

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Carmen Pitt Title: Senior EHS Specialist
 Signature:  Date: 10/7/2019
 email: cpitt@grizzlyenergyllc.com Telephone: 432-248-8145

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



Incident ID	NOY1707237994
District RP	1RP-4640
Facility ID	fOY1707237145
Application ID	pOY1707237994

October 3, 2019

New Mexico Energy, Minerals and Natural Resources Department
 Oil Conservation Division, District 1
 1625 French Drive
 Hobbs, NM 88240

Ryan Mann
 Hobbs Field Office
 New Mexico State Land Office
 2827 North Dal Paso Street, Suite 117
 Hobbs, NM 88240

Re: Site Assessment and Closure Report
Site Name: State V Tank Battery
GPS: Latitude: 32.86913 Longitude: -103.27867
Legals: UL "C", Sec. 5, T17S, R37E
Lea County, New Mexico
NMOCD Ref. No. 1RP-4640

Lowry Environmental & Associates, LLC (LEA), on behalf of Vanguard Operating, LLC, has prepared this Site Assessment and Closure Report for the Release Site known as the State V Tank Battery. Details of the release are summarized on the table below:

Nature and Volume of Release	
Date Release Discovered	Historic
Type of Release	Crude Oil and Produced Water
Source of Release	Tank Battery & Flowline
	Volume Released (bbls) Unknown
	Volume Recovered (bbls) Unknown
Cause of Release During an on-site inspection, NMSLO representatives discovered six (6) affected areas in need of remediation adjacent to the tank battery and associated flowlines.	
Affected Area The releases affected approximately 19,400 Sq. Ft. of pasture land.	
Was this a major release?	If YES, for what reasons (s) is this considered a major release?
NA	NA
If Yes, was immediate notice given to the OCD? By whom? To whom? When and by what means?	
N/A	

A copy of the Release Notification (NMOCD Form C-141) is provided as Attachment #9.

Site Assessment/Characterization	
What is the shallowest depth to groundwater beneath the area affected by the release?	~53 Ft.
Did this release impact groundwater or surface water?	No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	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)?	No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	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?	No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	No
Are the lateral extents of the release within 300 feet of a wetland?	No
Are the lateral extents of the release overlying a subsurface mine?	No
Are the lateral extents of the release overlying an unstable area such as karst geology?	No
Are the lateral extents of the release within a 100-year floodplain?	No
Did the release impact areas not on an exploration, development, production or storage site?	Yes

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey was conducted in an effort to determine the average depth to groundwater within a 1/2 Mile radius of the Site and identify any registered water wells within a 1,000 Ft. radius of the Site. A search of the NMOSE database suggested the presence of 3 water wells (L 01398, L 01107 POD1 and L 02487) within 1,000 ft. of the Site. A field survey indicated available geographic information for L 01398, L 01107 POD1 and L 02487 was outdated and/or incorrect; there were no water wells in that vicinity. Further review indicates the wells were drilled between 1951 and 1954 for "prospecting and natural resource development" and have since been plugged and abandoned. A search of the USGS database did not identify any water wells within a 1/2 Mile radius.

Based on the volume and nature of the release, inferred depth to groundwater and NMOCD Siting Criteria, the NMOCD Closure Criteria for the Site is as follows:

Closure Criteria for Soil Impacted by a Release	
Benzene	10 mg/kg
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)	50 mg/kg
Total Petroleum Hydrocarbons	2,500 mg/kg
Combined GRO and DRO	1,000 mg/kg
Chloride	10,000 mg/kg

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted on Figures 1 & 2. Depth to groundwater information is provided as Attachment #5. A Photographic Log is provided as Attachment #8.

NMOCD WORKPLAN

On **June 27, 2019**, a Site Assessment Report and Proposed Remediation Plan was submitted to the NMOCD and NMSLO proposing remediation activities designed to advance the Site toward and approved closure.

NMOCD APPROVALS

The Site Assessment Report and Proposed Remediation Plan was subsequently approved. Please reference the associated Site Assessment Report and Proposed Remediation Plan that was submitted for 1RP-4640 for additional details.

REMEDIATION ACTIVITIES SUMMARY

On **May 3, 2019**, remediation activities commenced at the release site. In accordance with the NMOCD-approved workplan, impacted soil affected above the NMOCD Closure Criteria along within impacted soil affected above the NMOCD Reclamation Standard present within the top 4 Ft. was excavated and transported to an NMOCD-approved disposal facility. Affected areas in need of remediation were labeled Excavation A through E for ease of record keeping. The floor and sidewalls of the excavated area were advanced until laboratory analytical results from confirmation soil samples indicated concentrations of BTEX, TPH and chloride were below the NMOCD Reclamation Standard.

On **May 15, 2019**, Caprock collected fifteen (15) soil samples (Exc. C NW #1, Exc. C SW #1, Exc. C EW #1, Exc. C WW #1, Exc. C Floor #1, Exc. D NW #1, Exc. D SW #1, Exc. D EW #1, Exc. D WW #1, Exc. C Floor #1, Exc. E Floor, Exc. E NW #1, Exc. E EW #1, Exc. E SW #1 and Exc. E WW #1) from the floor and sidewalls of Excavations C, D and E. The collected soil samples were submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria and/or Reclamation Standards in each of the submitted soil samples with the exception of soil samples Exc. C NW #1, which exhibited a chloride concentration of 740 mg/kg and Exc. D WW #1, which exhibited a chloride concentration of 700 mg/kg. Impacted soil in the areas characterized by soil samples Exc. C NW #1 and Exc. D WW #1 was excavated. Site and Sample Location Maps are provided as Attachments #3a and #3b. A "Soil Chemistry Table" is provided as Attachment #4. Laboratory analytical reports are provided as Attachment #7.

On **May 28, 2019**, Caprock collected twenty-four (24) soil samples (Exc. A NW #1, Exc. A NW #2, Exc. A WW #1, Exc. A WW #2, Exc. A WW #3, Exc. A SW #1, Exc. A SW #2, Exc. A SW #3, Exc. A EW #1, Exc. A EW #2, Exc. A EW #3, Exc. A Floor #1, Exc. A Floor #2, Exc. A Floor #3, Exc. A Floor #4, Exc. B NW #1, Exc. B NW #2, Exc. B EW, Exc. B SW #1, Exc. B SW #2, Exc. B WW #1, Exc. B Floor #1, Exc. B Floor #2 and Exc. B WW GC) from the floor and sidewalls of Excavations A and B. The collected soil samples were submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria and/or Reclamation Standards in each of the submitted soil samples with the exception of soil samples Exc. A NW #2, which exhibited a TPH concentration of 116 mg/kg, Exc. A WW #1, which exhibited a TPH concentration of 102 mg/kg, Exc. A SW #1, which exhibited a TPH concentration of 390 mg/kg, Exc. A EW #1, which exhibited a TPH concentration of 359 mg/kg, Exc. A WW #2, which exhibited a TPH concentration of 282 mg/kg, Exc. A Floor #1, which exhibited a TPH concentration of 671 mg/kg, Exc. A Floor #2, which exhibited a TPH concentration of 567 mg/kg, Exc. B NW #1, which exhibited a TPH concentration of 1,380 mg/kg, Exc. B NW #2, which exhibited a TPH concentration of 2,340 mg/kg, Exc. B EW, which exhibited a TPH concentration of 344 mg/kg, Exc. B SW #1, which exhibited a TPH concentration of 940 mg/kg and Exc. B SW #2, which exhibited a TPH concentration of 110 mg/kg. Impacted soil in the areas characterized by soil samples Exc. A NW #2, Exc. A WW #1, Exc. A SW #1, Exc. A EW #1, Exc. A EW #2, Exc. A Floor #1, Exc. A Floor #2, Exc. B NW #1, Exc. B NW #2, Exc. B EW, Exc. B SW #1 and Exc. B SW #2 was excavated.

On **June 10, 2019**, Caprock collected twelve (12) soil samples (CTB-A Floor #1b, CTB-A Floor #2b, CTB-A NW#2b, CTB-A SW #1b, CTB-A WW #1b, CTB-A EW #1b, CTB-A EW #2b, CTB-B NW #1b, CTB-B NW#2b, CTB-B SW#1b, CTB-B SW #2b and CTB-B EW#1b) from the floor and sidewalls of Excavations A and B. The collected soil samples were submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria and/or Reclamation Standards in each of the submitted soil samples with the exception of soil samples CTB-B SW #1b, which exhibited a TPH concentration of 502 mg/kg, CTB-B EW

#1b, which exhibited a TPH concentration of 193 mg/kg, CTB-A NW #2b, which exhibited a TPH concentration of 429 mg/kg, CTB-A WW#1b, which exhibited a TPH concentration of 400 mg/kg and CTB-A EW #1b, which exhibited a TPH concentration of 405 mg/kg. Impacted soil in the areas characterized by soil samples CTB-B SW #1b, CTB-B EW #1b, CTB-A NW #2b, CTB-A WW #1b and CTB-A EW #1b was excavated.

On **June 14, 2019**, Caprock collected five (5) soil samples (Exc. A NW #2c, Exc. A WW #1c, Exc. A EW #1c, Exc. B SW #1c and Exc. B EW #1c) from the sidewalls of Excavations A and B. The collected soil samples were submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria and/or Reclamation Standards in each of the submitted soil samples.

On **July 26, 2019**, Caprock collected thirty-eight (38) soil samples (Exc. A Floor 5, Exc. A Floor 6, Exc. A Floor 7, Exc. A Floor 8, Exc. A Floor 9, Exc. A Floor 10, Exc. A Floor 11, Exc. A Floor 12, Exc. A Floor 13, Exc. A Floor 14, Exc. A Floor 15, Exc. A Floor 16, Exc. A Floor 17, Exc. A Floor 18, Exc. A Floor 19, Exc. A Floor 20, Exc. A Floor 21, Exc. A Floor 22, Exc. A Floor 23, Exc. A Floor 24, Exc. A Floor 25, Exc. A Floor 26, Exc. A Floor 27, Exc. A Floor 28, Exc. B Floor 3, Exc. B Floor 4, Exc. B Floor 5, Exc. B Floor 6, Exc. B Floor 7, Exc. B Floor 8, , Exc. C Floor 2, Exc. C Floor 3, Exc. C Floor 4, Exc. C Floor 5, Exc. C Floor 6, Exc. D Floor 2, Exc. D Floor 3 and Exc. E Floor 2) from the floor of Excavations A, B, C, D and E. The collected soil samples were submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria and/or Reclamation Standards in each of the submitted soil samples.

RESTORATION, RECLAMATION AND RE-VEGETATION PLAN

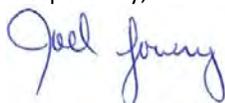
Upon receiving laboratory analytical results from confirmation soil samples, the excavated area was backfilled with locally sourced, non-impacted "like" material placed at or near original relative positions. Excavation backfill was contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable. Areas affected by remediation activities will be reseeded with an NMSLO-approved seed mixture during the first favorable growing season following closure of the site.

CLOSURE REQUEST

Impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standard was excavated and transported to an NMOCD-approved disposal facility. Laboratory analytical results from confirmation soil samples indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples. Approximately 3,060 cubic yards of impacted soil was transported to an NMOCD-approved disposal facility. Prior to backfill, the final dimensions of Excavation A was 210 Ft. in length, 45 to 100 Ft. in width and 1 to 2 Ft. in depth. The final dimensions of Excavation B was 120 Ft. in length, 40 to 75 Ft. in width and 1 to 4 Ft. in depth. The final dimensions of Excavation C was 85 Ft. in length, 35 to 54 Ft. in width and 4 Ft. in depth. The final dimensions of Excavation D was 42 Ft. in length, 24 to 32 Ft. in width and 4 Ft. in depth. The final dimensions of Excavation E was 40 Ft. in length, 20 to 30 Ft. in width and 4 Ft. in depth.

Based on laboratory analytical results, field activities conducted to date and conditions at the site, LEA recommends Vanguard Operating, LLC provide a copy of this Remediation Summary and Closure Report to the NMOCD and request closure be granted to the State V Tank Battery Site.

Respectfully,



Joel W. Lowry
Environmental Professional
Lowry Environmental & Associates, LLC

- Attachments:**
- Attachment #1- Figure 1 - Topographic Map
 - Attachment #2- Figure 2 - Aerial Map
 - Attachment #3- Figure 3a - Site & Sample Location Map (Excavations A & B)
Figure 3b - Site & Sample Location Map (Excavations C, D & E)
 - Attachment #4- Soil Chemistry Table
 - Attachment #5- Depth to Groundwater Information
 - Attachment #6- Soil Profile
 - Attachment #7- Laboratory Analytical Reports
 - Attachment #8- Photographic Log
 - Attachment #9- Release Notification (FORM C-141)
 - Attachment #10- Field Data

LIMITATIONS

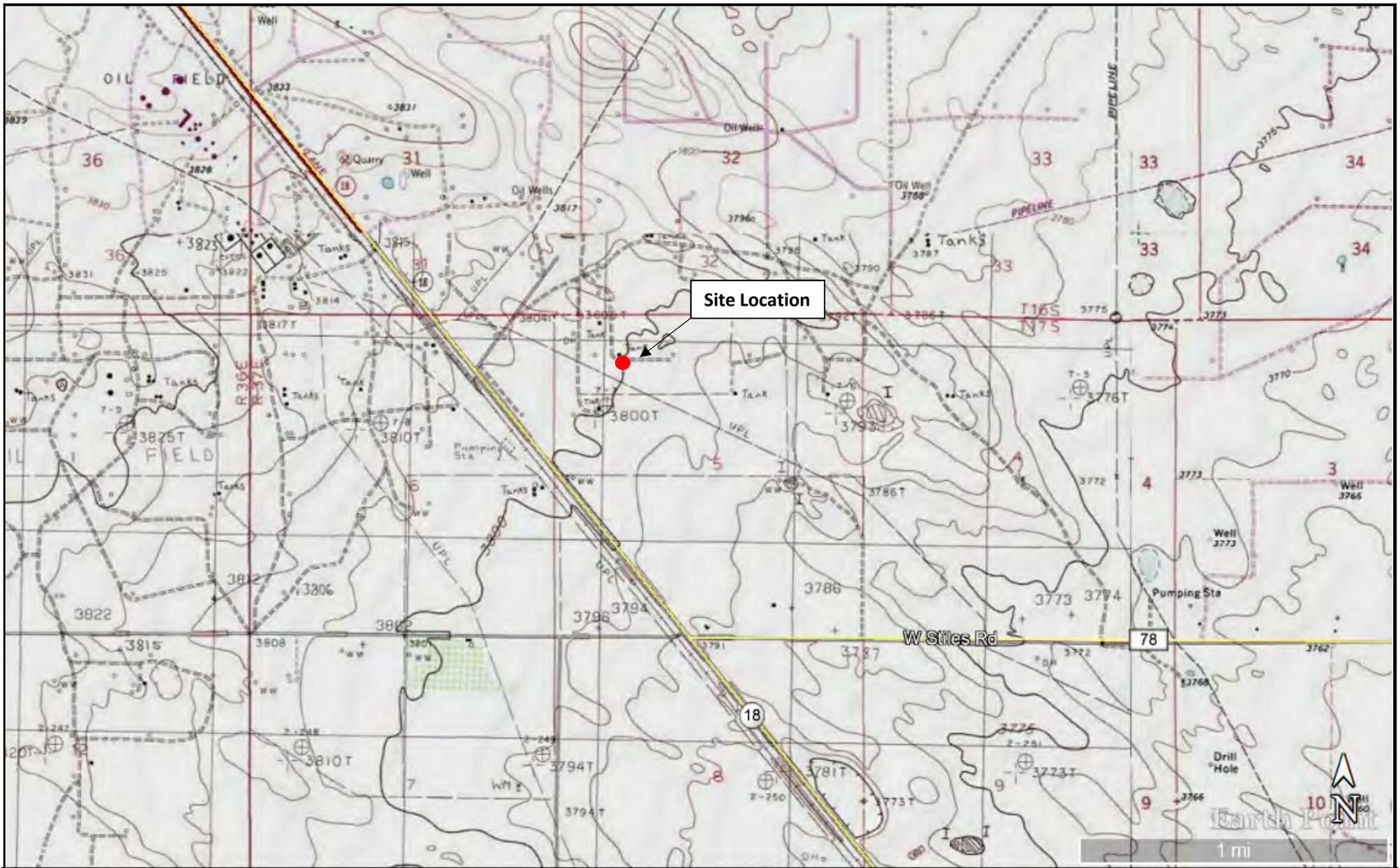
This document has been prepared on behalf of Vanguard Operating, LLC. Use of information contained in this report, including exhibits and attachments, by any other party without the consent of LEA and/or Vanguard Operating, LLC is prohibited.

This document has been prepared in a professional manner, using the degree of skill and care exercised by similar environmental professionals. LEA notes that the facts and conditions referenced in this document may change over time and that the conclusions and recommendations are only applicable to the facts and conditions as described at the time this document was prepared.

LEA has prepared this report to the best of its ability. No other warranty, expressed or implied, is made or intended.

Attachment #1

Figure 1 - Topographic Map



LEGEND:

● Site Location

Figure 1
 Topographic Map
 Vanguard Operating, LLC
 State V Tank Battery
 GPS: 32.86913, -103.27867
 Lea County, New Mexico

LOWRY environmental

Drafted by: jwl Checked by: client Date: 6/17/2019

Attachment #2

Figure 2 - Aerial Map



LEGEND:

	Site Location		Non-Industrial Building
	Fresh Water Well		Subsurface Mine
	100-Year Floodplain		1,000 Ft. Radius
	High/Critical Karst		

Figure 2
 Aerial Map
 Vanguard Operating, LLC
 State V Tank Battery
 GPS: 32.86913, -103.27867
 Lea County, New Mexico

LOWRY
 environmental



Drafted by: jwl Checked by: client Date: 6/17/2019

Attachment #3

Figure 3a - Site & Sample Location Map (Excavations A & B)

Figure 3b - Site & Sample Location Map (Excavations C, D & E)



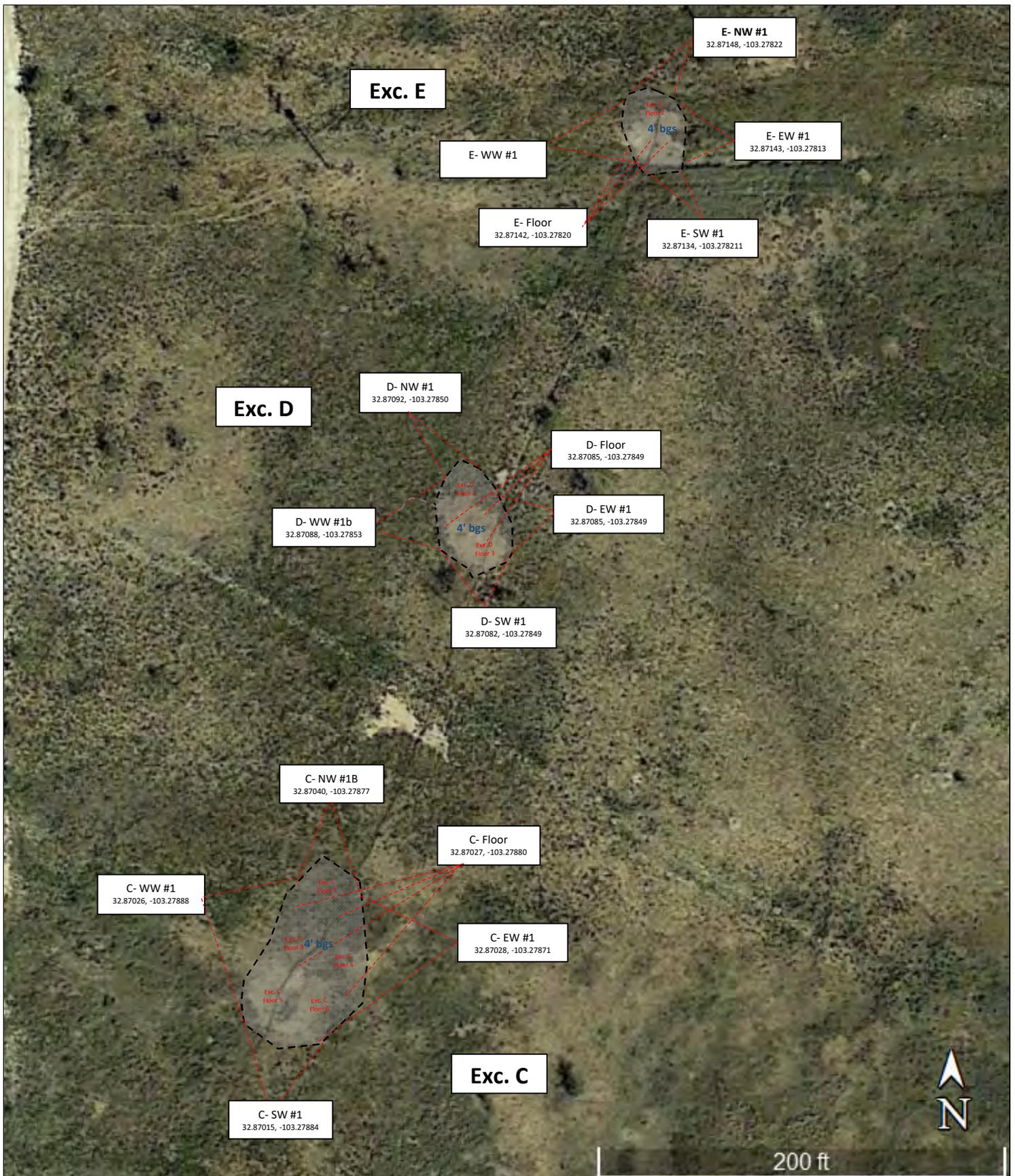
LEGEND:

	Exc. A - Floor 26	Floor Sample Location
		Sample Location
	4' bgs	Grade
		Excavated Area

Figure 3a
 Site & Sample Location Map
 Vanguard Operating, LLC
 State V Tank Battery
 GPS: 32.86913, -103.27867
 Lea County, New Mexico

LOWRY
 environmental

Drafted by: jwl Checked by: client Date: 10/3/2019



LEGEND:

	Floor Sample Location
	Sample Location
	Grade
	Excavated Area

Figure 3b
 Site & Sample Location Map
 Vanguard Operating, LLC
 State V Tank Battery
 GPS: 32.86913, -103.27867
 Lea County, New Mexico

LOWRY environmental

Drafted by: jwl Checked by: client Date: 10/3/2019

Attachment #4
Soil Chemistry Table

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL
Vanguard Operating
State V CTB-B
NMOC Ref. # 1RP-4640

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					300
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
Exc. A NW #1	5/28/2019	0-1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	530
Exc. A NW #2	5/28/2019	0-1'	Excavated	ND	ND	ND	24	24	92	116	530
Exc. A WW #1	5/28/2019	0-1'	Excavated	ND	ND	ND	12	12	90	102	ND
Exc. A WW #2	5/28/2019	0-1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	480
Exc. A WW #3	5/28/2019	0-1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A SW #1	5/28/2019	0-1'	Excavated	ND	ND	ND	70	70	320	390	ND
Exc. A SW #2	5/28/2019	NA	Excavated	ND	ND	ND	ND	ND	66	66	61
Exc. A SW #3	5/28/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	120
Exc. A EW #1	5/28/2019	NA	Excavated	ND	ND	ND	79	79	280	359	220
Exc. A EW #2	5/28/2019	NA	Excavated	ND	ND	ND	52	52	230	282	260
Exc. A EW #3	5/28/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	130
Exc. A Floor #1	5/28/2019	1'	Excavated	ND	ND	ND	81	81	590	671	70
Exc. A Floor #2	5/28/2019	1'	Excavated	ND	ND	ND	67	67	500	567	66
Exc. A Floor #3	5/28/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	92
Exc. A Floor #4	5/28/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	91
Exc. A Floor 5	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 6	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 7	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 8	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 9	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 10	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 11	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 12	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 13	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 14	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 15	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 16	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 17	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 18	7/26/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 19	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 20	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 21	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 22	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 23	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 24	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 25	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 26	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 27	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A Floor 28	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
CTB-A Floor #1B	6/10/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
CTB-A Floor #2B	6/10/2019	2'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
CTB-A NW#2B	6/10/2019	NA	Excavated	ND	ND	ND	69	69	360	429	ND
CTB-A SW#1B	6/10/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
CTB-A WW#1B	6/10/2019	NA	Excavated	ND	ND	ND	60	60	340	400	ND
CTB-A EW#1B	6/10/2019	NA	Excavated	ND	ND	ND	65	65	340	405	ND
CTB-A EW#2B	6/10/2019	NA	In-Situ	ND	ND	ND	10	10	52	62	ND
Exc. A NW #2C	6/14/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A WW #1C	6/14/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. A EW #1C	6/14/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Closure Criteria				10	50	-	-	-	-	2,500	10,000

NOTES:

- = Not analyzed for constituent

Bold text denotes a concentration that exceeds the NMOC Closure Criteria

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL
Vanguard Operating
State V CTB-B
NMOCD Ref. # 1RP-4640

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					300
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
Exc. B NW #1	5/28/2019	NA	Excavated	ND	ND	ND	410	410	970	1,380	120
Exc. B NW #2	5/28/2019	NA	Excavated	ND	ND	ND	740	740	1600	2,340	ND
Exc. B EW	5/28/2019	NA	Excavated	ND	ND	ND	64	64	280	344	270
Exc. B SW #1	5/28/2019	NA	Excavated	ND	ND	ND	210	210	730	940	ND
Exc. B SW #2	5/28/2019	NA	Excavated	ND	ND	ND	16	16	94	110	200
Exc. B WW #1	5/28/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	82
Exc. B Floor #1	5/28/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	79
Exc. B Floor #2	5/28/2019	4'	In-Situ	ND	ND	ND	ND	ND	ND	ND	81
Exc. B WW GC	5/28/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	88
Exc. B Floor 3	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. B Floor 4	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. B Floor 5	7/26/2019	1'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. B Floor 6	7/26/2019	4'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. B Floor 7	7/26/2019	4'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. B Floor 8	7/26/2019	4'	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
CTB-B-NW#1B	6/10/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
CTB-B-NW#2B	6/10/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
CTB-B-SW#1B	6/10/2019	NA	Excavated	ND	ND	ND	ND	72	430	502	ND
CTB-B-SW#2B	6/10/2019	NA	In-Situ	ND	ND	ND	ND	ND	49	49	520
CTB-B-EW#1B	6/10/2019	NA	Excavated	ND	ND	ND	33	33	160	193	ND
Exc. B SW #1C	6/14/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. B EW #1C	6/14/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. C NW #1	5/15/2019	NA	Excavated	ND	ND	ND	ND	ND	ND	ND	740
Exc. C SW #1	5/15/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. C EW #1	5/15/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	170
Exc. C WW #1	5/15/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	240
Exc. C Floor #1	5/15/2019	4'	In-Situ	ND	ND	ND	ND	ND	ND	ND	3,300
Exc. C Floor 2	7/26/2019	4'	In-Situ	ND	ND	ND	41	41	270	311	950
Exc. C Floor 3	7/26/2019	4'	In-Situ	ND	ND	ND	28	28	140	168	1,400
Exc. C Floor 4	7/26/2019	4'	In-Situ	ND	ND	ND	33	33	160	193	970
Exc. C Floor 5	7/26/2019	4'	In-Situ	ND	ND	ND	29	29	150	179	1,300
Exc. C Floor 6	7/26/2019	4'	In-Situ	ND	ND	ND	36	36	200	236	1,000
Exc. D. NW #1	5/15/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	220
Exc. D. EW #1	5/15/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	560
Exc. D. SW #1	5/15/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	290
Exc. D. WW #1	5/15/2019	NA	Excavated	ND	ND	ND	ND	ND	ND	ND	700
Exc. D. Floor	5/15/2019	4'	In-Situ	ND	ND	ND	ND	ND	ND	ND	2,500
Exc. D Floor 2	7/26/2019	4'	In-Situ	ND	ND	ND	ND	ND	ND	ND	2,500
Exc. D Floor 3	7/26/2019	4'	In-Situ	ND	ND	ND	18	18	140	158	4,200
Exc. E Floor	5/15/2019	4'	In-Situ	ND	ND	ND	ND	ND	ND	ND	3,200
Exc. E NW #1	5/15/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	210
Exc. E EW #1	5/15/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	450
Exc. E SW #1	5/15/2019	NA	In-Situ	ND	ND	ND	ND	ND	ND	ND	ND
Exc. E WW #1	5/15/2019	NA	Excavated	ND	ND	ND	ND	ND	ND	ND	670
Exc. E Floor 2	7/26/2019	4'	In-Situ	ND	ND	ND	ND	ND	ND	ND	3,500
Closure Criteria				10	50	-	-	-	-	2,500	10,000

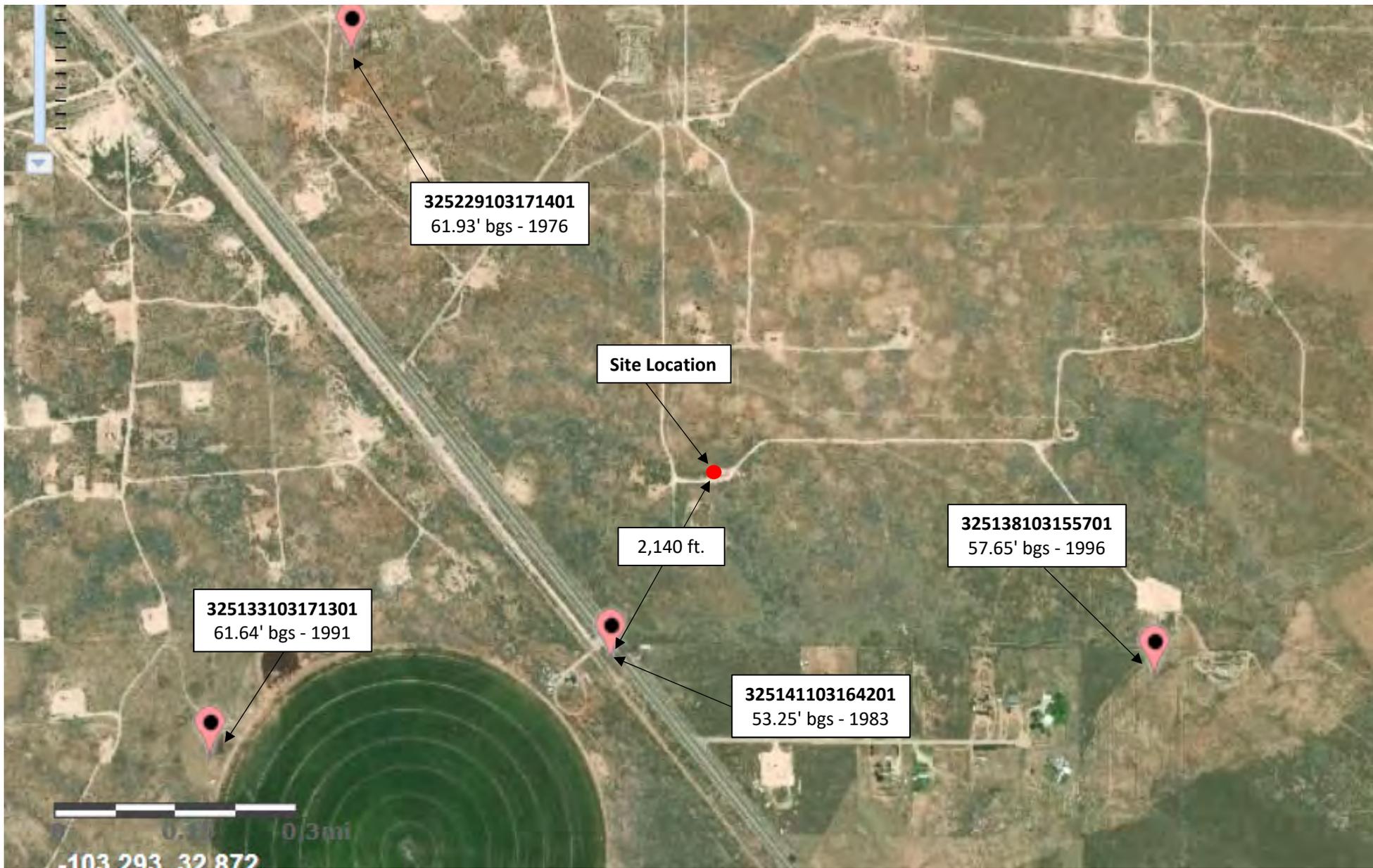
NOTES:

- = Not analyzed for constituent

Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

Attachment #5

Depth to Groundwater Information



LEGEND:

● Site Location

Figure 4
 USGS Well Proximity Map
 Vanguard Operating, LLC
 State V Tank Battery
 GPS: 32.86913, -103.27867
 Lea County, New Mexico

LOWRY
 environmental

Drafted by: jwl Checked by: client Date: 6/18/2019



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

(R=POD has been replaced,

O=orphaned,

C=the file is closed)

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
L_01398		L	LE	1	1	05	17S	37E		660901	3638119*	1	115	50	65
L_01107	POD1	L	LE	1	1	05	17S	37E		660800	3638218*	140	92	38	54
L_02487		L	LE	3	3	32	16S	37E		661016	3638527*	423	90	35	55
L_02078		L	LE	4	4	31	16S	37E		660613	3638521*	493	112	50	62
L_01604	POD1	L	LE	1	2	06	17S	37E		660397	3638214*	511	105		
L_02549		L	LE	3	3	05	17S	37E		660807	3637616*	512	138	65	73
L_05458		L	LE	1	4	31	16S	37E		660512	3638620*	633	240	50	190
L_13414	POD5	L	LE	4	1	06	17S	37E		660218	3637979	695	110	93	17
L_13414	POD4	L	LE	2	3	06	17S	37E		660248	3637870	697	110	93	17
L_13038	POD1	L	LE	4	1	06	17S	37E		660223	3637928	703	115		
L_13414	POD2	L	LE	4	1	06	17S	37E		660194	3637900	739	102	93	9
L_13414	POD1	L	LE	4	1	06	17S	37E		660176	3637917	751	110	93	17
L_00449	S	L	LE	2	2	06	17S	37E		660611	3637409*	767	120	48	72
L_00449	S	R	L	2	2	06	17S	37E		660611	3637409*	767	120	48	72
L_11773		L	LE	2	2	06	17S	37E		660611	3637409	767	235		
L_13414	POD3	L	LE	2	3	06	17S	37E		660143	3637890	790	110	93	17
L_13038	POD2	L	LE	2	3	06	17S	37E		660146	3637865	795	115		
L_13038	POD3	L	LE	2	3	06	17S	37E		660146	3637865	795	115		

Average Depth to Water: **65 feet**

Minimum Depth: **35 feet**

Maximum Depth: **93 feet**

Record Count: 18

UTMNAD83 Radius Search (in meters):

Easting (X): 660900.1

Northing (Y): 3638119.5

Radius: 804

*UTM location was derived from PLSS - see Help

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

6/14/19 12:04 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)					(NAD83 UTM in meters)		
		(quarters are smallest to largest)							
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
L	01398	1	1	05	17S	37E	660901	3638119*	
x									
Driller License:	46	Driller Company:	ABBOTT BROTHERS COMPANY						
Driller Name:	ABBOTT, MURRELL								
Drill Start Date:	03/13/1952	Drill Finish Date:	03/14/1952	Plug Date:	01/31/1953				
Log File Date:	03/17/1952	PCW Rev Date:	09/19/1952	Source:	Shallow				
Pump Type:		Pipe Discharge Size:		Estimated Yield:					
Casing Size:		Depth Well:	115 feet	Depth Water:	50 feet				
x									
	Water Bearing Stratifications:	Top	Bottom	Description					
		50	115	Sandstone/Gravel/Conglomerate					
x									

*UTM location was derived from PLSS - see Help

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

6/17/19 9:43 AM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)						(NAD83 UTM in meters)	
		(quarters are smallest to largest)							
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
L 01107	POD1	1	1	1	05	17S	37E	660800	3638218* 
Driller License:		Driller Company:							
Driller Name: C O ALDRIDGE									
Drill Start Date:	04/14/1951	Drill Finish Date:	04/16/1951		Plug Date:	12/31/1952			
Log File Date:	05/04/1951	PCW Rev Date:	05/10/1951		Source:	Shallow			
Pump Type:		Pipe Discharge Size:			Estimated Yield:				
Casing Size:	7.00	Depth Well:	92 feet		Depth Water:	38 feet			
Water Bearing Stratifications:		Top	Bottom	Description					
		38	70	Sandstone/Gravel/Conglomerate					
		80	92	Sandstone/Gravel/Conglomerate					
Casing Perforations:		Top	Bottom						
		40	78						

*UTM location was derived from PLSS - see Help

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6/17/19 9:44 AM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)			
		(quarters are smallest to largest)							
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
L	02487	3	3	32	16S	37E	661016	3638527*	
<hr/>									
Driller License:	33	Driller Company:		TATUM CLAUDE E.					
Driller Name:									
Drill Start Date:	02/06/1954	Drill Finish Date:		02/07/1954	Plug Date:		04/05/1955		
Log File Date:	03/12/1954	PCW Rev Date:			Source:		Shallow		
Pump Type:									
Pipe Discharge Size:									
Estimated Yield:									
Casing Size:		Depth Well:		90 feet	Depth Water:		35 feet		
<hr/>									
Water Bearing Stratifications:		Top	Bottom	Description					
		38	90	Sandstone/Gravel/Conglomerate					
<hr/>									

*UTM location was derived from PLSS - see Help

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

6/17/19 9:44 AM

POINT OF DIVERSION SUMMARY



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Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 325138103155701

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 325138103155701 17S.37E.05.412221

Lea County, New Mexico
Latitude 32°51'50", Longitude 103°16'12" NAD27
Land-surface elevation 3,791.00 feet above NGVD29
The depth of the well is 130 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1961-02-02		D	36.54				2		U	
1966-02-25		D	41.39				2		U	
1971-02-09		D	44.52				2		U	
1976-02-25		D	48.03				2		U	
1981-01-07		D	52.29				2		U	
1986-01-29		D	56.10				2		U	
1991-01-24		D	57.40				2		U	
1996-01-19		D	57.65				2		S	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2019-06-14 13:33:31 EDT

0.45 0.42 nadww02



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Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 325141103164201

Minimum number of levels = 1

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USGS 325141103164201 17S.37E.05.133334

Lea County, New Mexico
Latitude 32°51'51", Longitude 103°16'54" NAD27
Land-surface elevation 3,799.00 feet above NGVD29
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1980-01-04		D	51.77				2		U	
1981-01-07		D	52.16				2		U	
1982-01-05		D	52.59				2		U	
1983-01-05		D	53.25				2		U	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for USA: Water Levels

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0.46 0.44 nadww02



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Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 325133103171301

Minimum number of levels = 1

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USGS 325133103171301 17S.37E.06.411331

Lea County, New Mexico
Latitude 32°51'45", Longitude 103°17'25" NAD27
Land-surface elevation 3,806.00 feet above NGVD29
The depth of the well is 100 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1961-02-02		D	38.46				2		U	
1966-02-25		D	39.36				2		U	
1971-02-09		D	52.04				2		U	
1976-02-25		D	54.17				2		U	
1981-01-07		D	57.89				2		U	
1986-01-29		D	59.73				2		U	
1991-01-31		D	61.64				2		U	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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0.44 0.41 nadww02





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Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 325229103171401

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 325229103171401 16S.37E.31.322244

Lea County, New Mexico
Latitude 32°52'29", Longitude 103°17'14" NAD27
Land-surface elevation 3,811 feet above NAVD88
The depth of the well is 148 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1961-02-17		D	41.41				2		U	
1966-02-24		D	46.23				2		U	
1971-02-17		D	55.88				2		U	
1976-03-17		D	61.93				2		U	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

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Page Last Modified: 2019-06-14 13:37:22 EDT

0.45 0.42 nadww02



Attachment #6

Soil Profile

SOIL PROFILE

Site Name: State V TB

Date: 6/10/2019

Description	Depth (ft. bgs)
Brown Clayey Topsoil	1
Calcrete / Caliche	2
Caliche Rock	3
	4
	5
	6
	7
	8
	9
	0
	1
	2
	3
	4
	5
	6
	7
	8
	9
	0
	1
	2
	3
	4
	5
	6
	7
	8
	9
	0
	1
	2
	3
	4
	5
	6
	7
	8
	9
	0

Attachment #7
Laboratory Analytical Reports



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 24, 2019

Joel Lowry
Vanguard Operating
4001 Penbrook Ste.201
Odessa, TX 79762
TEL:
FAX

RE: State V CTB A

OrderNo.: 1906852

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/15/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906852

Date Reported: 6/24/2019

CLIENT: Vanguard Operating

Client Sample ID: NW #2C

Project: State V CTB A

Collection Date: 6/14/2019 8:00:00 AM

Lab ID: 1906852-001

Matrix: SOIL

Received Date: 6/15/2019 10:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/19/2019 1:22:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/19/2019 1:22:57 PM
Surr: DNOP	64.9	70-130	S	%Rec	1	6/19/2019 1:22:57 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/21/2019 8:37:51 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	6/18/2019 9:34:41 PM
Toluene	ND	0.050		mg/Kg	1	6/18/2019 9:34:41 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/18/2019 9:34:41 PM
Xylenes, Total	ND	0.099		mg/Kg	1	6/18/2019 9:34:41 PM
Surr: 1,2-Dichloroethane-d4	97.4	70-130		%Rec	1	6/18/2019 9:34:41 PM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	6/18/2019 9:34:41 PM
Surr: Dibromofluoromethane	115	70-130		%Rec	1	6/18/2019 9:34:41 PM
Surr: Toluene-d8	92.1	70-130		%Rec	1	6/18/2019 9:34:41 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/18/2019 9:34:41 PM
Surr: BFB	110	70-130		%Rec	1	6/18/2019 9:34:41 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906852

Date Reported: 6/24/2019

CLIENT: Vanguard Operating

Client Sample ID: WW #1C

Project: State V CTB A

Collection Date: 6/14/2019 8:05:00 AM

Lab ID: 1906852-002

Matrix: SOIL

Received Date: 6/15/2019 10:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/19/2019 1:47:01 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/19/2019 1:47:01 PM
Surr: DNOP	56.4	70-130	S	%Rec	1	6/19/2019 1:47:01 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/21/2019 8:50:15 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	6/18/2019 10:03:17 PM
Toluene	ND	0.049		mg/Kg	1	6/18/2019 10:03:17 PM
Ethylbenzene	ND	0.049		mg/Kg	1	6/18/2019 10:03:17 PM
Xylenes, Total	ND	0.098		mg/Kg	1	6/18/2019 10:03:17 PM
Surr: 1,2-Dichloroethane-d4	96.4	70-130		%Rec	1	6/18/2019 10:03:17 PM
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	6/18/2019 10:03:17 PM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	6/18/2019 10:03:17 PM
Surr: Toluene-d8	92.2	70-130		%Rec	1	6/18/2019 10:03:17 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/18/2019 10:03:17 PM
Surr: BFB	107	70-130		%Rec	1	6/18/2019 10:03:17 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906852

Date Reported: 6/24/2019

CLIENT: Vanguard Operating

Client Sample ID: EW #1C

Project: State V CTB A

Collection Date: 6/14/2019 8:10:00 AM

Lab ID: 1906852-003

Matrix: SOIL

Received Date: 6/15/2019 10:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/19/2019 2:11:16 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/19/2019 2:11:16 PM
Surr: DNOP	50.0	70-130	S	%Rec	1	6/19/2019 2:11:16 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/21/2019 9:02:40 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	6/19/2019 12:26:47 AM
Toluene	ND	0.049		mg/Kg	1	6/19/2019 12:26:47 AM
Ethylbenzene	ND	0.049		mg/Kg	1	6/19/2019 12:26:47 AM
Xylenes, Total	ND	0.098		mg/Kg	1	6/19/2019 12:26:47 AM
Surr: 1,2-Dichloroethane-d4	98.1	70-130		%Rec	1	6/19/2019 12:26:47 AM
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	6/19/2019 12:26:47 AM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	6/19/2019 12:26:47 AM
Surr: Toluene-d8	94.5	70-130		%Rec	1	6/19/2019 12:26:47 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/19/2019 12:26:47 AM
Surr: BFB	108	70-130		%Rec	1	6/19/2019 12:26:47 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906852

24-Jun-19

Client: Vanguard Operating
Project: State V CTB A

Sample ID: MB-45745	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45745	RunNo: 60839								
Prep Date: 6/21/2019	Analysis Date: 6/21/2019	SeqNo: 2059680	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45745	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45745	RunNo: 60839								
Prep Date: 6/21/2019	Analysis Date: 6/21/2019	SeqNo: 2059681	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.2	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906852

24-Jun-19

Client: Vanguard Operating
Project: State V CTB A

Sample ID: MB-45653	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45653	RunNo: 60757								
Prep Date: 6/18/2019	Analysis Date: 6/19/2019	SeqNo: 2056491	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.4		10.00		94.1	70	130			

Sample ID: LCS-45653	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45653	RunNo: 60757								
Prep Date: 6/18/2019	Analysis Date: 6/19/2019	SeqNo: 2056492	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.5	63.9	124			
Surr: DNOP	4.7		5.000		94.5	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906852

24-Jun-19

Client: Vanguard Operating
Project: State V CTB A

Sample ID: ics-45621	SampType: LCS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSS	Batch ID: 45621	RunNo: 60734								
Prep Date: 6/17/2019	Analysis Date: 6/18/2019	SeqNo: 2055220	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	70	130			
Toluene	0.98	0.050	1.000	0	98.1	70	130			
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		100	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.3	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		115	70	130			
Surr: Toluene-d8	0.48		0.5000		95.9	70	130			

Sample ID: mb-45621	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: 45621	RunNo: 60734								
Prep Date: 6/17/2019	Analysis Date: 6/18/2019	SeqNo: 2055221	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		100	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.8	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		116	70	130			
Surr: Toluene-d8	0.47		0.5000		94.5	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906852

24-Jun-19

Client: Vanguard Operating

Project: State V CTB A

Sample ID: ics-45621	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 45621	RunNo: 60734								
Prep Date: 6/17/2019	Analysis Date: 6/18/2019	SeqNo: 2055246	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.3	70	130			
Surr: BFB	550		500.0		110	70	130			

Sample ID: mb-45621	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 45621	RunNo: 60734								
Prep Date: 6/17/2019	Analysis Date: 6/18/2019	SeqNo: 2055247	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	550		500.0		109	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Sample Log-In Check List

Client Name: **VANGUARD OPERATIN**

Work Order Number: **1906852**

RcptNo: 1

Received By: **Thom Maybee** **6/15/2019 10:15:00 AM**

Completed By: **Leah Baca** **6/17/2019 8:36:31 AM**

Reviewed By: **ENM** **6/17/19**

Leah Baca

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

TO
6/17/19

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Yes			

Chain-of-Custody Record

Client: Vanguard
 Turn-Around Time: 5 day Rush
 Standard Rush
 Project Name: State U CTB-1A

Mailing Address: 4001 Penbrook St 201
 Odessa TX 79762
 Project #:

Project Manager: Joel Lowry
 Sampler: Math Taylor
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including CF): 4.3 + 0.3 = 4.6°C

Accreditation: Az Compliance Level 4 (Full Validation)
 NELAC Other AMLCD Eq
 EDD (Type)



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request	
BTEX / MTBE / TMB's (8021)	X
TPH:8015D(GRO / DRO / MRO)	X
8081 Pesticides/8082 PCB's	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	
Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	Chloride

Received by: [Signature] Date: 6/19/19 Time: 12:00
 Relinquished by: [Signature]
 Received by: [Signature] Date: 6-15-19 Time: 10:15
 Relinquished by: [Signature]
 Remarks: Math, Caprock Services @ Gmail.com
 Joel @ Lowry environmental.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 24, 2019

Joel Lowry
Vanguard Operating
4001 Penbrook Ste.201
Odessa, TX 79762
TEL:
FAX

RE: State V CTB B

OrderNo.: 1906849

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/15/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906849**

Date Reported: 6/24/2019

CLIENT: Vanguard Operating

Client Sample ID: SW #1C

Project: State V CTB B

Collection Date: 6/14/2019 8:30:00 AM

Lab ID: 1906849-001

Matrix: SOIL

Received Date: 6/15/2019 10:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/18/2019 12:45:24 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/18/2019 12:45:24 PM
Surr: DNOP	117	70-130		%Rec	1	6/18/2019 12:45:24 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/21/2019 4:29:41 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	6/18/2019 4:48:56 PM
Toluene	ND	0.048		mg/Kg	1	6/18/2019 4:48:56 PM
Ethylbenzene	ND	0.048		mg/Kg	1	6/18/2019 4:48:56 PM
Xylenes, Total	ND	0.097		mg/Kg	1	6/18/2019 4:48:56 PM
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%Rec	1	6/18/2019 4:48:56 PM
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	6/18/2019 4:48:56 PM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	6/18/2019 4:48:56 PM
Surr: Toluene-d8	93.0	70-130		%Rec	1	6/18/2019 4:48:56 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/18/2019 4:48:56 PM
Surr: BFB	106	70-130		%Rec	1	6/18/2019 4:48:56 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906849**

Date Reported: **6/24/2019**

CLIENT: Vanguard Operating

Client Sample ID: EW #1C

Project: State V CTB B

Collection Date: 6/14/2019 8:35:00 AM

Lab ID: 1906849-002

Matrix: SOIL

Received Date: 6/15/2019 10:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/18/2019 2:34:54 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/18/2019 2:34:54 PM
Surr: DNOP	108	70-130		%Rec	1	6/18/2019 2:34:54 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/21/2019 4:42:06 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	6/18/2019 5:17:34 PM
Toluene	ND	0.049		mg/Kg	1	6/18/2019 5:17:34 PM
Ethylbenzene	ND	0.049		mg/Kg	1	6/18/2019 5:17:34 PM
Xylenes, Total	ND	0.098		mg/Kg	1	6/18/2019 5:17:34 PM
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	6/18/2019 5:17:34 PM
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	6/18/2019 5:17:34 PM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	6/18/2019 5:17:34 PM
Surr: Toluene-d8	95.8	70-130		%Rec	1	6/18/2019 5:17:34 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/18/2019 5:17:34 PM
Surr: BFB	111	70-130		%Rec	1	6/18/2019 5:17:34 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906849

24-Jun-19

Client: Vanguard Operating
Project: State V CTB B

Sample ID: MB-45732	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45732	RunNo: 60839								
Prep Date: 6/21/2019	Analysis Date: 6/21/2019	SeqNo: 2059650	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45732	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45732	RunNo: 60839								
Prep Date: 6/21/2019	Analysis Date: 6/21/2019	SeqNo: 2059651	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906849

24-Jun-19

Client: Vanguard Operating
Project: State V CTB B

Sample ID: LCS-45594	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45594	RunNo: 60697								
Prep Date: 6/14/2019	Analysis Date: 6/17/2019	SeqNo: 2054871	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.8		5.000		75.9	70	130			

Sample ID: MB-45594	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45594	RunNo: 60697								
Prep Date: 6/14/2019	Analysis Date: 6/17/2019	SeqNo: 2054872	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.2		10.00		81.9	70	130			

Sample ID: LCS-45629	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45629	RunNo: 60697								
Prep Date: 6/17/2019	Analysis Date: 6/18/2019	SeqNo: 2055120	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	97.0	63.9	124			
Surr: DNOP	4.1		5.000		82.7	70	130			

Sample ID: MB-45629	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45629	RunNo: 60697								
Prep Date: 6/17/2019	Analysis Date: 6/18/2019	SeqNo: 2055121	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	14		10.00		144	70	130			S

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906849

24-Jun-19

Client: Vanguard Operating
Project: State V CTB B

Sample ID: ics-45621	SampType: LCS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSS	Batch ID: 45621	RunNo: 60734								
Prep Date: 6/17/2019	Analysis Date: 6/18/2019	SeqNo: 2055220	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	70	130			
Toluene	0.98	0.050	1.000	0	98.1	70	130			
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		100	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.3	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		115	70	130			
Surr: Toluene-d8	0.48		0.5000		95.9	70	130			

Sample ID: mb-45621	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: 45621	RunNo: 60734								
Prep Date: 6/17/2019	Analysis Date: 6/18/2019	SeqNo: 2055221	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		100	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.8	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		116	70	130			
Surr: Toluene-d8	0.47		0.5000		94.5	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906849

24-Jun-19

Client: Vanguard Operating
Project: State V CTB B

Sample ID: ics-45621	SampType: LCS		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: LCSS	Batch ID: 45621		RunNo: 60734							
Prep Date: 6/17/2019	Analysis Date: 6/18/2019		SeqNo: 2055246	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.3	70	130			
Surr: BFB	550		500.0		110	70	130			

Sample ID: mb-45621	SampType: MBLK		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: PBS	Batch ID: 45621		RunNo: 60734							
Prep Date: 6/17/2019	Analysis Date: 6/18/2019		SeqNo: 2055247	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	550		500.0		109	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

Sample Log-In Check List

Client Name: **VANGUARD OPERATIN** Work Order Number: **1906849** RcptNo: 1

Received By: **Thom Maybee** 6/15/2019 10:15:00 AM

Completed By: **Leah Baca** 6/17/2019 8:13:41 AM

Reviewed By: **DAD 6/17/19**

Leah Baca

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: **JJC 6-17-19**

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 13, 2019

Joel Lowry
Vanguard Operating
4001 Penbrook Ste.201
Odessa, TX 79762
TEL:
FAX

RE: State V CTB-A

OrderNo.: 1906579

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 7 sample(s) on 6/12/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906579**

Date Reported: **6/13/2019**

CLIENT: Vanguard Operating

Client Sample ID: CTB-A-Floor #1B

Project: State V CTB-A

Collection Date: 6/10/2019 11:30:00 AM

Lab ID: 1906579-001

Matrix: MEOH (SOIL) **Received Date:** 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/12/2019 12:15:49 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/12/2019 12:15:49 PM
Surr: DNOP	79.9	70-130		%Rec	1	6/12/2019 12:15:49 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/12/2019 12:39:25 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.022		mg/Kg	1	6/12/2019 10:47:26 AM
Toluene	ND	0.045		mg/Kg	1	6/12/2019 10:47:26 AM
Ethylbenzene	ND	0.045		mg/Kg	1	6/12/2019 10:47:26 AM
Xylenes, Total	ND	0.089		mg/Kg	1	6/12/2019 10:47:26 AM
Surr: 1,2-Dichloroethane-d4	89.1	70-130		%Rec	1	6/12/2019 10:47:26 AM
Surr: 4-Bromofluorobenzene	86.6	70-130		%Rec	1	6/12/2019 10:47:26 AM
Surr: Dibromofluoromethane	109	70-130		%Rec	1	6/12/2019 10:47:26 AM
Surr: Toluene-d8	78.0	70-130		%Rec	1	6/12/2019 10:47:26 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	6/12/2019 10:47:26 AM
Surr: BFB	98.9	70-130		%Rec	1	6/12/2019 10:47:26 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906579**

Date Reported: **6/13/2019**

CLIENT: Vanguard Operating

Client Sample ID: CTB-A-Floor #2B

Project: State V CTB-A

Collection Date: 6/10/2019 11:35:00 AM

Lab ID: 1906579-002

Matrix: MEOH (SOIL) **Received Date:** 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/12/2019 12:40:27 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/12/2019 12:40:27 PM
Surr: DNOP	91.9	70-130		%Rec	1	6/12/2019 12:40:27 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/12/2019 12:51:49 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	6/12/2019 11:16:02 AM
Toluene	ND	0.048		mg/Kg	1	6/12/2019 11:16:02 AM
Ethylbenzene	ND	0.048		mg/Kg	1	6/12/2019 11:16:02 AM
Xylenes, Total	ND	0.095		mg/Kg	1	6/12/2019 11:16:02 AM
Surr: 1,2-Dichloroethane-d4	88.0	70-130		%Rec	1	6/12/2019 11:16:02 AM
Surr: 4-Bromofluorobenzene	89.7	70-130		%Rec	1	6/12/2019 11:16:02 AM
Surr: Dibromofluoromethane	107	70-130		%Rec	1	6/12/2019 11:16:02 AM
Surr: Toluene-d8	80.4	70-130		%Rec	1	6/12/2019 11:16:02 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/12/2019 11:16:02 AM
Surr: BFB	105	70-130		%Rec	1	6/12/2019 11:16:02 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906579**

Date Reported: **6/13/2019**

CLIENT: Vanguard Operating

Client Sample ID: CTB-A-NW #2B

Project: State V CTB-A

Collection Date: 6/10/2019 11:40:00 AM

Lab ID: 1906579-003

Matrix: MEOH (SOIL) **Received Date:** 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	69	9.7		mg/Kg	1	6/12/2019 2:16:08 PM
Motor Oil Range Organics (MRO)	360	48		mg/Kg	1	6/12/2019 2:16:08 PM
Surr: DNOP	90.3	70-130		%Rec	1	6/12/2019 2:16:08 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/12/2019 1:29:03 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.022		mg/Kg	1	6/12/2019 11:44:42 AM
Toluene	ND	0.045		mg/Kg	1	6/12/2019 11:44:42 AM
Ethylbenzene	ND	0.045		mg/Kg	1	6/12/2019 11:44:42 AM
Xylenes, Total	ND	0.090		mg/Kg	1	6/12/2019 11:44:42 AM
Surr: 1,2-Dichloroethane-d4	88.0	70-130		%Rec	1	6/12/2019 11:44:42 AM
Surr: 4-Bromofluorobenzene	86.2	70-130		%Rec	1	6/12/2019 11:44:42 AM
Surr: Dibromofluoromethane	107	70-130		%Rec	1	6/12/2019 11:44:42 AM
Surr: Toluene-d8	80.9	70-130		%Rec	1	6/12/2019 11:44:42 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	6/12/2019 11:44:42 AM
Surr: BFB	103	70-130		%Rec	1	6/12/2019 11:44:42 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906579**

Date Reported: **6/13/2019**

CLIENT: Vanguard Operating

Client Sample ID: CTB-A-SW #1B

Project: State V CTB-A

Collection Date: 6/10/2019 11:45:00 AM

Lab ID: 1906579-004

Matrix: MEOH (SOIL)

Received Date: 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/12/2019 1:04:59 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/12/2019 1:04:59 PM
Surr: DNOP	86.1	70-130		%Rec	1	6/12/2019 1:04:59 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/12/2019 1:41:28 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	6/12/2019 12:13:21 PM
Toluene	ND	0.047		mg/Kg	1	6/12/2019 12:13:21 PM
Ethylbenzene	ND	0.047		mg/Kg	1	6/12/2019 12:13:21 PM
Xylenes, Total	ND	0.095		mg/Kg	1	6/12/2019 12:13:21 PM
Surr: 1,2-Dichloroethane-d4	87.9	70-130		%Rec	1	6/12/2019 12:13:21 PM
Surr: 4-Bromofluorobenzene	86.9	70-130		%Rec	1	6/12/2019 12:13:21 PM
Surr: Dibromofluoromethane	109	70-130		%Rec	1	6/12/2019 12:13:21 PM
Surr: Toluene-d8	81.5	70-130		%Rec	1	6/12/2019 12:13:21 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/12/2019 12:13:21 PM
Surr: BFB	103	70-130		%Rec	1	6/12/2019 12:13:21 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906579**

Date Reported: **6/13/2019**

CLIENT: Vanguard Operating

Client Sample ID: CTB-A-WW #1B

Project: State V CTB-A

Collection Date: 6/10/2019 11:50:00 AM

Lab ID: 1906579-005

Matrix: MEOH (SOIL) **Received Date:** 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	60	9.2		mg/Kg	1	6/12/2019 3:04:56 PM
Motor Oil Range Organics (MRO)	340	46		mg/Kg	1	6/12/2019 3:04:56 PM
Surr: DNOP	91.0	70-130		%Rec	1	6/12/2019 3:04:56 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/12/2019 1:53:52 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	6/12/2019 12:42:06 PM
Toluene	ND	0.047		mg/Kg	1	6/12/2019 12:42:06 PM
Ethylbenzene	ND	0.047		mg/Kg	1	6/12/2019 12:42:06 PM
Xylenes, Total	ND	0.093		mg/Kg	1	6/12/2019 12:42:06 PM
Surr: 1,2-Dichloroethane-d4	88.4	70-130		%Rec	1	6/12/2019 12:42:06 PM
Surr: 4-Bromofluorobenzene	87.3	70-130		%Rec	1	6/12/2019 12:42:06 PM
Surr: Dibromofluoromethane	106	70-130		%Rec	1	6/12/2019 12:42:06 PM
Surr: Toluene-d8	80.8	70-130		%Rec	1	6/12/2019 12:42:06 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/12/2019 12:42:06 PM
Surr: BFB	101	70-130		%Rec	1	6/12/2019 12:42:06 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906579**

Date Reported: **6/13/2019**

CLIENT: Vanguard Operating

Client Sample ID: CTB-A-EW #1B

Project: State V CTB-A

Collection Date: 6/10/2019 11:55:00 AM

Lab ID: 1906579-006

Matrix: MEOH (SOIL) **Received Date:** 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	65	9.9		mg/Kg	1	6/13/2019 8:17:17 AM
Motor Oil Range Organics (MRO)	340	50		mg/Kg	1	6/13/2019 8:17:17 AM
Surr: DNOP	97.3	70-130		%Rec	1	6/13/2019 8:17:17 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/12/2019 2:06:17 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.020		mg/Kg	1	6/12/2019 1:10:51 PM
Toluene	ND	0.040		mg/Kg	1	6/12/2019 1:10:51 PM
Ethylbenzene	ND	0.040		mg/Kg	1	6/12/2019 1:10:51 PM
Xylenes, Total	ND	0.080		mg/Kg	1	6/12/2019 1:10:51 PM
Surr: 1,2-Dichloroethane-d4	89.4	70-130		%Rec	1	6/12/2019 1:10:51 PM
Surr: 4-Bromofluorobenzene	88.6	70-130		%Rec	1	6/12/2019 1:10:51 PM
Surr: Dibromofluoromethane	110	70-130		%Rec	1	6/12/2019 1:10:51 PM
Surr: Toluene-d8	81.3	70-130		%Rec	1	6/12/2019 1:10:51 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	6/12/2019 1:10:51 PM
Surr: BFB	105	70-130		%Rec	1	6/12/2019 1:10:51 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906579**

Date Reported: **6/13/2019**

CLIENT: Vanguard Operating

Client Sample ID: CTB-A-EW #2B

Project: State V CTB-A

Collection Date: 6/10/2019 12:00:00 PM

Lab ID: 1906579-007

Matrix: MEOH (SOIL) **Received Date:** 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	10	9.6		mg/Kg	1	6/12/2019 2:19:02 PM
Motor Oil Range Organics (MRO)	52	48		mg/Kg	1	6/12/2019 2:19:02 PM
Surr: DNOP	94.3	70-130		%Rec	1	6/12/2019 2:19:02 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/12/2019 2:18:41 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.022		mg/Kg	1	6/12/2019 1:39:40 PM
Toluene	ND	0.043		mg/Kg	1	6/12/2019 1:39:40 PM
Ethylbenzene	ND	0.043		mg/Kg	1	6/12/2019 1:39:40 PM
Xylenes, Total	ND	0.086		mg/Kg	1	6/12/2019 1:39:40 PM
Surr: 1,2-Dichloroethane-d4	89.6	70-130		%Rec	1	6/12/2019 1:39:40 PM
Surr: 4-Bromofluorobenzene	88.4	70-130		%Rec	1	6/12/2019 1:39:40 PM
Surr: Dibromofluoromethane	110	70-130		%Rec	1	6/12/2019 1:39:40 PM
Surr: Toluene-d8	83.7	70-130		%Rec	1	6/12/2019 1:39:40 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	6/12/2019 1:39:40 PM
Surr: BFB	104	70-130		%Rec	1	6/12/2019 1:39:40 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906579

13-Jun-19

Client: Vanguard Operating
Project: State V CTB-A

Sample ID: MB-45535	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45535	RunNo: 60593								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050889	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45535	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45535	RunNo: 60593								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050890	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906579

13-Jun-19

Client: Vanguard Operating

Project: State V CTB-A

Sample ID: MB-45534	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45534	RunNo: 60580								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2049863	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		96.8	70	130			

Sample ID: LCS-45534	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45534	RunNo: 60580								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2049866	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	49	10	50.00	0	97.0	63.9	124			
Surr: DNOP	4.4		5.000		87.9	70	130			

Sample ID: 1906577-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 45534	RunNo: 60580								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050982	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	45	9.8	48.97	0	92.3	57	142			
Surr: DNOP	4.9		4.897		100	70	130			

Sample ID: 1906577-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 45534	RunNo: 60580								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050983	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	34	9.9	49.41	0	69.7	57	142	27.0	20	R
Surr: DNOP	3.7		4.941		74.0	70	130	0	0	

Sample ID: 1906465-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 45479	RunNo: 60580								
Prep Date: 6/10/2019	Analysis Date: 6/12/2019	SeqNo: 2050988	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	5.0		4.873		103	70	130			
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Sample ID: 1906465-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 45479	RunNo: 60580								
Prep Date: 6/10/2019	Analysis Date: 6/12/2019	SeqNo: 2050989	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906579

13-Jun-19

Client: Vanguard Operating

Project: State V CTB-A

Sample ID: 1906465-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 45479	RunNo: 60580								
Prep Date: 6/10/2019	Analysis Date: 6/12/2019	SeqNo: 2050989			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		4.748		93.5	70	130	0	0	

Sample ID: LCS-45479	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45479	RunNo: 60580								
Prep Date: 6/10/2019	Analysis Date: 6/12/2019	SeqNo: 2050992			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		98.8	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906579

13-Jun-19

Client: Vanguard Operating
Project: State V CTB-A

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSS	Batch ID: R60592	RunNo: 60592								
Prep Date:	Analysis Date: 6/12/2019	SeqNo: 2050136	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	113	70	130			
Toluene	1.0	0.050	1.000	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	0.42		0.5000		84.6	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.5000		89.1	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		102	70	130			
Surr: Toluene-d8	0.39		0.5000		77.9	70	130			

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: R60592	RunNo: 60592								
Prep Date:	Analysis Date: 6/12/2019	SeqNo: 2050144	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.42		0.5000		83.9	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.5000		88.6	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		101	70	130			
Surr: Toluene-d8	0.39		0.5000		77.8	70	130			

Sample ID: 1906579-001a ms	SampType: MS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: CTB-A-Floor #1B	Batch ID: R60592	RunNo: 60592								
Prep Date:	Analysis Date: 6/12/2019	SeqNo: 2050497	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.022	0.8921	0	117	68.9	131			
Toluene	0.92	0.045	0.8921	0	104	64.3	137			
Surr: 1,2-Dichloroethane-d4	0.41		0.4460		90.8	70	130			
Surr: 4-Bromofluorobenzene	0.40		0.4460		89.6	70	130			
Surr: Dibromofluoromethane	0.48		0.4460		109	70	130			
Surr: Toluene-d8	0.36		0.4460		81.0	70	130			

Sample ID: 1906579-001a msd	SampType: MSD	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: CTB-A-Floor #1B	Batch ID: R60592	RunNo: 60592								
Prep Date:	Analysis Date: 6/12/2019	SeqNo: 2050498	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.022	0.8921	0	112	68.9	131	4.53	20	
Toluene	0.91	0.045	0.8921	0	102	64.3	137	1.21	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906579

13-Jun-19

Client: Vanguard Operating

Project: State V CTB-A

Sample ID: 1906579-001a msd	SampType: MSD	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: CTB-A-Floor #1B	Batch ID: R60592	RunNo: 60592								
Prep Date:	Analysis Date: 6/12/2019	SeqNo: 2050498			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.41		0.4460		92.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.38		0.4460		85.4	70	130	0	0	
Surr: Dibromofluoromethane	0.51		0.4460		114	70	130	0	0	
Surr: Toluene-d8	0.37		0.4460		83.8	70	130	0	0	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906579

13-Jun-19

Client: Vanguard Operating

Project: State V CTB-A

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: G60592	RunNo: 60592								
Prep Date:	Analysis Date: 6/12/2019	SeqNo: 2050154							Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	490		500.0		97.2	70	130			

Sample ID: 2.5ug gro lcs	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: G60592	RunNo: 60592								
Prep Date:	Analysis Date: 6/12/2019	SeqNo: 2050155							Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.7	70	130			
Surr: BFB	500		500.0		101	70	130			

Sample ID: 1906579-002a ms	SampType: MS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: CTB-A-Floor #2B	Batch ID: G60592	RunNo: 60592								
Prep Date:	Analysis Date: 6/12/2019	SeqNo: 2050546							Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.8	23.86	0	80.1	68.2	135			
Surr: BFB	500		477.1		104	70	130			

Sample ID: 1906579-002a msd	SampType: MSD	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: CTB-A-Floor #2B	Batch ID: G60592	RunNo: 60592								
Prep Date:	Analysis Date: 6/12/2019	SeqNo: 2050547							Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.8	23.86	0	78.2	68.2	135	2.48	20	
Surr: BFB	510		477.1		106	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Sample Log-In Check List

Client Name: **VANGUARD OPERATIN**

Work Order Number: **1906579**

RcptNo: 1

Received By: **Leah Baca**

6/12/2019 8:55:00 AM

Leah Baca

Completed By: **Leah Baca**

6/12/2019 9:06:14 AM

Leah Baca

Reviewed By: **TO**

6/12/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
- (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
- (If no, notify customer for authorization.)

of preserved bottles checked for pH:
 (<2 or >12 unless noted)
 Adjusted?
 Checked by: *LB 6/12/19*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

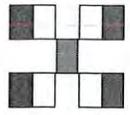
Chain-of-Custody Record

Client: Van guard
 Mailing Address: 4001 Penbrook St 201
Odeessa TX 79762
 Phone #:

email or Fax#:
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: Az Compliance
 NELAC Other AMOC D Eq
 EDD (Type)

Date	Time	Matrix	Sample Name
6-10-19	1130	Soil	CTB-A-Floor #1 B
	1135		CTB-A-Floor #2 B
	1140		CTB-A-NW #2 B
	1145		CTB-A-SW #1 B
	1150		CTB-A-WW #1 B
	1155		CTB-A-EW #1 B
	1200		CTB-A-EW #2 B

Turn-Around Time: Same Day
 Standard Rush
 Project Name: State V CTB-H
 Project #:
 Project Manager: Joel Lowry
 Sampler: Matt Taylor
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including CF): 2.3 - 6.5 = 1.8 C
 Container Type and # 4oz glass jar
 Preservative Type FCE
 HEAL No. 1906579
 Date: 6/11/19 Time: 6:30
 Relinquished by: Matt Taylor
 Date: 6/11/19 Time: 1900



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request	
BTEX / MTBE / TMS (8021)	X
TPH:8015D(GRO / DRO / MRO)	X
8081 Pesticides/8082 PCB's	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	
Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	X Chloride

Remarks:
e mail to Joel Lowry
Matt Taylor
 Received by: [Signature] Date: 6/11/19 Time: 0630
 Received by: [Signature] Date: 6/12/19 Time: 0855

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 17, 2019

Joel Lowry
Vanguard Operating
4001 Penbrook Ste.201
Odessa, TX 79762
TEL:
FAX:

RE: State V CTB-B

OrderNo.: 1906577

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/12/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906577

Date Reported: 6/17/2019

CLIENT: Vanguard Operating

Client Sample ID: CTB-B-NW #1B

Project: State V CTB-B

Collection Date: 6/10/2019 1:05:00 PM

Lab ID: 1906577-001

Matrix: MEOH (SOIL)

Received Date: 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/12/2019 11:37:22 AM	45535
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/12/2019 12:23:34 PM	45534
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/12/2019 12:23:34 PM	45534
Surr: DNOP	96.9	70-130		%Rec	1	6/12/2019 12:23:34 PM	45534
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/12/2019 11:31:22 AM	G60589
Surr: BFB	94.3	73.8-119		%Rec	1	6/12/2019 11:31:22 AM	G60589
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	6/12/2019 11:31:22 AM	B60589
Toluene	ND	0.048		mg/Kg	1	6/12/2019 11:31:22 AM	B60589
Ethylbenzene	ND	0.048		mg/Kg	1	6/12/2019 11:31:22 AM	B60589
Xylenes, Total	ND	0.096		mg/Kg	1	6/12/2019 11:31:22 AM	B60589
Surr: 4-Bromofluorobenzene	99.0	80-120		%Rec	1	6/12/2019 11:31:22 AM	B60589

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1906577**

Date Reported: **6/17/2019**

CLIENT: Vanguard Operating

Client Sample ID: CTB-B-NW #2B

Project: State V CTB-B

Collection Date: 6/10/2019 1:10:00 PM

Lab ID: 1906577-002

Matrix: MEOH (SOIL)

Received Date: 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/12/2019 11:49:47 AM	45535
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/12/2019 12:45:42 PM	45534
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/12/2019 12:45:42 PM	45534
Surr: DNOP	89.4	70-130		%Rec	1	6/12/2019 12:45:42 PM	45534
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/12/2019 11:54:53 AM	G60589
Surr: BFB	95.4	73.8-119		%Rec	1	6/12/2019 11:54:53 AM	G60589
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	6/12/2019 11:54:53 AM	B60589
Toluene	ND	0.047		mg/Kg	1	6/12/2019 11:54:53 AM	B60589
Ethylbenzene	ND	0.047		mg/Kg	1	6/12/2019 11:54:53 AM	B60589
Xylenes, Total	ND	0.095		mg/Kg	1	6/12/2019 11:54:53 AM	B60589
Surr: 4-Bromofluorobenzene	99.4	80-120		%Rec	1	6/12/2019 11:54:53 AM	B60589

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906577

Date Reported: 6/17/2019

CLIENT: Vanguard Operating

Client Sample ID: CTB-B-SW #1B

Project: State V CTB-B

Collection Date: 6/10/2019 1:15:00 PM

Lab ID: 1906577-003

Matrix: MEOH (SOIL)

Received Date: 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/12/2019 12:02:12 PM	45535
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	72	9.9		mg/Kg	1	6/12/2019 2:58:08 PM	45534
Motor Oil Range Organics (MRO)	430	49		mg/Kg	1	6/12/2019 2:58:08 PM	45534
Surr: DNOP	114	70-130		%Rec	1	6/12/2019 2:58:08 PM	45534
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	6/12/2019 12:18:27 PM	G60589
Surr: BFB	92.1	73.8-119		%Rec	1	6/12/2019 12:18:27 PM	G60589
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	6/12/2019 12:18:27 PM	B60589
Toluene	ND	0.041		mg/Kg	1	6/12/2019 12:18:27 PM	B60589
Ethylbenzene	ND	0.041		mg/Kg	1	6/12/2019 12:18:27 PM	B60589
Xylenes, Total	ND	0.083		mg/Kg	1	6/12/2019 12:18:27 PM	B60589
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	6/12/2019 12:18:27 PM	B60589

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906577

Date Reported: 6/17/2019

CLIENT: Vanguard Operating

Client Sample ID: CTB-B-SW #2B

Project: State V CTB-B

Collection Date: 6/10/2019 1:20:00 PM

Lab ID: 1906577-004

Matrix: MEOH (SOIL)

Received Date: 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	520	60		mg/Kg	20	6/12/2019 12:14:36 PM	45535
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/12/2019 2:36:00 PM	45534
Motor Oil Range Organics (MRO)	49	49		mg/Kg	1	6/12/2019 2:36:00 PM	45534
Surr: DNOP	92.9	70-130		%Rec	1	6/12/2019 2:36:00 PM	45534
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/12/2019 12:42:02 PM	G60589
Surr: BFB	97.4	73.8-119		%Rec	1	6/12/2019 12:42:02 PM	G60589
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/12/2019 12:42:02 PM	B60589
Toluene	ND	0.050		mg/Kg	1	6/12/2019 12:42:02 PM	B60589
Ethylbenzene	ND	0.050		mg/Kg	1	6/12/2019 12:42:02 PM	B60589
Xylenes, Total	ND	0.10		mg/Kg	1	6/12/2019 12:42:02 PM	B60589
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	6/12/2019 12:42:02 PM	B60589

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906577

Date Reported: 6/17/2019

CLIENT: Vanguard Operating

Client Sample ID: CTB-B-EW #1B

Project: State V CTB-B

Collection Date: 6/10/2019 1:25:00 PM

Lab ID: 1906577-005

Matrix: MEOH (SOIL)

Received Date: 6/12/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/12/2019 12:27:00 PM	45535
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	33	10		mg/Kg	1	6/12/2019 1:51:46 PM	45534
Motor Oil Range Organics (MRO)	160	50		mg/Kg	1	6/12/2019 1:51:46 PM	45534
Surr: DNOP	103	70-130		%Rec	1	6/12/2019 1:51:46 PM	45534
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	6/12/2019 1:05:39 PM	G60589
Surr: BFB	96.2	73.8-119		%Rec	1	6/12/2019 1:05:39 PM	G60589
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	6/12/2019 1:05:39 PM	B60589
Toluene	ND	0.042		mg/Kg	1	6/12/2019 1:05:39 PM	B60589
Ethylbenzene	ND	0.042		mg/Kg	1	6/12/2019 1:05:39 PM	B60589
Xylenes, Total	ND	0.084		mg/Kg	1	6/12/2019 1:05:39 PM	B60589
Surr: 4-Bromofluorobenzene	99.8	80-120		%Rec	1	6/12/2019 1:05:39 PM	B60589

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906577

17-Jun-19

Client: Vanguard Operating
Project: State V CTB-B

Sample ID: MB-45535	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45535	RunNo: 60593								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050889	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45535	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45535	RunNo: 60593								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050890	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906577

17-Jun-19

Client: Vanguard Operating
Project: State V CTB-B

Sample ID: MB-45534	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45534	RunNo: 60580								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2049863	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		96.8	70	130			

Sample ID: LCS-45534	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45534	RunNo: 60580								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2049866	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.0	63.9	124			
Surr: DNOP	4.4		5.000		87.9	70	130			

Sample ID: LCS-45506	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45506	RunNo: 60571								
Prep Date: 6/11/2019	Analysis Date: 6/12/2019	SeqNo: 2050487	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.6	70	130			

Sample ID: MB-45506	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45506	RunNo: 60571								
Prep Date: 6/11/2019	Analysis Date: 6/12/2019	SeqNo: 2050488	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		122	70	130			

Sample ID: 1906577-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: CTB-B-NW #1B	Batch ID: 45534	RunNo: 60580								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050982	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.8	48.97	0	92.3	57	142			
Surr: DNOP	4.9		4.897		100	70	130			

Sample ID: 1906577-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: CTB-B-NW #1B	Batch ID: 45534	RunNo: 60580								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050983	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	34	9.9	49.41	0	69.7	57	142	27.0	20	R

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906577

17-Jun-19

Client: Vanguard Operating
Project: State V CTB-B

Sample ID: 1906577-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: CTB-B-NW #1B	Batch ID: 45534	RunNo: 60580								
Prep Date: 6/12/2019	Analysis Date: 6/12/2019	SeqNo: 2050983	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.7		4.941		74.0	70	130	0	0	

Sample ID: LCS-45543	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45543	RunNo: 60622								
Prep Date: 6/12/2019	Analysis Date: 6/13/2019	SeqNo: 2052482	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		5.000		95.4	70	130			

Sample ID: MB-45543	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45543	RunNo: 60622								
Prep Date: 6/12/2019	Analysis Date: 6/13/2019	SeqNo: 2052483	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		113	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906577

17-Jun-19

Client: Vanguard Operating
Project: State V CTB-B

Sample ID: RB	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: G60589		RunNo: 60589							
Prep Date:	Analysis Date: 6/12/2019		SeqNo: 2050516		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	970		1000		97.5	73.8	119			

Sample ID: 2.5UG GRO LCS	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: G60589		RunNo: 60589							
Prep Date:	Analysis Date: 6/12/2019		SeqNo: 2050519		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.9	80.1	123			
Surr: BFB	1200		1000		115	73.8	119			

Sample ID: MB-45503	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 45503		RunNo: 60589							
Prep Date: 6/11/2019	Analysis Date: 6/12/2019		SeqNo: 2050522		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		101	73.8	119			

Sample ID: LCS-45503	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 45503		RunNo: 60589							
Prep Date: 6/11/2019	Analysis Date: 6/12/2019		SeqNo: 2050523		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		108	73.8	119			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906577

17-Jun-19

Client: Vanguard Operating
Project: State V CTB-B

Sample ID: RB	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: B60589	RunNo: 60589								
Prep Date:	Analysis Date: 6/12/2019	SeqNo: 2050552	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID: 100NG BTEX LCS	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: B60589	RunNo: 60589								
Prep Date:	Analysis Date: 6/12/2019	SeqNo: 2050553	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	98.5	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: MB-45503	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45503	RunNo: 60589								
Prep Date: 6/11/2019	Analysis Date: 6/12/2019	SeqNo: 2050556	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID: LCS-45503	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 45503	RunNo: 60589								
Prep Date: 6/11/2019	Analysis Date: 6/12/2019	SeqNo: 2050557	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Sample Log-In Check List

Client Name: **VANGUARD OPERATIN**

Work Order Number: **1906577**

RcptNo: 1

Received By: **Leah Baca**

6/12/2019 8:55:00 AM

Leah Baca

Completed By: **Leah Baca**

6/12/2019 9:09:12 AM

Leah Baca

Reviewed By: **TO**

6/12/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
- (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
- (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: *LB 6/12/19*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Chain-of-Custody Record

Client: VanSward

Turn-Around Time: 24 hr
 Standard Rush same day
 Project Name: State V CTB-B

Mailing Address: 4001 Penbrooke St 201

Cocksa TX 79762

Phone #:

email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: AZ Compliance

NELAC Other NM OGD Eq.

EDD (Type)

Project Manager: Joel Lowry

Sampler: Matt Taylor

On Ice: Yes No

of Coolers: (1)

Cooler Temp (including CF): 2.3 - 2.5 = 1.8C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
6-10-19	1305	Soil	CTB-B-NW#1 B	4oz glass	ICE	1906577
↓	1310	↓	CTB-B-NW#2 B	↓	↓	-002
↓	1315	↓	CTB-B-SW#1 B	↓	↓	-003
↓	1320	↓	CTB-B-SW#2 B	↓	↓	-004
↓	1325	↓	CTB-B-EW#1 B	↓	↓	-005

Date: 6/19 Time: 6:30

Date: 6/19 Time: 1900

Received by: [Signature] Date: 6/19 Time: 0630

Received by: [Signature] Date: 6/19 Time: 0855

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
X	X								x Chloride
↓	↓								↓
↓	↓								↓
↓	↓								↓
↓	↓								↓

Remarks:

e mail to Joel Lowry
Matt Taylor
Taylor



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 28, 2019

Joel Lowry
Caprock Services, LLC
PO Box 457
Lovington, NM 88260
TEL: (575) 704-2718
FAX

RE: State V CTB-E

OrderNo.: 1905966

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 5 sample(s) on 5/18/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1905966**

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor

Project: State V CTB-E

Collection Date: 5/15/2019 8:50:00 AM

Lab ID: 1905966-001

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/22/2019 1:42:44 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/22/2019 1:42:44 PM
Surr: DNOP	162	70-130	S	%Rec	1	5/22/2019 1:42:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/22/2019 2:49:08 AM
Surr: BFB	87.3	73.8-119		%Rec	1	5/22/2019 2:49:08 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/22/2019 2:49:08 AM
Toluene	ND	0.050		mg/Kg	1	5/22/2019 2:49:08 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/22/2019 2:49:08 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/22/2019 2:49:08 AM
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	5/22/2019 2:49:08 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	3200	150		mg/Kg	50	5/24/2019 9:07:06 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1905966**

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: NW #1

Project: State V CTB-E

Collection Date: 5/15/2019 8:55:00 AM

Lab ID: 1905966-002

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/22/2019 2:07:09 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/22/2019 2:07:09 PM
Surr: DNOP	142	70-130	S	%Rec	1	5/22/2019 2:07:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/22/2019 3:36:12 AM
Surr: BFB	85.5	73.8-119		%Rec	1	5/22/2019 3:36:12 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/22/2019 3:36:12 AM
Toluene	ND	0.050		mg/Kg	1	5/22/2019 3:36:12 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/22/2019 3:36:12 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/22/2019 3:36:12 AM
Surr: 4-Bromofluorobenzene	97.6	80-120		%Rec	1	5/22/2019 3:36:12 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	210	60		mg/Kg	20	5/23/2019 5:15:48 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905966

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: EW #1

Project: State V CTB-E

Collection Date: 5/15/2019 9:00:00 AM

Lab ID: 1905966-003

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/22/2019 2:31:39 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/22/2019 2:31:39 PM
Surr: DNOP	136	70-130	S	%Rec	1	5/22/2019 2:31:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/22/2019 3:59:44 AM
Surr: BFB	88.6	73.8-119		%Rec	1	5/22/2019 3:59:44 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/22/2019 3:59:44 AM
Toluene	ND	0.050		mg/Kg	1	5/22/2019 3:59:44 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/22/2019 3:59:44 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/22/2019 3:59:44 AM
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	5/22/2019 3:59:44 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	450	60		mg/Kg	20	5/23/2019 5:28:13 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905966

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: SW #1

Project: State V CTB-E

Collection Date: 5/15/2019 9:05:00 AM

Lab ID: 1905966-004

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/22/2019 3:01:22 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/22/2019 3:01:22 PM
Surr: DNOP	159	70-130	S	%Rec	1	5/22/2019 3:01:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/22/2019 4:23:15 AM
Surr: BFB	85.8	73.8-119		%Rec	1	5/22/2019 4:23:15 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/22/2019 4:23:15 AM
Toluene	ND	0.050		mg/Kg	1	5/22/2019 4:23:15 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/22/2019 4:23:15 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/22/2019 4:23:15 AM
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	1	5/22/2019 4:23:15 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	ND	60		mg/Kg	20	5/23/2019 6:05:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905966

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: WW #1

Project: State V CTB-E

Collection Date: 5/15/2019 9:10:00 AM

Lab ID: 1905966-005

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/22/2019 3:25:30 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/22/2019 3:25:30 PM
Surr: DNOP	82.0	70-130		%Rec	1	5/22/2019 3:25:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/22/2019 4:46:42 AM
Surr: BFB	85.7	73.8-119		%Rec	1	5/22/2019 4:46:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/22/2019 4:46:42 AM
Toluene	ND	0.049		mg/Kg	1	5/22/2019 4:46:42 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/22/2019 4:46:42 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/22/2019 4:46:42 AM
Surr: 4-Bromofluorobenzene	96.8	80-120		%Rec	1	5/22/2019 4:46:42 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	670	61		mg/Kg	20	5/23/2019 6:17:52 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905966

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-E

Sample ID: MB-45142	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45142	RunNo: 60144								
Prep Date: 5/23/2019	Analysis Date: 5/23/2019	SeqNo: 2031663 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45142	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45142	RunNo: 60144								
Prep Date: 5/23/2019	Analysis Date: 5/23/2019	SeqNo: 2031664 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	99.0	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905966

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-E

Sample ID: MB-45096	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45096	RunNo: 60078								
Prep Date: 5/21/2019	Analysis Date: 5/22/2019	SeqNo: 2028763			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		95.8	70	130			

Sample ID: LCS-45096	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45096	RunNo: 60078								
Prep Date: 5/21/2019	Analysis Date: 5/22/2019	SeqNo: 2028765			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	114	63.9	124			
Surr: DNOP	5.7		5.000		113	70	130			

Sample ID: MB-45119	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45119	RunNo: 60110								
Prep Date: 5/22/2019	Analysis Date: 5/23/2019	SeqNo: 2030204			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		106	70	130			

Sample ID: LCS-45119	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45119	RunNo: 60110								
Prep Date: 5/22/2019	Analysis Date: 5/23/2019	SeqNo: 2030205			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.3		5.000		145	70	130			S

Sample ID: LCS-45119	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45119	RunNo: 60110								
Prep Date: 5/22/2019	Analysis Date: 5/23/2019	SeqNo: 2030850			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.1		5.000		142	70	130			S

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905966

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-E

Sample ID: MB-45034	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 45034		RunNo: 60046							
Prep Date: 5/20/2019	Analysis Date: 5/21/2019		SeqNo: 2027109		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		87.4	73.8	119			

Sample ID: LCS-45034	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 45034		RunNo: 60046							
Prep Date: 5/20/2019	Analysis Date: 5/21/2019		SeqNo: 2027110		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.8	80.1	123			
Surr: BFB	1000		1000		102	73.8	119			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905966

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-E

Sample ID: MB-45034	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027141			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.4	80	120			

Sample ID: LCS-45034	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027142			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.4	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.4	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.2	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Sample Log-In Check List

Client Name: **CAPROCK SERVICES, L**

Work Order Number: **1905966**

RcptNo: **1**

Received By: **Erin Melendrez** **5/18/2019 10:10:00 AM** *EM*

Completed By: **Erin Melendrez** **5/18/2019 2:43:46 PM** *EM*

Reviewed By: **ENM**
LB: DAD 5/20/19

5/20/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: **DAD 5/20/19**

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

Chain-of-Custody Record

Client: Caprock Services, LLC
 Mailing Address: P.O. Box 457
Lovington NM 88260
 Phone #: (575) 704-2718
 email or Fax#: Caprockservices56@gmail.com

QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: AZ Compliance Other: NMDCD Eq.
 NELAC EDD (Type)

Turn-Around Time: 3 days
 Standard Rush
 Project Name: State VCTB-E

Project #: _____
 Project Manager: Joel Lowry

Sampler: Jordyne Taylor
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including CF): 1.6°C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
5-15-19	0850	Soil	F100R	4oz Glass	ICE	-001
5-15-19	0855		NW #1			-002
5-15-19	0900		FW #1			-003
5-15-19	0905		SW #1			-004
5-15-19	0910		NW #1			-005

Date: 5-17-19 Time: 0700
 Relinquished by: [Signature]
 Date: 5/17/19 Time: 1900
 Relinquished by: [Signature]

Received by: [Signature] Date: 5/17/19 Time: 0700
 Via: _____
 Received by: [Signature] Date: 5/18/19 Time: 1010
 Via: COURIER



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request	
TPH:8015D(GRO / DRO / MRO)	<input checked="" type="checkbox"/>
8081 Pesticides/8082 PCBs	<input type="checkbox"/>
EDB (Method 504.1)	<input type="checkbox"/>
PAHs by 8310 or 8270SIMS	<input type="checkbox"/>
RCRA 8 Metals	<input type="checkbox"/>
Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	<input type="checkbox"/>
8260 (VOA)	<input type="checkbox"/>
8270 (Semi-VOA)	<input type="checkbox"/>
Total Coliform (Present/Absent)	<input checked="" type="checkbox"/>
	<u>Chloride</u>

Remarks: Please email results to: joel@lowryenvironmental.com
jordyne.caprockservices@gmail.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 28, 2019

Joel Lowry
Caprock Services, LLC
PO Box 457
Lovington, NM 88260
TEL: (575) 704-2718
FAX

RE: State V CTB-C

OrderNo.: 1905965

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 5 sample(s) on 5/18/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905965

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: NW #1

Project: State V CTB-C

Collection Date: 5/15/2019 7:30:00 AM

Lab ID: 1905965-001

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/22/2019 10:49:25 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/22/2019 10:49:25 AM
Surr: DNOP	128	70-130		%Rec	1	5/22/2019 10:49:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/22/2019 12:52:09 AM
Surr: BFB	88.1	73.8-119		%Rec	1	5/22/2019 12:52:09 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/22/2019 12:52:09 AM
Toluene	ND	0.050		mg/Kg	1	5/22/2019 12:52:09 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/22/2019 12:52:09 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/22/2019 12:52:09 AM
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	5/22/2019 12:52:09 AM
EPA METHOD 300.0: ANIONS						Analyst: smb
Chloride	740	60		mg/Kg	20	5/23/2019 2:46:30 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905965

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: SW #1

Project: State V CTB-C

Collection Date: 5/15/2019 7:35:00 AM

Lab ID: 1905965-002

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/22/2019 12:06:04 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/22/2019 12:06:04 PM
Surr: DNOP	113	70-130		%Rec	1	5/22/2019 12:06:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/22/2019 1:15:33 AM
Surr: BFB	86.4	73.8-119		%Rec	1	5/22/2019 1:15:33 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/22/2019 1:15:33 AM
Toluene	ND	0.048		mg/Kg	1	5/22/2019 1:15:33 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/22/2019 1:15:33 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/22/2019 1:15:33 AM
Surr: 4-Bromofluorobenzene	98.5	80-120		%Rec	1	5/22/2019 1:15:33 AM
EPA METHOD 300.0: ANIONS						Analyst: smb
Chloride	ND	60		mg/Kg	20	5/23/2019 2:58:55 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905965

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: EW #1

Project: State V CTB-C

Collection Date: 5/15/2019 7:40:00 AM

Lab ID: 1905965-003

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/22/2019 12:30:12 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/22/2019 12:30:12 PM
Surr: DNOP	120	70-130		%Rec	1	5/22/2019 12:30:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/22/2019 1:38:58 AM
Surr: BFB	85.3	73.8-119		%Rec	1	5/22/2019 1:38:58 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/22/2019 1:38:58 AM
Toluene	ND	0.050		mg/Kg	1	5/22/2019 1:38:58 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/22/2019 1:38:58 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/22/2019 1:38:58 AM
Surr: 4-Bromofluorobenzene	96.6	80-120		%Rec	1	5/22/2019 1:38:58 AM
EPA METHOD 300.0: ANIONS						Analyst: smb
Chloride	170	60		mg/Kg	20	5/23/2019 3:11:20 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905965

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: WW #1

Project: State V CTB-C

Collection Date: 5/15/2019 7:45:00 AM

Lab ID: 1905965-004

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/22/2019 12:54:20 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/22/2019 12:54:20 PM
Surr: DNOP	110	70-130		%Rec	1	5/22/2019 12:54:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/22/2019 2:02:19 AM
Surr: BFB	87.0	73.8-119		%Rec	1	5/22/2019 2:02:19 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/22/2019 2:02:19 AM
Toluene	ND	0.049		mg/Kg	1	5/22/2019 2:02:19 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/22/2019 2:02:19 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/22/2019 2:02:19 AM
Surr: 4-Bromofluorobenzene	99.6	80-120		%Rec	1	5/22/2019 2:02:19 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	240	60		mg/Kg	20	5/23/2019 3:48:58 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905965

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor #1

Project: State V CTB-C

Collection Date: 5/15/2019 7:50:00 AM

Lab ID: 1905965-005

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/22/2019 1:18:23 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/22/2019 1:18:23 PM
Surr: DNOP	146	70-130	S	%Rec	1	5/22/2019 1:18:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/22/2019 2:25:42 AM
Surr: BFB	87.1	73.8-119		%Rec	1	5/22/2019 2:25:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/22/2019 2:25:42 AM
Toluene	ND	0.049		mg/Kg	1	5/22/2019 2:25:42 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/22/2019 2:25:42 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/22/2019 2:25:42 AM
Surr: 4-Bromofluorobenzene	99.5	80-120		%Rec	1	5/22/2019 2:25:42 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	3300	150		mg/Kg	50	5/24/2019 8:54:42 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905965

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-C

Sample ID: MB-45141	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45141	RunNo: 60132								
Prep Date: 5/23/2019	Analysis Date: 5/23/2019	SeqNo: 2031535	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45141	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45141	RunNo: 60132								
Prep Date: 5/23/2019	Analysis Date: 5/23/2019	SeqNo: 2031536	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

Sample ID: MB-45142	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45142	RunNo: 60144								
Prep Date: 5/23/2019	Analysis Date: 5/23/2019	SeqNo: 2031663	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45142	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45142	RunNo: 60144								
Prep Date: 5/23/2019	Analysis Date: 5/23/2019	SeqNo: 2031664	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	99.0	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905965

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-C

Sample ID: MB-45096	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45096	RunNo: 60078								
Prep Date: 5/21/2019	Analysis Date: 5/22/2019	SeqNo: 2028763	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		95.8	70	130			

Sample ID: LCS-45096	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45096	RunNo: 60078								
Prep Date: 5/21/2019	Analysis Date: 5/22/2019	SeqNo: 2028765	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	57	10	50.00	0	114	63.9	124			
Surr: DNOP	5.7		5.000		113	70	130			

Sample ID: 1905965-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: NW #1	Batch ID: 45096	RunNo: 60078								
Prep Date: 5/21/2019	Analysis Date: 5/22/2019	SeqNo: 2029475	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	62	9.9	49.36	0	126	53.5	126			
Surr: DNOP	6.3		4.936		128	70	130			

Sample ID: 1905965-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: NW #1	Batch ID: 45096	RunNo: 60078								
Prep Date: 5/21/2019	Analysis Date: 5/22/2019	SeqNo: 2029476	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	63	9.5	47.66	0	132	53.5	126	1.31	21.7	S
Surr: DNOP	6.5		4.766		136	70	130	0	0	S

Sample ID: MB-45119	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45119	RunNo: 60110								
Prep Date: 5/22/2019	Analysis Date: 5/23/2019	SeqNo: 2030204	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	11		10.00		106	70	130			
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Sample ID: LCS-45119	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45119	RunNo: 60110								
Prep Date: 5/22/2019	Analysis Date: 5/23/2019	SeqNo: 2030205	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905965

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-C

Sample ID: LCS-45119	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 45119		RunNo: 60110							
Prep Date: 5/22/2019	Analysis Date: 5/23/2019		SeqNo: 2030205	Units: %Rec						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.3		5.000		145	70	130			S

Sample ID: LCS-45119	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 45119		RunNo: 60110							
Prep Date: 5/22/2019	Analysis Date: 5/23/2019		SeqNo: 2030850	Units: %Rec						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.1		5.000		142	70	130			S

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905965

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-C

Sample ID: MB-45034	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027109	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		87.4	73.8	119			

Sample ID: LCS-45034	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027110	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.8	80.1	123			
Surr: BFB	1000		1000		102	73.8	119			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905965

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-C

Sample ID: MB-45034	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027141	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.4	80	120			

Sample ID: LCS-45034	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027142	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.4	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.4	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.2	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Sample Log-In Check List

Client Name: CAPROCK SERVICES, L

Work Order Number: 1905965

RcptNo: 1

Received By: Erin Melendrez 5/18/2019 10:10:00 AM

Completed By: Erin Melendrez 5/18/2019 2:39:17 PM

Reviewed By: EJM 5/20/19

LB: DAD 5/20/19

Handwritten signatures

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: DAD 5/20/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

Chain-of-Custody Record

Client: Caprock Services, LLC

Mailing Address: P.O. Box 4517
Lovington NM 88260
 Phone #: (575) 704-2718

email or Fax#: Caprockservices56@gmail.com

QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: Az Compliance
 NELAC Other NMDCD Eq.
 EDD (Type)

Turn-Around Time: 5 day
 Standard Rush
 Project Name: State VLTB-L

Project #: _____
 Project Manager: Joel Lowry

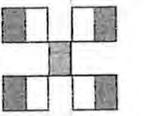
Sampler: Jordyne Taylor
 On Ice: Yes No
 # of Coolers: 1

Cooler Temp (including CP): 1.6°C

Container Type and #	Preservative Type	Date	Time
4oz Glass	FLE	5/15/19	0730
↓	↓	5/15/19	0735
↓	↓	5/15/19	0740
↓	↓	5/15/19	0745
↓	↓	5/15/19	0750

Date	Time	Relinquished by:
5/17/19	0700	<u>Matt Taylor</u>
5/18/19	1010	<u>Joel Lowry</u>

Received by: [Signature] Date: 5/17/19 Time: 0700
 Received by: [Signature] Date: 5/18/19 Time: 1010



HALL ENVIRONMENTAL
 ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
X	X								X
X	X								X
X	X								X
X	X								X
X	X								X

Remarks: Please email results to: joel@lowryenvironmental.com
jordyne.caprockservices@gmail.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 28, 2019

Joel Lowry
Caprock Services, LLC
PO Box 457
Lovington, NM 88260
TEL: (575) 704-2718
FAX

RE: State V CTB-D

OrderNo.: 1905964

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 5 sample(s) on 5/18/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1905964**

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: NW #1

Project: State V CTB-D

Collection Date: 5/15/2019 8:15:00 AM

Lab ID: 1905964-001

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/23/2019 5:09:44 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/23/2019 5:09:44 PM
Surr: DNOP	136	70-130	S	%Rec	1	5/23/2019 5:09:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/21/2019 9:22:02 PM
Surr: BFB	88.7	73.8-119		%Rec	1	5/21/2019 9:22:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/21/2019 9:22:02 PM
Toluene	ND	0.050		mg/Kg	1	5/21/2019 9:22:02 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/21/2019 9:22:02 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/21/2019 9:22:02 PM
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	5/21/2019 9:22:02 PM
EPA METHOD 300.0: ANIONS						Analyst: smb
Chloride	220	60		mg/Kg	20	5/23/2019 1:19:36 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1905964**

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: EW #1

Project: State V CTB-D

Collection Date: 5/15/2019 8:20:00 AM

Lab ID: 1905964-002

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/23/2019 5:31:53 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/23/2019 5:31:53 PM
Surr: DNOP	118	70-130		%Rec	1	5/23/2019 5:31:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/21/2019 11:18:52 PM
Surr: BFB	88.6	73.8-119		%Rec	1	5/21/2019 11:18:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/21/2019 11:18:52 PM
Toluene	ND	0.050		mg/Kg	1	5/21/2019 11:18:52 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/21/2019 11:18:52 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/21/2019 11:18:52 PM
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	5/21/2019 11:18:52 PM
EPA METHOD 300.0: ANIONS						Analyst: smb
Chloride	560	60		mg/Kg	20	5/23/2019 1:56:51 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905964

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: SW #1

Project: State V CTB-D

Collection Date: 5/15/2019 8:25:00 AM

Lab ID: 1905964-003

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/23/2019 5:54:14 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/23/2019 5:54:14 PM
Surr: DNOP	111	70-130		%Rec	1	5/23/2019 5:54:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/21/2019 11:42:12 PM
Surr: BFB	86.5	73.8-119		%Rec	1	5/21/2019 11:42:12 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/21/2019 11:42:12 PM
Toluene	ND	0.049		mg/Kg	1	5/21/2019 11:42:12 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/21/2019 11:42:12 PM
Xylenes, Total	ND	0.099		mg/Kg	1	5/21/2019 11:42:12 PM
Surr: 4-Bromofluorobenzene	99.2	80-120		%Rec	1	5/21/2019 11:42:12 PM
EPA METHOD 300.0: ANIONS						Analyst: smb
Chloride	290	60		mg/Kg	20	5/23/2019 2:09:15 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905964

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: WW #1

Project: State V CTB-D

Collection Date: 5/15/2019 8:30:00 AM

Lab ID: 1905964-004

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/23/2019 6:16:31 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/23/2019 6:16:31 PM
Surr: DNOP	166	70-130	S	%Rec	1	5/23/2019 6:16:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/22/2019 12:05:32 AM
Surr: BFB	88.4	73.8-119		%Rec	1	5/22/2019 12:05:32 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/22/2019 12:05:32 AM
Toluene	ND	0.049		mg/Kg	1	5/22/2019 12:05:32 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/22/2019 12:05:32 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/22/2019 12:05:32 AM
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	5/22/2019 12:05:32 AM
EPA METHOD 300.0: ANIONS						Analyst: smb
Chloride	700	60		mg/Kg	20	5/23/2019 2:21:40 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1905964**

Date Reported: 5/28/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor

Project: State V CTB-D

Collection Date: 5/15/2019 8:35:00 AM

Lab ID: 1905964-005

Matrix: SOIL

Received Date: 5/18/2019 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/23/2019 6:38:48 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/23/2019 6:38:48 PM
Surr: DNOP	138	70-130	S	%Rec	1	5/23/2019 6:38:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/22/2019 12:28:49 AM
Surr: BFB	87.8	73.8-119		%Rec	1	5/22/2019 12:28:49 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/22/2019 12:28:49 AM
Toluene	ND	0.050		mg/Kg	1	5/22/2019 12:28:49 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/22/2019 12:28:49 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/22/2019 12:28:49 AM
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	5/22/2019 12:28:49 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	2500	150		mg/Kg	50	5/24/2019 11:11:15 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905964

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-D

Sample ID: MB-45141	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45141	RunNo: 60132								
Prep Date: 5/23/2019	Analysis Date: 5/23/2019	SeqNo: 2031535	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45141	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45141	RunNo: 60132								
Prep Date: 5/23/2019	Analysis Date: 5/23/2019	SeqNo: 2031536	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905964

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-D

Sample ID: LCS-45063	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45063	RunNo: 60057								
Prep Date: 5/21/2019	Analysis Date: 5/22/2019	SeqNo: 2028025	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.2	63.9	124			
Surr: DNOP	4.4		5.000		88.8	70	130			

Sample ID: MB-45063	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45063	RunNo: 60057								
Prep Date: 5/21/2019	Analysis Date: 5/22/2019	SeqNo: 2028027	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.4		10.00		93.6	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905964

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-D

Sample ID: MB-45034	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027109	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		87.4	73.8	119			

Sample ID: LCS-45034	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027110	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.8	80.1	123			
Surr: BFB	1000		1000		102	73.8	119			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905964

28-May-19

Client: Caprock Services, LLC

Project: State V CTB-D

Sample ID: MB-45034	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027141	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.4	80	120			

Sample ID: LCS-45034	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027142	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.4	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.4	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.2	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: 1905964-001AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: NW #1	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027144	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	0.9843	0	98.9	63.9	127			
Toluene	1.0	0.049	0.9843	0.008583	104	69.9	131			
Ethylbenzene	1.1	0.049	0.9843	0	108	71	132			
Xylenes, Total	3.2	0.098	2.953	0	110	71.8	131			
Surr: 4-Bromofluorobenzene	0.99		0.9843		101	80	120			

Sample ID: 1905964-001AMSD	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: NW #1	Batch ID: 45034	RunNo: 60046								
Prep Date: 5/20/2019	Analysis Date: 5/21/2019	SeqNo: 2027145	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9950	0	103	63.9	127	4.97	20	
Toluene	1.1	0.050	0.9950	0.008583	107	69.9	131	3.79	20	
Ethylbenzene	1.1	0.050	0.9950	0	112	71	132	4.70	20	
Xylenes, Total	3.4	0.10	2.985	0	113	71.8	131	3.81	20	
Surr: 4-Bromofluorobenzene	1.0		0.9950		102	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Sample Log-In Check List

Client Name: **CAPROCK SERVICES, L**

Work Order Number: **1905964**

RcptNo: 1

Received By: **Erin Melendrez** 5/18/2019 10:10:00 AM *EM*

Completed By: **Erin Melendrez** 5/18/2019 2:31:41 PM *EM*

Reviewed By: **ENM** 5/20/19

LB: DAD 5/20/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: DAD 5/20/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

Chain-of-Custody Record

Client: Caprock Services, LLC

Mailing Address: P.O. Box 457

Lovington NM 88260

Phone #: (575) 704-2718

email or Fax#: Caprockservices56@gmail.com

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation: Az Compliance Other NMOCED Eq.

EDD (Type)

Date	Time	Matrix	Sample Name
5-15-19	0815	Soil	WW #1
5-15-19	0820		EW #1
5-15-19	0825		SW #1
5-15-19	0830		WW #1
5-15-19	0835		Floor

Turn-Around Time: Same

Standard Rush

Project Name: State V CTB-D

Project #:

Project Manager:

Joel Lowry

Sampler: Jordyne Taylor

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CF): 1.6°C

Container Type and # 4oz Glass Preservative Type FCE HEAL No. 1905964

↓ ↓ ↓ ↓ ↓

-001

-002

-003

-004

-005

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chloride
X	X									X
X	X									X
X	X									X
X	X									X
X	X									X

Remarks: Please email results to:

joel@lowryenvironmental.com

jordyne.caprockservices@gmail.com

Received by: [Signature] Date: 5/17/19 Time: 0700

Received by: Via: Courier Date: 5/18/19 Time: 1010

Relinquished by: [Signature] Date: 5/19/19 Time: 1900

Relinquished by: [Signature]

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 06, 2019

Joel Lowry
Caprock Services, LLC
PO Box 457
Lovington, NM 88260
TEL: (575) 704-2718
FAX:

RE: State V CTB-A

OrderNo.: 1907E82

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 24 sample(s) on 7/30/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 5

Project: State V CTB-A

Collection Date: 7/26/2019 9:10:00 AM

Lab ID: 1907E82-001

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 12:48:02 AM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 4:09:00 PM	46491
Surr: BFB	94.7	70-130		%Rec	1	8/1/2019 4:09:00 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 2:31:37 PM	46535
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	8/2/2019 2:31:37 PM	46535
Surr: DNOP	132	70-130	S	%Rec	1	8/2/2019 2:31:37 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	8/1/2019 4:09:00 PM	46491
Toluene	ND	0.049		mg/Kg	1	8/1/2019 4:09:00 PM	46491
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 4:09:00 PM	46491
Xylenes, Total	ND	0.099		mg/Kg	1	8/1/2019 4:09:00 PM	46491
Surr: 1,2-Dichloroethane-d4	96.0	70-130		%Rec	1	8/1/2019 4:09:00 PM	46491
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	8/1/2019 4:09:00 PM	46491
Surr: Dibromofluoromethane	105	70-130		%Rec	1	8/1/2019 4:09:00 PM	46491
Surr: Toluene-d8	99.5	70-130		%Rec	1	8/1/2019 4:09:00 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 6

Project: State V CTB-A

Collection Date: 7/26/2019 9:15:00 AM

Lab ID: 1907E82-002

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 1:00:27 AM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 4:37:55 PM	46491
Surr: BFB	95.6	70-130		%Rec	1	8/1/2019 4:37:55 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 2:53:49 PM	46535
Motor Oil Range Organics (MRO)	ND	52		mg/Kg	1	8/2/2019 2:53:49 PM	46535
Surr: DNOP	149	70-130	S	%Rec	1	8/2/2019 2:53:49 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/1/2019 4:37:55 PM	46491
Toluene	ND	0.049		mg/Kg	1	8/1/2019 4:37:55 PM	46491
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 4:37:55 PM	46491
Xylenes, Total	ND	0.098		mg/Kg	1	8/1/2019 4:37:55 PM	46491
Surr: 1,2-Dichloroethane-d4	91.3	70-130		%Rec	1	8/1/2019 4:37:55 PM	46491
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	8/1/2019 4:37:55 PM	46491
Surr: Dibromofluoromethane	96.6	70-130		%Rec	1	8/1/2019 4:37:55 PM	46491
Surr: Toluene-d8	98.5	70-130		%Rec	1	8/1/2019 4:37:55 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 7

Project: State V CTB-A

Collection Date: 7/26/2019 9:20:00 AM

Lab ID: 1907E82-003

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	61		mg/Kg	20	8/2/2019 1:12:52 AM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/1/2019 5:06:50 PM	46491
Surr: BFB	96.2	70-130		%Rec	1	8/1/2019 5:06:50 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/2/2019 3:38:17 PM	46535
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/2/2019 3:38:17 PM	46535
Surr: DNOP	95.8	70-130		%Rec	1	8/2/2019 3:38:17 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	8/1/2019 5:06:50 PM	46491
Toluene	ND	0.050		mg/Kg	1	8/1/2019 5:06:50 PM	46491
Ethylbenzene	ND	0.050		mg/Kg	1	8/1/2019 5:06:50 PM	46491
Xylenes, Total	ND	0.099		mg/Kg	1	8/1/2019 5:06:50 PM	46491
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%Rec	1	8/1/2019 5:06:50 PM	46491
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	8/1/2019 5:06:50 PM	46491
Surr: Dibromofluoromethane	103	70-130		%Rec	1	8/1/2019 5:06:50 PM	46491
Surr: Toluene-d8	101	70-130		%Rec	1	8/1/2019 5:06:50 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 8

Project: State V CTB-A

Collection Date: 7/26/2019 9:25:00 AM

Lab ID: 1907E82-004

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 1:25:16 AM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/1/2019 5:35:45 PM	46491
Surr: BFB	95.3	70-130		%Rec	1	8/1/2019 5:35:45 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 4:00:35 PM	46535
Motor Oil Range Organics (MRO)	ND	52		mg/Kg	1	8/2/2019 4:00:35 PM	46535
Surr: DNOP	129	70-130		%Rec	1	8/2/2019 4:00:35 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/1/2019 5:35:45 PM	46491
Toluene	ND	0.048		mg/Kg	1	8/1/2019 5:35:45 PM	46491
Ethylbenzene	ND	0.048		mg/Kg	1	8/1/2019 5:35:45 PM	46491
Xylenes, Total	ND	0.097		mg/Kg	1	8/1/2019 5:35:45 PM	46491
Surr: 1,2-Dichloroethane-d4	92.9	70-130		%Rec	1	8/1/2019 5:35:45 PM	46491
Surr: 4-Bromofluorobenzene	98.5	70-130		%Rec	1	8/1/2019 5:35:45 PM	46491
Surr: Dibromofluoromethane	98.8	70-130		%Rec	1	8/1/2019 5:35:45 PM	46491
Surr: Toluene-d8	99.5	70-130		%Rec	1	8/1/2019 5:35:45 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 9

Project: State V CTB-A

Collection Date: 7/26/2019 9:30:00 AM

Lab ID: 1907E82-005

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 2:02:29 AM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/1/2019 6:04:40 PM	46491
Surr: BFB	95.8	70-130		%Rec	1	8/1/2019 6:04:40 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/2/2019 4:22:47 PM	46535
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/2/2019 4:22:47 PM	46535
Surr: DNOP	145	70-130	S	%Rec	1	8/2/2019 4:22:47 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	8/1/2019 6:04:40 PM	46491
Toluene	ND	0.050		mg/Kg	1	8/1/2019 6:04:40 PM	46491
Ethylbenzene	ND	0.050		mg/Kg	1	8/1/2019 6:04:40 PM	46491
Xylenes, Total	ND	0.099		mg/Kg	1	8/1/2019 6:04:40 PM	46491
Surr: 1,2-Dichloroethane-d4	96.6	70-130		%Rec	1	8/1/2019 6:04:40 PM	46491
Surr: 4-Bromofluorobenzene	99.5	70-130		%Rec	1	8/1/2019 6:04:40 PM	46491
Surr: Dibromofluoromethane	101	70-130		%Rec	1	8/1/2019 6:04:40 PM	46491
Surr: Toluene-d8	100	70-130		%Rec	1	8/1/2019 6:04:40 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 10

Project: State V CTB-A

Collection Date: 7/26/2019 9:35:00 AM

Lab ID: 1907E82-006

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	61		mg/Kg	20	8/2/2019 2:14:54 AM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 6:33:34 PM	46491
Surr: BFB	92.8	70-130		%Rec	1	8/1/2019 6:33:34 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/2/2019 4:45:12 PM	46535
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/2/2019 4:45:12 PM	46535
Surr: DNOP	136	70-130	S	%Rec	1	8/2/2019 4:45:12 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/1/2019 6:33:34 PM	46491
Toluene	ND	0.049		mg/Kg	1	8/1/2019 6:33:34 PM	46491
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 6:33:34 PM	46491
Xylenes, Total	ND	0.098		mg/Kg	1	8/1/2019 6:33:34 PM	46491
Surr: 1,2-Dichloroethane-d4	95.2	70-130		%Rec	1	8/1/2019 6:33:34 PM	46491
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	8/1/2019 6:33:34 PM	46491
Surr: Dibromofluoromethane	98.8	70-130		%Rec	1	8/1/2019 6:33:34 PM	46491
Surr: Toluene-d8	95.0	70-130		%Rec	1	8/1/2019 6:33:34 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 11

Project: State V CTB-A

Collection Date: 7/26/2019 9:40:00 AM

Lab ID: 1907E82-007

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	59		mg/Kg	20	8/2/2019 2:27:18 AM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/1/2019 7:02:25 PM	46491
Surr: BFB	94.7	70-130		%Rec	1	8/1/2019 7:02:25 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 5:07:23 PM	46535
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/2/2019 5:07:23 PM	46535
Surr: DNOP	90.2	70-130		%Rec	1	8/2/2019 5:07:23 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.023		mg/Kg	1	8/1/2019 7:02:25 PM	46491
Toluene	ND	0.046		mg/Kg	1	8/1/2019 7:02:25 PM	46491
Ethylbenzene	ND	0.046		mg/Kg	1	8/1/2019 7:02:25 PM	46491
Xylenes, Total	ND	0.092		mg/Kg	1	8/1/2019 7:02:25 PM	46491
Surr: 1,2-Dichloroethane-d4	95.4	70-130		%Rec	1	8/1/2019 7:02:25 PM	46491
Surr: 4-Bromofluorobenzene	99.4	70-130		%Rec	1	8/1/2019 7:02:25 PM	46491
Surr: Dibromofluoromethane	100	70-130		%Rec	1	8/1/2019 7:02:25 PM	46491
Surr: Toluene-d8	99.7	70-130		%Rec	1	8/1/2019 7:02:25 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 12

Project: State V CTB-A

Collection Date: 7/26/2019 9:45:00 AM

Lab ID: 1907E82-008

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 2:39:42 AM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/1/2019 7:31:16 PM	46491
Surr: BFB	94.1	70-130		%Rec	1	8/1/2019 7:31:16 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/2/2019 5:29:54 PM	46535
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/2/2019 5:29:54 PM	46535
Surr: DNOP	90.0	70-130		%Rec	1	8/2/2019 5:29:54 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/1/2019 7:31:16 PM	46491
Toluene	ND	0.048		mg/Kg	1	8/1/2019 7:31:16 PM	46491
Ethylbenzene	ND	0.048		mg/Kg	1	8/1/2019 7:31:16 PM	46491
Xylenes, Total	ND	0.096		mg/Kg	1	8/1/2019 7:31:16 PM	46491
Surr: 1,2-Dichloroethane-d4	97.4	70-130		%Rec	1	8/1/2019 7:31:16 PM	46491
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	8/1/2019 7:31:16 PM	46491
Surr: Dibromofluoromethane	101	70-130		%Rec	1	8/1/2019 7:31:16 PM	46491
Surr: Toluene-d8	97.1	70-130		%Rec	1	8/1/2019 7:31:16 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 13

Project: State V CTB-A

Collection Date: 7/26/2019 9:50:00 AM

Lab ID: 1907E82-009

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 10:46:26 AM	46555
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/1/2019 8:00:04 PM	46491
Surr: BFB	94.5	70-130		%Rec	1	8/1/2019 8:00:04 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 5:52:15 PM	46535
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/2/2019 5:52:15 PM	46535
Surr: DNOP	98.3	70-130		%Rec	1	8/2/2019 5:52:15 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.023		mg/Kg	1	8/1/2019 8:00:04 PM	46491
Toluene	ND	0.047		mg/Kg	1	8/1/2019 8:00:04 PM	46491
Ethylbenzene	ND	0.047		mg/Kg	1	8/1/2019 8:00:04 PM	46491
Xylenes, Total	ND	0.094		mg/Kg	1	8/1/2019 8:00:04 PM	46491
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%Rec	1	8/1/2019 8:00:04 PM	46491
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	8/1/2019 8:00:04 PM	46491
Surr: Dibromofluoromethane	100	70-130		%Rec	1	8/1/2019 8:00:04 PM	46491
Surr: Toluene-d8	98.1	70-130		%Rec	1	8/1/2019 8:00:04 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 14

Project: State V CTB-A

Collection Date: 7/26/2019 9:55:00 AM

Lab ID: 1907E82-010

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 10:58:51 AM	46555
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/1/2019 8:28:55 PM	46491
Surr: BFB	93.9	70-130		%Rec	1	8/1/2019 8:28:55 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 6:14:51 PM	46535
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/2/2019 6:14:51 PM	46535
Surr: DNOP	137	70-130	S	%Rec	1	8/2/2019 6:14:51 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/1/2019 8:28:55 PM	46491
Toluene	ND	0.048		mg/Kg	1	8/1/2019 8:28:55 PM	46491
Ethylbenzene	ND	0.048		mg/Kg	1	8/1/2019 8:28:55 PM	46491
Xylenes, Total	ND	0.095		mg/Kg	1	8/1/2019 8:28:55 PM	46491
Surr: 1,2-Dichloroethane-d4	96.4	70-130		%Rec	1	8/1/2019 8:28:55 PM	46491
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	8/1/2019 8:28:55 PM	46491
Surr: Dibromofluoromethane	98.7	70-130		%Rec	1	8/1/2019 8:28:55 PM	46491
Surr: Toluene-d8	98.5	70-130		%Rec	1	8/1/2019 8:28:55 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 15

Project: State V CTB-A

Collection Date: 7/26/2019 10:00:00 AM

Lab ID: 1907E82-011

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 11:11:15 AM	46555
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/1/2019 8:57:44 PM	46491
Surr: BFB	95.8	70-130		%Rec	1	8/1/2019 8:57:44 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 6:37:11 PM	46535
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/2/2019 6:37:11 PM	46535
Surr: DNOP	112	70-130		%Rec	1	8/2/2019 6:37:11 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.023		mg/Kg	1	8/1/2019 8:57:44 PM	46491
Toluene	ND	0.047		mg/Kg	1	8/1/2019 8:57:44 PM	46491
Ethylbenzene	ND	0.047		mg/Kg	1	8/1/2019 8:57:44 PM	46491
Xylenes, Total	ND	0.093		mg/Kg	1	8/1/2019 8:57:44 PM	46491
Surr: 1,2-Dichloroethane-d4	96.4	70-130		%Rec	1	8/1/2019 8:57:44 PM	46491
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	8/1/2019 8:57:44 PM	46491
Surr: Dibromofluoromethane	98.3	70-130		%Rec	1	8/1/2019 8:57:44 PM	46491
Surr: Toluene-d8	98.8	70-130		%Rec	1	8/1/2019 8:57:44 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 16

Project: State V CTB-A

Collection Date: 7/26/2019 10:05:00 AM

Lab ID: 1907E82-012

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 11:48:28 AM	46555
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/1/2019 9:26:31 PM	46491
Surr: BFB	93.2	70-130		%Rec	1	8/1/2019 9:26:31 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 6:59:39 PM	46535
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/2/2019 6:59:39 PM	46535
Surr: DNOP	136	70-130	S	%Rec	1	8/2/2019 6:59:39 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	8/1/2019 9:26:31 PM	46491
Toluene	ND	0.050		mg/Kg	1	8/1/2019 9:26:31 PM	46491
Ethylbenzene	ND	0.050		mg/Kg	1	8/1/2019 9:26:31 PM	46491
Xylenes, Total	ND	0.099		mg/Kg	1	8/1/2019 9:26:31 PM	46491
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%Rec	1	8/1/2019 9:26:31 PM	46491
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	8/1/2019 9:26:31 PM	46491
Surr: Dibromofluoromethane	98.4	70-130		%Rec	1	8/1/2019 9:26:31 PM	46491
Surr: Toluene-d8	98.3	70-130		%Rec	1	8/1/2019 9:26:31 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 17

Project: State V CTB-A

Collection Date: 7/26/2019 10:10:00 AM

Lab ID: 1907E82-013

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 12:50:29 PM	46555
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/1/2019 11:50:28 PM	46491
Surr: BFB	93.0	70-130		%Rec	1	8/1/2019 11:50:28 PM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/2/2019 7:21:58 PM	46535
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/2/2019 7:21:58 PM	46535
Surr: DNOP	89.1	70-130		%Rec	1	8/2/2019 7:21:58 PM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/1/2019 11:50:28 PM	46491
Toluene	ND	0.048		mg/Kg	1	8/1/2019 11:50:28 PM	46491
Ethylbenzene	ND	0.048		mg/Kg	1	8/1/2019 11:50:28 PM	46491
Xylenes, Total	ND	0.096		mg/Kg	1	8/1/2019 11:50:28 PM	46491
Surr: 1,2-Dichloroethane-d4	98.8	70-130		%Rec	1	8/1/2019 11:50:28 PM	46491
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	8/1/2019 11:50:28 PM	46491
Surr: Dibromofluoromethane	101	70-130		%Rec	1	8/1/2019 11:50:28 PM	46491
Surr: Toluene-d8	100	70-130		%Rec	1	8/1/2019 11:50:28 PM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1907E82

Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 18

Project: State V CTB-A

Collection Date: 7/26/2019 10:15:00 AM

Lab ID: 1907E82-014

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 1:02:54 PM	46555
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 8:29:03 PM	46536
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	8/2/2019 8:29:03 PM	46536
Surr: DNOP	106	70-130		%Rec	1	8/2/2019 8:29:03 PM	46536
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/31/2019 9:24:57 PM	46492
Surr: BFB	108	73.8-119		%Rec	1	7/31/2019 9:24:57 PM	46492
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	7/31/2019 9:24:57 PM	46492
Toluene	ND	0.047		mg/Kg	1	7/31/2019 9:24:57 PM	46492
Ethylbenzene	ND	0.047		mg/Kg	1	7/31/2019 9:24:57 PM	46492
Xylenes, Total	ND	0.095		mg/Kg	1	7/31/2019 9:24:57 PM	46492
Surr: 4-Bromofluorobenzene	91.8	80-120		%Rec	1	7/31/2019 9:24:57 PM	46492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 19

Project: State V CTB-A

Collection Date: 7/26/2019 10:20:00 AM

Lab ID: 1907E82-015

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 1:15:18 PM	46555
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 9:36:01 PM	46536
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/2/2019 9:36:01 PM	46536
Surr: DNOP	121	70-130		%Rec	1	8/2/2019 9:36:01 PM	46536
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/31/2019 10:33:13 PM	46492
Surr: BFB	106	73.8-119		%Rec	1	7/31/2019 10:33:13 PM	46492
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	7/31/2019 10:33:13 PM	46492
Toluene	ND	0.046		mg/Kg	1	7/31/2019 10:33:13 PM	46492
Ethylbenzene	ND	0.046		mg/Kg	1	7/31/2019 10:33:13 PM	46492
Xylenes, Total	ND	0.092		mg/Kg	1	7/31/2019 10:33:13 PM	46492
Surr: 4-Bromofluorobenzene	91.8	80-120		%Rec	1	7/31/2019 10:33:13 PM	46492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 20

Project: State V CTB-A

Collection Date: 7/26/2019 10:25:00 AM

Lab ID: 1907E82-016

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 1:27:43 PM	46555
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 9:58:26 PM	46536
Motor Oil Range Organics (MRO)	ND	52		mg/Kg	1	8/2/2019 9:58:26 PM	46536
Surr: DNOP	124	70-130		%Rec	1	8/2/2019 9:58:26 PM	46536
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/31/2019 11:41:19 PM	46492
Surr: BFB	103	73.8-119		%Rec	1	7/31/2019 11:41:19 PM	46492
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	7/31/2019 11:41:19 PM	46492
Toluene	ND	0.047		mg/Kg	1	7/31/2019 11:41:19 PM	46492
Ethylbenzene	ND	0.047		mg/Kg	1	7/31/2019 11:41:19 PM	46492
Xylenes, Total	ND	0.094		mg/Kg	1	7/31/2019 11:41:19 PM	46492
Surr: 4-Bromofluorobenzene	89.3	80-120		%Rec	1	7/31/2019 11:41:19 PM	46492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 21

Project: State V CTB-A

Collection Date: 7/26/2019 10:30:00 AM

Lab ID: 1907E82-017

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 1:40:07 PM	46555
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 10:20:49 PM	46536
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	8/2/2019 10:20:49 PM	46536
Surr: DNOP	113	70-130		%Rec	1	8/2/2019 10:20:49 PM	46536
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/1/2019 12:04:02 AM	46492
Surr: BFB	105	73.8-119		%Rec	1	8/1/2019 12:04:02 AM	46492
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	8/1/2019 12:04:02 AM	46492
Toluene	ND	0.050		mg/Kg	1	8/1/2019 12:04:02 AM	46492
Ethylbenzene	ND	0.050		mg/Kg	1	8/1/2019 12:04:02 AM	46492
Xylenes, Total	ND	0.10		mg/Kg	1	8/1/2019 12:04:02 AM	46492
Surr: 4-Bromofluorobenzene	91.1	80-120		%Rec	1	8/1/2019 12:04:02 AM	46492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 22

Project: State V CTB-A

Collection Date: 7/26/2019 10:35:00 AM

Lab ID: 1907E82-018

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 1:52:32 PM	46555
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/2/2019 10:43:12 PM	46536
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/2/2019 10:43:12 PM	46536
Surr: DNOP	112	70-130		%Rec	1	8/2/2019 10:43:12 PM	46536
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/1/2019 12:26:47 AM	46492
Surr: BFB	104	73.8-119		%Rec	1	8/1/2019 12:26:47 AM	46492
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	8/1/2019 12:26:47 AM	46492
Toluene	ND	0.048		mg/Kg	1	8/1/2019 12:26:47 AM	46492
Ethylbenzene	ND	0.048		mg/Kg	1	8/1/2019 12:26:47 AM	46492
Xylenes, Total	ND	0.097		mg/Kg	1	8/1/2019 12:26:47 AM	46492
Surr: 4-Bromofluorobenzene	89.8	80-120		%Rec	1	8/1/2019 12:26:47 AM	46492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 23

Project: State V CTB-A

Collection Date: 7/26/2019 10:40:00 AM

Lab ID: 1907E82-019

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 2:04:57 PM	46555
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/2/2019 11:05:31 PM	46536
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/2/2019 11:05:31 PM	46536
Surr: DNOP	103	70-130		%Rec	1	8/2/2019 11:05:31 PM	46536
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 12:49:31 AM	46492
Surr: BFB	106	73.8-119		%Rec	1	8/1/2019 12:49:31 AM	46492
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	8/1/2019 12:49:31 AM	46492
Toluene	ND	0.049		mg/Kg	1	8/1/2019 12:49:31 AM	46492
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 12:49:31 AM	46492
Xylenes, Total	ND	0.099		mg/Kg	1	8/1/2019 12:49:31 AM	46492
Surr: 4-Bromofluorobenzene	91.8	80-120		%Rec	1	8/1/2019 12:49:31 AM	46492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 24

Project: State V CTB-A

Collection Date: 7/26/2019 10:45:00 AM

Lab ID: 1907E82-020

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 2:17:21 PM	46555
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	11		mg/Kg	1	8/2/2019 11:27:50 PM	46536
Motor Oil Range Organics (MRO)	ND	53		mg/Kg	1	8/2/2019 11:27:50 PM	46536
Surr: DNOP	110	70-130		%Rec	1	8/2/2019 11:27:50 PM	46536
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/1/2019 1:12:19 AM	46492
Surr: BFB	107	73.8-119		%Rec	1	8/1/2019 1:12:19 AM	46492
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	8/1/2019 1:12:19 AM	46492
Toluene	ND	0.048		mg/Kg	1	8/1/2019 1:12:19 AM	46492
Ethylbenzene	ND	0.048		mg/Kg	1	8/1/2019 1:12:19 AM	46492
Xylenes, Total	ND	0.097		mg/Kg	1	8/1/2019 1:12:19 AM	46492
Surr: 4-Bromofluorobenzene	91.9	80-120		%Rec	1	8/1/2019 1:12:19 AM	46492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1907E82

Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 25

Project: State V CTB-A

Collection Date: 7/26/2019 10:50:00 AM

Lab ID: 1907E82-021

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 2:54:34 PM	46555
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	11		mg/Kg	1	8/2/2019 11:50:08 PM	46536
Motor Oil Range Organics (MRO)	ND	53		mg/Kg	1	8/2/2019 11:50:08 PM	46536
Surr: DNOP	103	70-130		%Rec	1	8/2/2019 11:50:08 PM	46536
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/1/2019 1:35:12 AM	46492
Surr: BFB	99.0	73.8-119		%Rec	1	8/1/2019 1:35:12 AM	46492
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	8/1/2019 1:35:12 AM	46492
Toluene	ND	0.046		mg/Kg	1	8/1/2019 1:35:12 AM	46492
Ethylbenzene	ND	0.046		mg/Kg	1	8/1/2019 1:35:12 AM	46492
Xylenes, Total	ND	0.091		mg/Kg	1	8/1/2019 1:35:12 AM	46492
Surr: 4-Bromofluorobenzene	85.4	80-120		%Rec	1	8/1/2019 1:35:12 AM	46492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 26

Project: State V CTB-A

Collection Date: 7/26/2019 10:55:00 AM

Lab ID: 1907E82-022

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 3:06:58 PM	46555
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/3/2019 12:12:37 AM	46536
Motor Oil Range Organics (MRO)	ND	52		mg/Kg	1	8/3/2019 12:12:37 AM	46536
Surr: DNOP	120	70-130		%Rec	1	8/3/2019 12:12:37 AM	46536
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 1:57:59 AM	46492
Surr: BFB	103	73.8-119		%Rec	1	8/1/2019 1:57:59 AM	46492
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	8/1/2019 1:57:59 AM	46492
Toluene	ND	0.049		mg/Kg	1	8/1/2019 1:57:59 AM	46492
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 1:57:59 AM	46492
Xylenes, Total	ND	0.099		mg/Kg	1	8/1/2019 1:57:59 AM	46492
Surr: 4-Bromofluorobenzene	89.5	80-120		%Rec	1	8/1/2019 1:57:59 AM	46492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1907E82

Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 27

Project: State V CTB-A

Collection Date: 7/26/2019 11:00:00 AM

Lab ID: 1907E82-023

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 3:19:23 PM	46555
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/3/2019 12:57:25 AM	46536
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/3/2019 12:57:25 AM	46536
Surr: DNOP	115	70-130		%Rec	1	8/3/2019 12:57:25 AM	46536
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 2:20:56 AM	46492
Surr: BFB	105	73.8-119		%Rec	1	8/1/2019 2:20:56 AM	46492
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	8/1/2019 2:20:56 AM	46492
Toluene	ND	0.049		mg/Kg	1	8/1/2019 2:20:56 AM	46492
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 2:20:56 AM	46492
Xylenes, Total	ND	0.098		mg/Kg	1	8/1/2019 2:20:56 AM	46492
Surr: 4-Bromofluorobenzene	89.6	80-120		%Rec	1	8/1/2019 2:20:56 AM	46492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E82
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 28

Project: State V CTB-A

Collection Date: 7/26/2019 11:05:00 AM

Lab ID: 1907E82-024

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 3:31:48 PM	46555
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/3/2019 1:19:50 AM	46536
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/3/2019 1:19:50 AM	46536
Surr: DNOP	95.6	70-130		%Rec	1	8/3/2019 1:19:50 AM	46536
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/1/2019 1:31:31 AM	46492
Surr: BFB	91.7	73.8-119		%Rec	1	8/1/2019 1:31:31 AM	46492
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/1/2019 1:31:31 AM	46492
Toluene	ND	0.048		mg/Kg	1	8/1/2019 1:31:31 AM	46492
Ethylbenzene	ND	0.048		mg/Kg	1	8/1/2019 1:31:31 AM	46492
Xylenes, Total	ND	0.096		mg/Kg	1	8/1/2019 1:31:31 AM	46492
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	8/1/2019 1:31:31 AM	46492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E82

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB-A

Sample ID: MB-46547	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 46547	RunNo: 61834								
Prep Date: 8/1/2019	Analysis Date: 8/1/2019	SeqNo: 2097049	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-46547	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 46547	RunNo: 61834								
Prep Date: 8/1/2019	Analysis Date: 8/1/2019	SeqNo: 2097050	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.3	90	110			

Sample ID: MB-46555	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 46555	RunNo: 61879								
Prep Date: 8/2/2019	Analysis Date: 8/2/2019	SeqNo: 2098288	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-46555	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 46555	RunNo: 61879								
Prep Date: 8/2/2019	Analysis Date: 8/2/2019	SeqNo: 2098289	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.9	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E82

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB-A

Sample ID: LCS-46512	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 46512	RunNo: 61831								
Prep Date: 7/31/2019	Analysis Date: 8/1/2019	SeqNo: 2096582	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.0		5.000		79.1	70	130			

Sample ID: MB-46512	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 46512	RunNo: 61831								
Prep Date: 7/31/2019	Analysis Date: 8/1/2019	SeqNo: 2096583	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.8		10.00		87.8	70	130			

Sample ID: 1907E82-014AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: Floor 18	Batch ID: 46536	RunNo: 61831								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097756	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.8	49.16	0	96.0	57	142			
Surr: DNOP	3.8		4.916		76.3	70	130			

Sample ID: 1907E82-014AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: Floor 18	Batch ID: 46536	RunNo: 61831								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097757	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	63	9.5	47.62	0	132	57	142	28.3	20	R
Surr: DNOP	5.2		4.762		109	70	130	0	0	

Sample ID: 1907E78-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 46535	RunNo: 61831								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097766	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	64	9.6	48.08	0	133	57	142			
Surr: DNOP	6.4		4.808		134	70	130			S

Sample ID: 1907E78-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 46535	RunNo: 61831								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097767	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	67	10	49.80	0	135	57	142	5.00	20	
Surr: DNOP	6.6		4.980		133	70	130	0	0	S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E82

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB-A

Sample ID: LCS-46535	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 46535		RunNo: 61831							
Prep Date: 8/1/2019	Analysis Date: 8/2/2019		SeqNo: 2097809		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.0	63.9	124			
Surr: DNOP	4.7		5.000		94.9	70	130			

Sample ID: LCS-46536	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 46536		RunNo: 61831							
Prep Date: 8/1/2019	Analysis Date: 8/2/2019		SeqNo: 2097810		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	61	10	50.00	0	121	63.9	124			
Surr: DNOP	4.9		5.000		98.4	70	130			

Sample ID: MB-46535	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 46535		RunNo: 61831							
Prep Date: 8/1/2019	Analysis Date: 8/2/2019		SeqNo: 2097811		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		135	70	130			S

Sample ID: MB-46536	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 46536		RunNo: 61831							
Prep Date: 8/1/2019	Analysis Date: 8/2/2019		SeqNo: 2097812		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		133	70	130			S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E82

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB-A

Sample ID: 1907E82-014AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: Floor 18	Batch ID: 46492	RunNo: 61812								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095467	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.7	23.34	0	107	69.1	142			
Surr: BFB	1100		933.7		122	73.8	119			S

Sample ID: 1907E82-014AMSD	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: Floor 18	Batch ID: 46492	RunNo: 61812								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095468	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.28	0	100	69.1	142	6.94	20	
Surr: BFB	1100		931.1		123	73.8	119	0	0	S

Sample ID: LCS-46492	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 46492	RunNo: 61812								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095480	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.7	80.1	123			
Surr: BFB	1200		1000		121	73.8	119			S

Sample ID: MB-46492	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 46492	RunNo: 61812								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095482	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		108	73.8	119			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E82

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB-A

Sample ID: 1907E82-015AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: Floor 19	Batch ID: 46492	RunNo: 61812								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095663	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.023	0.9294	0	96.2	63.9	127			
Toluene	0.95	0.046	0.9294	0.008158	102	69.9	131			
Ethylbenzene	0.92	0.046	0.9294	0	98.9	71	132			
Xylenes, Total	2.7	0.093	2.788	0.01427	95.3	71.8	131			
Surr: 4-Bromofluorobenzene	0.96		0.9294		103	80	120			

Sample ID: 1907E82-015MSD	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: Floor 19	Batch ID: 46492	RunNo: 61812								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095664	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.024	0.9709	0	98.2	63.9	127	6.48	20	
Toluene	1.0	0.049	0.9709	0.008158	104	69.9	131	6.56	20	
Ethylbenzene	0.98	0.049	0.9709	0	101	71	132	6.78	20	
Xylenes, Total	2.9	0.097	2.913	0.01427	98.4	71.8	131	7.52	20	
Surr: 4-Bromofluorobenzene	1.0		0.9709		106	80	120	0	0	

Sample ID: LCS-46492	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 46492	RunNo: 61812								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095674	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	92.1	80	120			
Toluene	0.97	0.050	1.000	0	97.1	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.1	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.8	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID: MB-46492	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 46492	RunNo: 61812								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095676	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.2	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E82

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB-A

Sample ID: ics-46491	SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: LCSS	Batch ID: 46491		RunNo: 61815							
Prep Date: 7/30/2019	Analysis Date: 8/1/2019		SeqNo: 2095750		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.5	70	130			
Toluene	1.0	0.050	1.000	0	100	70	130			
Ethylbenzene	1.0	0.050	1.000	0	99.9	70	130			
Xylenes, Total	3.1	0.10	3.000	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.7	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		102	70	130			
Surr: Toluene-d8	0.50		0.5000		99.5	70	130			

Sample ID: mb-46491	SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBS	Batch ID: 46491		RunNo: 61815							
Prep Date: 7/30/2019	Analysis Date: 8/1/2019		SeqNo: 2095751		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		96.2	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.50		0.5000		101	70	130			
Surr: Toluene-d8	0.50		0.5000		99.9	70	130			

Sample ID: 1907e81-001ams	SampType: MS		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: BatchQC	Batch ID: 46491		RunNo: 61815							
Prep Date: 7/30/2019	Analysis Date: 8/1/2019		SeqNo: 2095763		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	0.9940	0	93.7	68.9	131			
Toluene	1.0	0.050	0.9940	0	105	64.3	137			
Ethylbenzene	1.1	0.050	0.9940	0	107	70	130			
Xylenes, Total	3.1	0.099	2.982	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.4970		95.4	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.4970		100	70	130			
Surr: Dibromofluoromethane	0.47		0.4970		95.0	70	130			
Surr: Toluene-d8	0.49		0.4970		99.3	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E82

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB-A

Sample ID: 1907e81-001amsd	SampType: MSD	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: BatchQC	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095764	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	0.9901	0	92.0	68.9	131	2.21	20	
Toluene	1.0	0.050	0.9901	0	102	64.3	137	3.02	20	
Ethylbenzene	1.0	0.050	0.9901	0	105	70	130	2.13	0	
Xylenes, Total	3.1	0.099	2.970	0	104	70	130	1.89	0	
Surr: 1,2-Dichloroethane-d4	0.48		0.4950		96.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.50		0.4950		101	70	130	0	0	
Surr: Dibromofluoromethane	0.46		0.4950		93.0	70	130	0	0	
Surr: Toluene-d8	0.48		0.4950		97.4	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E82

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB-A

Sample ID: ics-46491	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095774	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	81.0	70	130			
Surr: BFB	480		500.0		95.5	70	130			

Sample ID: mb-46491	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095775	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	480		500.0		95.5	70	130			

Sample ID: 1907e78-001ams	SampType: MS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: BatchQC	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095778	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	24.78	0	84.0	68.2	135			
Surr: BFB	480		495.5		97.8	70	130			

Sample ID: 1907e78-001amsd	SampType: MSD	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: BatchQC	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095779	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.6	23.00	0	81.4	68.2	135	10.6	20	
Surr: BFB	430		460.0		93.9	70	130	0	0	

Sample ID: ics-46521	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 46521	RunNo: 61843								
Prep Date: 7/31/2019	Analysis Date: 8/2/2019	SeqNo: 2096862	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	470		500.0		94.1	70	130			

Sample ID: mb-46521	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 46521	RunNo: 61843								
Prep Date: 7/31/2019	Analysis Date: 8/2/2019	SeqNo: 2096863	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	470		500.0		94.4	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Sample Log-In Check List

Client Name: **CAPROCK SERVICES, L**

Work Order Number: **1907E82**

RcptNo: 1

Received By: *Daniel M* 7/30/2019 8:43:00 AM
 Completed By: Leah Baca 7/30/2019 9:59:26 AM
 Reviewed By: *DAD 7/30/19*

Leah Baca

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: *mg 07/30/19*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.5	Good	Yes			
2	6.6	Good	Yes			
3	3.8	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 07, 2019

Joel Lowry
Caprock Services, LLC
PO Box 457
Lovington, NM 88260
TEL: (575) 704-2718
FAX

RE: State V CTB B

OrderNo.: 1907E81

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/30/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1907E81

Date Reported: 8/7/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 3

Project: State V CTB B

Collection Date: 7/26/2019 8:40:00 AM

Lab ID: 1907E81-001

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/2/2019 12:15:44 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/2/2019 12:15:44 PM
Surr: DNOP	126	70-130		%Rec	1	8/2/2019 12:15:44 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/1/2019 11:33:37 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	8/1/2019 5:43:44 AM
Toluene	ND	0.049		mg/Kg	1	8/1/2019 5:43:44 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 5:43:44 AM
Xylenes, Total	ND	0.098		mg/Kg	1	8/1/2019 5:43:44 AM
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%Rec	1	8/1/2019 5:43:44 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/1/2019 5:43:44 AM
Surr: Dibromofluoromethane	95.2	70-130		%Rec	1	8/1/2019 5:43:44 AM
Surr: Toluene-d8	97.5	70-130		%Rec	1	8/1/2019 5:43:44 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 5:43:44 AM
Surr: BFB	94.3	70-130		%Rec	1	8/1/2019 5:43:44 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E81
 Date Reported: 8/7/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 4

Project: State V CTB B

Collection Date: 7/26/2019 8:45:00 AM

Lab ID: 1907E81-002

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 12:40:36 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	8/2/2019 12:40:36 PM
Surr: DNOP	127	70-130		%Rec	1	8/2/2019 12:40:36 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/1/2019 11:46:02 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/1/2019 7:09:28 AM
Toluene	ND	0.049		mg/Kg	1	8/1/2019 7:09:28 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 7:09:28 AM
Xylenes, Total	ND	0.098		mg/Kg	1	8/1/2019 7:09:28 AM
Surr: 1,2-Dichloroethane-d4	93.8	70-130		%Rec	1	8/1/2019 7:09:28 AM
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	8/1/2019 7:09:28 AM
Surr: Dibromofluoromethane	92.9	70-130		%Rec	1	8/1/2019 7:09:28 AM
Surr: Toluene-d8	94.9	70-130		%Rec	1	8/1/2019 7:09:28 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 7:09:28 AM
Surr: BFB	92.5	70-130		%Rec	1	8/1/2019 7:09:28 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E81
 Date Reported: 8/7/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 5

Project: State V CTB B

Collection Date: 7/26/2019 8:50:00 AM

Lab ID: 1907E81-003

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	8/2/2019 1:02:45 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/2/2019 1:02:45 PM
Surr: DNOP	135	70-130	S	%Rec	1	8/2/2019 1:02:45 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/1/2019 11:58:26 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JMR
Benzene	ND	0.023		mg/Kg	1	8/1/2019 2:13:27 PM
Toluene	ND	0.047		mg/Kg	1	8/1/2019 2:13:27 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/1/2019 2:13:27 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/1/2019 2:13:27 PM
Surr: 1,2-Dichloroethane-d4	95.7	70-130		%Rec	1	8/1/2019 2:13:27 PM
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	8/1/2019 2:13:27 PM
Surr: Dibromofluoromethane	101	70-130		%Rec	1	8/1/2019 2:13:27 PM
Surr: Toluene-d8	98.8	70-130		%Rec	1	8/1/2019 2:13:27 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/1/2019 2:13:27 PM
Surr: BFB	93.8	70-130		%Rec	1	8/1/2019 2:13:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E81
 Date Reported: 8/7/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 6

Project: State V CTB B

Collection Date: 7/26/2019 8:55:00 AM

Lab ID: 1907E81-004

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/2/2019 1:24:49 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/2/2019 1:24:49 PM
Surr: DNOP	105	70-130		%Rec	1	8/2/2019 1:24:49 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 12:10:50 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/1/2019 2:42:19 PM
Toluene	ND	0.048		mg/Kg	1	8/1/2019 2:42:19 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/1/2019 2:42:19 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/1/2019 2:42:19 PM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	8/1/2019 2:42:19 PM
Surr: 4-Bromofluorobenzene	94.1	70-130		%Rec	1	8/1/2019 2:42:19 PM
Surr: Dibromofluoromethane	105	70-130		%Rec	1	8/1/2019 2:42:19 PM
Surr: Toluene-d8	100	70-130		%Rec	1	8/1/2019 2:42:19 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/1/2019 2:42:19 PM
Surr: BFB	92.5	70-130		%Rec	1	8/1/2019 2:42:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E81
 Date Reported: 8/7/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 7

Project: State V CTB B

Collection Date: 7/26/2019 9:00:00 AM

Lab ID: 1907E81-005

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/2/2019 1:47:07 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/2/2019 1:47:07 PM
Surr: DNOP	105	70-130		%Rec	1	8/2/2019 1:47:07 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	61		mg/Kg	20	8/2/2019 12:23:14 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	8/1/2019 3:11:12 PM
Toluene	ND	0.050		mg/Kg	1	8/1/2019 3:11:12 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/1/2019 3:11:12 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/1/2019 3:11:12 PM
Surr: 1,2-Dichloroethane-d4	91.7	70-130		%Rec	1	8/1/2019 3:11:12 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/1/2019 3:11:12 PM
Surr: Dibromofluoromethane	99.8	70-130		%Rec	1	8/1/2019 3:11:12 PM
Surr: Toluene-d8	96.6	70-130		%Rec	1	8/1/2019 3:11:12 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/1/2019 3:11:12 PM
Surr: BFB	94.2	70-130		%Rec	1	8/1/2019 3:11:12 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E81
 Date Reported: 8/7/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 8

Project: State V CTB B

Collection Date: 7/26/2019 9:05:00 AM

Lab ID: 1907E81-006

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	8/2/2019 2:09:19 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/2/2019 2:09:19 PM
Surr: DNOP	103	70-130		%Rec	1	8/2/2019 2:09:19 PM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	8/2/2019 12:35:38 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JMR
Benzene	ND	0.025		mg/Kg	1	8/1/2019 3:40:05 PM
Toluene	ND	0.050		mg/Kg	1	8/1/2019 3:40:05 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/1/2019 3:40:05 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/1/2019 3:40:05 PM
Surr: 1,2-Dichloroethane-d4	94.0	70-130		%Rec	1	8/1/2019 3:40:05 PM
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	8/1/2019 3:40:05 PM
Surr: Dibromofluoromethane	99.7	70-130		%Rec	1	8/1/2019 3:40:05 PM
Surr: Toluene-d8	99.0	70-130		%Rec	1	8/1/2019 3:40:05 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JMR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/1/2019 3:40:05 PM
Surr: BFB	95.9	70-130		%Rec	1	8/1/2019 3:40:05 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E81

07-Aug-19

Client: Caprock Services, LLC

Project: State V CTB B

Sample ID: MB-46547	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 46547	RunNo: 61834								
Prep Date: 8/1/2019	Analysis Date: 8/1/2019	SeqNo: 2097049	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-46547	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 46547	RunNo: 61834								
Prep Date: 8/1/2019	Analysis Date: 8/1/2019	SeqNo: 2097050	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.3	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E81

07-Aug-19

Client: Caprock Services, LLC

Project: State V CTB B

Sample ID: LCS-46512	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 46512		RunNo: 61831							
Prep Date: 7/31/2019	Analysis Date: 8/1/2019		SeqNo: 2096582	Units: %Rec						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.0		5.000		79.1	70	130			

Sample ID: MB-46512	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 46512		RunNo: 61831							
Prep Date: 7/31/2019	Analysis Date: 8/1/2019		SeqNo: 2096583	Units: %Rec						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.8		10.00		87.8	70	130			

Sample ID: LCS-46535	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 46535		RunNo: 61831							
Prep Date: 8/1/2019	Analysis Date: 8/2/2019		SeqNo: 2097809	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.0	63.9	124			
Surr: DNOP	4.7		5.000		94.9	70	130			

Sample ID: MB-46535	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 46535		RunNo: 61831							
Prep Date: 8/1/2019	Analysis Date: 8/2/2019		SeqNo: 2097811	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		135	70	130			S

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E81

07-Aug-19

Client: Caprock Services, LLC

Project: State V CTB B

Sample ID: ics-46491	SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: LCSS	Batch ID: 46491		RunNo: 61815							
Prep Date: 7/30/2019	Analysis Date: 8/1/2019		SeqNo: 2095750		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.5	70	130			
Toluene	1.0	0.050	1.000	0	100	70	130			
Ethylbenzene	1.0	0.050	1.000	0	99.9	70	130			
Xylenes, Total	3.1	0.10	3.000	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.7	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		102	70	130			
Surr: Toluene-d8	0.50		0.5000		99.5	70	130			

Sample ID: mb-46491	SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBS	Batch ID: 46491		RunNo: 61815							
Prep Date: 7/30/2019	Analysis Date: 8/1/2019		SeqNo: 2095751		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		96.2	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.50		0.5000		101	70	130			
Surr: Toluene-d8	0.50		0.5000		99.9	70	130			

Sample ID: 1907e81-001ams	SampType: MS		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: Floor 3	Batch ID: 46491		RunNo: 61815							
Prep Date: 7/30/2019	Analysis Date: 8/1/2019		SeqNo: 2095763		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	0.9940	0	93.7	68.9	131			
Toluene	1.0	0.050	0.9940	0	105	64.3	137			
Ethylbenzene	1.1	0.050	0.9940	0	107	70	130			
Xylenes, Total	3.1	0.099	2.982	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.4970		95.4	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.4970		100	70	130			
Surr: Dibromofluoromethane	0.47		0.4970		95.0	70	130			
Surr: Toluene-d8	0.49		0.4970		99.3	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E81

07-Aug-19

Client: Caprock Services, LLC

Project: State V CTB B

Sample ID: 1907e81-001amsd	SampType: MSD	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: Floor 3	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095764 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	0.9901	0	92.0	68.9	131	2.21	20	
Toluene	1.0	0.050	0.9901	0	102	64.3	137	3.02	20	
Ethylbenzene	1.0	0.050	0.9901	0	105	70	130	2.13	0	
Xylenes, Total	3.1	0.099	2.970	0	104	70	130	1.89	0	
Surr: 1,2-Dichloroethane-d4	0.48		0.4950		96.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.50		0.4950		101	70	130	0	0	
Surr: Dibromofluoromethane	0.46		0.4950		93.0	70	130	0	0	
Surr: Toluene-d8	0.48		0.4950		97.4	70	130	0	0	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E81

07-Aug-19

Client: Caprock Services, LLC

Project: State V CTB B

Sample ID: ics-46491	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095774	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	81.0	70	130			
Surr: BFB	480		500.0		95.5	70	130			

Sample ID: mb-46491	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095775	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	480		500.0		95.5	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Sample Log-In Check List

Client Name: **CAPROCK SERVICES, L**

Work Order Number: **1907E81**

RcptNo: 1

Received By: *Daniel M.* 7/30/2019 8:43:00 AM

Completed By: **Leah Baca** 7/30/2019 10:02:42 AM

Reviewed By: **DAD 7/30/19**

Leah Baca

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: *mgj 7/30/19*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.5	Good	Yes			
2	6.6	Good	Yes			
3	3.8	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 06, 2019

Joel Lowry
Caprock Services, LLC
PO Box 457
Lovington, NM 88260
TEL: (575) 704-2718
FAX:

RE: State V CTB C

OrderNo.: 1907E80

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/30/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E80
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 2

Project: State V CTB C

Collection Date: 7/26/2019 8:15:00 AM

Lab ID: 1907E80-001

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	950	60		mg/Kg	20	8/1/2019 9:41:58 PM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/1/2019 6:30:06 AM	46480
Surr: BFB	94.3	70-130		%Rec	1	8/1/2019 6:30:06 AM	46480
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	41	10		mg/Kg	1	8/3/2019 5:02:32 AM	46481
Motor Oil Range Organics (MRO)	270	51		mg/Kg	1	8/3/2019 5:02:32 AM	46481
Surr: DNOP	96.8	70-130		%Rec	1	8/3/2019 5:02:32 AM	46481
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.023		mg/Kg	1	8/1/2019 6:30:06 AM	46480
Toluene	ND	0.046		mg/Kg	1	8/1/2019 6:30:06 AM	46480
Ethylbenzene	ND	0.046		mg/Kg	1	8/1/2019 6:30:06 AM	46480
Xylenes, Total	ND	0.093		mg/Kg	1	8/1/2019 6:30:06 AM	46480
Surr: 1,2-Dichloroethane-d4	85.7	70-130		%Rec	1	8/1/2019 6:30:06 AM	46480
Surr: 4-Bromofluorobenzene	94.4	70-130		%Rec	1	8/1/2019 6:30:06 AM	46480
Surr: Dibromofluoromethane	86.8	70-130		%Rec	1	8/1/2019 6:30:06 AM	46480
Surr: Toluene-d8	96.6	70-130		%Rec	1	8/1/2019 6:30:06 AM	46480

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E80
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 3

Project: State V CTB C

Collection Date: 7/26/2019 8:20:00 AM

Lab ID: 1907E80-002

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	1400	60		mg/Kg	20	8/1/2019 9:54:23 PM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/1/2019 6:58:59 AM	46480
Surr: BFB	94.7	70-130		%Rec	1	8/1/2019 6:58:59 AM	46480
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	28	9.3		mg/Kg	1	8/5/2019 10:15:11 PM	46512
Motor Oil Range Organics (MRO)	140	47		mg/Kg	1	8/5/2019 10:15:11 PM	46512
Surr: DNOP	98.0	70-130		%Rec	1	8/5/2019 10:15:11 PM	46512
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.024		mg/Kg	1	8/1/2019 6:58:59 AM	46480
Toluene	ND	0.048		mg/Kg	1	8/1/2019 6:58:59 AM	46480
Ethylbenzene	ND	0.048		mg/Kg	1	8/1/2019 6:58:59 AM	46480
Xylenes, Total	ND	0.095		mg/Kg	1	8/1/2019 6:58:59 AM	46480
Surr: 1,2-Dichloroethane-d4	82.3	70-130		%Rec	1	8/1/2019 6:58:59 AM	46480
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	8/1/2019 6:58:59 AM	46480
Surr: Dibromofluoromethane	84.3	70-130		%Rec	1	8/1/2019 6:58:59 AM	46480
Surr: Toluene-d8	99.1	70-130		%Rec	1	8/1/2019 6:58:59 AM	46480

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E80
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 4

Project: State V CTB C

Collection Date: 7/26/2019 8:25:00 AM

Lab ID: 1907E80-003

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	970	60		mg/Kg	20	8/1/2019 10:06:47 PM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 12:03:44 PM	46480
Surr: BFB	86.2	70-130		%Rec	1	8/1/2019 12:03:44 PM	46480
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	33	10		mg/Kg	1	8/5/2019 11:28:42 PM	46512
Motor Oil Range Organics (MRO)	160	51		mg/Kg	1	8/5/2019 11:28:42 PM	46512
Surr: DNOP	96.1	70-130		%Rec	1	8/5/2019 11:28:42 PM	46512
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.024		mg/Kg	1	8/1/2019 12:03:44 PM	46480
Toluene	ND	0.049		mg/Kg	1	8/1/2019 12:03:44 PM	46480
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 12:03:44 PM	46480
Xylenes, Total	ND	0.097		mg/Kg	1	8/1/2019 12:03:44 PM	46480
Surr: 1,2-Dichloroethane-d4	87.6	70-130		%Rec	1	8/1/2019 12:03:44 PM	46480
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	1	8/1/2019 12:03:44 PM	46480
Surr: Dibromofluoromethane	90.3	70-130		%Rec	1	8/1/2019 12:03:44 PM	46480
Surr: Toluene-d8	95.2	70-130		%Rec	1	8/1/2019 12:03:44 PM	46480

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E80
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 5

Project: State V CTB C

Collection Date: 7/26/2019 8:30:00 AM

Lab ID: 1907E80-004

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	1300	61		mg/Kg	20	8/1/2019 10:44:01 PM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 1:02:48 PM	46480
Surr: BFB	86.4	70-130		%Rec	1	8/1/2019 1:02:48 PM	46480
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	29	10		mg/Kg	1	8/6/2019 1:55:24 AM	46512
Motor Oil Range Organics (MRO)	150	50		mg/Kg	1	8/6/2019 1:55:24 AM	46512
Surr: DNOP	82.7	70-130		%Rec	1	8/6/2019 1:55:24 AM	46512
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.024		mg/Kg	1	8/1/2019 1:02:48 PM	46480
Toluene	ND	0.049		mg/Kg	1	8/1/2019 1:02:48 PM	46480
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 1:02:48 PM	46480
Xylenes, Total	ND	0.098		mg/Kg	1	8/1/2019 1:02:48 PM	46480
Surr: 1,2-Dichloroethane-d4	89.6	70-130		%Rec	1	8/1/2019 1:02:48 PM	46480
Surr: 4-Bromofluorobenzene	94.7	70-130		%Rec	1	8/1/2019 1:02:48 PM	46480
Surr: Dibromofluoromethane	89.4	70-130		%Rec	1	8/1/2019 1:02:48 PM	46480
Surr: Toluene-d8	88.1	70-130		%Rec	1	8/1/2019 1:02:48 PM	46480

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E80
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 6

Project: State V CTB C

Collection Date: 7/26/2019 8:35:00 AM

Lab ID: 1907E80-005

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	1000	60		mg/Kg	20	8/1/2019 10:56:25 PM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 1:32:28 PM	46480
Surr: BFB	92.3	70-130		%Rec	1	8/1/2019 1:32:28 PM	46480
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	36	10		mg/Kg	1	8/6/2019 12:42:03 AM	46512
Motor Oil Range Organics (MRO)	200	51		mg/Kg	1	8/6/2019 12:42:03 AM	46512
Surr: DNOP	89.2	70-130		%Rec	1	8/6/2019 12:42:03 AM	46512
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.024		mg/Kg	1	8/1/2019 1:32:28 PM	46480
Toluene	ND	0.049		mg/Kg	1	8/1/2019 1:32:28 PM	46480
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 1:32:28 PM	46480
Xylenes, Total	ND	0.097		mg/Kg	1	8/1/2019 1:32:28 PM	46480
Surr: 1,2-Dichloroethane-d4	89.4	70-130		%Rec	1	8/1/2019 1:32:28 PM	46480
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	8/1/2019 1:32:28 PM	46480
Surr: Dibromofluoromethane	88.6	70-130		%Rec	1	8/1/2019 1:32:28 PM	46480
Surr: Toluene-d8	95.3	70-130		%Rec	1	8/1/2019 1:32:28 PM	46480

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E80

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB C

Sample ID: MB-46547	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 46547	RunNo: 61834								
Prep Date: 8/1/2019	Analysis Date: 8/1/2019	SeqNo: 2097049	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-46547	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 46547	RunNo: 61834								
Prep Date: 8/1/2019	Analysis Date: 8/1/2019	SeqNo: 2097050	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.3	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E80

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB C

Sample ID: LCS-46481	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 46481	RunNo: 61770								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2094814	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	105	63.9	124			
Surr: DNOP	4.8		5.000		96.3	70	130			

Sample ID: MB-46481	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 46481	RunNo: 61770								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2094815	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		98.8	70	130			

Sample ID: LCS-46512	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 46512	RunNo: 61831								
Prep Date: 7/31/2019	Analysis Date: 8/1/2019	SeqNo: 2096582	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	63.9	124			
Surr: DNOP	4.0		5.000		79.1	70	130			

Sample ID: MB-46512	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 46512	RunNo: 61831								
Prep Date: 7/31/2019	Analysis Date: 8/1/2019	SeqNo: 2096583	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		87.8	70	130			

Sample ID: 1907F27-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 46537	RunNo: 61864								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097833	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		4.735		106	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E80

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB C

Sample ID: 1907F27-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 46537	RunNo: 61864								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097834	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		4.575		104	70	130	0	0	

Sample ID: LCS-46537	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 46537	RunNo: 61864								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097873	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		5.000		95.9	70	130			

Sample ID: MB-46537	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 46537	RunNo: 61864								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097875	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		105	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E80

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB C

Sample ID: mb-46480		SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: PBS		Batch ID: 46480		RunNo: 61819						
Prep Date: 7/30/2019		Analysis Date: 7/31/2019		SeqNo: 2095794		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		86.4	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.1	70	130			
Surr: Dibromofluoromethane	0.43		0.5000		86.5	70	130			
Surr: Toluene-d8	0.47		0.5000		94.5	70	130			

Sample ID: ics-46480		SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: LCSS		Batch ID: 46480		RunNo: 61819						
Prep Date: 7/30/2019		Analysis Date: 7/31/2019		SeqNo: 2095795		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	105	70	130			
Toluene	0.96	0.050	1.000	0	95.8	70	130			
Ethylbenzene	0.97	0.050	1.000	0	96.5	70	130			
Xylenes, Total	3.0	0.10	3.000	0	98.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		88.8	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		95.0	70	130			
Surr: Dibromofluoromethane	0.44		0.5000		87.4	70	130			
Surr: Toluene-d8	0.48		0.5000		95.3	70	130			

Sample ID: 1907e79-001ams		SampType: MS		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: BatchQC		Batch ID: 46480		RunNo: 61819						
Prep Date: 7/30/2019		Analysis Date: 8/1/2019		SeqNo: 2095815		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9747	0	104	68.9	131			
Toluene	0.97	0.049	0.9747	0	99.2	64.3	137			
Ethylbenzene	0.95	0.049	0.9747	0	97.2	70	130			
Xylenes, Total	3.0	0.097	2.924	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	0.41		0.4873		83.4	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.4873		97.4	70	130			
Surr: Dibromofluoromethane	0.42		0.4873		86.7	70	130			
Surr: Toluene-d8	0.47		0.4873		96.1	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E80

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB C

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9785	0	107	68.9	131	2.79	20	
Toluene	1.0	0.049	0.9785	0	102	64.3	137	3.11	20	
Ethylbenzene	0.95	0.049	0.9785	0	97.2	70	130	0.369	0	
Xylenes, Total	3.0	0.098	2.935	0	103	70	130	0.143	0	
Surr: 1,2-Dichloroethane-d4	0.44		0.4892		89.2	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.47		0.4892		96.3	70	130	0	0	
Surr: Dibromofluoromethane	0.44		0.4892		90.6	70	130	0	0	
Surr: Toluene-d8	0.47		0.4892		96.2	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E80

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB C

Sample ID: mb-46480	SampType: MBLK		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: PBS	Batch ID: 46480		RunNo: 61819							
Prep Date: 7/30/2019	Analysis Date: 7/31/2019		SeqNo: 2095872		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	450		500.0		90.8	70	130			

Sample ID: lcs-46480	SampType: LCS		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: LCSS	Batch ID: 46480		RunNo: 61819							
Prep Date: 7/30/2019	Analysis Date: 7/31/2019		SeqNo: 2095873		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.2	70	130			
Surr: BFB	460		500.0		92.8	70	130			

Sample ID: 1907d83-002ams	SampType: MS		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: BatchQC	Batch ID: 46480		RunNo: 61819							
Prep Date: 7/30/2019	Analysis Date: 7/31/2019		SeqNo: 2095877		Units: mg/Kg-dry					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.7	28.48	0	98.9	68.2	135			
Surr: BFB	530		569.6		93.5	70	130			

Sample ID: 1907d83-002amsd	SampType: MSD		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: BatchQC	Batch ID: 46480		RunNo: 61819							
Prep Date: 7/30/2019	Analysis Date: 7/31/2019		SeqNo: 2095879		Units: mg/Kg-dry					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.4	26.97	0	101	68.2	135	3.16	20	
Surr: BFB	520		539.4		97.3	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Sample Log-In Check List

Client Name: **CAPROCK SERVICES, L** Work Order Number: **1907E80** RcptNo: 1

Received By: *Daniel M* 7/30/2019 8:43:00 AM

Completed By: **Leah Baca** 7/30/2019 10:21:47 AM

Reviewed By: *DAD 7/30/19*

Leah Baca

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH:
 (<2 or >12 unless noted)
 Adjusted?
 Checked by: *mg 07/30/19*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.5	Good	Yes			
2	6.6	Good	Yes			
3	3.8	Good	Yes			

Chain-of-Custody Record

Client: Caprock Services

Mailing Address: P.O. Box 457

Lovington NM 88260

Phone #: (575) 704-2718

email or Fax#: CaprockServices56@gmail.com

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation: Az Compliance Other NMDCD Eq.

NELAC EDD (Type)

Turn-Around Time: 5 day Standard Rush

Project Name: State VCTB - C

Project #:

Project Manager: Joel Lowry

Sampler: Matt Taylor

On Ice: Yes No

of Coolers: 3

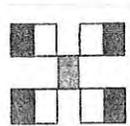
Cooler Temp (including CP): 3.6-0.1=3.5°C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
7-26-19	0815	Soil	FLOOR 2	4oz glass	ICE	1907ER0-001
"	0820	"	FLOOR 3	~	~	-002
"	0825	"	FLOOR 4	~	~	-003
"	0830	"	FLOOR 5	~	~	-004
"	0835	"	FLOOR 6	~	~	-005

Date: 7/29/19 Time: 0630 Relinquished by: [Signature]

Date: 7/29/19 Time: 0630 Relinquished by: [Signature]

Date: 7/30/19 Time: 0630 Relinquished by: Daniel Marquez Courier



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Analysis Request	Analysis Request
8081 Pesticides/8082 PCB's	
TPH:8015D(GRO / DRO / MRO)	
BTEX / MTBE / TMB's (8021)	X
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	X
CF, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	X
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	

Remarks: Caprock Services 56 @ Gmail.com

Code: 1 3.6-0.1=3.5°C
2 6.7-0.1=3.5°C
3 3.9-0.1=3.8°C

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 05, 2019

Joel Lowry
Caprock Services, LLC
PO Box 457
Lovington, NM 88260
TEL: (575) 704-2718
FAX

RE: State V CTB D

OrderNo.: 1907E79

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/30/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1907E79

Date Reported: 8/5/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 2

Project: State V CTB D

Collection Date: 7/26/2019 8:05:00 AM

Lab ID: 1907E79-001

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/31/2019 7:08:05 PM
Motor Oil Range Organics (MRO)	ND	52		mg/Kg	1	7/31/2019 7:08:05 PM
Surr: DNOP	96.9	70-130		%Rec	1	7/31/2019 7:08:05 PM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	2500	150		mg/Kg	50	8/2/2019 5:31:34 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: DJF
Benzene	ND	0.025		mg/Kg	1	8/1/2019 4:33:39 AM
Toluene	ND	0.049		mg/Kg	1	8/1/2019 4:33:39 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 4:33:39 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/1/2019 4:33:39 AM
Surr: 1,2-Dichloroethane-d4	83.7	70-130		%Rec	1	8/1/2019 4:33:39 AM
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	8/1/2019 4:33:39 AM
Surr: Dibromofluoromethane	86.1	70-130		%Rec	1	8/1/2019 4:33:39 AM
Surr: Toluene-d8	95.5	70-130		%Rec	1	8/1/2019 4:33:39 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 4:33:39 AM
Surr: BFB	90.0	70-130		%Rec	1	8/1/2019 4:33:39 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1907E79

Date Reported: 8/5/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 3

Project: State V CTB D

Collection Date: 7/26/2019 8:10:00 AM

Lab ID: 1907E79-002

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: TOM
Diesel Range Organics (DRO)	18	10		mg/Kg	1	8/3/2019 5:46:49 AM
Motor Oil Range Organics (MRO)	140	51		mg/Kg	1	8/3/2019 5:46:49 AM
Surr: DNOP	85.0	70-130		%Rec	1	8/3/2019 5:46:49 AM
EPA METHOD 300.0: ANIONS						Analyst: MRA
Chloride	4200	150		mg/Kg	50	8/2/2019 5:43:59 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: DJF
Benzene	ND	0.025		mg/Kg	1	8/1/2019 6:01:10 AM
Toluene	ND	0.050		mg/Kg	1	8/1/2019 6:01:10 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/1/2019 6:01:10 AM
Xylenes, Total	ND	0.10		mg/Kg	1	8/1/2019 6:01:10 AM
Surr: 1,2-Dichloroethane-d4	84.8	70-130		%Rec	1	8/1/2019 6:01:10 AM
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	8/1/2019 6:01:10 AM
Surr: Dibromofluoromethane	85.2	70-130		%Rec	1	8/1/2019 6:01:10 AM
Surr: Toluene-d8	100	70-130		%Rec	1	8/1/2019 6:01:10 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: DJF
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/1/2019 6:01:10 AM
Surr: BFB	98.2	70-130		%Rec	1	8/1/2019 6:01:10 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH Not In Range
 RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E79

05-Aug-19

Client: Caprock Services, LLC

Project: State V CTB D

Sample ID: MB-46544	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 46544	RunNo: 61848								
Prep Date: 8/1/2019	Analysis Date: 8/1/2019	SeqNo: 2096889	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-46544	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 46544	RunNo: 61848								
Prep Date: 8/1/2019	Analysis Date: 8/1/2019	SeqNo: 2096890	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.9	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E79

05-Aug-19

Client: Caprock Services, LLC

Project: State V CTB D

Sample ID: LCS-46481	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 46481	RunNo: 61770								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2094814	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	105	63.9	124			
Surr: DNOP	4.8		5.000		96.3	70	130			

Sample ID: MB-46481	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 46481	RunNo: 61770								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2094815	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		98.8	70	130			

Sample ID: LCS-46512	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 46512	RunNo: 61831								
Prep Date: 7/31/2019	Analysis Date: 8/1/2019	SeqNo: 2096582	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.0		5.000		79.1	70	130			

Sample ID: MB-46512	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 46512	RunNo: 61831								
Prep Date: 7/31/2019	Analysis Date: 8/1/2019	SeqNo: 2096583	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.8		10.00		87.8	70	130			

Sample ID: LCS-46536	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 46536	RunNo: 61831								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097810	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		98.4	70	130			

Sample ID: MB-46536	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 46536	RunNo: 61831								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097812	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	13		10.00		133	70	130			S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E79

05-Aug-19

Client: Caprock Services, LLC

Project: State V CTB D

Sample ID: mb-46480	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: 46480	RunNo: 61819								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095794	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		86.4	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.1	70	130			
Surr: Dibromofluoromethane	0.43		0.5000		86.5	70	130			
Surr: Toluene-d8	0.47		0.5000		94.5	70	130			

Sample ID: ics-46480	SampType: LCS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSS	Batch ID: 46480	RunNo: 61819								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095795	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	105	70	130			
Toluene	0.96	0.050	1.000	0	95.8	70	130			
Ethylbenzene	0.97	0.050	1.000	0	96.5	70	130			
Xylenes, Total	3.0	0.10	3.000	0	98.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		88.8	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		95.0	70	130			
Surr: Dibromofluoromethane	0.44		0.5000		87.4	70	130			
Surr: Toluene-d8	0.48		0.5000		95.3	70	130			

Sample ID: 1907e79-001ams	SampType: MS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: Floor 2	Batch ID: 46480	RunNo: 61819								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095815	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9747	0	104	68.9	131			
Toluene	0.97	0.049	0.9747	0	99.2	64.3	137			
Ethylbenzene	0.95	0.049	0.9747	0	97.2	70	130			
Xylenes, Total	3.0	0.097	2.924	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	0.41		0.4873		83.4	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.4873		97.4	70	130			
Surr: Dibromofluoromethane	0.42		0.4873		86.7	70	130			
Surr: Toluene-d8	0.47		0.4873		96.1	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E79

05-Aug-19

Client: Caprock Services, LLC

Project: State V CTB D

Sample ID: 1907e79-001amsd	SampType: MSD	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: Floor 2	Batch ID: 46480	RunNo: 61819								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095826 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9785	0	107	68.9	131	2.79	20	
Toluene	1.0	0.049	0.9785	0	102	64.3	137	3.11	20	
Ethylbenzene	0.95	0.049	0.9785	0	97.2	70	130	0.369	0	
Xylenes, Total	3.0	0.098	2.935	0	103	70	130	0.143	0	
Surr: 1,2-Dichloroethane-d4	0.44		0.4892		89.2	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.47		0.4892		96.3	70	130	0	0	
Surr: Dibromofluoromethane	0.44		0.4892		90.6	70	130	0	0	
Surr: Toluene-d8	0.47		0.4892		96.2	70	130	0	0	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E79

05-Aug-19

Client: Caprock Services, LLC

Project: State V CTB D

Sample ID: mb-46480	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 46480	RunNo: 61819								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095872	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	450		500.0		90.8	70	130			

Sample ID: ics-46480	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 46480	RunNo: 61819								
Prep Date: 7/30/2019	Analysis Date: 7/31/2019	SeqNo: 2095873	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.2	70	130			
Surr: BFB	460		500.0		92.8	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Sample Log-In Check List

Client Name: **CAPROCK SERVICES, L**

Work Order Number: **1907E79**

RcptNo: **1**

Received By: *Daniel M* **7/30/2019 8:43:00 AM**

Completed By: **Leah Baca** **7/30/2019 10:24:48 AM**

Reviewed By: *DAD 7/30/19*

Leah Baca

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: *ng 07/30/19*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.5	Good	Yes			
2	6.6	Good	Yes			
3	3.8	Good	Yes			

Chain-of-Custody Record

Client: Caprock Services

Mailing Address: P.O. Box 457

Livingston NM 88260

Phone #: (575) 704-2718

email or Fax#: CaprockServicesSlk@gmail.com

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation: AZ Compliance NELAC Other NMDCD Eq.

EDD (Type)

Turn-Around Time: 5 day

Standard Rush

Project Name: State VCTB-D

Project #:

Project Manager: Joel Lowry

Sampler: Matt Taylor

On Ice: Yes No

of Coolers: 3

Cooler Temp (including CP): 3.6-0.1 = 3.5°C

Container Type and #

Preservative Type

HEAL No.

4oz glass ICE 1907-ETG -001

" " " -002

Date

Matrix

Sample Name

7-26-19 0805 Soil Floor 2

" 0810 Soil Floor 3

Date: 7/29/19

Time: 0630

Relinquished by: [Signature]

Date: 7/29/19

Time: 1900

Relinquished by: M.S.H.

Received by: [Signature]

Date: 7/29/19

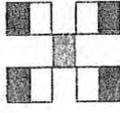
Time: 0630

Received by: [Signature]

Date: 7/30/19

Time: 8:43

Devine Marquez



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

801 Pesticides/802 PCBs	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	CF, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
<input checked="" type="checkbox"/> (TP) 8015D (GRO / DRO / MRO)				<input checked="" type="checkbox"/>			
<input checked="" type="checkbox"/> (BTEX) MTBE / TMB's (8021)				<input checked="" type="checkbox"/>			

Remarks: Caprock Services Slk @ gmail.com

cooler
1 3.6 - 0.1 = 3.5°C
2 4.7 - 0.1 = 4.6°C
3 3.9 - 0.1 = 3.8°C



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 06, 2019

Joel Lowry
Caprock Services, LLC
PO Box 457
Lovington, NM 88260
TEL: (575) 704-2718
FAX:

RE: State V CTB E

OrderNo.: 1907E78

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/30/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1907E78
 Date Reported: 8/6/2019

CLIENT: Caprock Services, LLC

Client Sample ID: Floor 2

Project: State V CTB E

Collection Date: 7/26/2019 8:00:00 AM

Lab ID: 1907E78-001

Matrix: SOIL

Received Date: 7/30/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	3500	150		mg/Kg	50	8/2/2019 5:19:09 PM	46547
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: JMR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/1/2019 4:17:26 AM	46491
Surr: BFB	92.2	70-130		%Rec	1	8/1/2019 4:17:26 AM	46491
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/2/2019 11:09:17 AM	46535
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/2/2019 11:09:17 AM	46535
Surr: DNOP	137	70-130	S	%Rec	1	8/2/2019 11:09:17 AM	46535
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: JMR
Benzene	ND	0.024		mg/Kg	1	8/1/2019 4:17:26 AM	46491
Toluene	ND	0.049		mg/Kg	1	8/1/2019 4:17:26 AM	46491
Ethylbenzene	ND	0.049		mg/Kg	1	8/1/2019 4:17:26 AM	46491
Xylenes, Total	ND	0.097		mg/Kg	1	8/1/2019 4:17:26 AM	46491
Surr: 1,2-Dichloroethane-d4	97.9	70-130		%Rec	1	8/1/2019 4:17:26 AM	46491
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	8/1/2019 4:17:26 AM	46491
Surr: Dibromofluoromethane	104	70-130		%Rec	1	8/1/2019 4:17:26 AM	46491
Surr: Toluene-d8	97.7	70-130		%Rec	1	8/1/2019 4:17:26 AM	46491

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E78

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB E

Sample ID: MB-46547	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 46547	RunNo: 61834								
Prep Date: 8/1/2019	Analysis Date: 8/1/2019	SeqNo: 2097049	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-46547	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 46547	RunNo: 61834								
Prep Date: 8/1/2019	Analysis Date: 8/1/2019	SeqNo: 2097050	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.3	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E78

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB E

Sample ID: LCS-46512	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 46512	RunNo: 61831								
Prep Date: 7/31/2019	Analysis Date: 8/1/2019	SeqNo: 2096582	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.0		5.000		79.1	70	130			

Sample ID: MB-46512	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 46512	RunNo: 61831								
Prep Date: 7/31/2019	Analysis Date: 8/1/2019	SeqNo: 2096583	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.8		10.00		87.8	70	130			

Sample ID: 1907E78-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: Floor 2	Batch ID: 46535	RunNo: 61831								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097766	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	64	9.6	48.08	0	133	57	142			
Surr: DNOP	6.4		4.808		134	70	130			S

Sample ID: 1907E78-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: Floor 2	Batch ID: 46535	RunNo: 61831								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097767	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	67	10	49.80	0	135	57	142	5.00	20	
Surr: DNOP	6.6		4.980		133	70	130	0	0	S

Sample ID: LCS-46535	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 46535	RunNo: 61831								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097809	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.0	63.9	124			
Surr: DNOP	4.7		5.000		94.9	70	130			

Sample ID: MB-46535	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 46535	RunNo: 61831								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097811	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E78

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB E

Sample ID: MB-46535	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 46535	RunNo: 61831								
Prep Date: 8/1/2019	Analysis Date: 8/2/2019	SeqNo: 2097811			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	13		10.00		135	70	130			S

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E78

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB E

Sample ID: ics-46491		SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: LCSS		Batch ID: 46491		RunNo: 61815						
Prep Date: 7/30/2019		Analysis Date: 8/1/2019		SeqNo: 2095750		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.5	70	130			
Toluene	1.0	0.050	1.000	0	100	70	130			
Ethylbenzene	1.0	0.050	1.000	0	99.9	70	130			
Xylenes, Total	3.1	0.10	3.000	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.7	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		102	70	130			
Surr: Toluene-d8	0.50		0.5000		99.5	70	130			

Sample ID: mb-46491		SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: PBS		Batch ID: 46491		RunNo: 61815						
Prep Date: 7/30/2019		Analysis Date: 8/1/2019		SeqNo: 2095751		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		96.2	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.50		0.5000		101	70	130			
Surr: Toluene-d8	0.50		0.5000		99.9	70	130			

Sample ID: 1907e81-001ams		SampType: MS		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: BatchQC		Batch ID: 46491		RunNo: 61815						
Prep Date: 7/30/2019		Analysis Date: 8/1/2019		SeqNo: 2095763		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	0.9940	0	93.7	68.9	131			
Toluene	1.0	0.050	0.9940	0	105	64.3	137			
Ethylbenzene	1.1	0.050	0.9940	0	107	70	130			
Xylenes, Total	3.1	0.099	2.982	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.4970		95.4	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.4970		100	70	130			
Surr: Dibromofluoromethane	0.47		0.4970		95.0	70	130			
Surr: Toluene-d8	0.49		0.4970		99.3	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E78

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB E

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	0.9901	0	92.0	68.9	131	2.21	20	
Toluene	1.0	0.050	0.9901	0	102	64.3	137	3.02	20	
Ethylbenzene	1.0	0.050	0.9901	0	105	70	130	2.13	0	
Xylenes, Total	3.1	0.099	2.970	0	104	70	130	1.89	0	
Surr: 1,2-Dichloroethane-d4	0.48		0.4950		96.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.50		0.4950		101	70	130	0	0	
Surr: Dibromofluoromethane	0.46		0.4950		93.0	70	130	0	0	
Surr: Toluene-d8	0.48		0.4950		97.4	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1907E78

06-Aug-19

Client: Caprock Services, LLC

Project: State V CTB E

Sample ID: Ics-46491	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095774	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	81.0	70	130			
Surr: BFB	480		500.0		95.5	70	130			

Sample ID: mb-46491	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095775	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	480		500.0		95.5	70	130			

Sample ID: 1907e78-001ams	SampType: MS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: Floor 2	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095778	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	24.78	0	84.0	68.2	135			
Surr: BFB	480		495.5		97.8	70	130			

Sample ID: 1907e78-001amsd	SampType: MSD	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: Floor 2	Batch ID: 46491	RunNo: 61815								
Prep Date: 7/30/2019	Analysis Date: 8/1/2019	SeqNo: 2095779	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.6	23.00	0	81.4	68.2	135	10.6	20	
Surr: BFB	430		460.0		93.9	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Sample Log-In Check List

Client Name: **CAPROCK SERVICES, L**

Work Order Number: **1907E78**

RcptNo: 1

Received By: *Daniel M* 7/30/2019 8:43:00 AM

Completed By: **Leah Baca** 7/30/2019 10:26:48 AM

Reviewed By: *DAD 7/30/19*

Leah Baca

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No Approved by client.
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
- (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
- (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: *my 07/30/19*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.5	Good	Yes			
2	6.6	Good	Yes			
3	3.8	Good	Yes			

Chain-of-Custody Record

Client: Caprock Services
 Mailing Address: P.O. Box 4157
Livingston NM 88260
 Phone #: (575) 704-2718
 email or Fax#: caprockservices56@gmail.com

QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: Az Compliance Other NMDCD Eq.
 NELAC EDD (Type)

Turn-Around Time: 5 day
 Standard Rush

Project Name: State V CTB-E
 Project #:

Project Manager: Joel Lowry
 Sampler: Matt Taylor
 On Ice: Yes No
 # of Coolers: 3
 Cooler Temp (including CF): 3.8-0.1-3.5c

Container Type and #: 402 glass ICE
 Preservative Type: ICE
 HEAL No. 1907E7X
-001

Date: 7/26/19 Time: 0630
 Relinquished by: [Signature]
 Date: 7/29/19 Time: 1900
 Relinquished by: [Signature]

Received by: [Signature] Date: 7/29/19 Time: 0630
 Received by: [Signature] Date: 7/30/19 Time: 8:43
 Daniel Murguez courses 7/30/19 8:43

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request	
<input checked="" type="checkbox"/> BTEX / MTBE / TMB's (8021)	
<input checked="" type="checkbox"/> TPH8015D(GRO / DRO / MRO)	
8081 Pesticides/8082 PCBs	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	
<input checked="" type="checkbox"/> Cl ₂ , F ₂ , Br ₂ , NO ₃ , NO ₂ , PO ₄ , SO ₄	
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	

Remarks: Caprock Services 56 @ Gmail.com
CO-6 ✓ 1 3.6-0.1 = 3.5c
2 6.7-0.1 = 6.6c
3 3.9-0.1 = 3.8c

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 10, 2019

Joel Lowry
Vanguard Operating
4001 Penbrook Ste.201
Odessa, TX 79762
TEL:
FAX:

RE: State V CTB-A

OrderNo.: 1905E11

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 15 sample(s) on 5/30/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: NW #1

Project: State V CTB-A

Collection Date: 5/28/2019 9:00:00 AM

Lab ID: 1905E11-001

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	530	59		mg/Kg	20	6/3/2019 4:18:23 PM	45328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/3/2019 7:15:52 PM	45297
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/3/2019 7:15:52 PM	45297
Surr: DNOP	96.7	70-130		%Rec	1	6/3/2019 7:15:52 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/31/2019 4:03:47 PM	45283
Surr: BFB	95.6	73.8-119		%Rec	1	5/31/2019 4:03:47 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 4:03:47 PM	45283
Toluene	ND	0.050		mg/Kg	1	5/31/2019 4:03:47 PM	45283
Ethylbenzene	ND	0.050		mg/Kg	1	5/31/2019 4:03:47 PM	45283
Xylenes, Total	ND	0.10		mg/Kg	1	5/31/2019 4:03:47 PM	45283
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	5/31/2019 4:03:47 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: NW #2

Project: State V CTB-A

Collection Date: 5/28/2019 9:05:00 AM

Lab ID: 1905E11-002

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	530	60		mg/Kg	20	6/3/2019 4:55:36 PM	45328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	24	9.0		mg/Kg	1	6/5/2019 3:13:30 PM	45297
Motor Oil Range Organics (MRO)	92	45		mg/Kg	1	6/5/2019 3:13:30 PM	45297
Surr: DNOP	116	70-130		%Rec	1	6/5/2019 3:13:30 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 4:27:25 PM	45283
Surr: BFB	94.2	73.8-119		%Rec	1	5/31/2019 4:27:25 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 4:27:25 PM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 4:27:25 PM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 4:27:25 PM	45283
Xylenes, Total	ND	0.099		mg/Kg	1	5/31/2019 4:27:25 PM	45283
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	5/31/2019 4:27:25 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: WW #1

Project: State V CTB-A

Collection Date: 5/28/2019 9:10:00 AM

Lab ID: 1905E11-003

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/3/2019 5:08:01 PM	45328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	12	9.9		mg/Kg	1	6/5/2019 3:37:52 PM	45297
Motor Oil Range Organics (MRO)	90	49		mg/Kg	1	6/5/2019 3:37:52 PM	45297
Surr: DNOP	119	70-130		%Rec	1	6/5/2019 3:37:52 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 4:51:04 PM	45283
Surr: BFB	92.3	73.8-119		%Rec	1	5/31/2019 4:51:04 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/31/2019 4:51:04 PM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 4:51:04 PM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 4:51:04 PM	45283
Xylenes, Total	ND	0.098		mg/Kg	1	5/31/2019 4:51:04 PM	45283
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	5/31/2019 4:51:04 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: WW #2

Project: State V CTB-A

Collection Date: 5/28/2019 9:15:00 AM

Lab ID: 1905E11-004

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	480	60		mg/Kg	20	6/3/2019 5:20:26 PM	45328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/3/2019 7:40:36 PM	45297
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/3/2019 7:40:36 PM	45297
Surr: DNOP	88.0	70-130		%Rec	1	6/3/2019 7:40:36 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 5:14:44 PM	45283
Surr: BFB	95.6	73.8-119		%Rec	1	5/31/2019 5:14:44 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 5:14:44 PM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 5:14:44 PM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 5:14:44 PM	45283
Xylenes, Total	ND	0.099		mg/Kg	1	5/31/2019 5:14:44 PM	45283
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	5/31/2019 5:14:44 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: WW #3

Project: State V CTB-A

Collection Date: 5/28/2019 9:20:00 AM

Lab ID: 1905E11-005

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/3/2019 5:32:50 PM	45328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/5/2019 4:02:06 PM	45297
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/5/2019 4:02:06 PM	45297
Surr: DNOP	93.5	70-130		%Rec	1	6/5/2019 4:02:06 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 5:38:28 PM	45283
Surr: BFB	94.9	73.8-119		%Rec	1	5/31/2019 5:38:28 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 5:38:28 PM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 5:38:28 PM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 5:38:28 PM	45283
Xylenes, Total	ND	0.098		mg/Kg	1	5/31/2019 5:38:28 PM	45283
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	5/31/2019 5:38:28 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: SW #1

Project: State V CTB-A

Collection Date: 5/28/2019 9:25:00 AM

Lab ID: 1905E11-006

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	6/5/2019 2:02:06 PM	45384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	70	9.9		mg/Kg	1	6/6/2019 10:43:19 AM	45302
Motor Oil Range Organics (MRO)	320	50		mg/Kg	1	6/6/2019 10:43:19 AM	45302
Surr: DNOP	74.4	70-130		%Rec	1	6/6/2019 10:43:19 AM	45302
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 6:02:13 PM	45283
Surr: BFB	92.2	73.8-119		%Rec	1	5/31/2019 6:02:13 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 6:02:13 PM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 6:02:13 PM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 6:02:13 PM	45283
Xylenes, Total	ND	0.099		mg/Kg	1	5/31/2019 6:02:13 PM	45283
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	5/31/2019 6:02:13 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: SW #2

Project: State V CTB-A

Collection Date: 5/28/2019 9:30:00 AM

Lab ID: 1905E11-007

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	61	60		mg/Kg	20	6/5/2019 2:39:20 PM	45384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/6/2019 11:13:58 AM	45302
Motor Oil Range Organics (MRO)	66	49		mg/Kg	1	6/6/2019 11:13:58 AM	45302
Surr: DNOP	81.7	70-130		%Rec	1	6/6/2019 11:13:58 AM	45302
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 6:26:00 PM	45283
Surr: BFB	91.8	73.8-119		%Rec	1	5/31/2019 6:26:00 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 6:26:00 PM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 6:26:00 PM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 6:26:00 PM	45283
Xylenes, Total	ND	0.099		mg/Kg	1	5/31/2019 6:26:00 PM	45283
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	5/31/2019 6:26:00 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: SW #3

Project: State V CTB-A

Collection Date: 5/28/2019 9:35:00 AM

Lab ID: 1905E11-008

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	120	60		mg/Kg	20	6/5/2019 2:51:45 PM	45384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/6/2019 11:36:12 AM	45302
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/6/2019 11:36:12 AM	45302
Surr: DNOP	52.5	70-130	S	%Rec	1	6/6/2019 11:36:12 AM	45302
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/31/2019 6:49:42 PM	45283
Surr: BFB	92.0	73.8-119		%Rec	1	5/31/2019 6:49:42 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 6:49:42 PM	45283
Toluene	ND	0.050		mg/Kg	1	5/31/2019 6:49:42 PM	45283
Ethylbenzene	ND	0.050		mg/Kg	1	5/31/2019 6:49:42 PM	45283
Xylenes, Total	ND	0.099		mg/Kg	1	5/31/2019 6:49:42 PM	45283
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	5/31/2019 6:49:42 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: EW #1

Project: State V CTB-A

Collection Date: 5/28/2019 9:40:00 AM

Lab ID: 1905E11-009

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	220	60		mg/Kg	20	6/5/2019 3:04:10 PM	45384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	79	9.7		mg/Kg	1	6/5/2019 5:39:32 PM	45302
Motor Oil Range Organics (MRO)	280	49		mg/Kg	1	6/5/2019 5:39:32 PM	45302
Surr: DNOP	79.2	70-130		%Rec	1	6/5/2019 5:39:32 PM	45302
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 7:13:20 PM	45283
Surr: BFB	88.7	73.8-119		%Rec	1	5/31/2019 7:13:20 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/31/2019 7:13:20 PM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 7:13:20 PM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 7:13:20 PM	45283
Xylenes, Total	ND	0.098		mg/Kg	1	5/31/2019 7:13:20 PM	45283
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	5/31/2019 7:13:20 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: EW #2

Project: State V CTB-A

Collection Date: 5/28/2019 9:45:00 AM

Lab ID: 1905E11-010

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	260	60		mg/Kg	20	6/5/2019 3:41:24 PM	45384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	52	9.9		mg/Kg	1	6/6/2019 11:32:25 AM	45302
Motor Oil Range Organics (MRO)	230	49		mg/Kg	1	6/6/2019 11:32:25 AM	45302
Surr: DNOP	50.1	70-130	S	%Rec	1	6/6/2019 11:32:25 AM	45302
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 7:36:56 PM	45283
Surr: BFB	92.6	73.8-119		%Rec	1	5/31/2019 7:36:56 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 7:36:56 PM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 7:36:56 PM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 7:36:56 PM	45283
Xylenes, Total	ND	0.098		mg/Kg	1	5/31/2019 7:36:56 PM	45283
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	5/31/2019 7:36:56 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: EW #3

Project: State V CTB-A

Collection Date: 5/28/2019 9:50:00 AM

Lab ID: 1905E11-011

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	130	60		mg/Kg	20	6/5/2019 3:53:49 PM	45384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/6/2019 11:58:27 AM	45302
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/6/2019 11:58:27 AM	45302
Surr: DNOP	68.3	70-130	S	%Rec	1	6/6/2019 11:58:27 AM	45302
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 8:23:55 PM	45283
Surr: BFB	86.9	73.8-119		%Rec	1	5/31/2019 8:23:55 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 8:23:55 PM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 8:23:55 PM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 8:23:55 PM	45283
Xylenes, Total	ND	0.098		mg/Kg	1	5/31/2019 8:23:55 PM	45283
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	5/31/2019 8:23:55 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: Floor #1

Project: State V CTB-A

Collection Date: 5/28/2019 9:55:00 AM

Lab ID: 1905E11-012

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	70	60		mg/Kg	20	6/5/2019 4:06:14 PM	45384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	81	10		mg/Kg	1	6/6/2019 12:21:50 PM	45302
Motor Oil Range Organics (MRO)	590	50		mg/Kg	1	6/6/2019 12:21:50 PM	45302
Surr: DNOP	86.6	70-130		%Rec	1	6/6/2019 12:21:50 PM	45302
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 8:47:23 PM	45283
Surr: BFB	94.8	73.8-119		%Rec	1	5/31/2019 8:47:23 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/31/2019 8:47:23 PM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 8:47:23 PM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 8:47:23 PM	45283
Xylenes, Total	ND	0.098		mg/Kg	1	5/31/2019 8:47:23 PM	45283
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	5/31/2019 8:47:23 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: Floor #2

Project: State V CTB-A

Collection Date: 5/28/2019 10:00:00 AM

Lab ID: 1905E11-013

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	66	60		mg/Kg	20	6/5/2019 8:51:11 PM	45398
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	67	10		mg/Kg	1	6/6/2019 1:11:23 PM	45302
Motor Oil Range Organics (MRO)	500	50		mg/Kg	1	6/6/2019 1:11:23 PM	45302
Surr: DNOP	73.2	70-130		%Rec	1	6/6/2019 1:11:23 PM	45302
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/31/2019 10:56:59 PM	45287
Surr: BFB	92.1	73.8-119		%Rec	1	5/31/2019 10:56:59 PM	45287
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 10:56:59 PM	45287
Toluene	ND	0.050		mg/Kg	1	5/31/2019 10:56:59 PM	45287
Ethylbenzene	ND	0.050		mg/Kg	1	5/31/2019 10:56:59 PM	45287
Xylenes, Total	ND	0.10		mg/Kg	1	5/31/2019 10:56:59 PM	45287
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	5/31/2019 10:56:59 PM	45287

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: Floor #3

Project: State V CTB-A

Collection Date: 5/28/2019 10:05:00 AM

Lab ID: 1905E11-014

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	92	60		mg/Kg	20	6/5/2019 9:03:36 PM	45398
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/5/2019 8:06:42 PM	45302
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/5/2019 8:06:42 PM	45302
Surr: DNOP	82.6	70-130		%Rec	1	6/5/2019 8:06:42 PM	45302
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/1/2019 12:04:51 AM	45287
Surr: BFB	95.6	73.8-119		%Rec	1	6/1/2019 12:04:51 AM	45287
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/1/2019 12:04:51 AM	45287
Toluene	ND	0.050		mg/Kg	1	6/1/2019 12:04:51 AM	45287
Ethylbenzene	ND	0.050		mg/Kg	1	6/1/2019 12:04:51 AM	45287
Xylenes, Total	ND	0.10		mg/Kg	1	6/1/2019 12:04:51 AM	45287
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/1/2019 12:04:51 AM	45287

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E11

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: Floor #4

Project: State V CTB-A

Collection Date: 5/28/2019 10:10:00 AM

Lab ID: 1905E11-015

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	91	60		mg/Kg	20	6/5/2019 9:16:01 PM	45398
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/5/2019 8:31:17 PM	45302
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/5/2019 8:31:17 PM	45302
Surr: DNOP	88.4	70-130		%Rec	1	6/5/2019 8:31:17 PM	45302
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/1/2019 1:12:51 AM	45287
Surr: BFB	91.5	73.8-119		%Rec	1	6/1/2019 1:12:51 AM	45287
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/1/2019 1:12:51 AM	45287
Toluene	ND	0.049		mg/Kg	1	6/1/2019 1:12:51 AM	45287
Ethylbenzene	ND	0.049		mg/Kg	1	6/1/2019 1:12:51 AM	45287
Xylenes, Total	ND	0.099		mg/Kg	1	6/1/2019 1:12:51 AM	45287
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	6/1/2019 1:12:51 AM	45287

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E11

10-Jun-19

Client: Vanguard Operating
Project: State V CTB-A

Sample ID: MB-45328	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45328	RunNo: 60349								
Prep Date: 6/3/2019	Analysis Date: 6/3/2019	SeqNo: 2041072	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45328	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45328	RunNo: 60349								
Prep Date: 6/3/2019	Analysis Date: 6/3/2019	SeqNo: 2041073	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.3	90	110			

Sample ID: MB-45384	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45384	RunNo: 60433								
Prep Date: 6/5/2019	Analysis Date: 6/5/2019	SeqNo: 2043901	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45384	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45384	RunNo: 60433								
Prep Date: 6/5/2019	Analysis Date: 6/5/2019	SeqNo: 2043902	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Sample ID: MB-45398	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45398	RunNo: 60439								
Prep Date: 6/5/2019	Analysis Date: 6/5/2019	SeqNo: 2044238	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45398	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45398	RunNo: 60439								
Prep Date: 6/5/2019	Analysis Date: 6/5/2019	SeqNo: 2044239	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.1	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E11

10-Jun-19

Client: Vanguard Operating
Project: State V CTB-A

Sample ID: LCS-45302	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45302	RunNo: 60335								
Prep Date: 5/31/2019	Analysis Date: 6/3/2019	SeqNo: 2040606	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	63.9	124			
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID: MB-45302	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45302	RunNo: 60335								
Prep Date: 5/31/2019	Analysis Date: 6/3/2019	SeqNo: 2040608	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		120	70	130			

Sample ID: MB-45297	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45297	RunNo: 60356								
Prep Date: 5/31/2019	Analysis Date: 6/3/2019	SeqNo: 2040613	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.9		10.00		88.6	70	130			

Sample ID: LCS-45297	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45297	RunNo: 60356								
Prep Date: 5/31/2019	Analysis Date: 6/3/2019	SeqNo: 2040614	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.1	63.9	124			
Surr: DNOP	4.4		5.000		88.7	70	130			

Sample ID: 1905E11-006AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: SW #1	Batch ID: 45302	RunNo: 60436								
Prep Date: 5/31/2019	Analysis Date: 6/7/2019	SeqNo: 2044902	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	9.8	48.92	70.05	-66.4	57	142			S
Surr: DNOP	1.4		4.892		29.0	70	130			S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E11

10-Jun-19

Client: Vanguard Operating

Project: State V CTB-A

Sample ID: 1905E11-006AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: SW #1	Batch ID: 45302	RunNo: 60436								
Prep Date: 5/31/2019	Analysis Date: 6/7/2019	SeqNo: 2044903 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	10	50.40	70.05	77.5	57	142	97.5	20	R
Surr: DNOP	3.9		5.040		77.9	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E11

10-Jun-19

Client: Vanguard Operating

Project: State V CTB-A

Sample ID: MB-45287	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039157	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		89.4	73.8	119			

Sample ID: LCS-45287	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039158	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.5	80.1	123			
Surr: BFB	1100		1000		105	73.8	119			

Sample ID: 1905E11-013AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: Floor #2	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039160	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	32	5.0	24.85	0	129	69.1	142			
Surr: BFB	1100		994.0		108	73.8	119			

Sample ID: 1905E11-013AMSD	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: Floor #2	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039161	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.9	24.37	0	124	69.1	142	6.00	20	
Surr: BFB	1100		974.7		108	73.8	119	0	0	

Sample ID: MB-45283	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039216	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		91.1	73.8	119			

Sample ID: LCS-45283	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039217	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E11

10-Jun-19

Client: Vanguard Operating

Project: State V CTB-A

Sample ID: LCS-45283	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039217			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.0	80.1	123			
Surr: BFB	1100		1000		105	73.8	119			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E11

10-Jun-19

Client: Vanguard Operating
Project: State V CTB-A

Sample ID: MB-45287	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039195	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.3	80	120			

Sample ID: LCS-45287	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039196	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	105	80	120			
Toluene	1.0	0.050	1.000	0	104	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: 1905E11-014AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: Floor #3	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 6/1/2019	SeqNo: 2039199	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.4	0.025	0.9921	0	138	63.9	127			S
Toluene	1.4	0.050	0.9921	0	140	69.9	131			S
Ethylbenzene	1.4	0.050	0.9921	0	140	71	132			S
Xylenes, Total	4.1	0.099	2.976	0	137	71.8	131			S
Surr: 4-Bromofluorobenzene	1.1		0.9921		108	80	120			

Sample ID: 1905E11-014AMSD	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: Floor #3	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 6/1/2019	SeqNo: 2039200	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.4	0.025	0.9852	0	140	63.9	127	0.640	20	S
Toluene	1.4	0.049	0.9852	0	140	69.9	131	0.646	20	S
Ethylbenzene	1.4	0.049	0.9852	0	140	71	132	0.135	20	S
Xylenes, Total	4.1	0.099	2.956	0	137	71.8	131	0.296	20	S
Surr: 4-Bromofluorobenzene	1.0		0.9852		104	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E11

10-Jun-19

Client: Vanguard Operating
Project: State V CTB-A

Sample ID: MB-45283	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039249	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: LCS-45283	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039250	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.1	80	120			
Toluene	0.95	0.050	1.000	0	94.9	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.0	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.9	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

Sample Log-In Check List

Client Name: **VANGARD OPERATING**

Work Order Number: **1905E11**

RcptNo: 1

Received By: **Leah Baca**

5/30/2019 8:45:00 AM

Leah Baca

Completed By: **Leah Baca**

5/30/2019 11:28:45 AM

Leah Baca

Reviewed By:

LB

5/30/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			

Chain-of-Custody Record

Client: Vanguard
 Mailing Address: 4001 Penbrook St 201
Odessa TX 79762
 Phone #:

Turn-Around Time: 5 day Turn
 Standard Rush
 Project Name: State VCTB-A
 Project #:

email or Fax#: _____
 QA/QC Package: Level 4 (Full Validation)
 Standard
 Accreditation: Az Compliance
 NELAC Other NM OED Eq.
 EDD (Type)

Project Manager: Joel Lowry
 Sampler: Matt Taylor
 On Ice: Yes No
 # of Coolers: (1)
 Cooler Temp (including CF): 1.9 + CF = 2.1 C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
5-28-19	1000	Soil	FLOOR # 2	402 66-SS Jar	ICE	190511 -013
↓	1005	↓	FLOOR # 3	↓	↓	-014
↓	1010	↓	FLOOR # 4	↓	↓	-015

Date: 5/29 Time: 7 AM Relinquished by: [Signature]
 Date: 5/29/19 Time: 9:00 Relinquished by: [Signature]

Received by: [Signature] Date: 5/29/19 Time: 0700
 Received by: [Signature] Date: 5/30/19 Time: 0845



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request										
BTX / MTBE / TMB's (8021)	FBI:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	
X	X								X	<u>Chloride</u>
X	X								X	
X	X								X	

Remarks: Joel Lowry environmental.com
Jordan.Laprock Services@gmail.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 10, 2019

Joel Lowry
Vanguard Operating
4001 Penbrook Ste.201
Odessa, TX 79762
TEL:
FAX:

RE: State V CTB-B

OrderNo.: 1905E10

Dear Joel Lowry:

Hall Environmental Analysis Laboratory received 9 sample(s) on 5/30/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E10

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: NW #1

Project: State V CTB-B

Collection Date: 5/28/2019 8:00:00 AM

Lab ID: 1905E10-001

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	120	60		mg/Kg	20	6/3/2019 4:42:55 PM	45327
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	410	88		mg/Kg	10	6/3/2019 8:05:10 PM	45297
Motor Oil Range Organics (MRO)	970	440		mg/Kg	10	6/3/2019 8:05:10 PM	45297
Surr: DNOP	0	70-130	S	%Rec	10	6/3/2019 8:05:10 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/31/2019 10:34:20 PM	45276
Surr: BFB	92.7	73.8-119		%Rec	1	5/31/2019 10:34:20 PM	45276
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 10:34:20 PM	45276
Toluene	ND	0.050		mg/Kg	1	5/31/2019 10:34:20 PM	45276
Ethylbenzene	ND	0.050		mg/Kg	1	5/31/2019 10:34:20 PM	45276
Xylenes, Total	ND	0.099		mg/Kg	1	5/31/2019 10:34:20 PM	45276
Surr: 4-Bromofluorobenzene	93.9	80-120		%Rec	1	5/31/2019 10:34:20 PM	45276

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E10

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: NW #2

Project: State V CTB-B

Collection Date: 5/28/2019 8:05:00 AM

Lab ID: 1905E10-002

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/3/2019 4:55:20 PM	45327
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	740	92		mg/Kg	10	6/3/2019 8:29:33 PM	45297
Motor Oil Range Organics (MRO)	1600	460		mg/Kg	10	6/3/2019 8:29:33 PM	45297
Surr: DNOP	0	70-130	S	%Rec	10	6/3/2019 8:29:33 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/31/2019 10:34:26 AM	45283
Surr: BFB	91.7	73.8-119		%Rec	1	5/31/2019 10:34:26 AM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 10:34:26 AM	45283
Toluene	ND	0.050		mg/Kg	1	5/31/2019 10:34:26 AM	45283
Ethylbenzene	ND	0.050		mg/Kg	1	5/31/2019 10:34:26 AM	45283
Xylenes, Total	ND	0.099		mg/Kg	1	5/31/2019 10:34:26 AM	45283
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	5/31/2019 10:34:26 AM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E10

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: EW

Project: State V CTB-B

Collection Date: 5/28/2019 8:10:00 AM

Lab ID: 1905E10-003

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	270	60		mg/Kg	20	6/3/2019 5:07:44 PM	45327
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	64	9.7		mg/Kg	1	6/3/2019 8:53:53 PM	45297
Motor Oil Range Organics (MRO)	280	48		mg/Kg	1	6/3/2019 8:53:53 PM	45297
Surr: DNOP	99.2	70-130		%Rec	1	6/3/2019 8:53:53 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 11:44:45 AM	45283
Surr: BFB	89.9	73.8-119		%Rec	1	5/31/2019 11:44:45 AM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 11:44:45 AM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 11:44:45 AM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 11:44:45 AM	45283
Xylenes, Total	ND	0.098		mg/Kg	1	5/31/2019 11:44:45 AM	45283
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	5/31/2019 11:44:45 AM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E10

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: SW #1

Project: State V CTB-B

Collection Date: 5/28/2019 8:15:00 AM

Lab ID: 1905E10-004

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/3/2019 2:39:07 PM	45328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	210	90		mg/Kg	10	6/3/2019 10:07:11 PM	45297
Motor Oil Range Organics (MRO)	730	450		mg/Kg	10	6/3/2019 10:07:11 PM	45297
Surr: DNOP	0	70-130	S	%Rec	10	6/3/2019 10:07:11 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/31/2019 12:55:12 PM	45283
Surr: BFB	89.9	73.8-119		%Rec	1	5/31/2019 12:55:12 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 12:55:12 PM	45283
Toluene	ND	0.050		mg/Kg	1	5/31/2019 12:55:12 PM	45283
Ethylbenzene	ND	0.050		mg/Kg	1	5/31/2019 12:55:12 PM	45283
Xylenes, Total	ND	0.10		mg/Kg	1	5/31/2019 12:55:12 PM	45283
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	5/31/2019 12:55:12 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E10

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: SW #2

Project: State V CTB-B

Collection Date: 5/28/2019 8:20:00 AM

Lab ID: 1905E10-005

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	200	60		mg/Kg	20	6/3/2019 3:16:20 PM	45328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	16	9.9		mg/Kg	1	6/5/2019 8:55:45 PM	45297
Motor Oil Range Organics (MRO)	94	50		mg/Kg	1	6/5/2019 8:55:45 PM	45297
Surr: DNOP	94.0	70-130		%Rec	1	6/5/2019 8:55:45 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/31/2019 1:18:45 PM	45283
Surr: BFB	90.7	73.8-119		%Rec	1	5/31/2019 1:18:45 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 1:18:45 PM	45283
Toluene	ND	0.050		mg/Kg	1	5/31/2019 1:18:45 PM	45283
Ethylbenzene	ND	0.050		mg/Kg	1	5/31/2019 1:18:45 PM	45283
Xylenes, Total	ND	0.099		mg/Kg	1	5/31/2019 1:18:45 PM	45283
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	5/31/2019 1:18:45 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E10

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: WW #1

Project: State V CTB-B

Collection Date: 5/28/2019 8:25:00 AM

Lab ID: 1905E10-006

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	82	60		mg/Kg	20	6/3/2019 3:28:45 PM	45328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/3/2019 3:14:06 PM	45297
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/3/2019 3:14:06 PM	45297
Surr: DNOP	97.5	70-130		%Rec	1	6/3/2019 3:14:06 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/31/2019 1:42:18 PM	45283
Surr: BFB	90.7	73.8-119		%Rec	1	5/31/2019 1:42:18 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 1:42:18 PM	45283
Toluene	ND	0.050		mg/Kg	1	5/31/2019 1:42:18 PM	45283
Ethylbenzene	ND	0.050		mg/Kg	1	5/31/2019 1:42:18 PM	45283
Xylenes, Total	ND	0.099		mg/Kg	1	5/31/2019 1:42:18 PM	45283
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	5/31/2019 1:42:18 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E10

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: Floor #1

Project: State V CTB-B

Collection Date: 5/28/2019 8:30:00 AM

Lab ID: 1905E10-007

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	79	60		mg/Kg	20	6/3/2019 3:41:10 PM	45328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/3/2019 12:00:36 PM	45297
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/3/2019 12:00:36 PM	45297
Surr: DNOP	97.7	70-130		%Rec	1	6/3/2019 12:00:36 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/31/2019 2:05:48 PM	45283
Surr: BFB	91.5	73.8-119		%Rec	1	5/31/2019 2:05:48 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 2:05:48 PM	45283
Toluene	ND	0.049		mg/Kg	1	5/31/2019 2:05:48 PM	45283
Ethylbenzene	ND	0.049		mg/Kg	1	5/31/2019 2:05:48 PM	45283
Xylenes, Total	ND	0.099		mg/Kg	1	5/31/2019 2:05:48 PM	45283
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	5/31/2019 2:05:48 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E10

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: Floor #2

Project: State V CTB-B

Collection Date: 5/28/2019 8:35:00 AM

Lab ID: 1905E10-008

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	81	60		mg/Kg	20	6/3/2019 3:53:34 PM	45328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/3/2019 12:24:47 PM	45297
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/3/2019 12:24:47 PM	45297
Surr: DNOP	96.0	70-130		%Rec	1	6/3/2019 12:24:47 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/31/2019 2:29:23 PM	45283
Surr: BFB	91.0	73.8-119		%Rec	1	5/31/2019 2:29:23 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 2:29:23 PM	45283
Toluene	ND	0.050		mg/Kg	1	5/31/2019 2:29:23 PM	45283
Ethylbenzene	ND	0.050		mg/Kg	1	5/31/2019 2:29:23 PM	45283
Xylenes, Total	ND	0.10		mg/Kg	1	5/31/2019 2:29:23 PM	45283
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	5/31/2019 2:29:23 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905E10

Date Reported: 6/10/2019

CLIENT: Vanguard Operating

Client Sample ID: WW GC

Project: State V CTB-B

Collection Date: 5/28/2019 8:40:00 AM

Lab ID: 1905E10-009

Matrix: SOIL

Received Date: 5/30/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	88	60		mg/Kg	20	6/3/2019 4:05:59 PM	45328
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/3/2019 12:48:58 PM	45297
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/3/2019 12:48:58 PM	45297
Surr: DNOP	92.0	70-130		%Rec	1	6/3/2019 12:48:58 PM	45297
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/31/2019 2:53:01 PM	45283
Surr: BFB	92.7	73.8-119		%Rec	1	5/31/2019 2:53:01 PM	45283
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/31/2019 2:53:01 PM	45283
Toluene	ND	0.050		mg/Kg	1	5/31/2019 2:53:01 PM	45283
Ethylbenzene	ND	0.050		mg/Kg	1	5/31/2019 2:53:01 PM	45283
Xylenes, Total	ND	0.099		mg/Kg	1	5/31/2019 2:53:01 PM	45283
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	5/31/2019 2:53:01 PM	45283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E10

10-Jun-19

Client: Vanguard Operating
Project: State V CTB-B

Sample ID: MB-45327	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45327	RunNo: 60350								
Prep Date: 6/3/2019	Analysis Date: 6/3/2019	SeqNo: 2040927	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45327	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45327	RunNo: 60350								
Prep Date: 6/3/2019	Analysis Date: 6/3/2019	SeqNo: 2040928	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.2	90	110			

Sample ID: MB-45328	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45328	RunNo: 60349								
Prep Date: 6/3/2019	Analysis Date: 6/3/2019	SeqNo: 2041072	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45328	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45328	RunNo: 60349								
Prep Date: 6/3/2019	Analysis Date: 6/3/2019	SeqNo: 2041073	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.3	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E10

10-Jun-19

Client: Vanguard Operating
Project: State V CTB-B

Sample ID: MB-45297	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45297	RunNo: 60356								
Prep Date: 5/31/2019	Analysis Date: 6/3/2019	SeqNo: 2040613	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.9		10.00		88.6	70	130			

Sample ID: LCS-45297	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45297	RunNo: 60356								
Prep Date: 5/31/2019	Analysis Date: 6/3/2019	SeqNo: 2040614	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.1	63.9	124			
Surr: DNOP	4.4		5.000		88.7	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E10

10-Jun-19

Client: Vanguard Operating
Project: State V CTB-B

Sample ID: MB-45276	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 45276	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039133	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		93.8	73.8	119			

Sample ID: LCS-45276	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 45276	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039134	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.4	80.1	123			
Surr: BFB	1000		1000		105	73.8	119			

Sample ID: MB-45287	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039157	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	890		1000		89.4	73.8	119			

Sample ID: LCS-45287	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039158	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		105	73.8	119			

Sample ID: MB-45283	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039216	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		91.1	73.8	119			

Sample ID: LCS-45283	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039217	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.0	80.1	123			
Surr: BFB	1100		1000		105	73.8	119			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E10

10-Jun-19

Client: Vanguard Operating
Project: State V CTB-B

Sample ID: 1905E10-002AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: NW #2	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039222	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.9	24.41	1.505	109	69.1	142			
Surr: BFB	990		976.6		102	73.8	119			

Sample ID: 1905E10-002AMSD	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: NW #2	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039223	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	24.88	1.505	92.1	69.1	142	14.2	20	
Surr: BFB	1000		995.0		102	73.8	119	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E10

10-Jun-19

Client: Vanguard Operating
Project: State V CTB-B

Sample ID: MB-45276	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45276	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039171	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	80	120			

Sample ID: LCS-45276	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 45276	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039172	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	105	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.4	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.6	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID: MB-45287	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039195	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		91.3	80	120			

Sample ID: LCS-45287	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 45287	RunNo: 60312								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039196	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: MB-45283	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039249	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905E10

10-Jun-19

Client: Vanguard Operating
Project: State V CTB-B

Sample ID: MB-45283	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039249	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: LCS-45283	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039250	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.1	80	120			
Toluene	0.95	0.050	1.000	0	94.9	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.0	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.9	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID: 1905E10-003AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: EW	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039253	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.024	0.9756	0	96.2	63.9	127			
Toluene	1.0	0.049	0.9756	0.01327	101	69.9	131			
Ethylbenzene	1.0	0.049	0.9756	0	106	71	132			
Xylenes, Total	3.1	0.098	2.927	0.02212	107	71.8	131			
Surr: 4-Bromofluorobenzene	1.0		0.9756		104	80	120			

Sample ID: 1905E10-003AMSD	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: EW	Batch ID: 45283	RunNo: 60311								
Prep Date: 5/30/2019	Analysis Date: 5/31/2019	SeqNo: 2039254	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	0.9940	0	92.3	63.9	127	2.27	20	
Toluene	0.98	0.050	0.9940	0.01327	97.4	69.9	131	1.72	20	
Ethylbenzene	1.0	0.050	0.9940	0	102	71	132	2.10	20	
Xylenes, Total	3.1	0.099	2.982	0.02212	103	71.8	131	2.08	20	
Surr: 4-Bromofluorobenzene	1.0		0.9940		104	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Sample Log-In Check List

Client Name: **VANGARD OPERATING**

Work Order Number: **1905E10**

RcptNo: 1

Received By: **Leah Baca**

5/30/2019 8:45:00 AM

Leah Baca

Completed By: **Leah Baca**

5/30/2019 11:25:41 AM

Leah Baca

Reviewed By:

LB

5/30/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			

Attachment #8
Photographic Log

PHOTOGRAPHIC LOG

28:05:2019 08:48:24
+32.869282,-103.278640



Figure 1 View of portion of Excavation A, facing South.

PHOTOGRAPHIC LOG

28:05:2019 08:49:52
+32.869928,-103.278651



Figure 2 View of portion of Excavation B, facing Southwest.

PHOTOGRAPHIC LOG

28:05:2019 08:54:12
+32.870378,-103.278938



Figure 3 View of portion of Excavation C, facing South.

PHOTOGRAPHIC LOG

28:05:2019 08:56:06
+32.870898,-103.278515



Figure 4 View of portion of Excavation D, facing South.

PHOTOGRAPHIC LOG

28:05:2019 08:57:36
+32.871429,-103.278326



Figure 5 View of portion of Excavation E, facing North.

PHOTOGRAPHIC LOG



16:09:2019 13:12:43
+32.869205,-103.278772

Figure 6 View of portion of Excavation A after remediation activities, facing South.

PHOTOGRAPHIC LOG

16:09:2019 13:13:21
+32.869585,-103.278820



Figure 7 View of portion of Excavation B after remediation activities, facing North.

PHOTOGRAPHIC LOG

16:09:2019 13:14:34
+32.870132,-103.278792



Figure 8 View of portion of Excavation C after remediation activities, facing North.

PHOTOGRAPHIC LOG



Figure 9 View of portion of Excavation D after remediation activities, facing North.

Attachment #9
Release Notification (FORM C-141)

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	nOY1707237630
District RP	IRP-4640
Facility ID	fOY1707237145
Application ID	pOY1707237994

Release Notification

Responsible Party

Responsible Party Vanguard Operating, LLC	OGRID 258350
Contact Name Marty Bloodworth	Contact Telephone 432-770-9738
Contact email mbloodworth@vnrenergy.com	Incident # (assigned by OCD)
Contact mailing address 4001 Penbrook Suite 201, Odessa, TX, 79762	

Location of Release Source

Latitude 32.86906 Longitude -103.27863
(NAD 83 in decimal degrees to 5 decimal places)

Site Name State V Tank Battery	Site Type Tank Battery and Flowline
Date Release Discovered Historic	API# (if applicable)

Unit Letter	Section	Township	Range	County
D	5	17S	37E	Lea

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) Unknown	Volume Recovered (bbls) Unknown
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) Unknown	Volume Recovered (bbls) Unknown
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Historic soil impacts appear to be the result of the failure of the flowline and overflowing of the tank battery at some point in the past.

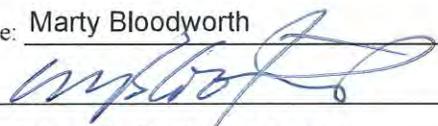
MSB

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Unknow Volume
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? NA (Historical Release)	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> 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.
Printed Name: <u>Marty Bloodworth</u> Title: <u>District Manager Dist. Supt.</u> Signature: <u></u> Date: <u>6/17/2019</u> email: <u>mbloodworth@vnreenergy.com</u> Telephone: <u>432-770-9738</u>
<u>OCD Only</u> Received by: <u>Olivia Yu</u> Date: <u>03/13/2017</u>

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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?	53 _____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.*

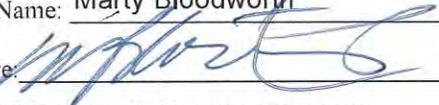
- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the 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

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Printed Name: Marty Bloodworth Title: District Manager Dist Supt.
 Signature:  Date: 6/17/2019
 email: mbloodworth@vnreenergy.com Telephone: 432-770-9738

OCD Only

Received by: Dylan Rose-Coss Date: 06/27/2019

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Remediation Plan

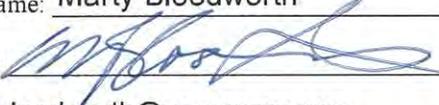
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

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

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

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

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Printed Name: Marty Bloodworth Title: ~~District Manager~~ Dist. Supt.
 Signature:  Date: 6/17/2019
 email: mbloodworth@vnreenergy.com Telephone: 432-770-9738

OCD Only

Received by: Dylan Rose-Coss Date: 06/27/2019

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: Dylan Rose-Coss Date: 07/10/2019