD Sample ID: **HS20071363-20MSD** Units: **mg/Kg** Analysis Date: **06-Aug-2020 10:04**
Client ID: **CH-19 4-5** Run ID: **GalI01_366283** SeqNo: **5687018** PrepDate: **03-Aug-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	275.2	9.95	198.9	92.5	91.8	80 - 120	280.6	1.97	30	

The following samples were analyzed in this batch:

HS20071363-01	HS20071363-02	HS20071363-03	HS20071363-04
HS20071363-05	HS20071363-06	HS20071363-07	HS20071363-08
HS20071363-09	HS20071363-10	HS20071363-11	HS20071363-12
HS20071363-13	HS20071363-14	HS20071363-15	HS20071363-16
HS20071363-17	HS20071363-18	HS20071363-19	HS20071363-20

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

QC BATCH REPORT

Batch ID: R366304 (0) **Instrument:** Balance1 **Method:** MOISTURE - ASTM D2216

DUP Sample ID: **HS20080106-07DUP** Units: **wt%** Analysis Date: **05-Aug-2020 14:53**
Client ID: Run ID: **Balance1_366304** SeqNo: **5687387** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	8.47	0.0100					8.55	0.94	20	

The following samples were analyzed in this batch:

HS20071363-01	HS20071363-02	HS20071363-03	HS20071363-04
HS20071363-05	HS20071363-06	HS20071363-07	HS20071363-08
HS20071363-09	HS20071363-10	HS20071363-11	HS20071363-12

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: HS20071363

QC BATCH REPORT

Batch ID: R366305 (0) **Instrument:** Balance1 **Method:** MOISTURE - ASTM D2216

DUP Sample ID: **HS20071460-09DUP** Units: **wt%** Analysis Date: **05-Aug-2020 17:34**
Client ID: Run ID: **Balance1_366305** SeqNo: **5687404** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	1.26	0.0100					1.26	0	20	

The following samples were analyzed in this batch: HS20071363-13 HS20071363-14 HS20071363-15 HS20071363-16 HS20071363-17 HS20071363-18 HS20071363-19 HS20071363-20

ALS Houston, US Date: 13-Aug-20

Client: AECOM
Project: 60620394 Cotton Hills
WorkOrder: **HS20071363**

QUALIFIERS, ACRONYMS, UNITS

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

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

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

ALS Houston, US Date: 13-Aug-20

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
Maryland	343, 2019-2020	30-Sep-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 13-Aug-20

Sample Receipt Checklist

Work Order ID: HS20071363 **Date/Time Received:** **30-Jul-2020 09:05**

Client Name: AECOM-Houston **Received by:** **Paresh M. Giga**

Completed By: /S/ Nilesh D. Ranchod (eSignature) 30-Jul-2020 10:19 (Date/Time) **Reviewed by:** /S/ Dane J. Wacasey (eSignature) 03-Aug-2020 18:32 (Date/Time)

Matrices: **Soil** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☑	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	2 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:226730/226729
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.8°C, 2.1°C, 1.8°C UC/C		IR # 31
Cooler(s)/Kit(s):	42639, 45145, 44623		
Date/Time sample(s) sent to storage:	07/30/2020 15:00		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070

Chain of Custody Forr

Page 1 of 2

COC ID: 226730

HS20071363

AECOM

60620394 Cotton Hills

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	60620394 Vendor ID 35146	Project Name	60620394 Cotton Hills
Work Order		Project Number	60620394
Company Name	AECOM	Bill To Company	AECOM
Send Report To	Wallace Gilmore	Invoice Attn	USAPImaging - A/P
Address	19219 Katy Freeway Suite 100	Address	PO Box 203970
City/State/Zip	Houston, TX 77094	City/State/Zip	Austin TX 78720
Phone	(281) -64-6-24	Phone	(512) 419-6825
Fax	(713) 780-0838	Fax	
e-Mail Address	Wallace.Gilmore@aecom.com	e-Mail Address	USAPImaging@aecom.com

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

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	CH-18 0-1	7/29/20	1010	Soil	None	1	X	X									
2	CH-18 1-2		1015			1	X	X									
3	CH-18 2-3		1020			1	X	X									
4	CH-18 3-4		1025			1	X	X									
5	CH-18 4-5		1030			1	X	X									
6	CH-17 0-1		1045			1	X	X									
7	CH-17 1-2		1050			1	X	X									
8	CH-17 2-3		1055			1	X	X									
9	CH-17 3-4		1100			1	X	X									
10	CH-17 4-5		1105			1	X	X									

Sampler(s) Please Print & Sign: James Lovick

Shipment Method: FedEx

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

Results Due Date:

Relinquished by:	Date: 7/29/20	Time: 1600	Received by:	
Relinquished by:	Date:	Time:	Received by (Laboratory):	Date: 7/30/20 Time: 09:35
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes: AECOM CEMC Hobbs NM

Cooler ID	Cooler Temp.
42639	2.3°
45143	2.1°
44623	1.8°

QC Package: (Check One Box Below)

- [X] Level II Std QC
- [ ] Level III Std QC/Raw Data
- [ ] Level IV SW846/CLP
- [ ] Other
- [ ] TRRP Checklist
- [ ] TRRP Level IV

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

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

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

Chain of Custody Form

Page 2 of 2

COC ID: 226729

HS20071363

MV

AECOM
60620394 Cotton Hills

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	60620394 Vendor ID 35146	Project Name	60620394 Cotton Hills
Work Order		Project Number	60620394
Company Name	AECOM	Bill To Company	AECOM
Send Report To	Wallace Gilmore	Invoice Attn	USAPImaging - A/P
Address	19219 Katy Freeway Suite 100	Address	PO Box 203970
City/State/Zip	Houston, TX 77094	City/State/Zip	Austin TX 78720
Phone	(281) -64-6-24	Phone	(512) 419-6325
Fax	(713) 780-0839	Fax	
e-Mail Address	Wallace.Gilmore@aecom.com	e-Mail Address	USAPImaging@aecom.com

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

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	CH-16 0-1	7/29/20	1120	Soil	None	1	X	X									
2	CH-16 1-2		1125			1	X	X									
3	CH-16 2-3		1130			1	X	X									
4	CH-16 3-4		1135			1	X	X									
5	CH-16 4-5		1140			1	X	X									
6	CH-19 0-1		1200			1	X	X									
7	CH-19 1-2		1205			1	X	X									
8	CH-19 2-3		1210			2	X	X	X	X	X						
9	CH-19 3-4		1215			2	X	X	X	X	X						
10	CH-19 4-5		1220			1	X	X									C, D, E

Sampler(s) Please Print & Sign: James Lovely

Shipment Method: FedEx

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

Results Due Date:

Relinquished by: Date: 7/29/20 Time: 1600 Received by:

Relinquished by: Date: Time: Received by (Laboratory): 7/30/2020 09:35

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

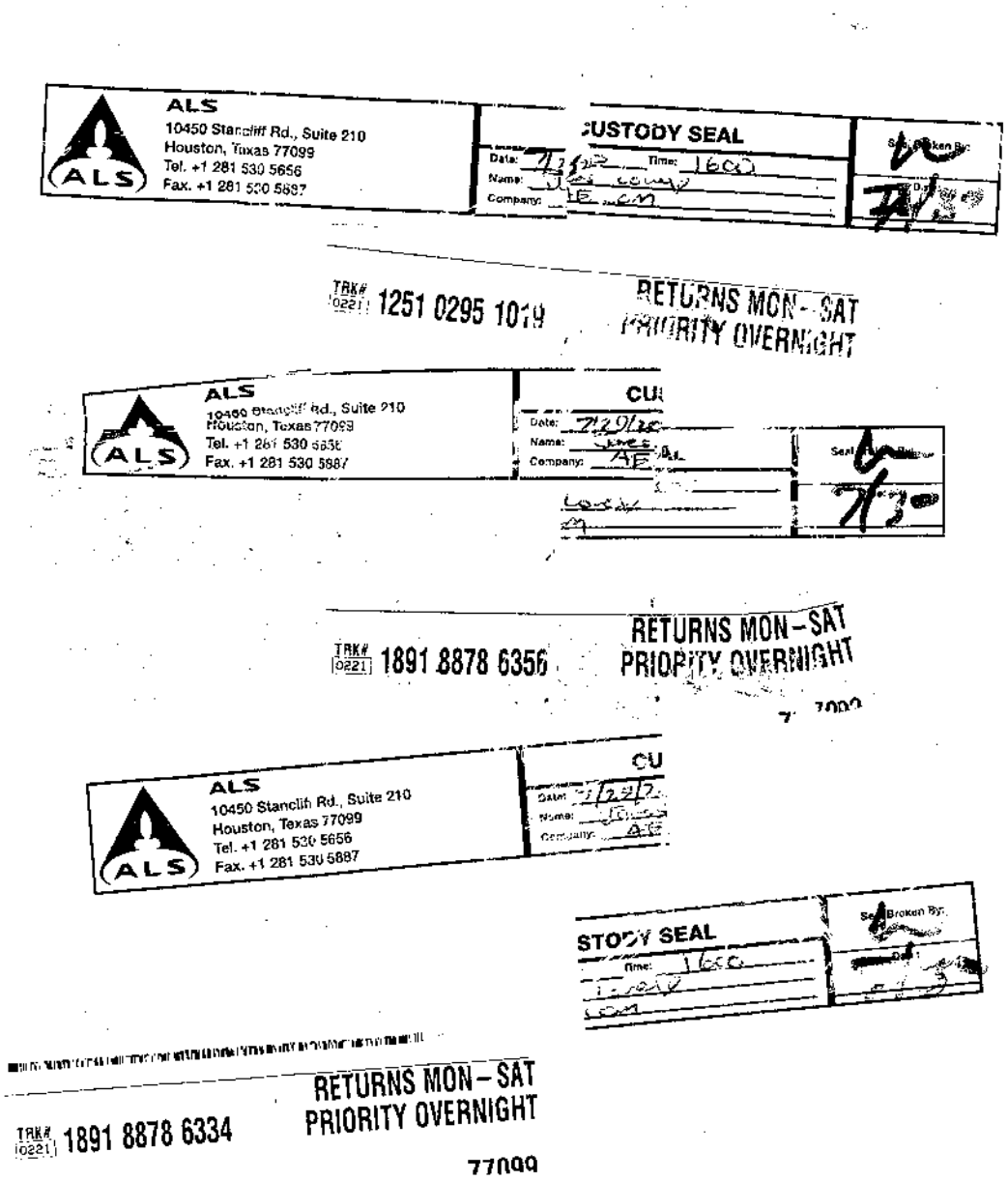
Notes: AECOM CEMC Hobbs NM

Cooler ID	Cooler Temp.

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

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

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



eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-1781-1
Client Project/Site: Cotton Hills

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

Attn: Mr. Wallace Gilmore

Authorized for release by:
5/6/2021 3:08:04 PM

John Builes, Project Manager
(281)240-4200
john.builes@eurofinset.com

Client: AECOM
Project/Site: Cotton Hills

Laboratory Job ID: 880-1781-1

Table of Contents

Definitions/Glossary

Client: AECOM Job ID: 880-1781-1
Project/Site: Cotton Hills

Qualifiers

HPLC/IC

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

Glossary

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

Case Narrative

Client: AECOM
Project/Site: Cotton Hills

Job ID: 880-1781-1

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Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-1781-1

Receipt

The samples were received on 4/30/2021 1:35 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.1°C

HPLC/IC

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

Client Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 880-1781-1

Client Sample ID: CH-20 (0-1)

Lab Sample ID: 880-1781-1

Date Collected: 04/30/21 08:15
Matrix: Solid
Date Received: 04/30/21 13:35
Sample Depth: 0 - 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	55.4		50.0		mg/Kg			05/05/21 01:40	10

Client Sample ID: CH-20 (1-2)

Lab Sample ID: 880-1781-2

Date Collected: 04/30/21 08:20
Matrix: Solid
Date Received: 04/30/21 13:35
Sample Depth: 1 - 2

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	58.1		49.7		mg/Kg			05/05/21 01:46	10

QC Sample Results

Client: AECOM
Project/Site: Cotton Hills

Job ID: 880-1781-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2677/1-A
Matrix: Solid
Analysis Batch: 2700

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/05/21 00:19	1

Lab Sample ID: LCS 880-2677/2-A
Matrix: Solid
Analysis Batch: 2700

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	235.3		mg/Kg		94	90 - 110		

Lab Sample ID: LCSD 880-2677/3-A
Matrix: Solid
Analysis Batch: 2700

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	241.2		mg/Kg		96	90 - 110	2	20

QC Association Summary

Client: AECOM
Project/Site: Cotton Hills

Job ID: 880-1781-1

HPLC/IC

Leach Batch: 2677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-1781-1	CH-20 (0-1)	Soluble	Solid	DI Leach	
880-1781-2	CH-20 (1-2)	Soluble	Solid	DI Leach	
MB 880-2677/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2677/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2677/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-1781-1	CH-20 (0-1)	Soluble	Solid	300.0	2677
880-1781-2	CH-20 (1-2)	Soluble	Solid	300.0	2677
MB 880-2677/1-A	Method Blank	Soluble	Solid	300.0	2677
LCS 880-2677/2-A	Lab Control Sample	Soluble	Solid	300.0	2677
LCSD 880-2677/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2677

Lab Chronicle

Client: AECOM
Project/Site: Cotton Hills

Job ID: 880-1781-1

Client Sample ID: CH-20 (0-1)

Lab Sample ID: 880-1781-1

Date Collected: 04/30/21 08:15
Matrix: Solid
Date Received: 04/30/21 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2677	05/04/21 12:14	SC	XM
Soluble	Analysis	300.0		10	2700	05/05/21 01:40	WP	XM

Client Sample ID: CH-20 (1-2)

Lab Sample ID: 880-1781-2

Date Collected: 04/30/21 08:20
Matrix: Solid
Date Received: 04/30/21 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2677	05/04/21 12:14	SC	XM
Soluble	Analysis	300.0		10	2700	05/05/21 01:46	WP	XM

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: AECOM
Project/Site: Cotton Hills

Job ID: 880-1781-1

Laboratory: Eurofins Xenco, Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

Method Summary

Client: AECOM
Project/Site: Cotton Hills

Job ID: 880-1781-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

Protocol References:

ASTM = ASTM International

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

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: AECOM

Job ID: 880-1781-1

Project/Site: Cotton Hills

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-1781-1	CH-20 (0-1)	Solid	04/30/21 08:15	04/30/21 13:35	0 - 1
880-1781-2	CH-20 (1-2)	Solid	04/30/21 08:20	04/30/21 13:35	1 - 2

eurofins | Environment Testing Xenco

H Mid EL

880-1781 Chain of Custody

Hobbs, NM (575) 392-

Work Order No: 1781

www.xenco.com Page 1 of 1

Project Manager:	Brad Wynne	Bill to: (if different)	Same
Company Name	AECOM	Company Name:	
Address:	13355 Noel Rd Suite 400	Address:	
City State ZIP:	Dallas, TX 75240	City State ZIP:	
Phone	214-971-1829	Email	Bradley.Wynne@AECOM.com

Work Order Comments

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

State of Project: New Mexico

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

Deliverables EDD ☐ ADaPT ☐ Other:

Project Name	Cotton Hills	Turn Around	
Project Number:	60657072	☒ Routine ☐ Rush	
Project Location:	New Mexico	Due Date	
Sampler's Name:	James Lovely	TAT starts the day received by the lab, if received by 4:30pm	
PO #	60657072		

SAMPLE RECEIPT			
Temp Blank.	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID	IR8
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	+0.5
Sample Custody Seals.	Yes No (N/A)	Temperature Reading	2.6
Total Containers		Corrected Temperature	3.1

Preservative Codes

None NO; DI Water H_2O; Cool Cool; MeOH Me; HCL HC; HNO_3 HN; H_2SO_4 H_2; NaOH Na; H_3PO_4 HP; $NaHSO_4$ NABIS; $Na_2S_2O_3$ $NaSO_3$; Zn Acetate+NaOH Zn; NaOH+Ascorbic Acid SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: Chlorides EPA 300	Sample Comments
CH-20 (0-1)	Soil	4/30/21	0815	0-1	Grab	1	X	Run
CH-20 (1-2)			0820	1-2		1	X	Run
CH-21 (0-1)			0835	0-1		1	X	Hold
CH-21 (1-2)			0840	1-2		1	X	Hold
CH-21 (2-3)			0845	2-3		1	X	Hold
CH-22 (0-1)			0900	0-1		1	X	Hold
CH-22 (1-2)			0905	1-2		1	X	Hold
CH-22 (2-3)			0910	2-3		1	X	Hold
CH-22 (3-4)			0915	3-4		1	X	Hold

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg 1631 / 245 1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $85.00 will be applied to each project and a charge of $5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4/30/20 1335	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: AECOM Job Number: 880-1781-1

Login Number: 1781 **List Source: Eurofins Midland**
List Number: 1
Creator: Teel, Brianna

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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	
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.	N/A	
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").	N/A	

Form C-141
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State of New Mexico
Oil Conservation Division

Incident ID	NRM1936556814
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

- [X] Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- [X] Extents of contamination must be fully delineated.
- [X] Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Amy Barnhill Title: Water Specialist

Signature: Amy Barnhill Date: 7-9-2021

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

OCD Only

Received by: Robert Hamlet Date: 10/5/2021

- [ ] Approved
- [X] Approved with Attached Conditions of Approval
- [ ] Denied
- [ ] Deferral Approved

Signature: Robert Hamlet Date: 10/5/2021

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

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

CONDITIONS

Action 37166

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 37166
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	The Workplan/Remediation Plan is approved with the following conditions: Borehole to 51' showing no groundwater allows for floor samples to be delineated/excavated to 10,000 mg/kg for chlorides, 2,500 mg/kg (GRO+DRO+MRO) or 1,000 mg/kg (GRO+DRO) for vertical delineation. Only sample points on pad that require a major facility deconstruction will be deferred. Remove contaminants safely around equipment/pipelines with a hydrovac. If you believe a certain area will require a deferral, please make sure that it has been fully delineated and specify the exact soil sample locations. The OCD needs to see that every measure has been taken to remediate the release before a deferral can be granted. After all possible contaminated soil has been removed, a formal deferral request will need to be uploaded to the OCD payment portal for review.	10/5/2021