



Environmental Site Remediation Work Plan

General Information

NMOCD District:	District 2	Incident ID:	nKMW1109729911
Landowner:	Mosaic Potash Carlsbad, Inc.	RP Reference:	2RP-719
Client:	Devon Energy Production Company, LP	Site Location:	Laguna Salado 22 Federal #004H
Date:	December 14, 2024	Project #:	23E-01414-02
Client Contact:	Jim Raley	Phone #:	575-689-7597
Vertex PM:	Chad Hensley	Phone #:	575-200-6172

Objective

The objective of the Environmental Site Remediation Workplan is to identify areas of exceedance for areas of concern after a site investigation where background samples were collected determine potential chloride levels to address the open releases for the Laguna Salado 22 Federal #004H (hereafter referred to as “Laguna Salado 4”). The areas of environmental concern include a flowline from Laguna Salado 4 that was observed spraying liquid off pad. Devon Energy Production Company, LP provided notification of the release to New Mexico Oil Conservation Division (NMOCD) District 2 via a Notification of Release. The initial C-141 Release Notifications was submitted on September 15, 2009 (Attachment 1). Closure criteria have been selected as per New Mexico Administrative Code (NMAC) 19.15.29.12. All applicable research as it pertains to closure criteria selection is presented in Attachment 2. The closure criteria for the site are presented below (Table 1).

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
< 50 feet	Chloride	20,000 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS - Total dissolved solids

TPH - Total petroleum hydrocarbons = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)

BTEX - Benzene, toluene, ethylbenzene, and xylenes

Site Assessment/Characterization

Site characterization was concluded on July 21, 2023. A total of 21 sample points were established and 52 samples collected for field screening. Based on the description of the release area, samples were collected within the area of staining around repaired flowline, working outward. Samples collected within and outside of staining yielded results with difficult to distinguish differences; therefore, background samples were collected near the site. Of the twenty-one sample points established, three were background sample points. All samples, including at the deepest vertical distance investigated, were submitted to the laboratory for analysis. All sample points are presented in Figure 1 (Attachment 3). Laboratory analysis results have been compared to noted closure criteria in Tables 1 and 2 and the results from the characterization activity are presented in Table 3 in (Attachment 4).

Background Sampling

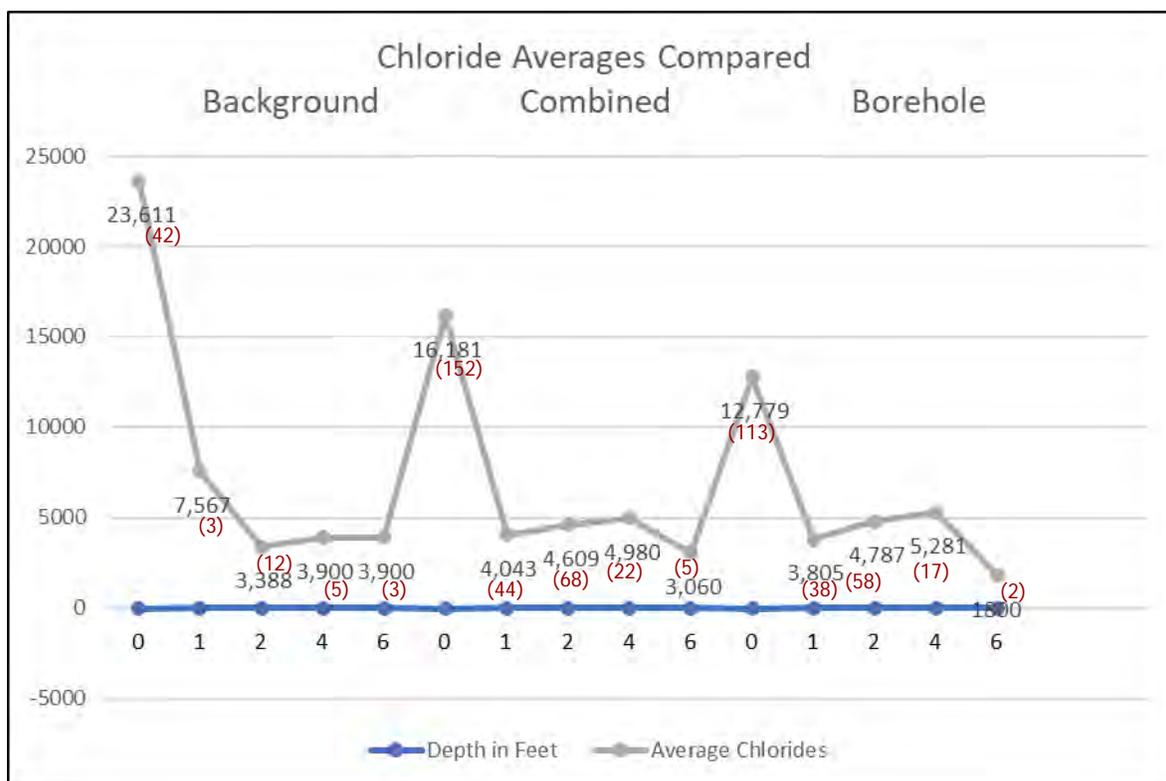
The surrounding landscape includes salt lakes, surface evaporites and gypsum outcrops. Based on site research for Laguna Salado 4, and the historical and current use of the area in which Laguna Salado 4 is located, as well as information from the New Mexico Energy, Minerals and Natural Resources Department and New Mexico Bureau of Geology and Mineral Resources included in Attachment 2, Vertex Resource





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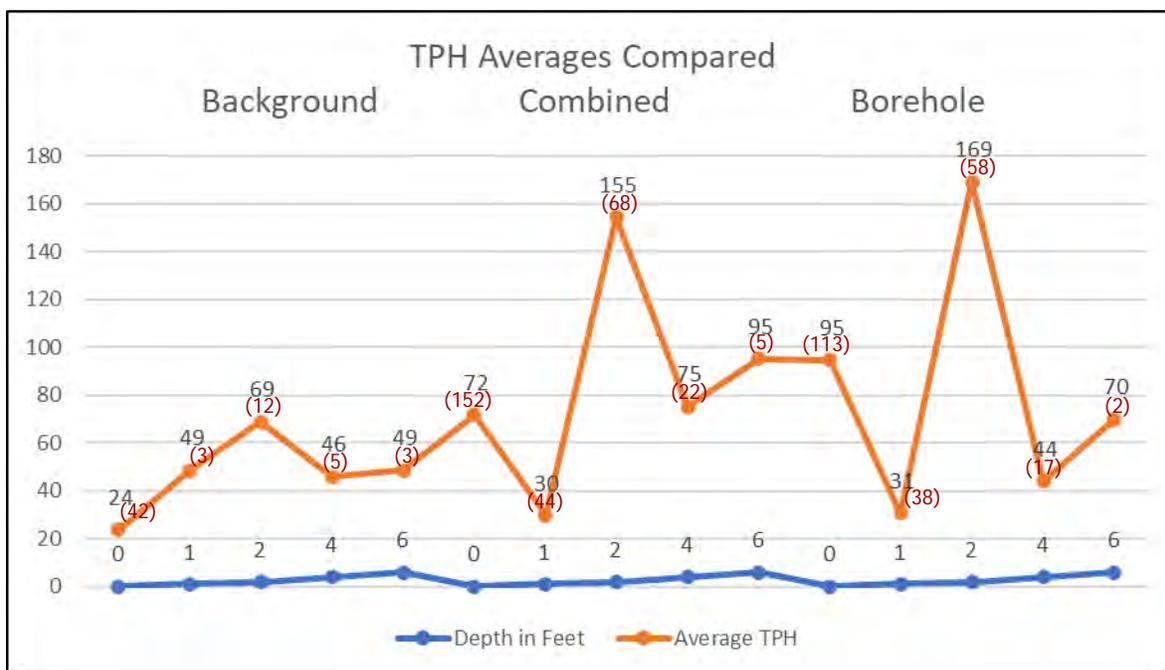
Services Inc. (Vertex) determined that there is potential for existing background chlorides to exceed remediation criteria as outlined in Table 1. The investigation of background chlorides, in an attempt to determine a distinction between chlorides found from the release and the natural background chlorides, resulted in laboratory analysis of the background samples with naturally elevated chloride levels compared to the strictest criteria and those found in and around areas of release indicated by the C-141 report. Samples were collected in three separate but similar locations, along various slopes, and elevations, and at various depths. Sample locations are presented on Figure 2 (Attachment 3). Results were then compared in groups of Background Samples, a total combination of all samples and samples collected in and around suspected release location in an attempt to delineate the release. The background sample laboratory data findings are included in Graph 1 for chlorides and Graph 2 for TPH. The data support evidence that background chloride results are higher than New Mexico Oil Conservation Division (NMOCD) strictest criteria values and appear to be higher than samples collected while investigating the suspected release location. Total petroleum hydrocarbon levels are elevated in isolated areas near the reported release.



Graph 1. Chloride Averages Compared – Lab results were compared in groups of Background Samples, a total combination of all samples and samples collected in and around suspected release location in an attempt to delineate the release. Samples were subdivided into respective depths, shown along the blue line, and averaged, shown along the gray line. Samples with lab results of “ND,” or Not Detected, were substituted with zero.

* Red numbers represent total number of samples averaged per each depth.

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Graph 2. Total Petroleum Hydrocarbons (TPH) Averages Compared – Results were compared in groups of Background Samples, a total combination of all samples and samples collected in and around suspected release location in an attempt to delineate the release. Samples were subdivided into respective depths, shown along the blue line, and averaged, shown along the orange line. TPH was compared with lab result data and field screen (Dexsil Petroflag) where numerical value was available and where both were available, the greater number was used. Samples with lab results of “ND,” or Not Detected, were substituted with zero.

*Red numbers represent total number of samples averaged per each depth.

The background sample laboratory data are included in Table 4 (Attachment 5). The laboratory data reports are also included in Attachment 5. Daily field reports are included in Attachment 6. According to the 19.15.29.12 NMAC – Closure Criteria for Soils Impacted by a Release table, “numerical limits or natural background level, whichever is greater” may be used to determine the level of remediation required for a release for chlorides. Due to the findings and the wide variation of chloride naturally occurring on the surface at concentrations ranging from not detected to 140,000 ppm and in subsurface areas at concentrations ranging from 660 ppm to 13,000 ppm, adjusted closure criteria limits for soils impacted by the release are required.

Background samples collected specifically around Laguna Salado 4 for requested adjusted closure criteria limits are presented in Table 1. No changes were made to the constituent limits for TPH, BTEX, or benzene. The area around the Laguna Salado 4 release point is vegetated with downhill slopes, becoming drainage low points where there are observable natural salt deposits outside of the release area. The release point is within a drainage low point which slopes downward from north to south. Since background samples represent the area as whole, hill side, hilltop, and valley edge, Vertex is requesting to use the background sample results from sample BG23-02. This sample better represents a similar location to the release point and thus a similar natural background chloride level than the other background samples, rather than to use an average of the three diverse samples.

Additionally, water levels in this area are shallow. Excavation at this site, greater than four feet below ground surface, may create hydraulic connectivity with the release constituents of concern, which could disturb the in-situ condition and potentially spread the release. This is not recommended.

TDS - Total dissolved solids

TPH - Total petroleum hydrocarbons = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)

BTEX - Benzene, toluene, ethylbenzene, and xylenes



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Remedial Activities

Areas identified with contaminant concentrations above the adjusted closure criteria will be remediated through excavation. Laboratory results from the site assessment/characterization have been referenced to estimate both the vertical and horizontal limits of the impacts and the volume of soil to be removed. Field screening will be utilized to confirm the removal of any TPH contaminated soil below the applicable closure criteria and utilized to confirm the removal of chloride contaminated soil below the requested adjusted closure criteria. Once excavation is complete, confirmatory samples will be collected utilizing a five-point composite sampling method, obtaining both base and wall samples, in correspondence with paragraph 1 of Subsection D of 19.15.29.12 NMAC, to confirm removal of contaminated soil below the applicable closure criteria. The confirmatory samples will be placed into laboratory-provided containers, preserved on ice and submitted to a National Environmental Laboratory Accreditation Program laboratory for chemical analysis. Laboratory analyses will include Method 300.0 for chlorides, Method 8021B for volatile organics, including benzene and BTEX, and EPA Method 8015 for TPH, including MRO, DRO and GRO. Contaminated soils will be stored on a 30-mil liner prior to disposal at an approved facility. The excavation will be backfilled with clean soil sourced locally.

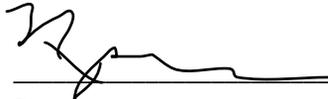
Incident #: NKMW1109729911

A total of 18 sample points were established for analysis off pad, along the flowline, and within and around staining. Exceedances to closure criteria were found in the pasture at sample points BH23-01, BH23-02, BH23-03, BH23-04, BH23-05, BH23-08, BH23-11, BH23-12, BH23-14, BH23-15, BH23-16 and BH23-18. Samples points BH23-04, BH23-05, BH23-08 will be excavated to 1 foot. Sample points BH23-01, BH23-02, BH23-03, BH23-12, BH23-14, BH23-15, BH23-16 will be excavated to 2.5 feet and BH23-18 will be excavated to 2 feet. Mechanical excavation equipment will be used to complete the excavation and hand excavation will be utilized in areas where mechanical excavation would be deemed unsafe. Field screening will be utilized to find the horizontal and vertical extents of the spill area. Confirmatory samples will be collected as per NMOCD guidance and submitted for laboratory analysis of all applicable parameters. The estimated volume to be excavated is **373 cubic yards**.

Sample Point	Excavation Depth	Remediation Method
BH23-01	2.5'	Excavator
BH23-02	2.5'	Excavator/Hancrew near lines
BH23-03	2.5'	Excavator/Hancrew near lines
BH23-04	1'	Excavator
BH23-05	1'	Excavator/Hancrew near lines
BH23-08	1'	Excavator/Hancrew near lines
BH23-11	1'	Excavator/Hancrew near lines
BH23-12	2.5'	Excavator/Hancrew near lines
BH23-14	2.5'	Excavator
BH23-15	2.5'	Excavator/Hancrew near lines
BH23-16	2.5'	Excavator
BH23-18	2'	Excavator

Should you have any questions or concerns, please do not hesitate to contact Chad Hensley at 575.200.6167 or chensley@vertexresource.com.

Environmental Site Remediation Work Plan



Riley Plogger
ENVIRONMENTAL TECHNICIAN, REPORTING

12/13/2024

Date



Chad Hensley B.Sc. GCNR
PROJECT MANAGER, REPORT REVIEW

12/14/2024

Date

Attachments

- Attachment 1. NMOCD C-141 Report
- Attachment 2. Closure Criteria Research
- Attachment 3. Figures
- Attachment 4. Characterization Table and Laboratory Data Reports
- Attachment 5. Background Characterization Table and Laboratory Data Reports

ATTACHMENT 1

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

SEP 22 2009

Form C-141
Revised October 10, 2003

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

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

30-015-36461

Release Notification and Corrective Action

AKMW 1109729911

OPERATOR Initial Report Final Report

Name of Company Devon Energy	Contact Shannon Moss, Foreman	
Address 6488 Seven Rivers Hwy – P.O. Box 250	Telephone No. 575-748-5232	
Facility Name Laguna Salado Battery	Facility Type Gas	
Surface Owner	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	22	23	29					Eddy

Latitude **N 32.299221** Longitude **W 103.97480**

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 30 bbls	Volume Recovered 0
Source of Release 4" poly SWD line, extending from the Laguna Salado Battery to the Remuda Basin SWD, ruptured; releasing approximately 30 bbls of produced water.	Date and Hour of Occurrence 09/15/09 – 9:30	Date and Hour of Discovery 09-15-09 – 9:30
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Paul Evans – BLM OCD	
By Whom? Shannon Moss, Foreman	Date and Hour 9:45	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* **At the Laguna Salado Battery, a road grader clipped a 4" poly SWD line, extending from the Laguna Salado Battery to the Remuda Basin SWD, thus causing it to rupture; releasing approximately 30 bbls of produced water.**

Describe Area Affected and Cleanup Action Taken.* **50' x 50' Sandy Pasture – Valves closed and area bermed, Leak repaired and contaminated soil removed and hauled to disposal site.**

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

Signature: <i>Mykol Horner</i>	OIL CONSERVATION DIVISION	
Printed Name: Mykol Horner	Approved by District Supervisor:	
Title: Field Tech 1	Signed By: <i>Mike Brando</i>	Approval Date: 4/7/11
E-mail Address: mykol.horner@dvn.com	Expiration Date:	Attached <input type="checkbox"/>
Date: 09/18/09 Phone: 575-748-0160	Conditions of Approval: Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:	

* Attach Additional Sheets If Necessary

5/7/11

ATTACHMENT 2

Closure Criteria Worksheet			
Site Name: LAGUNA SALADO 22 FEDERAL #004H			
Spill Coordinates: 32.294426,-103.9730835			
Site Specific Conditions		Value	Unit
1	Depth to Groundwater	<50	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	15,734	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	385	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	19,430	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or	19,430	feet
	ii) Within 1000 feet of any fresh water well or spring		feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	8,606	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	Medium	Critical High Medium Low
10	Within a 100-year Floodplain	500	year
11	Soil Type	Loam	
12	Ecological Classification	Gyp Upland	
13	Geology	Qpl	
NMAC 19.15.29.12 E (Table 1) Closure Criteria		<50'	<50' 51-100' >100'



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

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

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C 02797		CUB	ED	2	3	22	23S	29E		596540	3572895*	656	200		
C 02716		CUB	ED	4	4	4	16	23S	29E	595818	3574002*	988	400		
C 02715		CUB	ED	4	1	3	15	23S	29E	596221	3574411*	993	400		
C 02717		CUB	ED	4	2	4	16	23S	29E	595817	3574407*	1233	400		
C 01217 S		CUB	ED	4	1	4	16	23S	29E	595413	3574403*	1543	350		
C 02718		CUB	ED	4	4	2	16	23S	29E	595816	3574812*	1547	400		
C 04326 POD14		CUB	ED	4	2	3	23	23S	29E	598191	3572765	1687	58	54	4
C 04326 POD16		CUB	ED	2	4	3	23	23S	29E	598209	3572664	1751	64	54	10
C 02720		CUB	ED	2	1	21	23S	29E		594911	3573690*	1784	150		
C 02721		CUB	ED	2	3	21	23S	29E		594915	3572879*	1890	150		
C 02808		CUB	ED	2	3	16	23S	29E		594909	3574501*	2025	100		
C 02809		CUB	ED	2	3	16	23S	29E		594909	3574501*	2025	100		
C 02707		C	ED	2	28	23S	29E			595535	3571868*	2026	40	18	22
C 03057 EXPLORE		CUB	ED	4	1	1	21	23S	29E	594605	3573586*	2084	150		
C 02794		CUB	ED	4	3	10	23S	29E		596518	3575731*	2203	100		
C 02795		CUB	ED	4	3	10	23S	29E		596518	3575731*	2203	200		
C 02613		CUB	ED	4	4	2	20	23S	29E	594203	3573176*	2511	400		
C 03058 EXPLORE		CUB	ED	4	1	1	16	23S	29E	594605	3575206*	2671	150		

C 01627	C	ED	1	4	4	28	23S	29E	595649	3570959*		2777	170		
C 02705	C	ED		2	17	23S	29E	593902	3575093*		3193	68	28	40	
C 02608	CUB	ED	3	1	4	17	23S	29E	593598	3574387*		3206	400		
C 04597 POD1	CUB	ED	1	1	4	24	23S	29E	600124	3573002		3476			
C 04597 POD2	CUB	ED	1	1	4	24	23S	29E	600122	3572959		3481			
C 04597 POD4	CUB	ED	1	1	4	24	23S	29E	600159	3572947		3519			
C 04597 POD3	CUB	ED	1	1	4	24	23S	29E	600172	3572991		3524			
C 04597 POD5	CUB	ED	2	1	4	24	23S	29E	600198	3572931		3560			
C 03059 EXPLORE	CUB	ED	4	1	3	17	23S	29E	592993	3574378*		3790		65	
C 02806	CUB	ED		1	1	09	23S	29E	594473	3576927*		4052	100		
C 02807	CUB	ED		1	1	09	23S	29E	594473	3576927*		4052	100		
C 04472 POD1	CUB	ED	2	2	4	13	23S	29E	600639	3574619		4096		37	
C 02792	CUB	ED		4	3	04	23S	29E	594868	3577336*		4215	200		
C 02793	CUB	ED		4	3	04	23S	29E	594868	3577336*		4215	100		
C 04594 POD2	CUB	ED	4	2	2	13	23S	29E	600604	3575232		4267	42	34	8
C 04594 POD5	CUB	ED	4	2	2	13	23S	29E	600626	3575236		4289	30	30	0
C 04594 POD1	CUB	ED	4	2	2	13	23S	29E	600629	3575241		4294	36	31	5
C 04594 POD7	CUB	ED	4	2	2	13	23S	29E	600659	3575217		4311	34	28	6
C 04594 POD6	CUB	ED	4	2	2	13	23S	29E	600659	3575220		4313	34	28	6
C 04594 POD3	CUB	ED	4	2	2	13	23S	29E	600645	3575280		4324	38	27	11
C 03587 POD1	CUB	ED	1	4	3	29	23S	29E	593338	3570754		4353	99	44	55
C 04594 POD4	CUB	ED	4	2	2	13	23S	29E	600704	3575224		4356	45	28	17
C 02706	C	ED		4	18	23S	29E	592302	3574291*		4451	17	10	7	
C 03587 POD2	CUB	ED	1	2	4	19	23S	29E	592213	3572706		4551	77	16	61
C 02486	C	ED	3	2	3	19	23S	30E	601304	3572832*		4668	350		
C 02804	CUB	ED		2	1	08	23S	29E	593262	3576905*		4806	100		

[C_02805](#)

CUB ED 2 1 08 23S 29E 593262 3576905*  4806 100

Average Depth to Water: 33 feet

Minimum Depth: 10 feet

Maximum Depth: 65 feet

Record Count: 45

UTMNAD83 Radius Search (in meters):

Easting (X): 596688.75

Northing (Y): 3573534.32

Radius: 5000

*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.

3/21/23 8:21 AM

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)				
Well Tag	POD Number	(quarters are smallest to largest)	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
C	02797		2	3	22	23S	29E	596540	3572895*	

Driller License: 1348 **Driller Company:** TAYLOR WATER WELL SERVICE

Driller Name: TAYLOR, CLINTON E.

Drill Start Date: **Drill Finish Date:** **Plug Date:**

Log File Date: **PCW Rev Date:** **Source:**

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 3.00 **Depth Well:** 200 feet **Depth Water:**

*UTM location was derived from PLSS - see Help

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3/21/23 3:36 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE)						(NAD83 UTM in meters)	
		(quarters are smallest to largest)						X	Y
NA	C 04326 POD14	Q64	Q16	Q4	Sec	Tws	Rng	598191	3572765

Driller License: 1664	Driller Company: CASCADE DRILLING, LP		
Driller Name: CAIN, SHAWN N.NJR.L.NER			
Drill Start Date: 05/11/2019	Drill Finish Date: 05/11/2019	Plug Date:	
Log File Date: 08/28/2019	PCW Rev Date:	Source: Shallow	
Pump Type:	Pipe Discharge Size:	Estimated Yield:	
Casing Size: 2.06	Depth Well: 58 feet	Depth Water: 54 feet	

Water Bearing Stratifications:	Top	Bottom	Description
	45	54	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	48	58

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.

3/21/23 3:47 PM

POINT OF DIVERSION SUMMARY



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

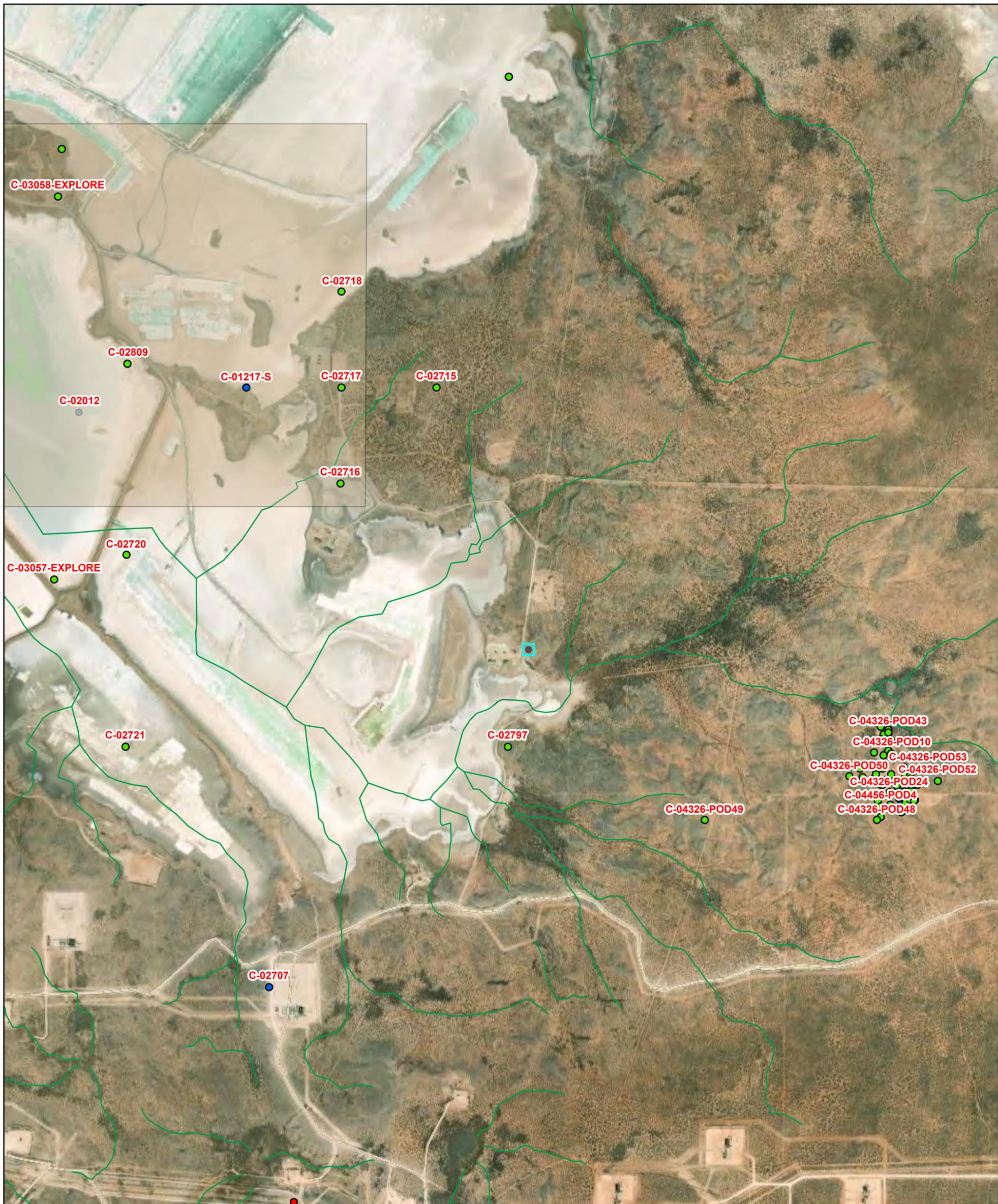
1. GENERAL AND WELL LOCATION	OSE POD NO (WELL NO) POD 14		WELL TAG ID NO BH 14		OSE FILE NO(S) C-4326			
	WELL OWNER NAME(S) XTO Energy, Inc.				PHONE (OPTIONAL) 432-221-7331			
	WELL OWNER MAILING ADDRESS 522 W Mermond, Suite 704				CITY Carlsbad	STATE NM	ZIP 88220	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32		MINUTES 17	SECONDS 14.49	N		* ACCURACY REQUIRED ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84
		LONGITUDE 103		57	25.95	W		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE North East Quarter of South West Quarter of Section 23, Township 23 South, Range 29 East, Eddy County, New Mexico								
2. DRILLING & CASING INFORMATION	LICENSE NO 1664		NAME OF LICENSED DRILLER Shawn Cain			NAME OF WELL DRILLING COMPANY Cascade Drilling		
	DRILLING STARTED 5/11/2019		DRILLING ENDED 5/11/2019		DEPTH OF COMPLETED WELL (FT) 58	BORE HOLE DEPTH (FT) 58	DEPTH WATER FIRST ENCOUNTERED (FT) 54	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT) 48	
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Sonic							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	58	6					
	0	48		2" PVC Blank	Flush Thread SCH 40	2.067	.154"	
	48	58		2" PVC Screen	Flush Thread SCH 40	2.067	.154"	.020
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	2	6	Concrete	5	Poured		
	2	45	6	Bentonite Chips	7.5	Poured		
	45	58	6	12-20 Sand	2.5	Poured		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/19)

FILE NO. C-4324	POD NO. 14	TRN NO. 648985
LOCATION 23S. 29E. 23. 324	WELL TAG ID NO.	PAGE 1 OF 2

Laguna Salado 22 Federal#004 OSE POD Location Map



10/30/2023, 7:19:19 AM

GIS WATERS PODs ●

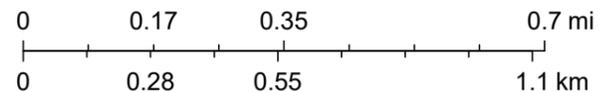
- Active
- Pending
- Plugged

- ▭ OSE District Boundary
- ▭ New Mexico State Trust Lands
- ▭ Subsurface Estate

NHD Flowlines

- Artificial Path
- Connector
- Stream River

1:18,056



Esri, HERE, iPC, Esri, HERE, Garmin, iPC, Maxar



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Data Category:

Site Information ▼

Geographic Area:

United States ▼

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USGS 321717103561001 23S.29E.24.41321

Available data for this site

SUMMARY OF ALL AVAILABLE DATA ▼

GO

Well Site

DESCRIPTION:

Latitude 32°17'17", Longitude 103°56'10" NAD27
 Eddy County, New Mexico , Hydrologic Unit 13060011
 Well depth: not determined.
 Land surface altitude: 3,034 feet above NAVD88.
 Well completed in "Other aquifers" (N9999OTHER) national aquifer.
 Well completed in "Rustler Formation" (312RSLR) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1983-02-02	2003-01-29	4
Revisions	Unavailable (site:0) (timeseries:0)		

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URL: [https://waterdata.usgs.gov/nwis/inventory?](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=321717103561001)

[agency_code=USGS&site_no=321717103561001](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=321717103561001)



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Page Last Modified: 2023-03-21 17:18:20 EDT

0.31 0.29 caww01



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Water Quality Samples for the Nation

To view additional data-quality attributes, output the results using these options: one result per row, expanded attributes.

Additional precautions are [here](#).

USGS 321742103552601 23S.30E.19.123421

Water-Quality:

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°17'42", Longitude 103°55'26" NAD27

Land-surface elevation 3,034 feet above NAVD88

The depth of the well is 100 feet below land surface.

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Parameter Group Period of Record table
Inventory of available water-quality data for printing
Inventory of water-quality data with retrieval

[Tab-separated data, one result per row](#)

[Tab-separated data one sample per row with remark codes combined with values](#)

[Tab-separated data one sample per row with tab-delimiter for remark codes](#)

[Reselect output format](#)

Sample Datetime	Time datum	Time datum reliability code	Sample Medium Code	Hydrologic Event	Hydrologic Condition	Geologic unit	Sample type	Specific conductance, wat unf uS/cm @ 25 degC (00095)
1972-09-20	MDT	T	WG	9	A	312RSLR	9	2630

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Title: Water Quality Samples for USA: Sample Data
URL: <https://nwis.waterdata.usgs.gov/nwis/qwdata?>



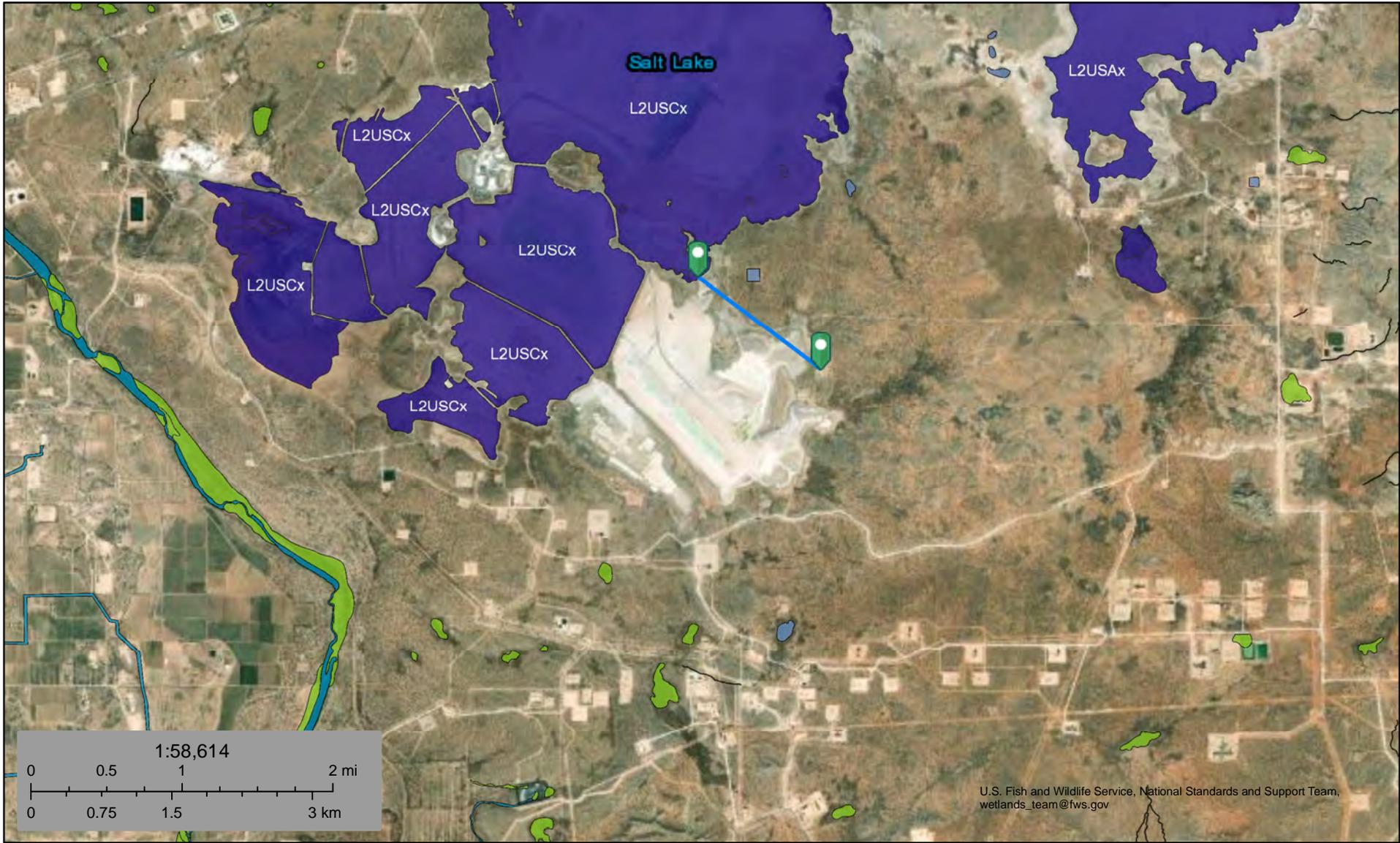
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Page Last Modified: 2023-09-21 09:41:11 EDT

0.45 0.39 nadww02



Laguna Salado 22 Fed 4 Lake 0.86 Miles



March 21, 2023

Wetlands

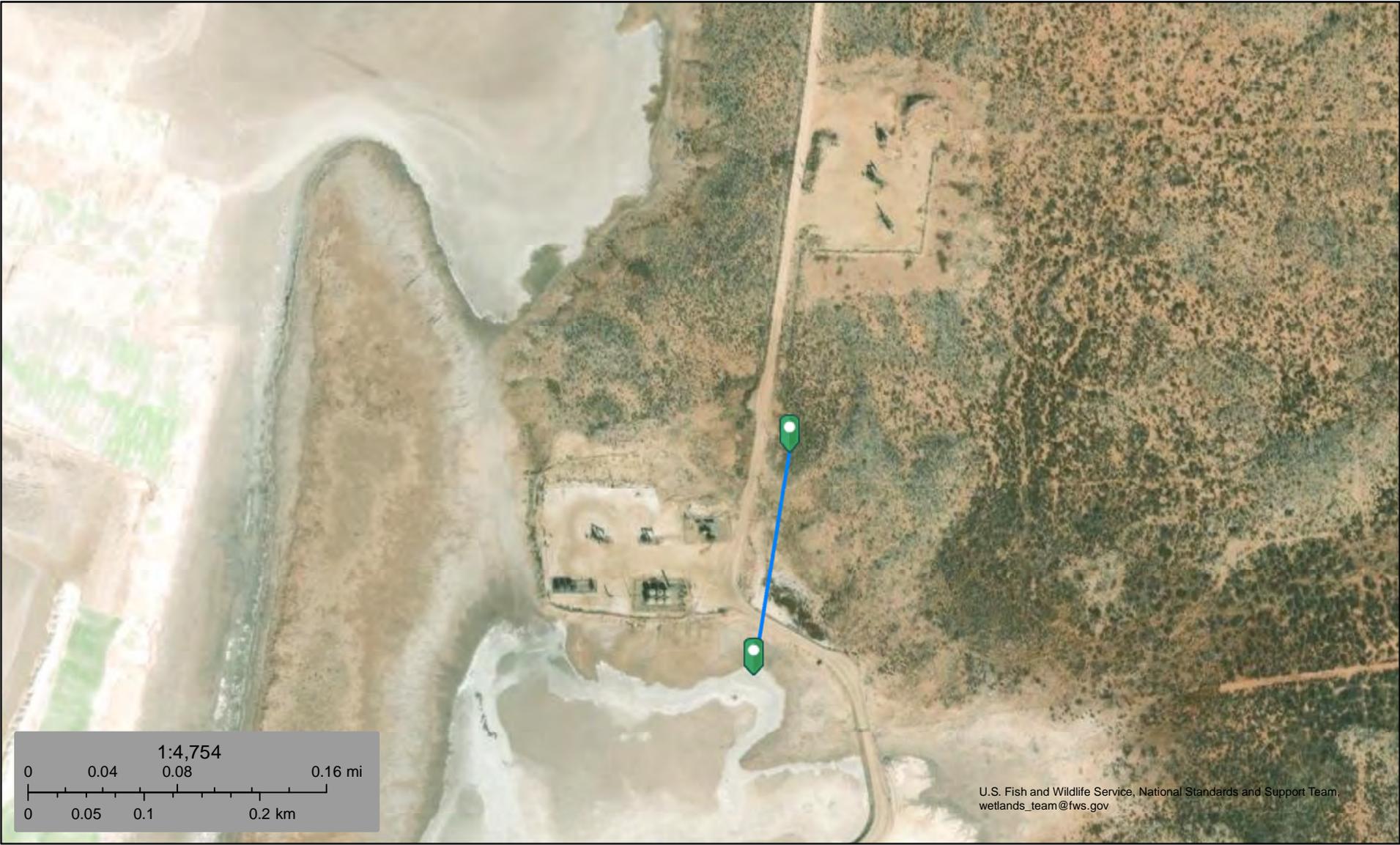
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

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Laguna Salado 22 Federal #004H Playa 0.1



October 30, 2023

Wetlands

- | | | |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Emergent Wetland |  Lake |
|  Estuarine and Marine Wetland |  Freshwater Forested/Shrub Wetland |  Other |
| |  Freshwater Pond |  Riverine |

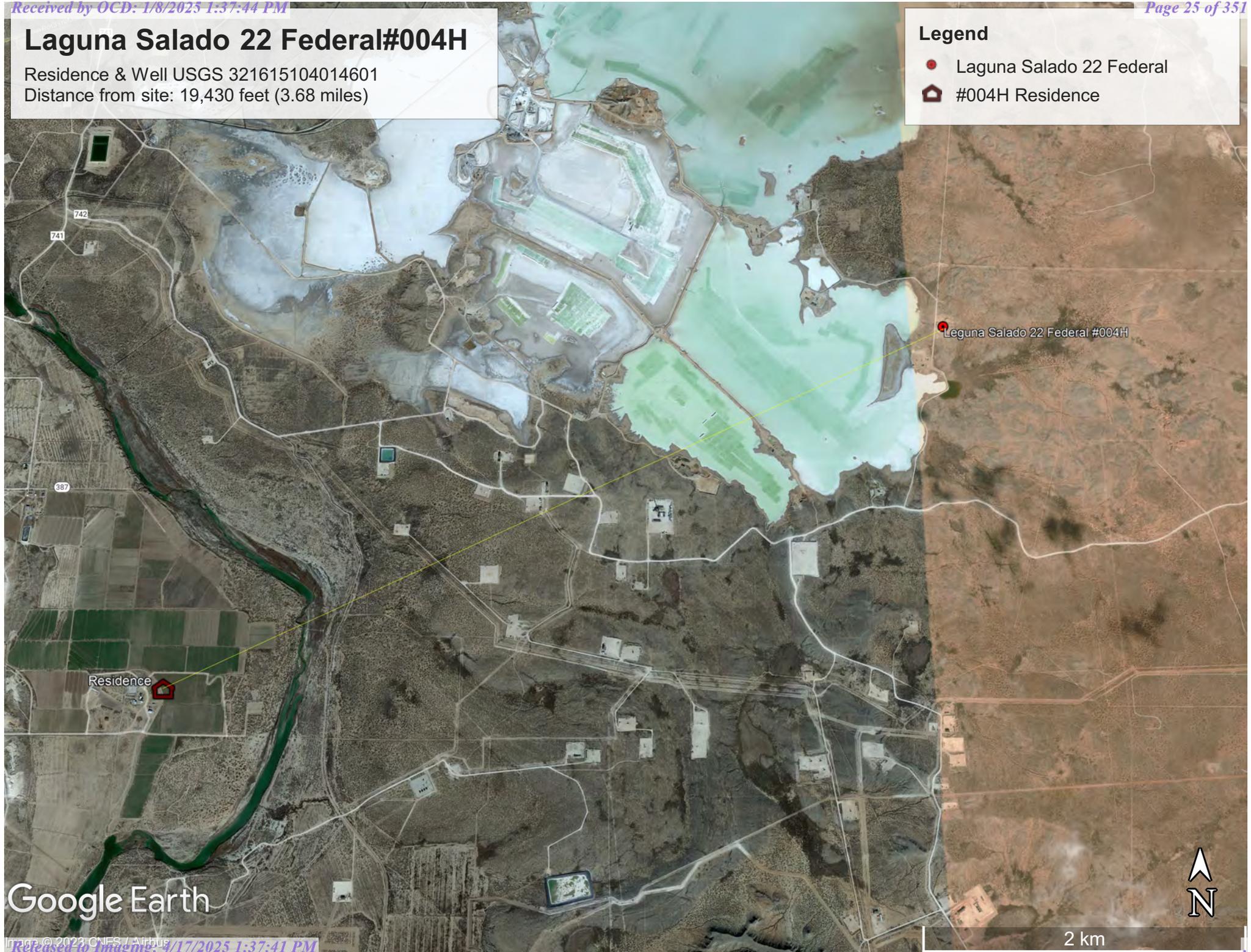
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Laguna Salado 22 Federal#004H

Residence & Well USGS 321615104014601
Distance from site: 19,430 feet (3.68 miles)

Legend

- Laguna Salado 22 Federal
- 🏠 #004H Residence



Laguna Salado 22 Federal #004H

Residence

Google Earth

2 km



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USGS 321615104014601 23S.29E.30.331322

Available data for this site

Well Site

DESCRIPTION:

Latitude 32°16'15", Longitude 104°01'46" NAD27
 Eddy County, New Mexico , Hydrologic Unit 13060011
 Well depth: 89 feet
 Land surface altitude: 2,962 feet above NAVD88.
 Well completed in "Other aquifers" (N9999OTHER) national aquifer.
 Well completed in "Alluvium, Bolson Deposits and Other Surface Deposits" (110AVMB) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1954-11-08	1954-11-08	1
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
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Title: NWIS Site Information for USA: Site Inventory

**URL: [https://waterdata.usgs.gov/nwis/inventory?
agency_code=USGS&site_no=321615104014601](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=321615104014601)**



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Page Last Modified: 2023-03-21 17:57:26 EDT

0.31 0.29 caww01



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr	(acre ft per annum)				County	POD Number	Well Tag	Code	Grant	Source	(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in me)			
	Sub basin	Use	Diversion	Owner							q	q	q	q	X	Y		
C 02797	CUB	MON	0	IMC	ED	C 02797					64	16	4	22	23S	29E	596540	3572895*
C 02716	CUB	MON	0	UNITED SALT CORPORATION	ED	C 02716					4	4	4	16	23S	29E	595818	3574002*
C 02715	CUB	MON	0	UNITED SALT CORPORATION	ED	C 02715					4	1	3	15	23S	29E	596221	3574411*
C 04326	CUB	MON	0	LT ENVIRONMENTAL INC	ED	C 04326 POD49	NA				2	4	3	23	23S	29E	597378	3572591
C 02717	CUB	MON	0	UNITED SALT CORPORATION	ED	C 02717					4	2	4	16	23S	29E	595817	3574407*
C 04326	CUB	MON	0	XTO ENERGY INC	ED	C 04326 POD50	NA				3	2	3	23	23S	29E	597992	3572782
					ED	C 04326 POD51					3	2	3	23	23S	29E	598034	3572817
					ED	C 04326 POD1					1	2	3	23	23S	29E	598124	3572992
C 01217	CUB	COM	150	INTREPID MINING NM LLC US BANK NATIONAL ASSOCIATION	ED	C 01217 S			Shallow		4	1	4	16	23S	29E	595413	3574403*
C 02622	CUB	COM	0	UNITED SALT CORPORATION	ED	C 01217 S			Shallow		4	1	4	16	23S	29E	595413	3574403*
C 02718	CUB	MON	0	UNITED SALT CORPORATION	ED	C 02718					4	4	2	16	23S	29E	595816	3574812*
C 04326	CUB	MON	0	XTO ENERGY INC	ED	C 04326 POD8	NA				3	2	3	23	23S	29E	598097	3572884
					ED	C 04326 POD6					1	2	3	23	23S	29E	598125	3572940
					ED	C 04326 POD44					3	2	3	23	23S	29E	598050	3572781
					ED	C 04326 POD4					1	2	3	23	23S	29E	598135	3572962
					ED	C 04326 POD2					1	2	3	23	23S	29E	598156	3572980
					ED	C 04326 POD43					2	3	23	23S	29E	598153	3572971	
					ED	C 04326 POD3					1	2	3	23	23S	29E	598156	3572962
					ED	C 04326 POD45					3	2	3	23	23S	29E	598095	3572822
					ED	C 04326 POD9					3	2	3	23	23S	29E	598136	3572873
					ED	C 04326 POD5					2	2	3	23	23S	29E	598169	3572940
					ED	C 04326 POD40					2	3	23	23S	29E	598114	3572815	
C 04456	CUB	MON	0	XTO ENERGY INC	ED	C 04456 POD2	NA				3	2	3	23	23S	29E	598103	3572791
C 04326	CUB	MON	0	XTO ENERGY INC	ED	C 04326 POD41	NA				2	3	23	23S	29E	598097	3572775	
					ED	C 04326 POD7					3	2	3	23	23S	29E	598157	3572894

Record Count: 25

UTMNAD83 Radius Search (in meters):

Easting (X): 596688

Northing (Y): 3573534

Radius: 1610

Sorted by: Distance

*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 purpose of the data.

3/29/23 10:07 AM

ACTIVE & INACTIVE POINTS OF D



LagunaSalado22Fed4 Wetland 1.63 Miles



U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.gov

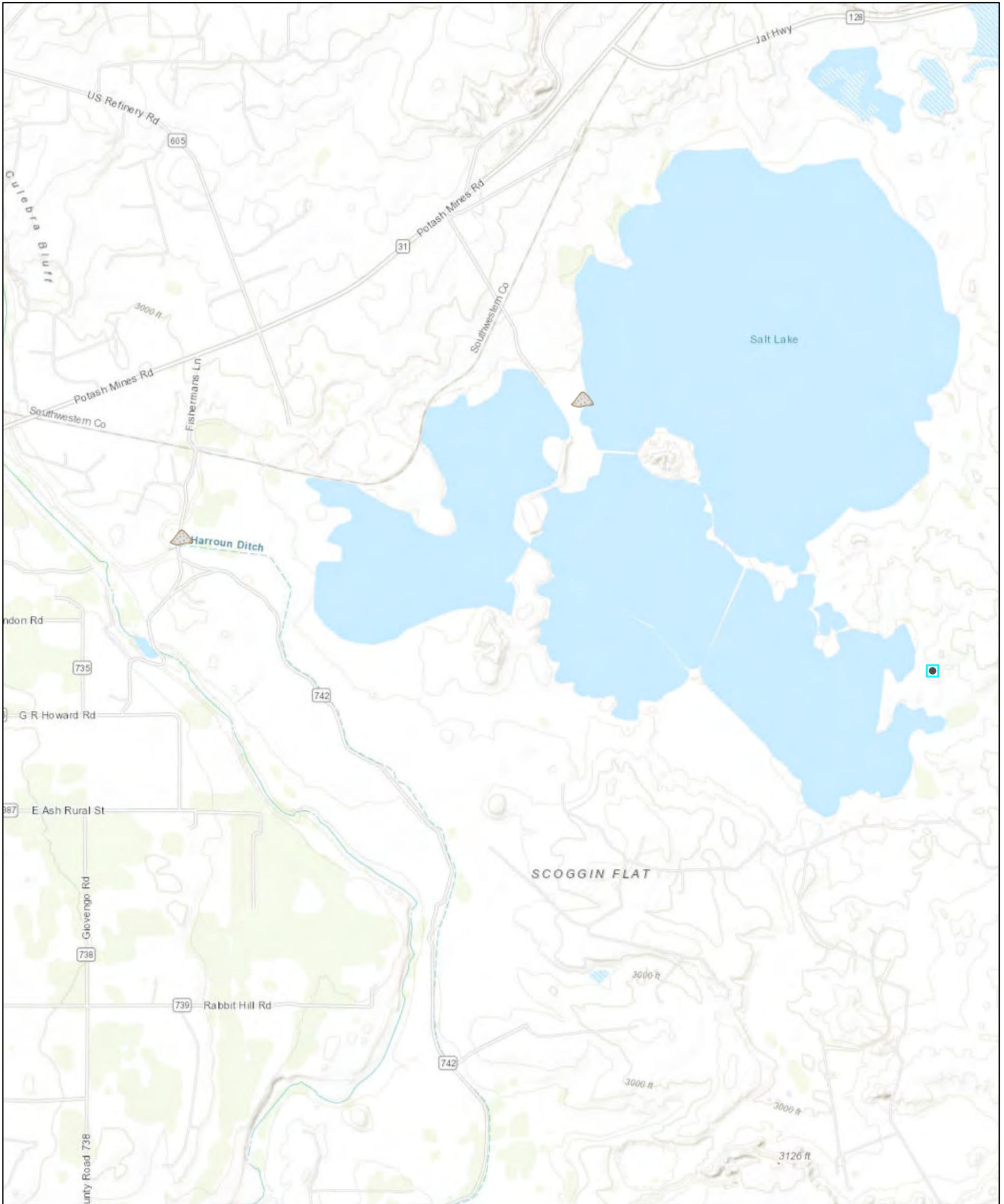
March 21, 2023

Wetlands

- Estuarine and Marine Deepwater
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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Leguna Salado 22 Fed 4H

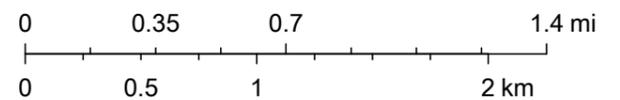


3/21/2023, 5:28:16 PM

Registered Mines

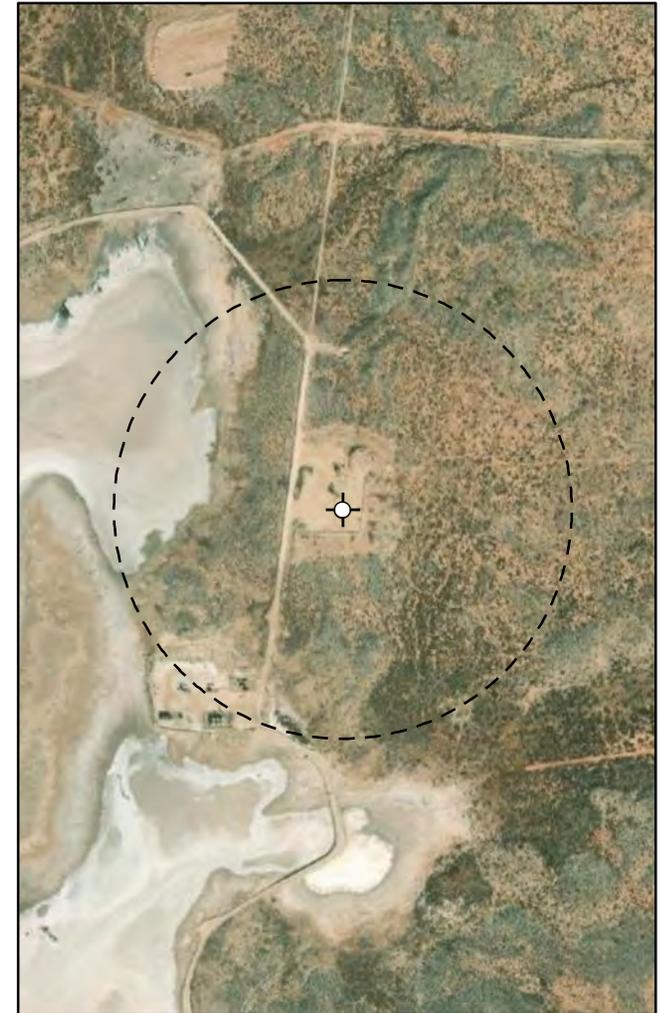
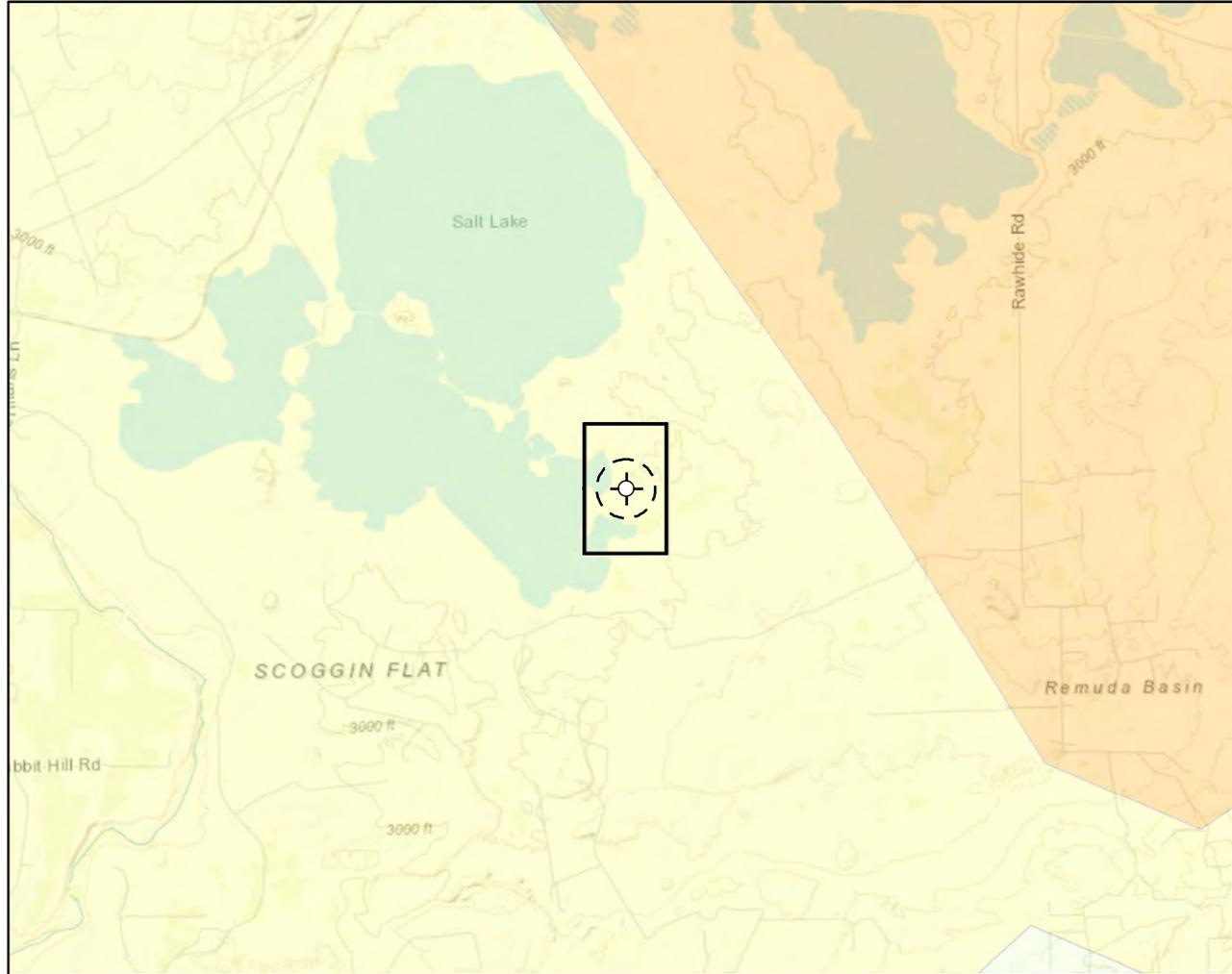
-  Aggregate, Stone etc.
-  Salt

1:36,112



Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

Document Path: G:\Projects\US PROJECTS\Devon Energy Corporation\2023\23E-01414 - Laguna Salado #4\Figure X Karst Potential Schematic - Laguna Salado #4\Federal #4 (23E-01414).mxd



Karst Potential

- Critical
- High
- Medium
- Low

- Site Location
- Site Buffer (1,000 ft.)

Overview Map

0 0.25 0.5 1 mi

Detail Map

0 150 300 600 ft.



Map Center:
Lat/Long: 32.294426, -103.973084

NAD 1983 UTM Zone 13N
Date: Apr 10/23



**Karst Potential Schematic
Laguna Salado #4**

FIGURE:

X



Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Inset Map, ESRI 2023; Overview Map: ESRI World Topographic. Karst potential data sourced from Rosswell Field Office, Bureau of Land Management, 2020 or United States Department of the Interior, Bureau of Land Management. (2018). Karst Potential.

VERSATILITY. EXPERTISE.

National Flood Hazard Layer FIRMMette



103°58'42"W 32°17'55"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

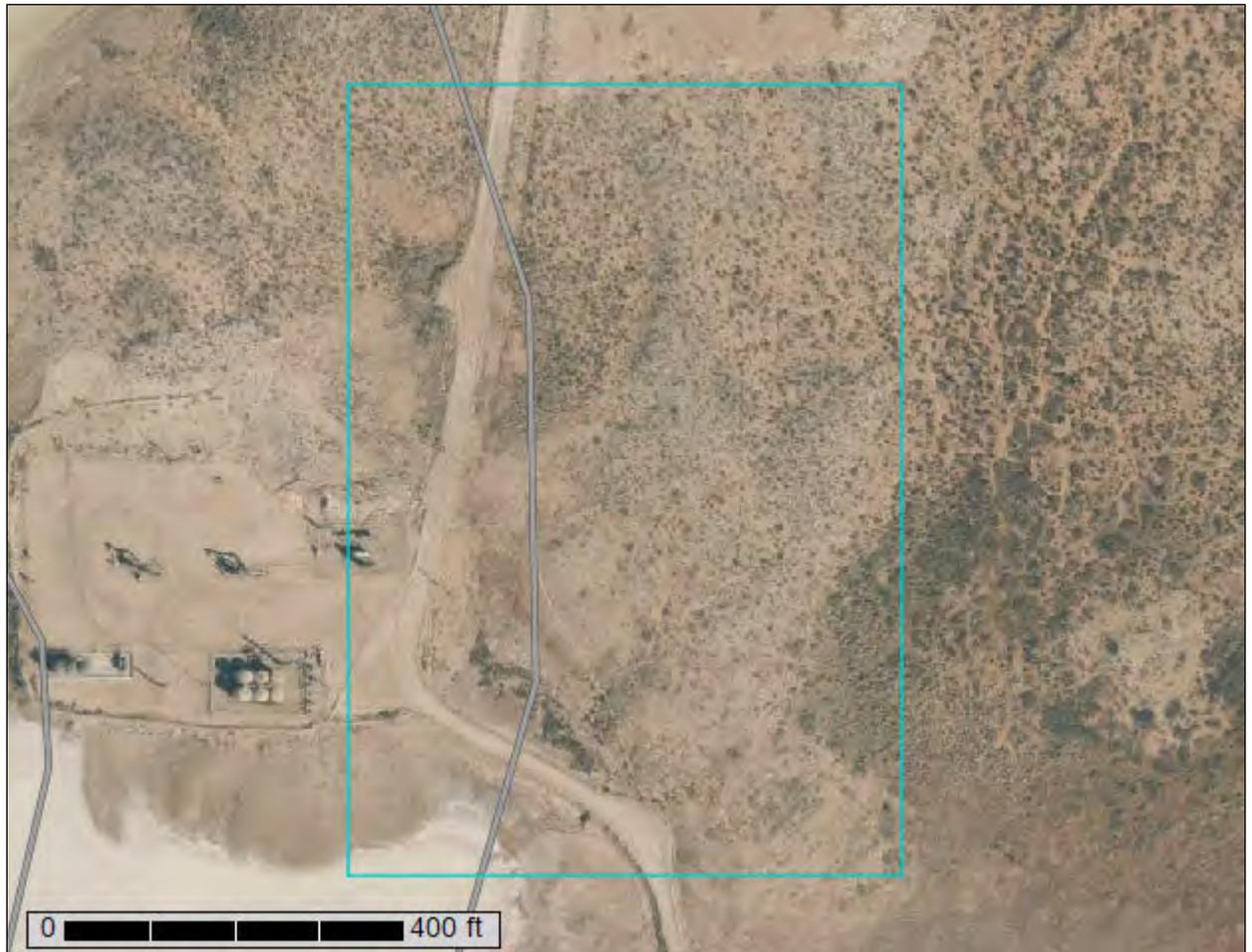
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/21/2023 at 1:35 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Eddy Area, New Mexico



October 30, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico
 Survey Area Data: Version 19, Sep 7, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CR	Cottonwood-Reeves loams, overflow, 0 to 3 percent slopes	11.1	79.1%
UG	Upton gravelly loam, 0 to 9 percent slopes	2.9	20.9%
Totals for Area of Interest		14.0	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

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development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

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Eddy Area, New Mexico**CR—Cottonwood-Reeves loams, overflow, 0 to 3 percent slopes****Map Unit Setting**

National map unit symbol: 1w47
Elevation: 3,000 to 4,300 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 60 to 64 degrees F
Frost-free period: 200 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Cottonwood and similar soils: 60 percent
Reeves and similar soils: 35 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cottonwood**Setting**

Landform: Ridges, hills
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, head slope, nose slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from gypsum

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 60 inches: bedrock

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 3 to 12 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
 (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Gypsum, maximum content: 20 percent
Maximum salinity: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R070BB006NM - Gyp Upland
Hydric soil rating: No

Custom Soil Resource Report

Description of Reeves**Setting**

Landform: Plains, ridges, hills

Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope

Landform position (three-dimensional): Side slope, head slope, nose slope, crest

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Residuum weathered from gypsum

Typical profile

H1 - 0 to 8 inches: loam

H2 - 8 to 32 inches: clay loam

H3 - 32 to 60 inches: gypsiferous material

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: OccasionalNone

Frequency of ponding: None

Calcium carbonate, maximum content: 25 percent

Gypsum, maximum content: 20 percent

Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6w

Hydrologic Soil Group: B

Ecological site: R070BB006NM - Gyp Upland

Hydric soil rating: No

Minor Components**Unnamed soils**

Percent of map unit: 5 percent

Hydric soil rating: No

UG—Upton gravelly loam, 0 to 9 percent slopes**Map Unit Setting**

National map unit symbol: 1w64

Elevation: 1,100 to 4,400 feet

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Mean annual precipitation: 7 to 15 inches
 Mean annual air temperature: 60 to 70 degrees F
 Frost-free period: 200 to 240 days
 Farmland classification: Not prime farmland

Map Unit Composition

Upton and similar soils: 96 percent
 Minor components: 4 percent
 Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Upton**Setting**

Landform: Ridges, fans
 Landform position (three-dimensional): Side slope, rise
 Down-slope shape: Convex
 Across-slope shape: Convex
 Parent material: Residuum weathered from limestone

Typical profile

H1 - 0 to 9 inches: gravelly loam
 H2 - 9 to 13 inches: gravelly loam
 H3 - 13 to 21 inches: cemented
 H4 - 21 to 60 inches: very gravelly loam

Properties and qualities

Slope: 0 to 9 percent
 Depth to restrictive feature: 7 to 20 inches to petrocalcic
 Drainage class: Well drained
 Runoff class: High
 Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
 (0.01 to 0.60 in/hr)
 Depth to water table: More than 80 inches
 Frequency of flooding: None
 Frequency of ponding: None
 Calcium carbonate, maximum content: 75 percent
 Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
 Sodium adsorption ratio, maximum: 1.0
 Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
 Land capability classification (nonirrigated): 7s
 Hydrologic Soil Group: D
 Ecological site: R070BC025NM - Shallow
 Hydric soil rating: No

Minor Components**Reagan**

Percent of map unit: 1 percent
 Ecological site: R070BC007NM - Loamy
 Hydric soil rating: No

Upton

Percent of map unit: 1 percent
 Ecological site: R070BC025NM - Shallow

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Hydric soil rating: No

Atoka

Percent of map unit: 1 percent

Ecological site: R070BC007NM - Loamy

Hydric soil rating: No

Atoka

Percent of map unit: 1 percent

Ecological site: R070BC007NM - Loamy

Hydric soil rating: No

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Ecological site R070BB006NM Gyp Upland

Accessed: 10/30/2023

General information

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this ecological site to occur outside of highlighted areas if detailed soil survey has not been completed or recently updated.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on valley floors, plains, fan piedmonts, piedmont slopes or relic lakebeds on basins. The parent material consists of mixed alluvium and or eolian deposits derived from sedimentary rock or residuum weathered from gypsum. Slopes range from 0 to 35 percent and average less than 8 percent. The soil does not meet hydric criteria, the calcium carbonate equivalent within the control section is less than 20 percent and gypsum percent greater than 40 percent. Elevations range from 2,800 to 5,000 feet.

Table 2. Representative physiographic features

Landforms	(1) Fan piedmont (2) Fan remnant (3) Basin-floor remnant
Flooding duration	Very brief (4 to 48 hours)
Flooding frequency	None to occasional
Ponding duration	Very brief (4 to 48 hours)
Ponding frequency	None to rare
Elevation	2,800–5,000 ft
Slope	0–35%
Aspect	Aspect is not a significant factor

Climatic features

The frost free season ranges from 180 to 221 days between early April and late October. The optimum growing season of the major native warm season plants coincides with the summer rains during June, July, August, and September. However, plants can make some growth at any time during the frost free period when moisture is available and minimum daily temperatures stay above 51 degrees F.

Vegetation on this site will be limited to plants which can take advantage of moisture at the time it falls, since the

soil profiles have large amounts of available water for short periods of time and then rapidly dry. The majority of precipitation comes in the form of high intensity, short duration thunderstorms. Little or no available moisture can be stored in the soil profiles of this site. Strong winds from the southwest blow during January through June which accelerate soil drying within the plant root zone and further discourage cool season plant growth or occupancy of the site.

Climate data was obtained from <http://www.wrcc.sage.dri.edu/summary/climsmnm.html> web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

Table 3. Representative climatic features

Frost-free period (average)	221 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

Influencing water features

This site is not influenced by water from wetlands or streams.

Soil features

Soils are shallow to moderately deep to gypsum material. Surface and subsurface textures range from loam, fine sandy loam or sandy loam. Substratum is a dense layers of soft or cemented gypsum material and gypsiferous earth at various depths. The gypsum materials commonly outcrop to the surface as inclusions of raw gypsumland which are void of vegetation and not part of the ecological site. In the lower part of the profile the semi indurated gypsum and caliche make up about 75 percent of the mass and are restrictive to root development. The plant, soil, air, water relationship is poor. The site has a droughty appearance because of the soils inability to support a dense stand of vegetation. If unprotected by plant cover or organic residue, the soil becomes easily wind blown and water eroded.

Minimum and maximum values listed below represent the characteristic soils for this site.

Characteristic Soils:

- Holloman
- Alamogordo
- Aztec
- Cottonwood
- McCullough
- Malargo
- Reeves
- Reflection
- Yesum

Table 4. Representative soil features

Surface texture	(1) Gypsiferous fine sandy loam (2) Loam (3) Sandy loam
Family particle size	(1) Loamy
Drainage class	Moderately well drained to well drained
Permeability class	Moderately slow to moderate

Soil depth	25–72 in
Surface fragment cover <=3"	0–3%
Surface fragment cover >3"	0–1%
Available water capacity (0-40in)	4–8 in
Calcium carbonate equivalent (0-40in)	5–30%
Electrical conductivity (0-40in)	2–16 mmhos/cm
Sodium adsorption ratio (0-40in)	0–1
Soil reaction (1:1 water) (0-40in)	7.4–8.6
Subsurface fragment volume <=3" (Depth not specified)	0–8%
Subsurface fragment volume >3" (Depth not specified)	0%

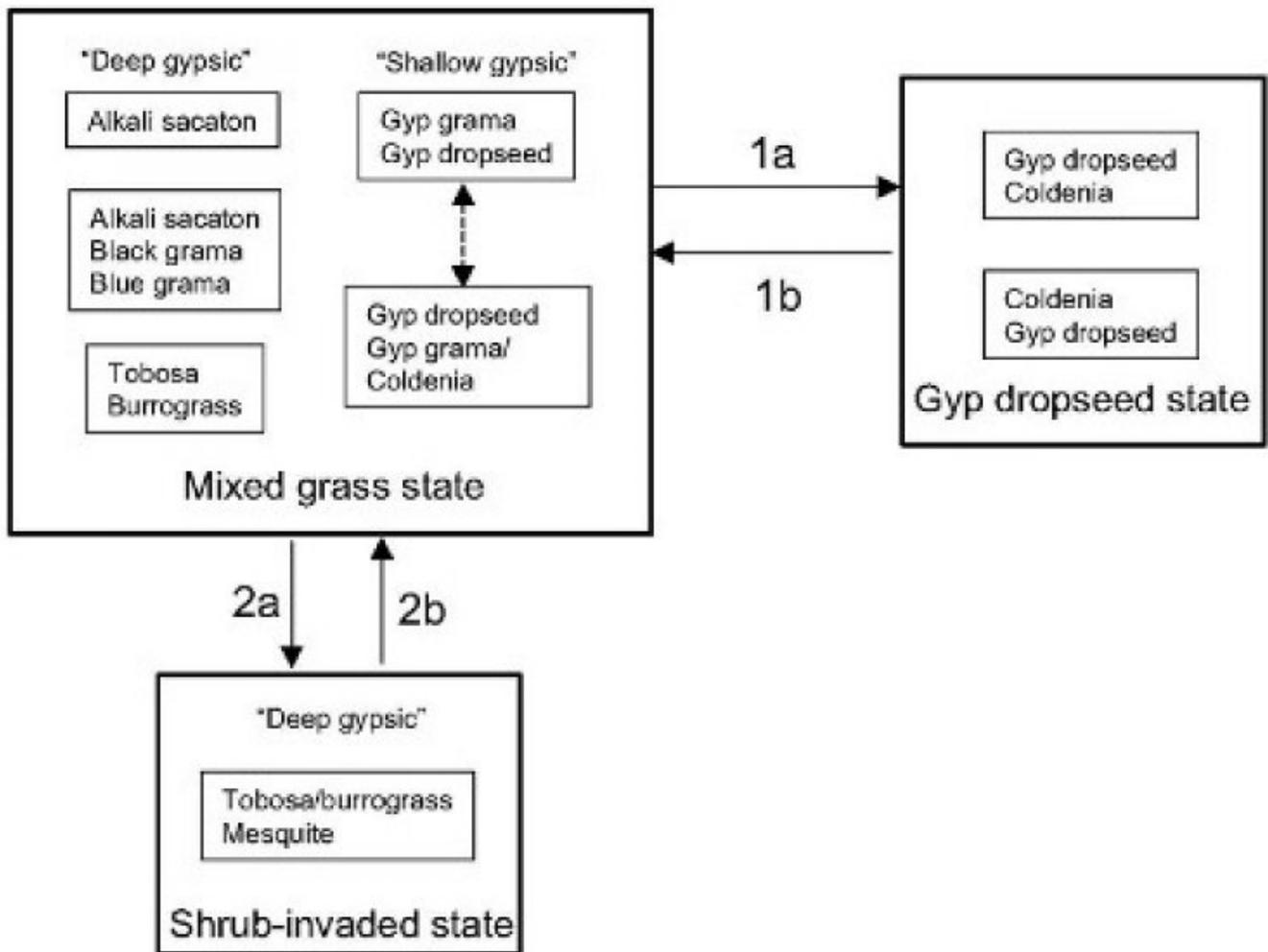
Ecological dynamics

Overview

The vegetation of this site often intergrades with that of Loamy sites, depending on the amounts of gypsum, soil texture, and depths of gypic horizons. Low-lying areas where run-in water occurs behave like draws. Areas where gypsum outcrops are exposed harbor little vegetation. Gyp Uplands may intergrade with the Salt Flats site depending on salinity levels. Thus, the vegetation of this site is very patchy, variable, and difficult to characterize. The historic plant community types that are likely to be associated with the gyp uplands site include 1) an alkali sacaton (*Sporobolus airoides*) and black grama (*Bouteloua eriopoda*) or blue grama (*B. gracilis*)-dominated community associated with soils having relatively deep (> 10 ") gypic horizons and 2) a gyp grama (*Bouteloua breviseta*) and gyp dropseed (*Sporobolus nealleyi*)-dominated community on soils with shallow (< 10") gypic horizons. Tobosa (*Pleuraphis mutica*), burrograss (*Scleropogon brevifolius*), and/or saltbush (*Atriplex canescens*) may also dominate depending on texture, land-use history, or other features. The subshrub Coldenia (*Coldenia* spp) increasingly dominates sites with very shallow gypic horizons as grasses decline. Gyp upland sites are susceptible to erosion when vegetation cover is reduced due to drought and overgrazing. Mesquite (*Prosopis glandulosa*) may invade soils with deeper gypic horizons within the site that are dominated by tobosa or burrograss. Erosion of A horizons bring gypic horizons closer to the surface and can shift community composition to dominance by gyp dropseed, coldenia, and bare soil.

State and transition model

State-Transition model: MLRA 42, SD-2 & 3, Gyp Upland



- 1a. Erosion and loss of soil fertility
- 1b. Soil addition
- 2a. Reduced fire or heavy grazing with shrub seed addition
- 2b. Shrub removal

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

This site has a grassland aspect with patches of bare or lichen covered soil surface exposed between patches of vegetation. The potential plant community is dominated by alkali sacaton, short and mid grass perennials and forbs, with half shrubs and shrubs sparsely and evenly distributed. Mixed grassland State: Alkali sacaton, black grama, and blue grama (only in SD-3) dominate soils that have relatively deep gypsic horizons that are deeper than 10" (e.g. Reeves series). Saltbush may be an abundant shrub. Alkali sacaton cover may be continuous in run-in settings surrounded by sparsely vegetated areas (alkali sacaton community). On fine-silty or fine loamy calcareous gypsid soils (e.g. Milner or Reeves series), tobosa or burrograss may be dominant. Dominance by burrograss or tobosa

might represent grazing-induced retrogression from an alkali sacaton-grama community type on these soils, but this has not been confirmed. In some cases, saltbush may be extremely dominant, (e.g. Malargo series) but it is not clear why. Gyp grama, black grama, and gyp dropseed dominate soils with shallow gypsic horizons and gyp dropseed, mormon tea (*Ephedra* spp.), and coldenia tend to dominate where the gypsic horizon is shallowest (< 3"). These communities exhibit low production, perhaps due to the comparatively shallow infiltration in gypsic soil and other chemical properties (Campbell and Campbell 1938). Outcrops of gypsum, often revealing a whitish floury mass at the surface, may be devoid of vegetation. Heavy grazing may reduce grama grasses and increase the dominance of gyp dropseed and coldenia, but it is important to recognize that these plants may dominate some patches without heavy grazing. Soil degradation due to surface compaction and reduced infiltration may be important on this site and result in reduced grass cover. Slight variations in the depth to the gypsic horizon, whether human induced or not, exert a powerful control on plant community composition. Where gypsic horizons are deep, soil texture or soil chemistry may govern composition. Diagnosis: Soils with deeper gypsic horizons should have continuous grass cover with a high representation of alkali sacaton and black grama. Shallower soils should have gyp grama and black grama but gyp outcrops will be dominated by gyp dropseeds or coldenia. Depending upon the depths to a gypsic horizon, large (< 1 m) bare patches may be common but they should not be common where the depth to gypsic horizon is greater than 5". This site has a grassland aspect with patches of bare or lichen covered soil surface exposed between patches of vegetation. The potential plant community is dominated by alkali sacaton, short and mid grass perennials and forbs, with half shrubs and shrubs sparsely and evenly distributed.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	300	470	640
Forb	45	71	96
Shrub/Vine	30	47	64
Total	375	588	800

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	25%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	16%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	57%

Figure 5. Plant community growth curve (percent production by month). NM2806, R042XC006NM Gyp Upland HCPC. R042XC006NM Gyp Upland HCPC Warm Season Plant Community.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	5	10	10	25	30	15	5	0	0

State 2 Transition to gyp dropseed

Community 2.1
Transition to gyp dropseed

Transition to gyp dropseed state (1a): Reduced grass cover caused by poor grazing management and/or drought may result in erosion of surface horizons. As the depth to the gypsic horizon decreases, plant communities will become increasingly dominated by gyp dropseed and/or coldenia. Mechanical disturbance of the soil surface and soil degradation may contribute to this effect. Key indicators of approach to transition: Increased bare ground, pedestalling, water flow patterns, blowouts, and eventually the loss of the A horizon.

State 3
Transition to shrub-invaded state

Community 3.1
Transition to shrub-invaded state

Transition to shrub-invaded state (2a): Reduced grass cover in deep gypsic soils may result in mesquite invasion. Key indicators of approach to transition: Increasing bare ground, presence of mesquite seedlings. Shrub-invaded: On deep gypsic soils and soils with less strong gypsic horizons (i.e. have a lower percentage of gypsum) within this site, mesquite may invade and cause some reduction in grass cover due to competition with grasses. These communities are dominated by tobosa or burrograss. Saltbush may also be an important component. It is not known if shrub presence and resulting erosion may result in the loss of dominant perennial grasses across broad areas on gypsic soils. As soil characteristics grade toward those of the loamy ecological site, widespread grass loss may be increasingly probable. Diagnosis: Moderate densities of mesquite, bare ground patches associated with mesquite patches.

State 4
Transition to mixed grassland (2b)

Community 4.1
Transition to mixed grassland (2b)

Transition to mixed grassland (2b): Shrub removal may result in the eventual recovery of perennial grasses. Gyp dropseed: These communities are dominated by gyp dropseed or coldenia, and often exhibit high amounts of bare ground and exposed gypsum at the surface. Gyp grama, black grama, and alkali sacaton may persist in small patches, especially in low-lying spots receiving run-in water and/or in which soils are protected from erosion. The frequency with which these community types represent degradation from mixed grassland due to poor management versus “natural” is unknown. The conditions under which gyp dropseed and coldenia dominate are unknown. Diagnosis: Dominance by gyp dropseed or coldenia, high amounts of bare ground, sometimes associated with a high cover of microbiotic crusts.

State 5
Transition to mixed grassland (1b)

Community 5.1
Transition to mixed grassland (1b)

Transition to mixed grassland (1b): Restoration or recovery of a non-gypsic A horizon would be required. Information sources and theoretical background: Communities, states, and transitions are based upon information in the ecological site description and observations by Brandon Bestelmeyer, Jornada Experimental Range and David Trujillo, NRCS. Information on the the role of gypsum in concert with soil chemical features in determining plant composition is sorely needed.

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
-------	-------------	--------	-----------------	-----------------------------	------------------

Grass/Grasslike					
1	Warm Season			266-323	
	alkali sacaton	SPAI	<i>Sporobolus airoides</i>	266-323	-
2	Warm Season			29-88	
	black grama	BOER4	<i>Bouteloua eriopoda</i>	29-88	-
3	Warm Season			6-59	
	gypsum grama	BOBR	<i>Bouteloua breviseta</i>	6-59	-
4	Warm Season			18-88	
	bush muhly	MUPO2	<i>Muhlenbergia porteri</i>	18-88	-
	plains bristlegrass	SEVU2	<i>Setaria vulpiseta</i>	18-88	-
5	Warm Season			6-18	
	gyp dropseed	SPNE	<i>Sporobolus nealleyi</i>	6-18	-
6	Warm Season			6-18	
	sand dropseed	SPCR	<i>Sporobolus cryptandrus</i>	6-18	-
7	Warm Season			6-18	
	blue grama	BOGR2	<i>Bouteloua gracilis</i>	6-18	-
8	Warm Season			18-88	
	threeawn	ARIST	<i>Aristida</i>	18-88	-
	low woollygrass	DAPU7	<i>Dasyochloa pulchella</i>	18-88	-
	ear muhly	MUAR	<i>Muhlenbergia arenacea</i>	18-88	-
Shrub/Vine					
9	Shrub			18-41	
	fourwing saltbush	ATCA2	<i>Atriplex canescens</i>	18-41	-
	jointfir	EPHED	<i>Ephedra</i>	18-41	-
	littleleaf sumac	RHMI3	<i>Rhus microphylla</i>	18-41	-
10	Shrub			6-18	
	javelina bush	COER5	<i>Condalia ericoides</i>	6-18	-
	knifeleaf condalia	COSP3	<i>Condalia spathulata</i>	6-18	-
	crown of thorns	KOSP	<i>Koeberlinia spinosa</i>	6-18	-
11	Cactus			6-18	
	pricklypear	OPUNT	<i>Opuntia</i>	6-18	-
	yucca	YUCCA	<i>Yucca</i>	6-18	-
Forb					
12	Forb			29-59	
	woody crinklemat	TICAC	<i>Tiquilia canescens</i> var. <i>canescens</i>	29-59	-
13	Forb			6-88	
	Forb, annual	2FA	<i>Forb, annual</i>	6-88	-
	trailing windmills	ALIN	<i>Allionia incarnata</i>	6-88	-
	daisy	CHRY2	<i>Chrysanthemum</i>	6-88	-
	golden tickseed	COTI3	<i>Coreopsis tinctoria</i>	6-88	-
	leatherweed	CRPOP	<i>Croton pottsii</i> var. <i>pottsii</i>	6-88	-
	Seven River Hills buckwheat	ERGY	<i>Eriogonum gypsophilum</i>	6-88	-

blazingstar	MENTZ	<i>Mentzelia</i>	6-88	-
fiddleleaf	NAMA4	<i>Nama</i>	6-88	-
whitest evening primrose	OEAL	<i>Oenothera albicaulis</i>	6-88	-
beardtongue	PENST	<i>Penstemon</i>	6-88	-
Texan phacelia	PHINT	<i>Phacelia integrifolia var. texana</i>	6-88	-
white milkwort	POAL4	<i>Polygala alba</i>	6-88	-
desert unicorn-plant	PRAL4	<i>Proboscidea althaeifolia</i>	6-88	-
whitestem paperflower	PSCO2	<i>Psilostrophe cooperi</i>	6-88	-
threadleaf ragwort	SEFLF	<i>Senecio flaccidus var. flaccidus</i>	6-88	-
Hopi tea greenthread	THME	<i>Thelesperma megapotamicum</i>	6-88	-

Animal community

This site provides habitats which support a resident animal community that is characterized by coyote, hooded skunk, desert cottontail, whitethroated woodrat, sparrow hawk, cactus wren, scaled quail, loggerhead shrike, mourning dove, and a number of ground nesting birds including, varied bunting, grasshopper sparrow, and Baird's sparrow Texas horned lizard, lesser earless lizard, and western diamondback rattlesnake.

Fourwing saltbush, littleleaf sumac, spiny allthorn, common javilinabush, and knifeleaf condalia provide protective cover for scaled quail. Seed, green herbage and fruit from a variety of grasses, forbs and shrubs provide food for a number of birds and mammals, including scaled and Gambel's quail, mourning dove and prairie dogs. The fruit of tesajo cactus is relished by quail.

Hydrological functions

The runoff curve numbers are determined by field investigations using hydraulic cover conditions and hydrologic soil groups.

Hydrologic Interpretations
 Soil Series Hydrologic Group
 Cottonwood C
 Holloman C
 Yesum B
 Alamogordo B
 Aztec C
 Malargo B
 Reeves C
 Reflection B

Recreational uses

This site offers recreation potential for hiking, horseback riding, rock, gem, and mineral collecting, nature observation and photography, and quail, dove, and predator hunting.
 During years of abundant moisture, a colorful array of wildflowers can be observed from spring through fall.

Wood products

This site provides little or no wood products other than curiosities and small furniture which can be made from the roots and stems of mesquite where it has invaded the site. The woody pods of devils claw are also used in curiosities.

Other products

This site is suitable for grazing during all seasons of the year. Care must be taken to leave enough vegetation cover for soil protection during windy and rainy periods or severe soil erosion will result. About 300 pounds per acre of total vegetation and litter is minimal for soil protection. This site is best suited and most efficiently utilized by cattle. It can also be utilized by small numbers of goats and sheep in combination with cattle where control or protection from predators can be provided. Grazing management that results in a mosaic of use patterns provides diversity for wildlife.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index Ac/AUM

- 100 - 76 5.5 – 8.0
- 75 – 51 7.5 – 11.0
- 50 – 26 11.0 – 15.0
- 25 – 0 25.0 +

Type locality

Location 1: Eddy County, NM	
Township/Range/Section	T26S R24E S27

Other references

Contributors

- Don Sylvester
- Dr. Brandon Bestelmeyer

Rangeland health reference sheet

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	
Contact for lead author	
Date	
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:**



2. **Presence of water flow patterns:**

3. **Number and height of erosional pedestals or terracettes:**

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):**

5. **Number of gullies and erosion associated with gullies:**

6. **Extent of wind scoured, blowouts and/or depositional areas:**

7. **Amount of litter movement (describe size and distance expected to travel):**

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):**

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:**

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):**

12. **Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):**

Dominant:

Sub-dominant:

Other:

Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):**

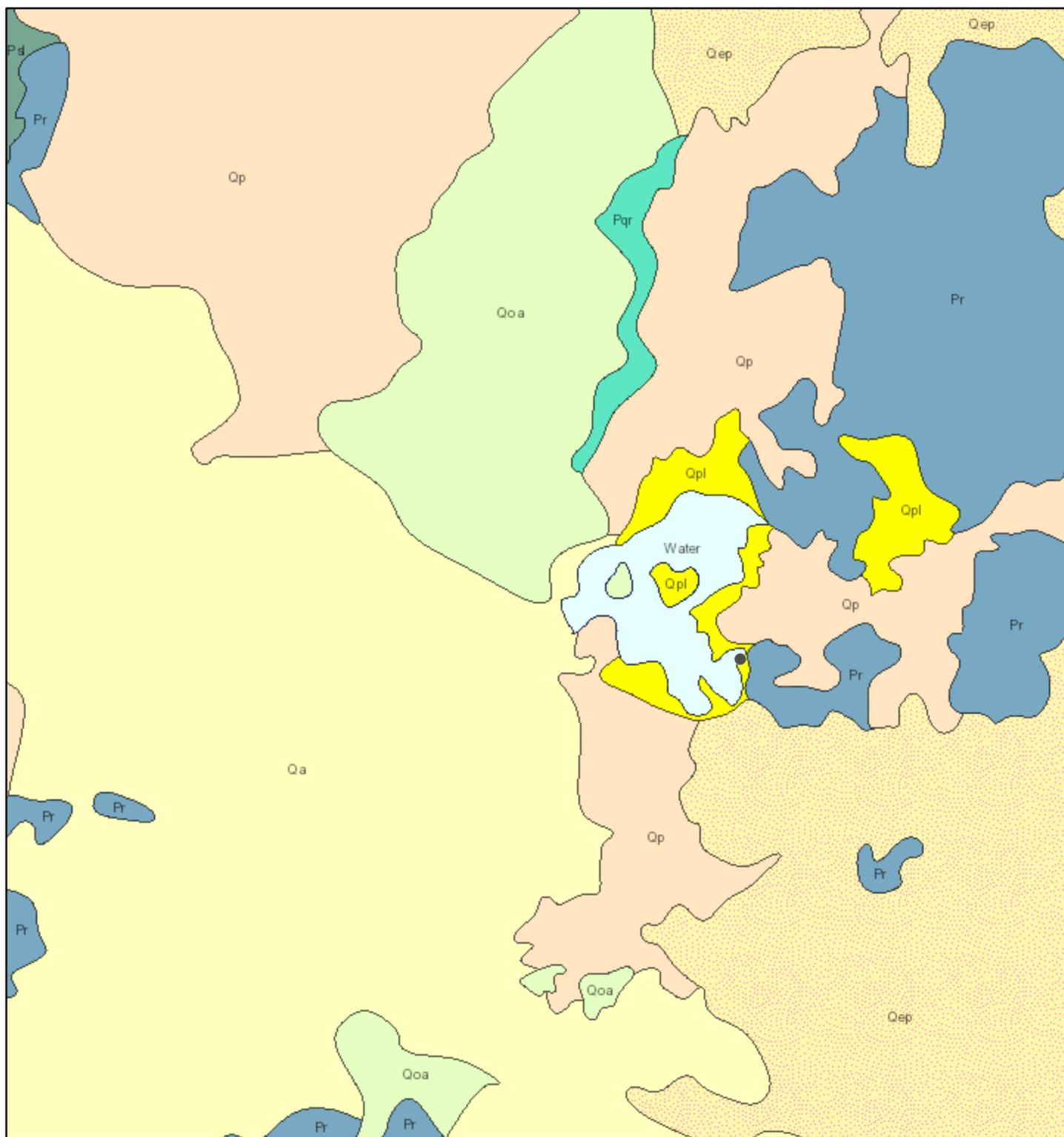
14. **Average percent litter cover (%) and depth (in):**

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):**

16. **Potential invasive (including noxious) species (native and non-native). List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site:**

17. **Perennial plant reproductive capability:**

Laguna Salado 22 Federal #004H

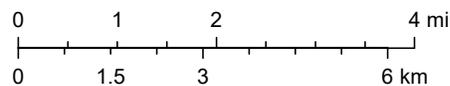


3/22/2023, 6:11:46 PM

1:144,448

Lithologic Units

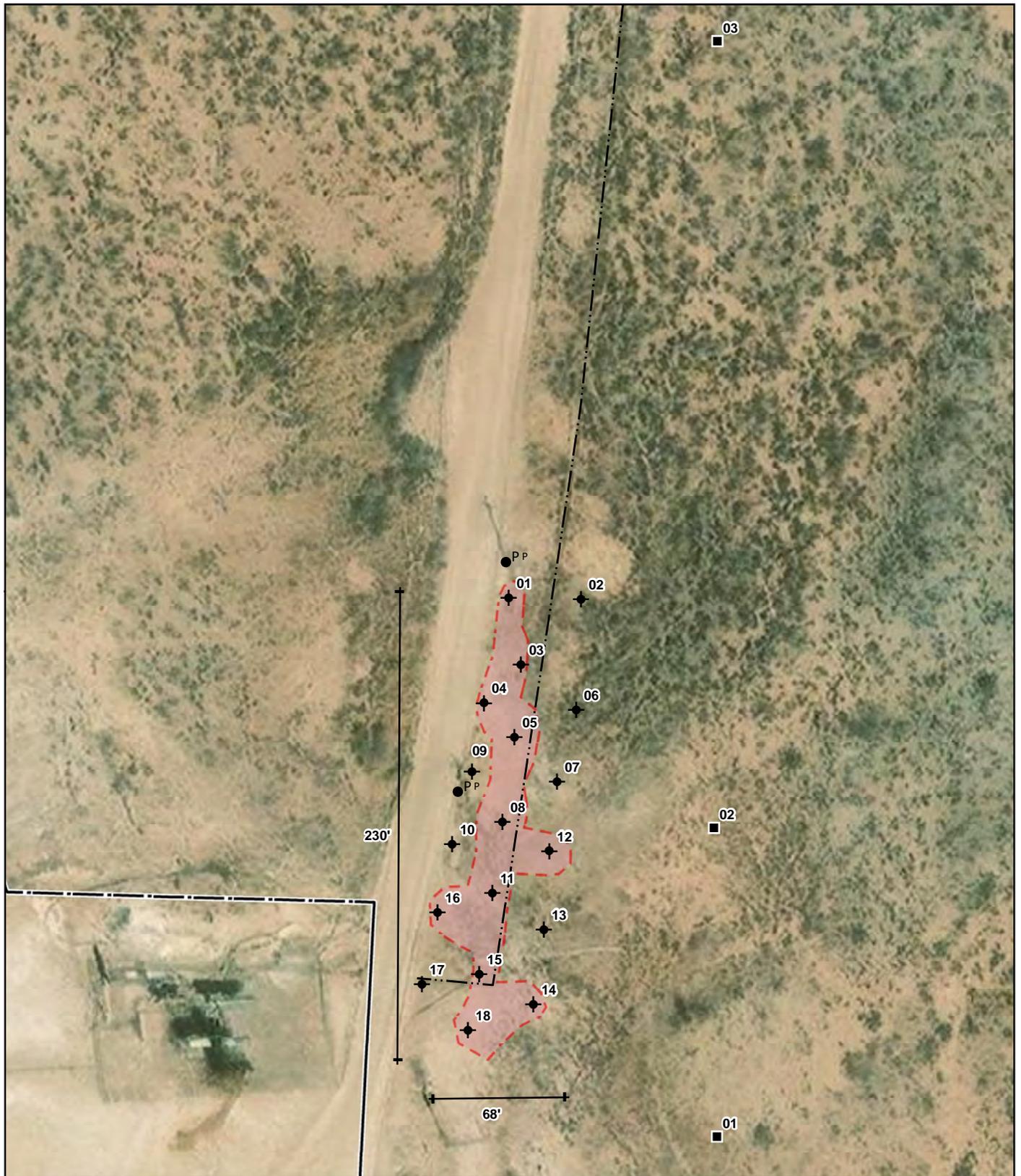
- Playa—Alluvium and evaporite deposits (Holocene)
- Water—Perennial standing water
- Qa—Alluvium (Holocene to upper Pleistocene)



Esri, NASA, NGA, USGS, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data;

ArcGIS Web AppBuilder

ATTACHMENT 3



- Background Sample (Prefixed by "BG23-")
- ◆ Borehole (Prefixed by "BH23-")
- ^{PP} Power Pole
- Pipeline (Underground)
- ▭ (Red) Approximate Release Area (~5,646 sq.ft.)
- ▭ (Dashed) Approximate Lease Boundary



0 10 20 40 ft
 NAD 1983 UTM Zone 13N
 Date: Nov 02/23

Map Center:
 Lat: 32.292899,
 Long: -103.973959



Characterization Sampling Site Schematic
Laguna Salado 22 Federal #004H

FIGURE:

1



Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2022. Site features from GPS by Vertex Professional Services Ltd., 2023.

Document Path: G:\1-Projects\US PROJECTS\Devon Energy Corporation\2023\23E-01414-Laguna Salado 22 Federal #004H\Figure 1 Characterization Sampling Site Schematic (23E-01414)\ID17335.mxd

Document Path: G:\1-Projects\US PROJECTS\Devon Energy Corporation\2023\23E-01414- Laguna Salado 22 Federal #04H\Figure 1 Background Sampling Multi Site Schematic (23E-01414).mxd



NAD 1983 UTM Zone 12N
Date: Sep 20/23



■ Background Sample □ Surface Sample

Backgrounds Sampling Site Schematic
Laguna Salado 22 Federal #004H;
Spud 16 State 10H & Battery and Laguna Salado 22 Fed #005H

FIGURE:
2



Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2022. Site features from GPS by Vertex Professional Services Ltd., 2023

ATTACHMENT 4

Client Name: Devon Energy
 Site Name: Laguna Salado 22 Federal #004 (Phase 2)
 NMOCD Tracking #: nAPP2317746199
 Project #: 23E-01414-02
 Lab Reports: 2307983, 2307A39 and 2307B06

Table 3. Initial Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs

Sample Description		Field Screening			Petroleum Hydrocarbons							Inorganic	
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID) (ppm)	Extractable Organic Compounds (PetroFlag) (ppm)	Chloride Concentration (ppm)	Volatile		Extractable					Chloride Concentration (mg/kg)
						Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	(GRO + DRO) (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	
BG23-01	0	July 19, 2023	0	64	1,590	ND	ND	ND	ND	ND	ND	ND	2,500
	2	July 19, 2023	0	77	4,789	ND	ND	ND	ND	ND	ND	ND	6,100
BG23-02	0	July 19, 2023	0	76	28,378	ND	ND	ND	ND	ND	ND	ND	34,000
	2	July 19, 2023	0	66	5,545	ND	ND	ND	ND	ND	ND	ND	6,000
BG23-03	0	July 19, 2023	0	75	656	ND	ND	ND	ND	ND	ND	ND	970
	2	July 19, 2023	0	69	190	ND	ND	ND	ND	ND	ND	ND	620
Average	0	-	-	-	-	-	-	-	-	-	-	-	12,490
	2	-	-	-	-	-	-	-	-	-	-	-	4,240
BH23-01	0	July 19, 2023	0	136	14,122	ND	ND	ND	10	ND	10	10	35000
	2	July 19, 2023	0	50	5,835	ND	ND	ND	ND	ND	ND	ND	6500
BH23-02	0	July 19, 2023	0	246	19,032	ND	ND	ND	ND	ND	ND	ND	19000
	2	July 19, 2023	0	56	7,754	ND	ND	ND	ND	ND	ND	ND	6600
BH23-03	0	July 20, 2023	0	46	25,041	ND	ND	ND	ND	ND	ND	ND	29000
	2	July 20, 2023	0	67	13,112	ND	ND	ND	ND	ND	ND	ND	13000
BH23-04	0	July 20, 2023	0	97	28,464	ND	ND	ND	11	ND	11	11	41000
	2	July 20, 2023	0	64	7,541	ND	ND	ND	ND	ND	ND	ND	4500
	4	July 20, 2023	0	85	5,257	ND	ND	ND	ND	ND	ND	ND	3300
BH23-05	0	July 20, 2023	0	54	28,456	ND	ND	ND	ND	ND	ND	ND	77000
	2	July 20, 2023	0	84	4,647	ND	ND	ND	ND	ND	ND	ND	3100
	4	July 20, 2023	0	74	5,097	ND	ND	ND	ND	ND	ND	ND	2500
BH23-06	0	July 20, 2023	0	238	24,390	ND	ND	ND	ND	ND	ND	ND	21000
	2	July 20, 2023	0	72	6,269	ND	ND	ND	ND	ND	ND	ND	4400
	4	July 20, 2023	0	38	5,647	ND	ND	ND	ND	ND	ND	ND	4500
BH23-07	0	July 20, 2023	0	53	23,009	ND	ND	ND	ND	ND	ND	ND	27000
	2	July 20, 2023	0	44	4,161	ND	ND	ND	ND	ND	ND	ND	3400
BH23-08	0	July 20, 2023	0	51	28,404	ND	ND	ND	ND	ND	ND	ND	42000
	2	July 20, 2023	0	81	4,733	ND	ND	ND	ND	ND	ND	ND	5500
BH23-09	0	July 20, 2023	0	270	21,467	ND	ND	ND	ND	ND	ND	ND	25000
	2	July 20, 2023	0	68	5,370	ND	ND	ND	ND	ND	ND	ND	5600
	4	July 20, 2023	0	0	3,397	ND	ND	ND	ND	ND	ND	ND	3300
BH23-10	0	July 21, 2023	0	41	19,253	ND	ND	ND	ND	ND	ND	ND	29000
	2	July 21, 2023	0	80	3,728	ND	ND	ND	ND	ND	ND	ND	3600
	3.5	July 21, 2023	0	90	4,598	ND	ND	ND	ND	ND	ND	ND	3900
BH23-11	0	July 21, 2023	0	190	28,456	ND	ND	ND	ND	ND	ND	ND	41000
	2	July 21, 2023	0	82	4,570	ND	ND	ND	ND	ND	ND	ND	4400
BH23-12	0	July 21, 2023	0	75	7,510	ND	ND	ND	ND	ND	ND	ND	9700
	2	July 21, 2023	0	51	9,299	ND	ND	ND	ND	ND	ND	ND	8900
BH23-13	0	July 21, 2023	0	63	12,156	ND	ND	ND	ND	ND	ND	ND	13000
	2	July 21, 2023	0	86	4,736	ND	ND	ND	ND	ND	ND	ND	4900
BH23-14	0	July 21, 2023	0	73	20,857	ND	ND	ND	ND	ND	ND	ND	40000
	2	July 21, 2023	0	81	7,223	ND	ND	ND	ND	ND	ND	ND	7500
	4	July 21, 2023	0	119	5,644	ND	ND	ND	ND	ND	ND	ND	8600
BH23-15	0	July 21, 2023	0	294	23,003	ND	ND	ND	ND	ND	ND	ND	27000
	2	July 21, 2023	0	103	6,001	ND	ND	ND	ND	ND	ND	ND	6500
	4	July 21, 2023	0	82	5,387	ND	ND	ND	ND	ND	ND	ND	7500
BH23-16	0	July 21, 2023	0	57	28,395	ND	ND	ND	ND	ND	ND	ND	37000
	2	July 21, 2023	0	56	8,373	ND	ND	ND	ND	ND	ND	ND	8300
	4	July 21, 2023	0	96	7,782	ND	ND	ND	ND	ND	ND	ND	5600
BH23-17	0	July 21, 2023	0	89	19,243	ND	ND	ND	ND	ND	ND	ND	22000
	2	July 21, 2023	0	69	7,359	ND	ND	ND	ND	ND	ND	ND	5700
	4	July 21, 2023	0	-	8,358	ND	ND	ND	ND	ND	ND	ND	7000



Client Name: Devon Energy
 Site Name: Laguna Salado 22 Federal #004 (Phase 2)
 NMOCD Tracking #: nAPP2317746199
 Project #: 23E-01414-02
 Lab Reports: 2307983, 2307A39 and 2307B06

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable					Chloride Concentration
						Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH23-18	0	July 21, 2023	0	69	22,832	ND	ND	ND	ND	ND	ND	ND	48000
	2	July 21, 2023	0	86	7,788	ND	ND	ND	ND	ND	ND	ND	5900
	4	July 21, 2023	0	85	9,703	ND	ND	ND	ND	ND	ND	ND	9300

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

Bold and green shaded indicates exceedance outside of NMOCD Reclamation Criteria (off-pad)





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

July 31, 2023

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (505) 350-1336

FAX:

RE: Laguna Salado Fed 4

OrderNo.: 2307983

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 10 sample(s) on 7/21/2023 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 white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-01 0.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:00:00 AM

Lab ID: 2307983-001

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/23/2023 12:23:57 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2023 12:23:57 PM
Surr: DNOP	105	69-147		%Rec	1	7/23/2023 12:23:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/24/2023 9:38:52 PM
Surr: BFB	95.5	15-244		%Rec	1	7/24/2023 9:38:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/24/2023 9:38:52 PM
Toluene	ND	0.048		mg/Kg	1	7/24/2023 9:38:52 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/24/2023 9:38:52 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/24/2023 9:38:52 PM
Surr: 4-Bromofluorobenzene	119	39.1-146		%Rec	1	7/24/2023 9:38:52 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	2500	150		mg/Kg	50	7/26/2023 9:53:56 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-01 2.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:10:00 AM

Lab ID: 2307983-002

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/23/2023 12:48:23 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2023 12:48:23 PM
Surr: DNOP	88.2	69-147		%Rec	1	7/23/2023 12:48:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/24/2023 10:49:22 PM
Surr: BFB	92.6	15-244		%Rec	1	7/24/2023 10:49:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/24/2023 10:49:22 PM
Toluene	ND	0.050		mg/Kg	1	7/24/2023 10:49:22 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/24/2023 10:49:22 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/24/2023 10:49:22 PM
Surr: 4-Bromofluorobenzene	116	39.1-146		%Rec	1	7/24/2023 10:49:22 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	6100	300		mg/Kg	100	7/26/2023 10:06:21 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-02 0.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:20:00 AM

Lab ID: 2307983-003

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/23/2023 1:12:51 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/23/2023 1:12:51 PM
Surr: DNOP	91.2	69-147		%Rec	1	7/23/2023 1:12:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/24/2023 11:59:42 PM
Surr: BFB	92.6	15-244		%Rec	1	7/24/2023 11:59:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/24/2023 11:59:42 PM
Toluene	ND	0.050		mg/Kg	1	7/24/2023 11:59:42 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/24/2023 11:59:42 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/24/2023 11:59:42 PM
Surr: 4-Bromofluorobenzene	117	39.1-146		%Rec	1	7/24/2023 11:59:42 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	34000	1500		mg/Kg	500	7/26/2023 10:18:46 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-02 2.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:30:00 AM

Lab ID: 2307983-004

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/23/2023 1:37:25 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2023 1:37:25 PM
Surr: DNOP	89.4	69-147		%Rec	1	7/23/2023 1:37:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/25/2023 12:23:08 AM
Surr: BFB	94.8	15-244		%Rec	1	7/25/2023 12:23:08 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 12:23:08 AM
Toluene	ND	0.049		mg/Kg	1	7/25/2023 12:23:08 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/25/2023 12:23:08 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/25/2023 12:23:08 AM
Surr: 4-Bromofluorobenzene	120	39.1-146		%Rec	1	7/25/2023 12:23:08 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	6000	300		mg/Kg	100	7/26/2023 10:31:10 AM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-03 0.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:40:00 AM

Lab ID: 2307983-005

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/23/2023 2:01:58 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2023 2:01:58 PM
Surr: DNOP	79.0	69-147		%Rec	1	7/23/2023 2:01:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/25/2023 12:46:30 AM
Surr: BFB	93.6	15-244		%Rec	1	7/25/2023 12:46:30 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 12:46:30 AM
Toluene	ND	0.048		mg/Kg	1	7/25/2023 12:46:30 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/25/2023 12:46:30 AM
Xylenes, Total	ND	0.096		mg/Kg	1	7/25/2023 12:46:30 AM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/25/2023 12:46:30 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	970	60		mg/Kg	20	7/25/2023 9:07:50 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-03 2.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:50:00 AM

Lab ID: 2307983-006

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/23/2023 2:26:32 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/23/2023 2:26:32 PM
Surr: DNOP	80.9	69-147		%Rec	1	7/23/2023 2:26:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/25/2023 1:10:05 AM
Surr: BFB	94.2	15-244		%Rec	1	7/25/2023 1:10:05 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/25/2023 1:10:05 AM
Toluene	ND	0.050		mg/Kg	1	7/25/2023 1:10:05 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/25/2023 1:10:05 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/25/2023 1:10:05 AM
Surr: 4-Bromofluorobenzene	119	39.1-146		%Rec	1	7/25/2023 1:10:05 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	620	61		mg/Kg	20	7/25/2023 9:20:15 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-01 0.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 11:00:00 AM

Lab ID: 2307983-007

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/23/2023 2:51:05 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2023 2:51:05 PM
Surr: DNOP	92.1	69-147		%Rec	1	7/23/2023 2:51:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/25/2023 1:33:29 AM
Surr: BFB	91.7	15-244		%Rec	1	7/25/2023 1:33:29 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 1:33:29 AM
Toluene	ND	0.048		mg/Kg	1	7/25/2023 1:33:29 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/25/2023 1:33:29 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/25/2023 1:33:29 AM
Surr: 4-Bromofluorobenzene	116	39.1-146		%Rec	1	7/25/2023 1:33:29 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	35000	1500		mg/Kg	500	7/26/2023 10:43:34 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-01 2.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 11:10:00 AM

Lab ID: 2307983-008

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/23/2023 3:15:40 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2023 3:15:40 PM
Surr: DNOP	92.4	69-147		%Rec	1	7/23/2023 3:15:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/25/2023 1:56:52 AM
Surr: BFB	95.5	15-244		%Rec	1	7/25/2023 1:56:52 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 1:56:52 AM
Toluene	ND	0.047		mg/Kg	1	7/25/2023 1:56:52 AM
Ethylbenzene	ND	0.047		mg/Kg	1	7/25/2023 1:56:52 AM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 1:56:52 AM
Surr: 4-Bromofluorobenzene	120	39.1-146		%Rec	1	7/25/2023 1:56:52 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	6500	300		mg/Kg	100	7/26/2023 10:55:59 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-02 0.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 11:20:00 AM

Lab ID: 2307983-009

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/23/2023 4:04:54 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/23/2023 4:04:54 PM
Surr: DNOP	96.6	69-147		%Rec	1	7/23/2023 4:04:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/25/2023 2:20:16 AM
Surr: BFB	92.9	15-244		%Rec	1	7/25/2023 2:20:16 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 2:20:16 AM
Toluene	ND	0.049		mg/Kg	1	7/25/2023 2:20:16 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/25/2023 2:20:16 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/25/2023 2:20:16 AM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/25/2023 2:20:16 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	19000	1200		mg/Kg	400	7/26/2023 11:08:23 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-02 2.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 11:30:00 AM

Lab ID: 2307983-010

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/23/2023 4:29:31 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/23/2023 4:29:31 PM
Surr: DNOP	91.8	69-147		%Rec	1	7/23/2023 4:29:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/25/2023 2:43:41 AM
Surr: BFB	93.6	15-244		%Rec	1	7/25/2023 2:43:41 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 2:43:41 AM
Toluene	ND	0.048		mg/Kg	1	7/25/2023 2:43:41 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/25/2023 2:43:41 AM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 2:43:41 AM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/25/2023 2:43:41 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	6600	300		mg/Kg	100	7/26/2023 11:20:48 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307983

31-Jul-23

Client: Devon Energy
Project: Laguna Salado Fed 4

Sample ID: MB-76439	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76439	RunNo: 98504								
Prep Date: 7/25/2023	Analysis Date: 7/25/2023	SeqNo: 3586441	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76439	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76439	RunNo: 98504								
Prep Date: 7/25/2023	Analysis Date: 7/25/2023	SeqNo: 3586442	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.8	90	110			

Sample ID: MB-76448	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76448	RunNo: 98504								
Prep Date: 7/25/2023	Analysis Date: 7/25/2023	SeqNo: 3586471	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76448	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76448	RunNo: 98504								
Prep Date: 7/25/2023	Analysis Date: 7/25/2023	SeqNo: 3586472	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.2	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307983

31-Jul-23

Client: Devon Energy
Project: Laguna Salado Fed 4

Sample ID: LCS-76387	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 76387	RunNo: 98368								
Prep Date: 7/21/2023	Analysis Date: 7/23/2023	SeqNo: 3583070	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	99.3	61.9	130			
Surr: DNOP	4.6		5.000		91.4	69	147			

Sample ID: MB-76387	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 76387	RunNo: 98451								
Prep Date: 7/21/2023	Analysis Date: 7/24/2023	SeqNo: 3583918	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	11		10.00		107	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307983

31-Jul-23

Client: Devon Energy
Project: Laguna Salado Fed 4

Sample ID: ics-76381	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3583843		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	94.4	70	130			
Surr: BFB	2000		1000		197	15	244			

Sample ID: mb-76381	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3583844		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	950		1000		95.2	15	244			

Sample ID: 2307983-001ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BG23-01 0.0'	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3584038		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.8	23.99	0	89.5	70	130			
Surr: BFB	1900		959.7		199	15	244			

Sample ID: 2307983-001amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BG23-01 0.0'	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3584039		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.8	24.04	0	87.0	70	130	2.62	20	
Surr: BFB	1800		961.5		190	15	244	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307983

31-Jul-23

Client: Devon Energy
Project: Laguna Salado Fed 4

Sample ID: LCS-76381	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3583856		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	114	70	130			
Toluene	1.1	0.050	1.000	0	115	70	130			
Ethylbenzene	1.2	0.050	1.000	0	117	70	130			
Xylenes, Total	3.5	0.10	3.000	0	118	70	130			
Surr: 4-Bromofluorobenzene	1.2		1.000		120	39.1	146			

Sample ID: mb-76381	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3583857		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	1.2		1.000		119	39.1	146			

Sample ID: 2307983-002ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BG23-01 2.0'	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3584057		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	105	70	130			
Toluene	1.1	0.050	0.9950	0	108	70	130			
Ethylbenzene	1.1	0.050	0.9950	0	110	70	130			
Xylenes, Total	3.3	0.10	2.985	0	109	70	130			
Surr: 4-Bromofluorobenzene	1.2		0.9950		119	39.1	146			

Sample ID: 2307983-002amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BG23-01 2.0'	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3584058		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9930	0	101	70	130	3.57	20	
Toluene	1.0	0.050	0.9930	0	102	70	130	5.27	20	
Ethylbenzene	1.0	0.050	0.9930	0	103	70	130	6.15	20	
Xylenes, Total	3.1	0.099	2.979	0	105	70	130	4.57	20	
Surr: 4-Bromofluorobenzene	1.2		0.9930		119	39.1	146	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2307983 RcptNo: 1

Received By: Juan Rojas 7/21/2023 7:50:00 AM
Completed By: Tracy Casarrubias 7/21/2023 8:15:29 AM
Reviewed By: [Signature] 7/21/23

Chain of Custody

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

Log In

- 3. Was an attempt made to cool the samples? Yes [x] No [] NA []
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [x] No [] NA []
5. Sample(s) in proper container(s)? Yes [x] No []
6. Sufficient sample volume for indicated test(s)? Yes [x] No []
7. Are samples (except VOA and ONG) properly preserved? Yes [x] No []
8. Was preservative added to bottles? Yes [] No [x] NA []
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [] No [] NA [x]
10. Were any sample containers received broken? Yes [] No [x]
11. Does paperwork match bottle labels? Yes [x] No []
12. Are matrices correctly identified on Chain of Custody? Yes [x] No []
13. Is it clear what analyses were requested? Yes [x] No []
14. Were all holding times able to be met? Yes [x] No []

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

Adjusted?
Checked by: SCM 07/21/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: Mailing address, phone number and Email/Fax are missing on COC - TMC 7/21/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.7, Good, Yes, Yogi

Chain-of-Custody Record

Client: Devon
 Direct Bill
 Mailing Address: Laguna Salado Fed #4

Turn-Around Time: Standard Rush 5 Day
 Project Name: Laguna Salado Fed #4
 Project #: 23E-01414

Project Manager: Kent Stallings
 Sampler: AK
 On Ice: Yes No
 # of Coolers: 1 HEAL No. 2307983
 Cooler Temp (including CF): 0.6 to 1.0 - 0.7 (°C)

Date	Time	Matrix	Sample Name	Depth	Container Type and #	Preservative Type	HEAL No.
7-19-23	1000	Soil	B623-01	0.0'	4 oz ICE		001
	1010		B623-01	2.0'			002
	1020		B623-02	0.0'			003
	1030		B623-02	2.0'			004
	1040		B623-03	0.0'			005
	1050		B623-03	2.0'			006
	1100		B623-01	0.0'			007
	1110		B623-01	2.0'			008
	1120		B623-02	0.0'			009
	1130		B623-02	2.0'			010

Date: 7/19/23 Time: 1900 Relinquished by: AK
 Date: 7/19/23 Time: 0600 Received by: AK
 Date: 7/19/23 Time: 1950 Relinquished by: AK
 Date: 7/19/23 Time: 0600 Received by: AK

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"/> TPH8015D(GRO / DRO / MRO)	<input checked="" type="checkbox"/> BTEX / MTBE / TMBs (8021)
<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	<input checked="" type="checkbox"/> EDB (Method 504.1)
<input checked="" type="checkbox"/> PAHs by 8310 or 8270SIMS	<input checked="" type="checkbox"/> RCRA 8 Metals
<input checked="" type="checkbox"/> Cl ⁻ , Br ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ , SO ₄ ²⁻	<input checked="" type="checkbox"/> 8260 (VOA)
<input checked="" type="checkbox"/> 8270 (Semi-VOA)	<input checked="" type="checkbox"/> Total Coliform (Present/Absent)

Remarks: CC: Kent Stallings
Kstallings@vertext.ca



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

August 04, 2023

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (505) 350-1336

FAX:

RE: Laguna Salado Fed 22 Federal 4

OrderNo.: 2307A39

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 18 sample(s) on 7/22/2023 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued August 03, 2023.

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. 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. All samples are reported as received unless otherwise indicated.

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

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-03 0.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 9:00:00 AM

Lab ID: 2307A39-001

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/25/2023 4:28:50 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/25/2023 4:28:50 PM
Surr: DNOP	105	69-147		%Rec	1	7/25/2023 4:28:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/25/2023 11:33:07 AM
Surr: BFB	93.0	15-244		%Rec	1	7/25/2023 11:33:07 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/25/2023 11:33:07 AM
Toluene	ND	0.049		mg/Kg	1	7/25/2023 11:33:07 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/25/2023 11:33:07 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/25/2023 11:33:07 AM
Surr: 4-Bromofluorobenzene	115	39.1-146		%Rec	1	7/25/2023 11:33:07 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	29000	1500		mg/Kg	500	7/27/2023 10:34:45 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-03 2.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 9:10:00 AM

Lab ID: 2307A39-002

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/25/2023 4:39:43 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/25/2023 4:39:43 PM
Surr: DNOP	107	69-147		%Rec	1	7/25/2023 4:39:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/25/2023 12:43:42 PM
Surr: BFB	95.7	15-244		%Rec	1	7/25/2023 12:43:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/25/2023 12:43:42 PM
Toluene	ND	0.049		mg/Kg	1	7/25/2023 12:43:42 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/25/2023 12:43:42 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/25/2023 12:43:42 PM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/25/2023 12:43:42 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	13000	600		mg/Kg	200	7/27/2023 10:47:10 AM

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-04 0.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 9:20:00 AM

Lab ID: 2307A39-003

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/25/2023 4:50:37 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/25/2023 4:50:37 PM
Surr: DNOP	109	69-147		%Rec	1	7/25/2023 4:50:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/25/2023 1:54:38 PM
Surr: BFB	98.8	15-244		%Rec	1	7/25/2023 1:54:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 1:54:38 PM
Toluene	ND	0.047		mg/Kg	1	7/25/2023 1:54:38 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/25/2023 1:54:38 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 1:54:38 PM
Surr: 4-Bromofluorobenzene	120	39.1-146		%Rec	1	7/25/2023 1:54:38 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	41000	1500		mg/Kg	500	7/27/2023 10:59:35 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-04 2.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 9:30:00 AM

Lab ID: 2307A39-004

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/25/2023 5:01:30 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/25/2023 5:01:30 PM
Surr: DNOP	102	69-147		%Rec	1	7/25/2023 5:01:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/25/2023 2:18:23 PM
Surr: BFB	99.7	15-244		%Rec	1	7/25/2023 2:18:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 2:18:23 PM
Toluene	ND	0.048		mg/Kg	1	7/25/2023 2:18:23 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/25/2023 2:18:23 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/25/2023 2:18:23 PM
Surr: 4-Bromofluorobenzene	122	39.1-146		%Rec	1	7/25/2023 2:18:23 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	4500	300		mg/Kg	100	7/27/2023 11:12:00 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-04 4.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 9:40:00 AM

Lab ID: 2307A39-005

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/25/2023 5:12:27 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/25/2023 5:12:27 PM
Surr: DNOP	111	69-147		%Rec	1	7/25/2023 5:12:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/25/2023 2:42:10 PM
Surr: BFB	96.3	15-244		%Rec	1	7/25/2023 2:42:10 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 2:42:10 PM
Toluene	ND	0.047		mg/Kg	1	7/25/2023 2:42:10 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/25/2023 2:42:10 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 2:42:10 PM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/25/2023 2:42:10 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	3300	150		mg/Kg	50	7/27/2023 11:24:24 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 0.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 9:50:00 AM

Lab ID: 2307A39-006

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/25/2023 5:23:23 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/25/2023 5:23:23 PM
Surr: DNOP	113	69-147		%Rec	1	7/25/2023 5:23:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/25/2023 3:06:00 PM
Surr: BFB	97.9	15-244		%Rec	1	7/25/2023 3:06:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 3:06:00 PM
Toluene	ND	0.047		mg/Kg	1	7/25/2023 3:06:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/25/2023 3:06:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 3:06:00 PM
Surr: 4-Bromofluorobenzene	120	39.1-146		%Rec	1	7/25/2023 3:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	77000	3000		mg/Kg	1000	7/27/2023 11:36:48 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 2.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 10:00:00 AM

Lab ID: 2307A39-007

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/25/2023 5:34:17 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/25/2023 5:34:17 PM
Surr: DNOP	113	69-147		%Rec	1	7/25/2023 5:34:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/25/2023 3:29:48 PM
Surr: BFB	99.1	15-244		%Rec	1	7/25/2023 3:29:48 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 3:29:48 PM
Toluene	ND	0.048		mg/Kg	1	7/25/2023 3:29:48 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/25/2023 3:29:48 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 3:29:48 PM
Surr: 4-Bromofluorobenzene	122	39.1-146		%Rec	1	7/25/2023 3:29:48 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	3100	150		mg/Kg	50	7/27/2023 11:49:13 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 4.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 10:10:00 AM

Lab ID: 2307A39-008

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/25/2023 5:56:20 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/25/2023 5:56:20 PM
Surr: DNOP	116	69-147		%Rec	1	7/25/2023 5:56:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/25/2023 3:53:42 PM
Surr: BFB	99.0	15-244		%Rec	1	7/25/2023 3:53:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 3:53:42 PM
Toluene	ND	0.048		mg/Kg	1	7/25/2023 3:53:42 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/25/2023 3:53:42 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 3:53:42 PM
Surr: 4-Bromofluorobenzene	122	39.1-146		%Rec	1	7/25/2023 3:53:42 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	2500	150		mg/Kg	50	7/27/2023 12:01:38 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-06 0.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 10:20:00 AM

Lab ID: 2307A39-009

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/25/2023 6:07:35 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/25/2023 6:07:35 PM
Surr: DNOP	97.2	69-147		%Rec	1	7/25/2023 6:07:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/25/2023 4:17:32 PM
Surr: BFB	100	15-244		%Rec	1	7/25/2023 4:17:32 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	7/25/2023 4:17:32 PM
Toluene	ND	0.047		mg/Kg	1	7/25/2023 4:17:32 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/25/2023 4:17:32 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/25/2023 4:17:32 PM
Surr: 4-Bromofluorobenzene	123	39.1-146		%Rec	1	7/25/2023 4:17:32 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	21000	1200		mg/Kg	400	7/27/2023 12:14:03 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-06 2.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 10:30:00 AM

Lab ID: 2307A39-010

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/25/2023 6:18:40 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/25/2023 6:18:40 PM
Surr: DNOP	98.9	69-147		%Rec	1	7/25/2023 6:18:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/25/2023 4:41:22 PM
Surr: BFB	101	15-244		%Rec	1	7/25/2023 4:41:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 4:41:22 PM
Toluene	ND	0.048		mg/Kg	1	7/25/2023 4:41:22 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/25/2023 4:41:22 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/25/2023 4:41:22 PM
Surr: 4-Bromofluorobenzene	123	39.1-146		%Rec	1	7/25/2023 4:41:22 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	4400	300		mg/Kg	100	7/27/2023 12:51:16 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-06 4.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 10:40:00 AM

Lab ID: 2307A39-011

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	7/25/2023 6:29:48 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/25/2023 6:29:48 PM
Surr: DNOP	90.6	69-147		%Rec	1	7/25/2023 6:29:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/25/2023 5:29:04 PM
Surr: BFB	99.9	15-244		%Rec	1	7/25/2023 5:29:04 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 5:29:04 PM
Toluene	ND	0.047		mg/Kg	1	7/25/2023 5:29:04 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/25/2023 5:29:04 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 5:29:04 PM
Surr: 4-Bromofluorobenzene	122	39.1-146		%Rec	1	7/25/2023 5:29:04 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	4500	150		mg/Kg	50	7/27/2023 1:03:41 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-07 0.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 10:50:00 AM

Lab ID: 2307A39-012

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/25/2023 6:40:50 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/25/2023 6:40:50 PM
Surr: DNOP	96.3	69-147		%Rec	1	7/25/2023 6:40:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/25/2023 5:52:46 PM
Surr: BFB	98.4	15-244		%Rec	1	7/25/2023 5:52:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 5:52:46 PM
Toluene	ND	0.048		mg/Kg	1	7/25/2023 5:52:46 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/25/2023 5:52:46 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/25/2023 5:52:46 PM
Surr: 4-Bromofluorobenzene	120	39.1-146		%Rec	1	7/25/2023 5:52:46 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	27000	1200		mg/Kg	400	7/27/2023 1:16:06 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-07 2.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 11:00:00 AM

Lab ID: 2307A39-013

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/25/2023 6:51:54 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/25/2023 6:51:54 PM
Surr: DNOP	97.0	69-147		%Rec	1	7/25/2023 6:51:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/25/2023 6:16:36 PM
Surr: BFB	99.5	15-244		%Rec	1	7/25/2023 6:16:36 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 6:16:36 PM
Toluene	ND	0.047		mg/Kg	1	7/25/2023 6:16:36 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/25/2023 6:16:36 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/25/2023 6:16:36 PM
Surr: 4-Bromofluorobenzene	123	39.1-146		%Rec	1	7/25/2023 6:16:36 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	3400	150		mg/Kg	50	7/27/2023 1:28:31 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-08 0.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 11:10:00 AM

Lab ID: 2307A39-014

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/25/2023 7:02:57 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/25/2023 7:02:57 PM
Surr: DNOP	102	69-147		%Rec	1	7/25/2023 7:02:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/25/2023 6:40:23 PM
Surr: BFB	98.7	15-244		%Rec	1	7/25/2023 6:40:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 6:40:23 PM
Toluene	ND	0.047		mg/Kg	1	7/25/2023 6:40:23 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/25/2023 6:40:23 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 6:40:23 PM
Surr: 4-Bromofluorobenzene	122	39.1-146		%Rec	1	7/25/2023 6:40:23 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	42000	3000		mg/Kg	1000	7/27/2023 1:40:55 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-08 2.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 11:20:00 AM

Lab ID: 2307A39-015

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/25/2023 7:13:56 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/25/2023 7:13:56 PM
Surr: DNOP	101	69-147		%Rec	1	7/25/2023 7:13:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/25/2023 7:04:01 PM
Surr: BFB	95.4	15-244		%Rec	1	7/25/2023 7:04:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 7:04:01 PM
Toluene	ND	0.049		mg/Kg	1	7/25/2023 7:04:01 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/25/2023 7:04:01 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/25/2023 7:04:01 PM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/25/2023 7:04:01 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	5500	300		mg/Kg	100	7/28/2023 9:55:41 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-09 0.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 11:30:00 AM

Lab ID: 2307A39-016

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	7/25/2023 7:24:51 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/25/2023 7:24:51 PM
Surr: DNOP	104	69-147		%Rec	1	7/25/2023 7:24:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/25/2023 7:27:40 PM
Surr: BFB	97.9	15-244		%Rec	1	7/25/2023 7:27:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 7:27:40 PM
Toluene	ND	0.047		mg/Kg	1	7/25/2023 7:27:40 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/25/2023 7:27:40 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 7:27:40 PM
Surr: 4-Bromofluorobenzene	121	39.1-146		%Rec	1	7/25/2023 7:27:40 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	25000	1200		mg/Kg	400	7/28/2023 10:08:05 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-09 2.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 11:40:00 AM

Lab ID: 2307A39-017

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/25/2023 7:57:42 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/25/2023 7:57:42 PM
Surr: DNOP	102	69-147		%Rec	1	7/25/2023 7:57:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/25/2023 7:51:19 PM
Surr: BFB	96.0	15-244		%Rec	1	7/25/2023 7:51:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/25/2023 7:51:19 PM
Toluene	ND	0.049		mg/Kg	1	7/25/2023 7:51:19 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/25/2023 7:51:19 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/25/2023 7:51:19 PM
Surr: 4-Bromofluorobenzene	120	39.1-146		%Rec	1	7/25/2023 7:51:19 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	5600	300		mg/Kg	100	7/28/2023 10:20:30 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307A39**

Date Reported: **8/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-09 4.0'

Project: Laguna Salado Fed 22 Federal 4

Collection Date: 7/20/2023 11:50:00 AM

Lab ID: 2307A39-018

Matrix: SOIL

Received Date: 7/22/2023 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/25/2023 8:08:36 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/25/2023 8:08:36 PM
Surr: DNOP	103	69-147		%Rec	1	7/25/2023 8:08:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/25/2023 8:14:52 PM
Surr: BFB	95.8	15-244		%Rec	1	7/25/2023 8:14:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	7/25/2023 8:14:52 PM
Toluene	ND	0.046		mg/Kg	1	7/25/2023 8:14:52 PM
Ethylbenzene	ND	0.046		mg/Kg	1	7/25/2023 8:14:52 PM
Xylenes, Total	ND	0.092		mg/Kg	1	7/25/2023 8:14:52 PM
Surr: 4-Bromofluorobenzene	119	39.1-146		%Rec	1	7/25/2023 8:14:52 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	3300	150		mg/Kg	50	7/28/2023 10:32:55 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307A39

04-Aug-23

Client: Devon Energy
Project: Laguna Salado Fed 22 Federal 4

Sample ID: MB-76484	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76484	RunNo: 98503								
Prep Date: 7/26/2023	Analysis Date: 7/26/2023	SeqNo: 3587802	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76484	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76484	RunNo: 98503								
Prep Date: 7/26/2023	Analysis Date: 7/26/2023	SeqNo: 3587803	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-76506	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76506	RunNo: 98546								
Prep Date: 7/27/2023	Analysis Date: 7/27/2023	SeqNo: 3589322	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76506	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76506	RunNo: 98546								
Prep Date: 7/27/2023	Analysis Date: 7/27/2023	SeqNo: 3589323	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.5	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307A39

04-Aug-23

Client: Devon Energy
Project: Laguna Salado Fed 22 Federal 4

Sample ID: 2307A39-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-03 0.0'	Batch ID: 76429	RunNo: 98469								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3586051			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	9.9	49.50	0	106	54.2	135			
Surr: DNOP	5.0		4.950		102	69	147			

Sample ID: 2307A39-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-03 0.0'	Batch ID: 76429	RunNo: 98469								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3586052			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	9.7	48.73	0	110	54.2	135	2.40	29.2	
Surr: DNOP	5.1		4.873		105	69	147	0	0	

Sample ID: LCS-76429	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 76429	RunNo: 98469								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3586101			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	104	61.9	130			
Surr: DNOP	4.5		5.000		90.8	69	147			

Sample ID: MB-76429	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 76429	RunNo: 98469								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3586105			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	11		10.00		114	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307A39

04-Aug-23

Client: Devon Energy
Project: Laguna Salado Fed 22 Federal 4

Sample ID: ics-76413	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 76413	RunNo: 98484								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3585304	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	88.5	70	130			
Surr: BFB	1900		1000		189	15	244			

Sample ID: mb-76413	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 76413	RunNo: 98484								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3585305	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	930		1000		93.4	15	244			

Sample ID: 2307a39-001ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BH23-03 0.0'	Batch ID: 76413	RunNo: 98484								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3585307	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.68	0	97.2	70	130			
Surr: BFB	2000		987.2		199	15	244			

Sample ID: 2307a39-001amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BH23-03 0.0'	Batch ID: 76413	RunNo: 98484								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3585308	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	24.75	0	113	70	130	15.6	20	
Surr: BFB	2200		990.1		222	15	244	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307A39

04-Aug-23

Client: Devon Energy
Project: Laguna Salado Fed 22 Federal 4

Sample ID: LCS-76413	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 76413	RunNo: 98484								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3585317	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	109	70	130			
Toluene	1.1	0.050	1.000	0	109	70	130			
Ethylbenzene	1.1	0.050	1.000	0	111	70	130			
Xylenes, Total	3.4	0.10	3.000	0	112	70	130			
Surr: 4-Bromofluorobenzene	1.2		1.000		117	39.1	146			

Sample ID: mb-76413	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 76413	RunNo: 98484								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3585318	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	1.2		1.000		118	39.1	146			

Sample ID: 2307a39-002ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-03 2.0'	Batch ID: 76413	RunNo: 98484								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3585321	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	0.9843	0	117	70	130			
Toluene	1.2	0.049	0.9843	0	120	70	130			
Ethylbenzene	1.2	0.049	0.9843	0	123	70	130			
Xylenes, Total	3.6	0.098	2.953	0	123	70	130			
Surr: 4-Bromofluorobenzene	1.2		0.9843		119	39.1	146			

Sample ID: 2307a39-002amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-03 2.0'	Batch ID: 76413	RunNo: 98484								
Prep Date: 7/24/2023	Analysis Date: 7/25/2023	SeqNo: 3585322	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9911	0	115	70	130	1.48	20	
Toluene	1.2	0.050	0.9911	0	117	70	130	1.67	20	
Ethylbenzene	1.2	0.050	0.9911	0	120	70	130	1.89	20	
Xylenes, Total	3.6	0.099	2.973	0	121	70	130	1.48	20	
Surr: 4-Bromofluorobenzene	1.2		0.9911		121	39.1	146	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2307A39 RcptNo: 1

Received By: Tracy Casarrubias 7/22/2023 10:30:00 AM

Completed By: Tracy Casarrubias 7/22/2023 10:46:19 AM

Reviewed By: [Handwritten signature] 7/24/23

Chain of Custody

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

Log In

- 3. Was an attempt made to cool the samples? Yes [x] No [] NA []
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [x] No [] NA []
5. Sample(s) in proper container(s)? Yes [x] No []
6. Sufficient sample volume for indicated test(s)? Yes [x] No []
7. Are samples (except VOA and ONG) properly preserved? Yes [x] No []
8. Was preservative added to bottles? Yes [] No [x] NA []
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [] No [] NA [x]
10. Were any sample containers received broken? Yes [] No [x]
11. Does paperwork match bottle labels? Yes [x] No []
12. Are matrices correctly identified on Chain of Custody? Yes [x] No []
13. Is it clear what analyses were requested? Yes [x] No []
14. Were all holding times able to be met? Yes [x] No []

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

Checked by: TMC 7/22/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: Mailing address, phone number, and Email/Fax are missing on COC- TMC 7/22/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.9, Good, Yes, Yogi, [], []

Chain-of-Custody Record

Client: Devon

Direct: Bill

Mailing Address:

Phone #: _____

email or Fax#: _____

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

Accreditation: Az Compliance NELAC Other

EDD (Type) _____

Turn-Around Time: Standard Rush

Project Name: Logona Sabado Fed 22 Federal 4

Project #: 23E-01714

Project Manager: Kent Stallings

Sampler: AK

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CF): 0.9 - 0.5 (°C)

Container Type and # 402

Preservative Type ICE

HEAL No. 2307A39

Received by: [Signature] Date: 1/20/23 Time: 8:10

Relinquished by: [Signature] Date: 1/20/23 Time: 10:30

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	PH/8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	PCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
7-20-23	0900	Soil	BH23-03	402	ICE	001										
	0910		BH23-03			002										
	0920		BH23-04			003										
	0930		BH23-04			004										
	0940		BH23-04			005										
	0950		BH23-05			006										
	1000		BH23-05			007										
	1010		BH23-05			008										
	1020		BH23-06			009										
	1030		BH23-06			010										
	1040		BH23-06			011										
	1050		BH23-07			012										



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)	PH/8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	PCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
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Remarks: LC: Kent Stallings
Kstallings@vertex.ca

Chain-of-Custody Record

Client: Devon Standard Rush
 Project Name: Luzerna Salado 22 Federal 4
 Project #: 23E-01414

Project Manager: Kent Stallings
 Sampler: AA
 On Ice: Yes No yes
 # of Coolers: 1
 Cooler Temp (including CF): 0.9-0.0.7 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
7-20-23	1100	Soil	BH23-07	402	ICE	230FA39
	1110		BH23-08			013
	1120		BH23-08			014
	1130		BH23-09			010
	1140		BH23-09			017
	1150		BH23-09			018

Relinquished by: [Signature]
 Relinquished by: [Signature]
 Date: 7/20/23 Time: 11:00
 Date: 7/22/23 Time: 10:30

Received by: [Signature] Date: 7/21/23 Time: 8:10
 Received by: [Signature] Date: 7/22/23 Time: 10:30



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 / TMBs (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, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	

Remarks: CC: Kent Stallings
K Stallings @ vertex.ca



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

August 03, 2023

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (575) 748-0176

FAX:

RE: Laguna Salado 22 Federal 4

OrderNo.: 2307B06

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 24 sample(s) on 7/25/2023 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 white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-10 0.0

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 8:00:00 AM

Lab ID: 2307B06-001

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/27/2023 2:05:14 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/27/2023 2:05:14 PM
Surr: DNOP	96.6	69-147		%Rec	1	7/27/2023 2:05:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/27/2023 7:16:00 PM
Surr: BFB	96.3	15-244		%Rec	1	7/27/2023 7:16:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	7/27/2023 7:16:00 PM
Toluene	ND	0.047		mg/Kg	1	7/27/2023 7:16:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/27/2023 7:16:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/27/2023 7:16:00 PM
Surr: 4-Bromofluorobenzene	117	39.1-146		%Rec	1	7/27/2023 7:16:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	29000	1500		mg/Kg	500	7/31/2023 3:32:48 PM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-10 2.0

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 8:10:00 AM

Lab ID: 2307B06-002

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	7/27/2023 2:29:16 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/27/2023 2:29:16 PM
Surr: DNOP	96.1	69-147		%Rec	1	7/27/2023 2:29:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/27/2023 7:39:33 PM
Surr: BFB	96.8	15-244		%Rec	1	7/27/2023 7:39:33 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/27/2023 7:39:33 PM
Toluene	ND	0.049		mg/Kg	1	7/27/2023 7:39:33 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/27/2023 7:39:33 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/27/2023 7:39:33 PM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/27/2023 7:39:33 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	3600	150		mg/Kg	50	7/31/2023 3:45:08 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-10 3.5

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 8:20:00 AM

Lab ID: 2307B06-003

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/27/2023 2:53:24 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/27/2023 2:53:24 PM
Surr: DNOP	94.6	69-147		%Rec	1	7/27/2023 2:53:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/27/2023 8:03:05 PM
Surr: BFB	96.4	15-244		%Rec	1	7/27/2023 8:03:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/27/2023 8:03:05 PM
Toluene	ND	0.049		mg/Kg	1	7/27/2023 8:03:05 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/27/2023 8:03:05 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/27/2023 8:03:05 PM
Surr: 4-Bromofluorobenzene	119	39.1-146		%Rec	1	7/27/2023 8:03:05 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	3900	150		mg/Kg	50	7/31/2023 3:57:29 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-11 0.0

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 8:30:00 AM

Lab ID: 2307B06-004

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/27/2023 3:17:25 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/27/2023 3:17:25 PM
Surr: DNOP	96.9	69-147		%Rec	1	7/27/2023 3:17:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/27/2023 8:26:37 PM
Surr: BFB	94.9	15-244		%Rec	1	7/27/2023 8:26:37 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/27/2023 8:26:37 PM
Toluene	ND	0.048		mg/Kg	1	7/27/2023 8:26:37 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/27/2023 8:26:37 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/27/2023 8:26:37 PM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/27/2023 8:26:37 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	41000	1500		mg/Kg	500	7/31/2023 4:09:49 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-11 2.0

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 8:40:00 AM

Lab ID: 2307B06-005

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	7/27/2023 4:05:24 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	7/27/2023 4:05:24 PM
Surr: DNOP	96.5	69-147		%Rec	1	7/27/2023 4:05:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/27/2023 11:10:34 PM
Surr: BFB	94.4	15-244		%Rec	1	7/27/2023 11:10:34 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/27/2023 11:10:34 PM
Toluene	ND	0.050		mg/Kg	1	7/27/2023 11:10:34 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/27/2023 11:10:34 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/27/2023 11:10:34 PM
Surr: 4-Bromofluorobenzene	117	39.1-146		%Rec	1	7/27/2023 11:10:34 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	4400	150		mg/Kg	50	7/31/2023 4:22:10 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-12 0.0

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 8:50:00 AM

Lab ID: 2307B06-006

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/27/2023 4:54:11 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/27/2023 4:54:11 PM
Surr: DNOP	95.2	69-147		%Rec	1	7/27/2023 4:54:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/27/2023 11:33:54 PM
Surr: BFB	94.2	15-244		%Rec	1	7/27/2023 11:33:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/27/2023 11:33:54 PM
Toluene	ND	0.048		mg/Kg	1	7/27/2023 11:33:54 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/27/2023 11:33:54 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/27/2023 11:33:54 PM
Surr: 4-Bromofluorobenzene	116	39.1-146		%Rec	1	7/27/2023 11:33:54 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	9700	300		mg/Kg	100	7/31/2023 4:34:31 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-12 2.0

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 9:00:00 AM

Lab ID: 2307B06-007

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	7/27/2023 5:18:43 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/27/2023 5:18:43 PM
Surr: DNOP	96.1	69-147		%Rec	1	7/27/2023 5:18:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/27/2023 11:57:16 PM
Surr: BFB	91.6	15-244		%Rec	1	7/27/2023 11:57:16 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/27/2023 11:57:16 PM
Toluene	ND	0.048		mg/Kg	1	7/27/2023 11:57:16 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/27/2023 11:57:16 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/27/2023 11:57:16 PM
Surr: 4-Bromofluorobenzene	114	39.1-146		%Rec	1	7/27/2023 11:57:16 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	8900	300		mg/Kg	100	7/31/2023 4:46:51 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-13 0.0

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 9:10:00 AM

Lab ID: 2307B06-008

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/27/2023 5:43:23 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/27/2023 5:43:23 PM
Surr: DNOP	92.9	69-147		%Rec	1	7/27/2023 5:43:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/28/2023 12:20:42 AM
Surr: BFB	93.1	15-244		%Rec	1	7/28/2023 12:20:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/28/2023 12:20:42 AM
Toluene	ND	0.048		mg/Kg	1	7/28/2023 12:20:42 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/28/2023 12:20:42 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/28/2023 12:20:42 AM
Surr: 4-Bromofluorobenzene	116	39.1-146		%Rec	1	7/28/2023 12:20:42 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	13000	1500		mg/Kg	500	7/31/2023 4:59:10 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-13 2.0

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 9:20:00 AM

Lab ID: 2307B06-009

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/27/2023 6:08:23 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/27/2023 6:08:23 PM
Surr: DNOP	94.4	69-147		%Rec	1	7/27/2023 6:08:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/28/2023 12:44:17 AM
Surr: BFB	94.1	15-244		%Rec	1	7/28/2023 12:44:17 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/28/2023 12:44:17 AM
Toluene	ND	0.048		mg/Kg	1	7/28/2023 12:44:17 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/28/2023 12:44:17 AM
Xylenes, Total	ND	0.096		mg/Kg	1	7/28/2023 12:44:17 AM
Surr: 4-Bromofluorobenzene	117	39.1-146		%Rec	1	7/28/2023 12:44:17 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	4900	150		mg/Kg	50	7/31/2023 5:11:31 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 0.0

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 9:30:00 AM

Lab ID: 2307B06-010

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/27/2023 6:33:20 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/27/2023 6:33:20 PM
Surr: DNOP	95.7	69-147		%Rec	1	7/27/2023 6:33:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/28/2023 1:07:36 AM
Surr: BFB	91.9	15-244		%Rec	1	7/28/2023 1:07:36 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/28/2023 1:07:36 AM
Toluene	ND	0.049		mg/Kg	1	7/28/2023 1:07:36 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/28/2023 1:07:36 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/28/2023 1:07:36 AM
Surr: 4-Bromofluorobenzene	114	39.1-146		%Rec	1	7/28/2023 1:07:36 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	40000	1500		mg/Kg	500	7/31/2023 5:48:35 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 2.0

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 9:40:00 AM

Lab ID: 2307B06-011

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/27/2023 7:22:55 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/27/2023 7:22:55 PM
Surr: DNOP	94.2	69-147		%Rec	1	7/27/2023 7:22:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/28/2023 1:30:57 AM
Surr: BFB	93.6	15-244		%Rec	1	7/28/2023 1:30:57 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/28/2023 1:30:57 AM
Toluene	ND	0.048		mg/Kg	1	7/28/2023 1:30:57 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/28/2023 1:30:57 AM
Xylenes, Total	ND	0.095		mg/Kg	1	7/28/2023 1:30:57 AM
Surr: 4-Bromofluorobenzene	115	39.1-146		%Rec	1	7/28/2023 1:30:57 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	7500	300		mg/Kg	100	7/31/2023 6:00:56 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 4.0

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 9:50:00 AM

Lab ID: 2307B06-012

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/27/2023 7:47:37 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/27/2023 7:47:37 PM
Surr: DNOP	97.0	69-147		%Rec	1	7/27/2023 7:47:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/28/2023 1:54:18 AM
Surr: BFB	93.6	15-244		%Rec	1	7/28/2023 1:54:18 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/28/2023 1:54:18 AM
Toluene	ND	0.048		mg/Kg	1	7/28/2023 1:54:18 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/28/2023 1:54:18 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/28/2023 1:54:18 AM
Surr: 4-Bromofluorobenzene	117	39.1-146		%Rec	1	7/28/2023 1:54:18 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	8600	300		mg/Kg	100	7/31/2023 6:13:16 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-15 0.0'

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 10:00:00 AM

Lab ID: 2307B06-013

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/27/2023 8:12:23 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/27/2023 8:12:23 PM
Surr: DNOP	97.3	69-147		%Rec	1	7/27/2023 8:12:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/28/2023 2:17:38 AM
Surr: BFB	91.3	15-244		%Rec	1	7/28/2023 2:17:38 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/28/2023 2:17:38 AM
Toluene	ND	0.049		mg/Kg	1	7/28/2023 2:17:38 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/28/2023 2:17:38 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/28/2023 2:17:38 AM
Surr: 4-Bromofluorobenzene	114	39.1-146		%Rec	1	7/28/2023 2:17:38 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	27000	1500		mg/Kg	500	7/31/2023 6:25:37 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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-15 2.0'

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 10:10:00 AM

Lab ID: 2307B06-014

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/27/2023 8:37:06 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/27/2023 8:37:06 PM
Surr: DNOP	99.0	69-147		%Rec	1	7/27/2023 8:37:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/28/2023 2:41:01 AM
Surr: BFB	95.3	15-244		%Rec	1	7/28/2023 2:41:01 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/28/2023 2:41:01 AM
Toluene	ND	0.049		mg/Kg	1	7/28/2023 2:41:01 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/28/2023 2:41:01 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/28/2023 2:41:01 AM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/28/2023 2:41:01 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	6500	300		mg/Kg	100	7/31/2023 6:37:57 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-15 3.0'

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 10:20:00 AM

Lab ID: 2307B06-015

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/28/2023 10:35:43 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/28/2023 10:35:43 PM
Surr: DNOP	98.5	69-147		%Rec	1	7/28/2023 10:35:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/28/2023 12:00:00 PM
Surr: BFB	83.9	15-244		%Rec	1	7/28/2023 12:00:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/28/2023 12:00:00 PM
Toluene	ND	0.048		mg/Kg	1	7/28/2023 12:00:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/28/2023 12:00:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/28/2023 12:00:00 PM
Surr: 4-Bromofluorobenzene	81.3	39.1-146		%Rec	1	7/28/2023 12:00:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	7500	300		mg/Kg	100	7/31/2023 6:50:19 PM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-16 0.0'

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 10:30:00 AM

Lab ID: 2307B06-016

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/28/2023 10:46:49 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/28/2023 10:46:49 PM
Surr: DNOP	103	69-147		%Rec	1	7/28/2023 10:46:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/28/2023 1:06:00 PM
Surr: BFB	80.4	15-244		%Rec	1	7/28/2023 1:06:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/28/2023 1:06:00 PM
Toluene	ND	0.049		mg/Kg	1	7/28/2023 1:06:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/28/2023 1:06:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/28/2023 1:06:00 PM
Surr: 4-Bromofluorobenzene	79.7	39.1-146		%Rec	1	7/28/2023 1:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	37000	1500		mg/Kg	500	7/31/2023 7:02:39 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-16 2.0'

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 10:40:00 AM

Lab ID: 2307B06-017

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/28/2023 10:57:53 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/28/2023 10:57:53 PM
Surr: DNOP	99.6	69-147		%Rec	1	7/28/2023 10:57:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/28/2023 2:11:00 PM
Surr: BFB	82.8	15-244		%Rec	1	7/28/2023 2:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/28/2023 2:11:00 PM
Toluene	ND	0.048		mg/Kg	1	7/28/2023 2:11:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/28/2023 2:11:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/28/2023 2:11:00 PM
Surr: 4-Bromofluorobenzene	80.4	39.1-146		%Rec	1	7/28/2023 2:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	8300	300		mg/Kg	100	7/31/2023 7:15:01 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-16 4.0'

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 10:50:00 AM

Lab ID: 2307B06-018

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	7/28/2023 11:08:59 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/28/2023 11:08:59 PM
Surr: DNOP	92.7	69-147		%Rec	1	7/28/2023 11:08:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/28/2023 2:33:00 PM
Surr: BFB	81.1	15-244		%Rec	1	7/28/2023 2:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/28/2023 2:33:00 PM
Toluene	ND	0.048		mg/Kg	1	7/28/2023 2:33:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/28/2023 2:33:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/28/2023 2:33:00 PM
Surr: 4-Bromofluorobenzene	79.4	39.1-146		%Rec	1	7/28/2023 2:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	5600	300		mg/Kg	100	7/31/2023 7:27:21 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-17 0.0'

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 11:00:00 AM

Lab ID: 2307B06-019

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	7/28/2023 11:20:03 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/28/2023 11:20:03 PM
Surr: DNOP	97.6	69-147		%Rec	1	7/28/2023 11:20:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/28/2023 2:55:00 PM
Surr: BFB	83.3	15-244		%Rec	1	7/28/2023 2:55:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/28/2023 2:55:00 PM
Toluene	ND	0.049		mg/Kg	1	7/28/2023 2:55:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/28/2023 2:55:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/28/2023 2:55:00 PM
Surr: 4-Bromofluorobenzene	80.4	39.1-146		%Rec	1	7/28/2023 2:55:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	22000	1500		mg/Kg	500	7/31/2023 7:39:41 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-17 2.0'

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 11:10:00 AM

Lab ID: 2307B06-020

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	7/28/2023 11:31:07 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/28/2023 11:31:07 PM
Surr: DNOP	100	69-147		%Rec	1	7/28/2023 11:31:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/28/2023 3:17:00 PM
Surr: BFB	86.5	15-244		%Rec	1	7/28/2023 3:17:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/28/2023 3:17:00 PM
Toluene	ND	0.049		mg/Kg	1	7/28/2023 3:17:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/28/2023 3:17:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/28/2023 3:17:00 PM
Surr: 4-Bromofluorobenzene	79.4	39.1-146		%Rec	1	7/28/2023 3:17:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	5700	150		mg/Kg	50	7/31/2023 8:16:43 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-17 4.0'

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 11:20:00 AM

Lab ID: 2307B06-021

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	7/28/2023 11:42:15 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/28/2023 11:42:15 PM
Surr: DNOP	98.0	69-147		%Rec	1	7/28/2023 11:42:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/28/2023 3:39:00 PM
Surr: BFB	82.0	15-244		%Rec	1	7/28/2023 3:39:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/28/2023 3:39:00 PM
Toluene	ND	0.048		mg/Kg	1	7/28/2023 3:39:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/28/2023 3:39:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/28/2023 3:39:00 PM
Surr: 4-Bromofluorobenzene	80.8	39.1-146		%Rec	1	7/28/2023 3:39:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	7000	300		mg/Kg	100	7/31/2023 8:29:04 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-18 0.0'

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 11:30:00 AM

Lab ID: 2307B06-022

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/28/2023 11:53:15 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/28/2023 11:53:15 PM
Surr: DNOP	108	69-147		%Rec	1	7/28/2023 11:53:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/28/2023 4:01:00 PM
Surr: BFB	83.7	15-244		%Rec	1	7/28/2023 4:01:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/28/2023 4:01:00 PM
Toluene	ND	0.049		mg/Kg	1	7/28/2023 4:01:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/28/2023 4:01:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/28/2023 4:01:00 PM
Surr: 4-Bromofluorobenzene	81.0	39.1-146		%Rec	1	7/28/2023 4:01:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	48000	1500		mg/Kg	500	7/31/2023 8:41:25 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-18 2.0'

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 11:40:00 AM

Lab ID: 2307B06-023

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/29/2023 12:15:12 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/29/2023 12:15:12 AM
Surr: DNOP	106	69-147		%Rec	1	7/29/2023 12:15:12 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/28/2023 4:23:00 PM
Surr: BFB	86.5	15-244		%Rec	1	7/28/2023 4:23:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/28/2023 4:23:00 PM
Toluene	ND	0.049		mg/Kg	1	7/28/2023 4:23:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/28/2023 4:23:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/28/2023 4:23:00 PM
Surr: 4-Bromofluorobenzene	80.9	39.1-146		%Rec	1	7/28/2023 4:23:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	5900	300		mg/Kg	100	7/31/2023 8:53:46 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307B06**

Date Reported: **8/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-18 4.0"

Project: Laguna Salado 22 Federal 4

Collection Date: 7/21/2023 11:50:00 AM

Lab ID: 2307B06-024

Matrix: SOIL

Received Date: 7/25/2023 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/29/2023 12:26:16 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/29/2023 12:26:16 AM
Surr: DNOP	105	69-147		%Rec	1	7/29/2023 12:26:16 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/28/2023 5:07:00 PM
Surr: BFB	83.1	15-244		%Rec	1	7/28/2023 5:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/28/2023 5:07:00 PM
Toluene	ND	0.050		mg/Kg	1	7/28/2023 5:07:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/28/2023 5:07:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/28/2023 5:07:00 PM
Surr: 4-Bromofluorobenzene	79.9	39.1-146		%Rec	1	7/28/2023 5:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	9300	300		mg/Kg	100	7/31/2023 9:06:07 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307B06

03-Aug-23

Client: Devon Energy
Project: Laguna Salado 22 Federal 4

Sample ID: MB-76528	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76528	RunNo: 98582								
Prep Date: 7/27/2023	Analysis Date: 7/28/2023	SeqNo: 3589673	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76528	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76528	RunNo: 98582								
Prep Date: 7/27/2023	Analysis Date: 7/28/2023	SeqNo: 3589674	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.3	90	110			

Sample ID: MB-76546	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76546	RunNo: 98582								
Prep Date: 7/28/2023	Analysis Date: 7/28/2023	SeqNo: 3589705	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76546	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76546	RunNo: 98582								
Prep Date: 7/28/2023	Analysis Date: 7/28/2023	SeqNo: 3589706	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.7	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307B06

03-Aug-23

Client: Devon Energy
Project: Laguna Salado 22 Federal 4

Sample ID: MB-76478	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 76478	RunNo: 98560								
Prep Date: 7/26/2023	Analysis Date: 7/27/2023	SeqNo: 3589110	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		126	69	147			

Sample ID: LCS-76478	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 76478	RunNo: 98560								
Prep Date: 7/26/2023	Analysis Date: 7/27/2023	SeqNo: 3589111	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	96.9	61.9	130			
Surr: DNOP	5.0		5.000		101	69	147			

Sample ID: 2307B06-015AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-15 3.0'	Batch ID: 76487	RunNo: 98583								
Prep Date: 7/26/2023	Analysis Date: 7/29/2023	SeqNo: 3589726	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.6	48.08	0	91.4	54.2	135			
Surr: DNOP	4.6		4.808		95.7	69	147			

Sample ID: 2307B06-015AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-15 3.0'	Batch ID: 76487	RunNo: 98583								
Prep Date: 7/26/2023	Analysis Date: 7/29/2023	SeqNo: 3589727	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.8	49.16	0	93.5	54.2	135	4.45	29.2	
Surr: DNOP	4.8		4.916		97.8	69	147	0	0	

Sample ID: LCS-76487	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 76487	RunNo: 98583								
Prep Date: 7/26/2023	Analysis Date: 7/28/2023	SeqNo: 3589774	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	95.9	61.9	130			
Surr: DNOP	4.9		5.000		97.9	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307B06

03-Aug-23

Client: Devon Energy
Project: Laguna Salado 22 Federal 4

Sample ID: MB-76487	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 76487	RunNo: 98583								
Prep Date: 7/26/2023	Analysis Date: 7/28/2023	SeqNo: 3589776			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	9.5		10.00		95.4	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307B06

03-Aug-23

Client: Devon Energy
Project: Laguna Salado 22 Federal 4

Sample ID: ics-76462	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 76462		RunNo: 98551							
Prep Date: 7/26/2023	Analysis Date: 7/27/2023		SeqNo: 3588303		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	86.0	70	130			
Surr: BFB	1900		1000		192	15	244			

Sample ID: mb-76462	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 76462		RunNo: 98551							
Prep Date: 7/26/2023	Analysis Date: 7/27/2023		SeqNo: 3588304		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		96.7	15	244			

Sample ID: ics-76468	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 76468		RunNo: 98596							
Prep Date: 7/26/2023	Analysis Date: 7/28/2023		SeqNo: 3590488		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	95.8	70	130			
Surr: BFB	2000		1000		199	15	244			

Sample ID: mb-76468	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 76468		RunNo: 98596							
Prep Date: 7/26/2023	Analysis Date: 7/28/2023		SeqNo: 3590489		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	850		1000		85.1	15	244			

Sample ID: 2307B06-015ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-15 3.0'	Batch ID: 76468		RunNo: 98596							
Prep Date: 7/26/2023	Analysis Date: 7/28/2023		SeqNo: 3590492		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.8	23.88	0	86.1	70	130			
Surr: BFB	1800		955.1		184	15	244			

Sample ID: 2307B06-015amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-15 3.0'	Batch ID: 76468		RunNo: 98596							
Prep Date: 7/26/2023	Analysis Date: 7/28/2023		SeqNo: 3590493		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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307B06

03-Aug-23

Client: Devon Energy
Project: Laguna Salado 22 Federal 4

Sample ID: 2307B06-015amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BH23-15 3.0'	Batch ID: 76468	RunNo: 98596								
Prep Date: 7/26/2023	Analysis Date: 7/28/2023	SeqNo: 3590493	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.8	23.97	0	86.8	70	130	1.26	20	
Surr: BFB	1900		958.8		198	15	244	0	0	

Sample ID: lcs-76457	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 76457	RunNo: 98596								
Prep Date: 7/25/2023	Analysis Date: 7/28/2023	SeqNo: 3590513	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		197	15	244			

Sample ID: mb-76457	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 76457	RunNo: 98596								
Prep Date: 7/25/2023	Analysis Date: 7/28/2023	SeqNo: 3590514	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	800		1000		80.2	15	244			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307B06

03-Aug-23

Client: Devon Energy
Project: Laguna Salado 22 Federal 4

Sample ID: LCS-76462	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 76462		RunNo: 98551							
Prep Date: 7/26/2023	Analysis Date: 7/27/2023		SeqNo: 3588339		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	92.4	70	130			
Toluene	0.93	0.050	1.000	0	93.2	70	130			
Ethylbenzene	0.95	0.050	1.000	0	95.2	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.4	70	130			
Surr: 4-Bromofluorobenzene	1.2		1.000		117	39.1	146			

Sample ID: mb-76462	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 76462		RunNo: 98551							
Prep Date: 7/26/2023	Analysis Date: 7/27/2023		SeqNo: 3588340		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	1.2		1.000		118	39.1	146			

Sample ID: lcs-76468	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 76468		RunNo: 98596							
Prep Date: 7/26/2023	Analysis Date: 7/28/2023		SeqNo: 3590566		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	87.5	70	130			
Toluene	0.88	0.050	1.000	0	88.5	70	130			
Ethylbenzene	0.90	0.050	1.000	0	90.5	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.8	70	130			
Surr: 4-Bromofluorobenzene	0.82		1.000		82.1	39.1	146			

Sample ID: mb-76468	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 76468		RunNo: 98596							
Prep Date: 7/26/2023	Analysis Date: 7/28/2023		SeqNo: 3590567		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	0.80		1.000		80.4	39.1	146			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307B06

03-Aug-23

Client: Devon Energy
Project: Laguna Salado 22 Federal 4

Sample ID: 2307B06-016ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-16 0.0'	Batch ID: 76468	RunNo: 98596								
Prep Date: 7/26/2023	Analysis Date: 7/28/2023	SeqNo: 3590572	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	0.9843	0	84.7	70	130			
Toluene	0.86	0.049	0.9843	0	87.4	70	130			
Ethylbenzene	0.89	0.049	0.9843	0	90.5	70	130			
Xylenes, Total	2.7	0.098	2.953	0	91.1	70	130			
Surr: 4-Bromofluorobenzene	0.80		0.9843		80.9	39.1	146			

Sample ID: 2307B06-016amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-16 0.0'	Batch ID: 76468	RunNo: 98596								
Prep Date: 7/26/2023	Analysis Date: 7/28/2023	SeqNo: 3590573	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	0.9852	0	87.5	70	130	3.34	20	
Toluene	0.88	0.049	0.9852	0	89.6	70	130	2.53	20	
Ethylbenzene	0.92	0.049	0.9852	0	93.3	70	130	3.17	20	
Xylenes, Total	2.8	0.099	2.956	0	93.5	70	130	2.64	20	
Surr: 4-Bromofluorobenzene	0.78		0.9852		79.5	39.1	146	0	0	

Sample ID: lcs-76457	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 76457	RunNo: 98596								
Prep Date: 7/25/2023	Analysis Date: 7/28/2023	SeqNo: 3590592	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.80		1.000		80.3	39.1	146			

Sample ID: mb-76457	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 76457	RunNo: 98596								
Prep Date: 7/25/2023	Analysis Date: 7/28/2023	SeqNo: 3590593	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.79		1.000		79.0	39.1	146			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy

Work Order Number: 2307B06

RcptNo: 1

Received By: Cheyenne Cason 7/25/2023 7:10:00 AM

Cason

Completed By: Cheyenne Cason 7/25/2023 7:22:20 AM

Cason

Reviewed By: *SCM 07/25/23*

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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes No NA

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: *Jr 7/25/23*

Special Handling (if applicable)

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

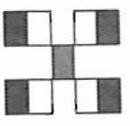
Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Not Present	Yogi		
2	1.4	Good	Not Present	Yogi		
3	0.5	Good	Not Present	Yogi		

Chain-of-Custody Record



HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com

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

Client: Deven
Project Name: Laguna Salsedo 22 Federal #4

Turn-Around Time: Standard Rush 5 Days

Project #: 23E-01414

Project Manager: Kent Stallings

Sampler: AVA
On Ice: Yes No Yog!

of Coolers: 3
Cooler Temp (including CF): See Remarks (°C)

Container Type and # 4102
Preservative Type ICE

Container HEAL No. 2307B06
23066

Date	Time	Matrix	Sample Name	Sample Name	Container Type and #	Preservative Type	Cooler Temp (including CF): See Remarks (°C)
7-21-23	0800	Soil	BH23-10	0.0	4102	ICE	001
	0810		BH23-10	2.0			002
	0820		BH23-10	3.5			003
	0830		BH23-11	0.0			004
	0840		BH23-11	2.0			005
	0850		BH23-12	0.0			006
	0900		BH23-12	2.0			007
	0910		BH23-13	0.0			008
	0920		BH23-13	2.0			009
	0930		BH23-14	0.0			010
	0940		BH23-14	2.0			011
	0950		BH23-14	4.0			012

Relinquished by: [Signature]

Relinquished by: [Signature]

Date: 1/21/23 Time: 1900

Date: 7/25/23 Time: 0710

Received by: [Signature] Date: 7/25/23 Time: 900

Received by: [Signature] Date: 7/25/23 Time: 0710

Analysis Request	
BTEX / MTBE / TMB's (8021)	PH: 8015D (GRO / DRO / MRO)
8081 Pesticides/8082 PCB's	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)

Remarks: 4.6-0.5
4.6-0.5-4.6
1.4-0.2-1.4
0.5-0.0-0.5
CL: Kent Stallings
Kstallings@vertex.ca

Chain-of-Custody Record

Client: Devon

Direct Bill

Mailing Address:

Turn-Around Time:

Standard Rush 5 DAY

Project Name:

Laguna Salado 22 Federal #4

Project #:

23E-01714

Phone #:

email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: Az Compliance

NELAC Other

EDD (Type)

Project Manager:

Kent Stallings

Sampler: AT

On Ice: Yes No

of Coolers: 3

Cooler Temp (including CF): See 1st page (°C)

Container Type and #

Preservative Type

HEAL No.

2307806

Date

Matrix

Sample Name

7-21-23 1000 Soil BH23-15 6.0'

1010 BH23-15 2.0'

1020 BH23-15 3.0'

1030 BH23-16 6.0'

1040 BH23-16 2.0'

1050 BH23-16 4.0'

1100 BH23-17 0.0'

1110 BH23-17 2.0'

1120 BH23-17 4.0'

1130 BH23-18 0.0'

1140 BH23-18 2.0'

1150 BH23-18 4.0'

Date: 7/24/23 9:00

Relinquished by: AK

Received by: AK

Date: 7/23 9:00

Date: 7/24/23 9:00

Relinquished by: AK

Received by: AK

Date: 7/25/23 0710

Analysis Request

BTEX / MTBE / TMBs (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, NO₃, NO₂, PO₄, SO₄)

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Remarks:

CC: Kent Stallings

Kstallings@vertex.ca

ATTACHMENT 5

Client Name: Devon Energy Production Company, LP
 Site Name: Laguna Salado 22 Federal #004H; Laguna Salado 22 Federal #005H; Spud 16 State #010
 Projects #: 23E-01414-01; 23E-01414-02; 22E-01927; 23E-0857
 Lab Reports: 2304962, 2304A19 ; 2308F18, 2309072; 2307983; 2208H98, 2304663; 2307083, 2305C87

Table 4. Background Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs

Sample Description				Field Screening			Petroleum Hydrocarbons							Inorganic
Site	Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable					Chloride Concentration
							Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
				(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
23E-01414-01 (Pad)	BG23-01	0	April 20, 2023	-	-	0	ND	ND	ND	ND	ND	ND	ND	ND
		2	April 20, 2023	-	-	4,355	ND	ND	ND	ND	ND	ND	ND	1,300
		4	April 20, 2023	-	-	1,425	ND	ND	ND	ND	ND	ND	ND	880
		6	April 20, 2023	-	-	2,094	ND	ND	ND	ND	ND	ND	ND	1,000
		8	April 21, 2023	-	-	1,975	ND	ND	ND	ND	ND	ND	ND	ND
23E-01414-01 (Pad)	BG23-02	0	April 21, 2023	-	-	238	ND	ND	ND	ND	ND	ND	ND	ND
		2	April 21, 2023	-	-	1,864	ND	ND	ND	ND	ND	ND	ND	660
		4	April 21, 2023	-	-	3,390	ND	ND	ND	ND	ND	ND	ND	2,300
		6	April 21, 2023	-	-	3,202	ND	ND	ND	ND	ND	ND	ND	1,900
		8	April 21, 2023	-	-	2,569	ND	ND	ND	ND	ND	ND	ND	1,900
23E-01414-01	BG23-01	0	August 25, 2023	-	58	0	ND	ND	ND	ND	ND	ND	ND	ND
		2	August 25, 2023	-	83	2,273	ND	ND	ND	ND	ND	ND	ND	1,700
23E-01414-01	BG23-02	0	August 25, 2023	-	91	14	ND	ND	ND	ND	ND	ND	ND	ND
		2	August 25, 2023	-	116	698	ND	ND	ND	ND	ND	ND	ND	970
23E-01414-01	BG23-03	0	August 25, 2023	-	202	28,598	ND	ND	ND	ND	ND	ND	ND	17,000
		2	August 25, 2023	-	86	5,293	ND	ND	ND	ND	ND	ND	ND	4,900
23E-01414-02	BG23-01	0	July 19, 2023	0	64	1,590	ND	ND	ND	ND	ND	ND	ND	2,500
		2	July 19, 2023	0	77	4,789	ND	ND	ND	ND	ND	ND	ND	6,100
23E-01414-02	BG23-02	0	July 19, 2023	0	76	28,378	ND	ND	ND	ND	ND	ND	ND	34,000
		2	July 19, 2023	0	66	5,545	ND	ND	ND	ND	ND	ND	ND	6,000
23E-01414-02	BG23-03	0	July 19, 2023	0	75	656	ND	ND	ND	ND	ND	ND	ND	970
		2	July 19, 2023	0	69	190	ND	ND	ND	ND	ND	ND	ND	620
22E-01927	BG22-01	0	August 29, 2022	-	-	25,522	ND	ND	ND	ND	ND	ND	ND	22,000
		1	August 29, 2022	-	-	7,700	ND	ND	ND	ND	ND	ND	ND	5,900
		2	August 29, 2022	-	-	4,792	ND	ND	ND	ND	ND	ND	ND	7,000
		4	August 29, 2022	-	-	8,637	ND	ND	ND	ND	ND	ND	ND	7,800
22E-01927	BG22-02	0	August 29, 2022	-	-	7,692	ND	ND	ND	ND	ND	ND	ND	7,000
		1	August 29, 2022	-	-	4,755	ND	ND	ND	ND	ND	ND	ND	3,800
		2	August 29, 2022	-	-	3,792	ND	ND	ND	ND	ND	ND	ND	2,800
22E-01927	BG22-03	0	August 29, 2022	-	-	12,782	ND	ND	ND	ND	ND	ND	ND	16,000
		1	August 29, 2022	-	-	10,865	ND	ND	ND	ND	ND	ND	ND	13,000
22E-01927	SS23-01	0	April 13, 2023	-	-	8,177	ND	ND	ND	ND	ND	ND	ND	5,200
22E-01927	SS23-02	0	April 13, 2023	-	-	28,728	ND	ND	ND	ND	ND	ND	ND	7,600
22E-01927	SS23-03	0	April 13, 2023	-	-	28,724	ND	ND	ND	ND	ND	ND	ND	31,000
22E-01927	SS23-04	0	April 13, 2023	-	-	28,728	ND	ND	ND	ND	ND	ND	ND	140,000
22E-01927	SS23-05	0	April 13, 2023	-	-	26,608	ND	ND	ND	ND	ND	ND	ND	48,000
22E-01927	SS23-06	0	April 13, 2023	-	-	18,719	ND	ND	ND	ND	ND	ND	ND	15,000
22E-01927	SS23-07	0	April 13, 2023	-	-	3,982	ND	ND	ND	ND	ND	ND	ND	4,100
22E-01927	SS23-08	0	April 13, 2023	-	-	28,663	ND	ND	ND	ND	ND	ND	ND	61,000
22E-01927	SS23-09	0	April 13, 2023	-	-	28,694	ND	ND	ND	ND	ND	ND	ND	99,000
22E-01927	SS23-10	0	April 13, 2023	-	-	28,689	ND	ND	ND	ND	ND	ND	ND	110,000
22E-01927	SS23-11	0	April 13, 2023	-	-	20,210	ND	ND	ND	ND	ND	ND	ND	16,000
22E-01927	SS23-12	0	April 13, 2023	-	-	3,362	ND	ND	ND	ND	ND	ND	ND	2,600
22E-01927	SS23-13	0	April 13, 2023	-	-	28,707	ND	ND	ND	ND	ND	ND	ND	33,000
22E-01927	SS23-14	0	April 13, 2023	-	-	12,942	ND	ND	ND	ND	ND	ND	ND	35,000
22E-01927	SS23-15	0	April 13, 2023	-	-	24,892	ND	ND	ND	ND	ND	ND	ND	17,000
22E-01927	SS23-16	0	April 13, 2023	-	-	5,335	ND	ND	ND	ND	ND	ND	ND	5,200
22E-01927	SS23-17	0	April 13, 2023	-	-	581	ND	ND	ND	ND	ND	ND	ND	530
22E-01927	SS23-18	0	April 13, 2023	-	-	28,724	ND	ND	ND	ND	ND	ND	ND	43,000
22E-01927	SS23-19	0	April 13, 2023	-	-	27,064	ND	ND	ND	ND	ND	ND	ND	59,000
22E-01927	SS23-20	0	April 13, 2023	-	-	25,588	ND	ND	ND	ND	ND	ND	ND	33,000
22E-01927	SS23-21	0	April 13, 2023	-	-	2,700	ND	ND	ND	ND	ND	ND	ND	2,500
22E-01927	SS23-22	0	April 13, 2023	-	-	77	ND	ND	ND	ND	ND	ND	ND	72
22E-01927	SS23-23	0	April 13, 2023	-	-	22,011	ND	ND	ND	ND	ND	ND	ND	3,700
22E-01927	SS23-24	0	April 13, 2023	-	-	4,451	ND	ND	ND	ND	ND	ND	ND	42,000
22E-01927	SS23-25	0	April 13, 2023	-	-	424	ND	ND	ND	ND	ND	ND	ND	1,700
22E-01927	SS23-26	0	April 13, 2023	-	-	145	ND	ND	ND	ND	ND	ND	ND	ND



Client Name: Devon Energy Production Company, LP
 Site Name: Laguna Salado 22 Federal #004H; Laguna Salado 22 Federal #005H; Spud 16 State #010
 Projects #: 23E-01414-01; 23E-01414-02; 22E-01927; 23E-0857
 Lab Reports: 2304962, 2304A19 ; 2308F18, 2309072; 2307983; 2208H98, 2304663; 2307083, 2305C87

Table 4. Background Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs													
Sample Description				Field Screening			Petroleum Hydrocarbons						Inorganic
Site	Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable				Chloride Concentration
							Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	
				(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
23E-02857	BG23-01	0	May 23, 2023	0	34	16,550	ND	ND	ND	ND	ND	ND	18,000
23E-02857	BG23-02	0	May 23, 2023	0	80	13,936	ND	ND	ND	ND	ND	ND	12,000
23E-02857	BG23-03	0	May 23, 2023	0	62	20,385	ND	ND	ND	ND	ND	ND	17,000
		2	June 30, 2023	-	114	5,682	ND	ND	ND	ND	ND	ND	4,900
		4	June 30, 2023	-	136	6,818	ND	ND	ND	ND	ND	ND	5,900
		6	June 30, 2023	-	146	11,104	ND	ND	ND	ND	ND	ND	8,800
23E-02857	BG23-04	0	June 30, 2023	-	123	13,558	ND	ND	ND	ND	ND	ND	14,000
		2	June 30, 2023	-	140	5,890	ND	ND	ND	ND	ND	ND	3,700
		4	June 30, 2023	-	28	4,549	ND	ND	ND	ND	ND	ND	3,200

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

Bold and green shaded indicates exceedance outside of NMOCD Reclamation Criteria





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

May 03, 2023

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (505) 350-1336

FAX

RE: Laguna Salado 22 Fed 4

OrderNo.: 2304962

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 12 sample(s) on 4/22/2023 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 white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 2'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 8:52:00 AM

Lab ID: 2304962-001

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	4/28/2023 11:40:45 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/28/2023 11:40:45 AM
Surr: DNOP	107	69-147		%Rec	1	4/28/2023 11:40:45 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/28/2023 11:59:52 AM
Surr: BFB	99.1	37.7-212		%Rec	1	4/28/2023 11:59:52 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	4/28/2023 11:59:52 AM
Toluene	ND	0.050		mg/Kg	1	4/28/2023 11:59:52 AM
Ethylbenzene	ND	0.050		mg/Kg	1	4/28/2023 11:59:52 AM
Xylenes, Total	ND	0.099		mg/Kg	1	4/28/2023 11:59:52 AM
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	4/28/2023 11:59:52 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	2000	60		mg/Kg	20	4/27/2023 7:13:46 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 4'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 9:10:00 AM

Lab ID: 2304962-002

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/28/2023 11:51:11 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/28/2023 11:51:11 AM
Surr: DNOP	105	69-147		%Rec	1	4/28/2023 11:51:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2023 1:09:49 PM
Surr: BFB	97.8	37.7-212		%Rec	1	4/28/2023 1:09:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/28/2023 1:09:49 PM
Toluene	ND	0.049		mg/Kg	1	4/28/2023 1:09:49 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/28/2023 1:09:49 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/28/2023 1:09:49 PM
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	4/28/2023 1:09:49 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1200	60		mg/Kg	20	4/27/2023 7:26:10 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 6'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 9:35:00 AM

Lab ID: 2304962-003

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/28/2023 12:01:41 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/28/2023 12:01:41 PM
Surr: DNOP	113	69-147		%Rec	1	4/28/2023 12:01:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/28/2023 2:19:53 PM
Surr: BFB	105	37.7-212		%Rec	1	4/28/2023 2:19:53 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	4/28/2023 2:19:53 PM
Toluene	ND	0.050		mg/Kg	1	4/28/2023 2:19:53 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/28/2023 2:19:53 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/28/2023 2:19:53 PM
Surr: 4-Bromofluorobenzene	98.5	70-130		%Rec	1	4/28/2023 2:19:53 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1900	60		mg/Kg	20	4/27/2023 7:38:34 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 8'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 10:00:00 AM

Lab ID: 2304962-004

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/28/2023 12:12:09 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/28/2023 12:12:09 PM
Surr: DNOP	99.2	69-147		%Rec	1	4/28/2023 12:12:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/28/2023 2:43:11 PM
Surr: BFB	103	37.7-212		%Rec	1	4/28/2023 2:43:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/28/2023 2:43:11 PM
Toluene	ND	0.048		mg/Kg	1	4/28/2023 2:43:11 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/28/2023 2:43:11 PM
Xylenes, Total	ND	0.097		mg/Kg	1	4/28/2023 2:43:11 PM
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	4/28/2023 2:43:11 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1500	60		mg/Kg	20	4/28/2023 10:41:18 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-14 9'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 10:26:00 AM

Lab ID: 2304962-005

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/28/2023 12:22:40 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/28/2023 12:22:40 PM
Surr: DNOP	89.7	69-147		%Rec	1	4/28/2023 12:22:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2023 3:06:27 PM
Surr: BFB	101	37.7-212		%Rec	1	4/28/2023 3:06:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/28/2023 3:06:27 PM
Toluene	ND	0.049		mg/Kg	1	4/28/2023 3:06:27 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/28/2023 3:06:27 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/28/2023 3:06:27 PM
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	4/28/2023 3:06:27 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	2400	150		mg/Kg	50	5/1/2023 9:14:10 AM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 2'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 11:15:00 AM

Lab ID: 2304962-006

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/28/2023 12:33:12 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/28/2023 12:33:12 PM
Surr: DNOP	110	69-147		%Rec	1	4/28/2023 12:33:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/28/2023 3:29:45 PM
Surr: BFB	109	37.7-212		%Rec	1	4/28/2023 3:29:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	4/28/2023 3:29:45 PM
Toluene	ND	0.050		mg/Kg	1	4/28/2023 3:29:45 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/28/2023 3:29:45 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/28/2023 3:29:45 PM
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	4/28/2023 3:29:45 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1000	60		mg/Kg	20	4/28/2023 11:05:59 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 4'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 11:36:00 AM

Lab ID: 2304962-007

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/28/2023 12:43:44 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/28/2023 12:43:44 PM
Surr: DNOP	104	69-147		%Rec	1	4/28/2023 12:43:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2023 3:53:06 PM
Surr: BFB	109	37.7-212		%Rec	1	4/28/2023 3:53:06 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/28/2023 3:53:06 PM
Toluene	ND	0.049		mg/Kg	1	4/28/2023 3:53:06 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/28/2023 3:53:06 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/28/2023 3:53:06 PM
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	4/28/2023 3:53:06 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1600	60		mg/Kg	20	4/28/2023 11:18:20 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 6'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 12:19:00 PM

Lab ID: 2304962-008

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/28/2023 12:54:20 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/28/2023 12:54:20 PM
Surr: DNOP	98.4	69-147		%Rec	1	4/28/2023 12:54:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2023 4:16:27 PM
Surr: BFB	114	37.7-212		%Rec	1	4/28/2023 4:16:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/28/2023 4:16:27 PM
Toluene	ND	0.049		mg/Kg	1	4/28/2023 4:16:27 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/28/2023 4:16:27 PM
Xylenes, Total	ND	0.097		mg/Kg	1	4/28/2023 4:16:27 PM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	4/28/2023 4:16:27 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1700	60		mg/Kg	20	4/28/2023 11:30:42 PM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-01 0'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 2:36:00 PM

Lab ID: 2304962-009

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	4/28/2023 1:04:56 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	4/28/2023 1:04:56 PM
Surr: DNOP	69.3	69-147		%Rec	1	4/28/2023 1:04:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/28/2023 4:40:02 PM
Surr: BFB	88.6	37.7-212		%Rec	1	4/28/2023 4:40:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/28/2023 4:40:02 PM
Toluene	ND	0.048		mg/Kg	1	4/28/2023 4:40:02 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/28/2023 4:40:02 PM
Xylenes, Total	ND	0.097		mg/Kg	1	4/28/2023 4:40:02 PM
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	4/28/2023 4:40:02 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	4/28/2023 11:43:03 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-01 2'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 2:45:00 PM

Lab ID: 2304962-010

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/28/2023 1:15:33 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/28/2023 1:15:33 PM
Surr: DNOP	108	69-147		%Rec	1	4/28/2023 1:15:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/28/2023 5:03:23 PM
Surr: BFB	100	37.7-212		%Rec	1	4/28/2023 5:03:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	4/28/2023 5:03:23 PM
Toluene	ND	0.050		mg/Kg	1	4/28/2023 5:03:23 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/28/2023 5:03:23 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/28/2023 5:03:23 PM
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	4/28/2023 5:03:23 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1300	59		mg/Kg	20	4/29/2023 12:20:04 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-01 4'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 2:55:00 PM

Lab ID: 2304962-011

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/28/2023 1:26:08 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/28/2023 1:26:08 PM
Surr: DNOP	94.0	69-147		%Rec	1	4/28/2023 1:26:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/28/2023 5:50:06 PM
Surr: BFB	97.3	37.7-212		%Rec	1	4/28/2023 5:50:06 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	4/28/2023 5:50:06 PM
Toluene	ND	0.050		mg/Kg	1	4/28/2023 5:50:06 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/28/2023 5:50:06 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/28/2023 5:50:06 PM
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	4/28/2023 5:50:06 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	880	61		mg/Kg	20	4/29/2023 9:04:38 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304962**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-01 6'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/20/2023 3:00:00 PM

Lab ID: 2304962-012

Matrix: SOIL

Received Date: 4/22/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/28/2023 1:36:40 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/28/2023 1:36:40 PM
Surr: DNOP	104	69-147		%Rec	1	4/28/2023 1:36:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2023 6:13:24 PM
Surr: BFB	107	37.7-212		%Rec	1	4/28/2023 6:13:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/28/2023 6:13:24 PM
Toluene	ND	0.049		mg/Kg	1	4/28/2023 6:13:24 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/28/2023 6:13:24 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/28/2023 6:13:24 PM
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	4/28/2023 6:13:24 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1000	60		mg/Kg	20	4/29/2023 9:16:58 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304962

03-May-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4

Sample ID: MB-74614	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 74614	RunNo: 96377								
Prep Date: 4/27/2023	Analysis Date: 4/27/2023	SeqNo: 3490687	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-74614	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 74614	RunNo: 96377								
Prep Date: 4/27/2023	Analysis Date: 4/27/2023	SeqNo: 3490688	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-74650	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 74650	RunNo: 96422								
Prep Date: 4/28/2023	Analysis Date: 4/28/2023	SeqNo: 3492968	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-74650	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 74650	RunNo: 96422								
Prep Date: 4/28/2023	Analysis Date: 4/28/2023	SeqNo: 3492969	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.7	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304962

03-May-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4

Sample ID: LCS-74602	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 74602	RunNo: 96417								
Prep Date: 4/27/2023	Analysis Date: 4/28/2023	SeqNo: 3492730	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	108	61.9	130			
Surr: DNOP	5.9		5.000		117	69	147			

Sample ID: MB-74602	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 74602	RunNo: 96417								
Prep Date: 4/27/2023	Analysis Date: 4/28/2023	SeqNo: 3492733	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		132	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304962

03-May-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4

Sample ID: ics-74590	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 74590		RunNo: 96393							
Prep Date: 4/26/2023	Analysis Date: 4/28/2023		SeqNo: 3491558		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	90.2	70	130			
Surr: BFB	5000		1000		504	37.7	212			S

Sample ID: mb-74590	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 74590		RunNo: 96393							
Prep Date: 4/26/2023	Analysis Date: 4/28/2023		SeqNo: 3491559		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	1000		1000		104	37.7	212			

Sample ID: 2304962-001ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-14 2'	Batch ID: 74590		RunNo: 96393							
Prep Date: 4/26/2023	Analysis Date: 4/28/2023		SeqNo: 3491561		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.9	24.61	0	81.7	70	130			
Surr: BFB	5000		984.3		506	37.7	212			S

Sample ID: 2304962-001amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-14 2'	Batch ID: 74590		RunNo: 96393							
Prep Date: 4/26/2023	Analysis Date: 4/28/2023		SeqNo: 3491562		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	24.80	0	87.7	70	130	7.83	20	
Surr: BFB	5200		992.1		521	37.7	212	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304962

03-May-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4

Sample ID: LCS-74590	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 74590	RunNo: 96393								
Prep Date: 4/26/2023	Analysis Date: 4/28/2023	SeqNo: 3491572			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	89.2	80	120			
Toluene	0.91	0.050	1.000	0	91.1	80	120			
Ethylbenzene	0.92	0.050	1.000	0	92.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.1	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.3	70	130			

Sample ID: mb-74590	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 74590	RunNo: 96393								
Prep Date: 4/26/2023	Analysis Date: 4/28/2023	SeqNo: 3491573			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	0.96		1.000		96.2	70	130			

Sample ID: 2304962-002ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-14 4'	Batch ID: 74590	RunNo: 96393								
Prep Date: 4/26/2023	Analysis Date: 4/28/2023	SeqNo: 3491576			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	0.9872	0	84.8	68.8	120			
Toluene	0.88	0.049	0.9872	0	89.3	73.6	124			
Ethylbenzene	0.90	0.049	0.9872	0	91.2	72.7	129			
Xylenes, Total	2.7	0.099	2.962	0	92.1	75.7	126			
Surr: 4-Bromofluorobenzene	0.99		0.9872		100	70	130			

Sample ID: 2304962-002amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-14 4'	Batch ID: 74590	RunNo: 96393								
Prep Date: 4/26/2023	Analysis Date: 4/28/2023	SeqNo: 3491577			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	0.9872	0	86.7	68.8	120	2.26	20	
Toluene	0.89	0.049	0.9872	0	90.1	73.6	124	0.859	20	
Ethylbenzene	0.90	0.049	0.9872	0	91.6	72.7	129	0.416	20	
Xylenes, Total	2.7	0.099	2.962	0	92.6	75.7	126	0.545	20	
Surr: 4-Bromofluorobenzene	0.99		0.9872		100	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2304962 RcptNo: 1

Received By: Juan Rojas 4/22/2023 7:30:00 AM
Completed By: Juan Rojas 4/22/2023 7:55:14 AM
Reviewed By: [Signature] 4/24/23

Chain of Custody

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

Log In

- 3. Was an attempt made to cool the samples? Yes [x] No [] NA []
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [x] No [] NA []
5. Sample(s) in proper container(s)? Yes [x] No []
6. Sufficient sample volume for indicated test(s)? Yes [x] No []
7. Are samples (except VOA and ONG) properly preserved? Yes [x] No []
8. Was preservative added to bottles? Yes [] No [x] NA []
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [] No [] NA [x]
10. Were any sample containers received broken? Yes [] No [x]
11. Does paperwork match bottle labels? Yes [x] No []
12. Are matrices correctly identified on Chain of Custody? Yes [x] No []
13. Is it clear what analyses were requested? Yes [x] No []
14. Were all holding times able to be met? Yes [x] No []

of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: [Signature] 4/22/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

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

- 16. Additional remarks:
Client missing mailing address, phone number and email address on COC. JR 4/22/23

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.3, Good, No, Morty, [], []

Chain-of-Custody Record

Client: Devon / Vertex

Mailing Address: On File

Phone #: /

email or Fax#: /

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

Accreditation: Az Compliance
 NELAC Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush 5 Day

Project Name: Laguna Salado 22 Fed 4

Project #: 23E-01414

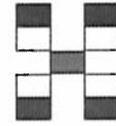
Project Manager: Kent Stallings

Sampler: SM

On Ice: Yes No

of Coolers: 1 (Method)

Cooler Temp (including CF): 24-0.1=0.3 (°C)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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	As, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
4/20/23	8:52	Soil	BH23-14 2'	4oz jar	ice	-001	✓						✓			
	9:10		BH23-14 4'			-002										
	9:35		BH23-14 6'			-003										
	10:00		BH23-14 8'			-004										
	10:26		BH23-14 9'			-005										
	11:15		BH 23-05 2'			-006										
	11:36		BH 23-05 4'			-007										
	12:19		BH 23-05 6'			-008										
	14:36		BG23-01 0'			-009										
	14:45		BG23-01 2'			-010										
	14:55		BG23-01 4'			-011										
	15:00		BG23-01 6'			-012										

Date: 4/20/23 Time: 18:40 Relinquished by: Joseph McCarty Received by: [Signature] Via: _____ Date: 4/20/23 Time: 9:30 Remarks: Direct bill: Devon w/o 21134488

Date: 4/21/23 Time: 19:00 Relinquished by: [Signature] Received by: [Signature] Via: _____ Date: 4/22/23 Time: 7:30 c-c.Smccarty@vertex.ca pg 1 of 1



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

May 03, 2023

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (505) 350-1336

FAX

RE: Laguna Salado 22 Fed 4

OrderNo.: 2304A19

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 7 sample(s) on 4/25/2023 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

Analytical Report

Lab Order **2304A19**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-01 8

Project: Laguna Salado 22 Fed 4

Collection Date: 4/21/2023 8:35:00 AM

Lab ID: 2304A19-001

Matrix: SOIL

Received Date: 4/25/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/27/2023 4:34:17 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/27/2023 4:34:17 AM
Surr: DNOP	89.5	69-147		%Rec	1	4/27/2023 4:34:17 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/28/2023 4:25:00 AM
Surr: BFB	92.5	37.7-212		%Rec	1	4/28/2023 4:25:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/28/2023 4:25:00 AM
Toluene	ND	0.048		mg/Kg	1	4/28/2023 4:25:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/28/2023 4:25:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	4/28/2023 4:25:00 AM
Surr: 4-Bromofluorobenzene	84.7	70-130		%Rec	1	4/28/2023 4:25:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	990	60		mg/Kg	20	4/27/2023 4:32:29 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304A19**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-02 0'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/21/2023 8:28:00 AM

Lab ID: 2304A19-002

Matrix: SOIL

Received Date: 4/25/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/28/2023 2:58:42 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/28/2023 2:58:42 AM
Surr: DNOP	93.6	69-147		%Rec	1	4/28/2023 2:58:42 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/1/2023 10:57:00 PM
Surr: BFB	88.0	37.7-212		%Rec	1	5/1/2023 10:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	5/1/2023 10:57:00 PM
Toluene	ND	0.050		mg/Kg	1	5/1/2023 10:57:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/1/2023 10:57:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/1/2023 10:57:00 PM
Surr: 4-Bromofluorobenzene	86.4	70-130		%Rec	1	5/1/2023 10:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	5/1/2023 3:36:56 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304A19**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-02 2'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/21/2023 9:34:00 AM

Lab ID: 2304A19-003

Matrix: SOIL

Received Date: 4/25/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/28/2023 3:09:33 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/28/2023 3:09:33 AM
Surr: DNOP	94.0	69-147		%Rec	1	4/28/2023 3:09:33 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/2/2023 12:02:00 AM
Surr: BFB	86.8	37.7-212		%Rec	1	5/2/2023 12:02:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	5/2/2023 12:02:00 AM
Toluene	ND	0.048		mg/Kg	1	5/2/2023 12:02:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/2/2023 12:02:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	5/2/2023 12:02:00 AM
Surr: 4-Bromofluorobenzene	85.7	70-130		%Rec	1	5/2/2023 12:02:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	660	60		mg/Kg	20	5/1/2023 4:38:40 PM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304A19**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-02 4'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/21/2023 9:40:00 AM

Lab ID: 2304A19-004

Matrix: SOIL

Received Date: 4/25/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/28/2023 3:20:23 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/28/2023 3:20:23 AM
Surr: DNOP	96.9	69-147		%Rec	1	4/28/2023 3:20:23 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2023 1:07:00 AM
Surr: BFB	85.3	37.7-212		%Rec	1	5/2/2023 1:07:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	5/2/2023 1:07:00 AM
Toluene	ND	0.049		mg/Kg	1	5/2/2023 1:07:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2023 1:07:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/2/2023 1:07:00 AM
Surr: 4-Bromofluorobenzene	86.4	70-130		%Rec	1	5/2/2023 1:07:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	2300	60		mg/Kg	20	5/1/2023 5:15:42 PM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304A19**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-02 6'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/21/2023 9:55:00 AM

Lab ID: 2304A19-005

Matrix: SOIL

Received Date: 4/25/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/28/2023 3:31:10 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/28/2023 3:31:10 AM
Surr: DNOP	99.6	69-147		%Rec	1	4/28/2023 3:31:10 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/2/2023 1:28:00 AM
Surr: BFB	89.1	37.7-212		%Rec	1	5/2/2023 1:28:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	5/2/2023 1:28:00 AM
Toluene	ND	0.047		mg/Kg	1	5/2/2023 1:28:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/2/2023 1:28:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	5/2/2023 1:28:00 AM
Surr: 4-Bromofluorobenzene	89.4	70-130		%Rec	1	5/2/2023 1:28:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1900	60		mg/Kg	20	5/1/2023 5:28:03 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304A19**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-02 8'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/21/2023 10:18:00 AM

Lab ID: 2304A19-006

Matrix: SOIL

Received Date: 4/25/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/28/2023 3:41:56 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/28/2023 3:41:56 AM
Surr: DNOP	88.6	69-147		%Rec	1	4/28/2023 3:41:56 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2023 1:50:00 AM
Surr: BFB	88.6	37.7-212		%Rec	1	5/2/2023 1:50:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	5/2/2023 1:50:00 AM
Toluene	ND	0.049		mg/Kg	1	5/2/2023 1:50:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2023 1:50:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/2/2023 1:50:00 AM
Surr: 4-Bromofluorobenzene	87.0	70-130		%Rec	1	5/2/2023 1:50:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1900	59		mg/Kg	20	5/1/2023 5:40:23 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304A19**

Date Reported: 5/3/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-40 0'

Project: Laguna Salado 22 Fed 4

Collection Date: 4/21/2023 8:19:00 AM

Lab ID: 2304A19-007

Matrix: SOIL

Received Date: 4/25/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	10	9.9		mg/Kg	1	4/28/2023 3:52:41 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/28/2023 3:52:41 AM
Surr: DNOP	78.2	69-147		%Rec	1	4/28/2023 3:52:41 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/2/2023 2:12:00 AM
Surr: BFB	84.6	37.7-212		%Rec	1	5/2/2023 2:12:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	5/2/2023 2:12:00 AM
Toluene	ND	0.049		mg/Kg	1	5/2/2023 2:12:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/2/2023 2:12:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/2/2023 2:12:00 AM
Surr: 4-Bromofluorobenzene	85.7	70-130		%Rec	1	5/2/2023 2:12:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	110	60		mg/Kg	20	5/1/2023 6:17:25 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304A19

03-May-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4

Sample ID: MB-74614	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 74614	RunNo: 96377								
Prep Date: 4/27/2023	Analysis Date: 4/27/2023	SeqNo: 3490687			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-74614	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 74614	RunNo: 96377								
Prep Date: 4/27/2023	Analysis Date: 4/27/2023	SeqNo: 3490688			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-74664	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 74664	RunNo: 96419								
Prep Date: 5/1/2023	Analysis Date: 5/1/2023	SeqNo: 3494404			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-74664	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 74664	RunNo: 96419								
Prep Date: 5/1/2023	Analysis Date: 5/1/2023	SeqNo: 3494405			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.5	90	110			

Sample ID: MB-74674	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 74674	RunNo: 96419								
Prep Date: 5/1/2023	Analysis Date: 5/1/2023	SeqNo: 3494434			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-74674	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 74674	RunNo: 96419								
Prep Date: 5/1/2023	Analysis Date: 5/1/2023	SeqNo: 3494435			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	16	1.5	15.00	0	109	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304A19

03-May-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4

Sample ID: LCS-74583	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 74583	RunNo: 96315								
Prep Date: 4/26/2023	Analysis Date: 4/26/2023	SeqNo: 3489050	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	82.6	61.9	130			
Surr: DNOP	4.4		5.000		88.6	69	147			

Sample ID: MB-74583	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 74583	RunNo: 96315								
Prep Date: 4/26/2023	Analysis Date: 4/26/2023	SeqNo: 3489053	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	9.3		10.00		92.8	69	147			

Sample ID: LCS-74617	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 74617	RunNo: 96349								
Prep Date: 4/27/2023	Analysis Date: 4/28/2023	SeqNo: 3490871	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.1	61.9	130			
Surr: DNOP	5.1		5.000		103	69	147			

Sample ID: MB-74617	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 74617	RunNo: 96381								
Prep Date: 4/27/2023	Analysis Date: 4/28/2023	SeqNo: 3491272	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	7.2		10.00		71.6	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304A19

03-May-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4

Sample ID: ics-74569	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 74569	RunNo: 96355								
Prep Date: 4/26/2023	Analysis Date: 4/27/2023	SeqNo: 3490359	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	84.2	70	130			
Surr: BFB	1900		1000		195	37.7	212			

Sample ID: mb-74569	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 74569	RunNo: 96355								
Prep Date: 4/26/2023	Analysis Date: 4/27/2023	SeqNo: 3490360	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	930		1000		92.9	37.7	212			

Sample ID: 2304a19-002ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BG23-02 0'	Batch ID: 74613	RunNo: 96448								
Prep Date: 4/27/2023	Analysis Date: 5/1/2023	SeqNo: 3494716	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	5.0	24.98	0	71.9	70	130			
Surr: BFB	1900		999.0		190	37.7	212			

Sample ID: 2304a19-002amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BG23-02 0'	Batch ID: 74613	RunNo: 96448								
Prep Date: 4/27/2023	Analysis Date: 5/1/2023	SeqNo: 3494717	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	5.0	24.98	0	77.0	70	130	6.88	20	
Surr: BFB	2000		999.0		195	37.7	212	0	0	

Sample ID: mb-74613	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 74613	RunNo: 96448								
Prep Date: 4/27/2023	Analysis Date: 5/1/2023	SeqNo: 3494775	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	860		1000		85.7	37.7	212			

Sample ID: ics-74613	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 74613	RunNo: 96448								
Prep Date: 4/27/2023	Analysis Date: 5/1/2023	SeqNo: 3494776	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304A19

03-May-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4

Sample ID: Ics-74613	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 74613	RunNo: 96448								
Prep Date: 4/27/2023	Analysis Date: 5/1/2023	SeqNo: 3494776			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	82.0	70	130			
Surr: BFB	1900		1000		188	37.7	212			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304A19

03-May-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4

Sample ID: ics-74569	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 74569	RunNo: 96355								
Prep Date: 4/26/2023	Analysis Date: 4/27/2023	SeqNo: 3490404	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	88.6	80	120			
Toluene	0.88	0.050	1.000	0	87.5	80	120			
Ethylbenzene	0.85	0.050	1.000	0	85.0	80	120			
Xylenes, Total	2.5	0.10	3.000	0	84.0	80	120			
Surr: 4-Bromofluorobenzene	0.87		1.000		87.5	70	130			

Sample ID: mb-74569	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 74569	RunNo: 96355								
Prep Date: 4/26/2023	Analysis Date: 4/27/2023	SeqNo: 3490405	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	0.86		1.000		85.8	70	130			

Sample ID: mb-74613	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 74613	RunNo: 96448								
Prep Date: 4/27/2023	Analysis Date: 5/1/2023	SeqNo: 3494774	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	0.89		1.000		88.9	70	130			

Sample ID: 2304a19-003ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BG23-02 2'	Batch ID: 74613	RunNo: 96448								
Prep Date: 4/27/2023	Analysis Date: 5/2/2023	SeqNo: 3494780	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.024	0.9643	0	90.4	68.8	120			
Toluene	0.87	0.048	0.9643	0	90.2	73.6	124			
Ethylbenzene	0.85	0.048	0.9643	0	87.9	72.7	129			
Xylenes, Total	2.5	0.096	2.893	0	87.1	75.7	126			
Surr: 4-Bromofluorobenzene	0.85		0.9643		87.7	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304A19

03-May-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4

Sample ID: 2304a19-003amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BG23-02 2'	Batch ID: 74613	RunNo: 96448								
Prep Date: 4/27/2023	Analysis Date: 5/2/2023	SeqNo: 3494781	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.024	0.9634	0	85.4	68.8	120	5.78	20	
Toluene	0.85	0.048	0.9634	0	88.3	73.6	124	2.25	20	
Ethylbenzene	0.85	0.048	0.9634	0	87.8	72.7	129	0.232	20	
Xylenes, Total	2.5	0.096	2.890	0	87.2	75.7	126	0.0394	20	
Surr: 4-Bromofluorobenzene	0.88		0.9634		91.0	70	130	0	0	

Sample ID: ics-74613	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 74613	RunNo: 96448								
Prep Date: 4/27/2023	Analysis Date: 5/1/2023	SeqNo: 3494814	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.0	80	120			
Toluene	0.87	0.050	1.000	0	87.1	80	120			
Ethylbenzene	0.84	0.050	1.000	0	84.4	80	120			
Xylenes, Total	2.5	0.10	3.000	0	83.6	80	120			
Surr: 4-Bromofluorobenzene	0.89		1.000		89.3	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy

Work Order Number: 2304A19

RcptNo: 1

Received By: Juan Rojas 4/25/2023 7:20:00 AM

[Signature]

Completed By: Tracy Casarrubias 4/25/2023 8:49:06 AM

Reviewed By: [Signature] 4/25/23

Chain of Custody

1. Is Chain of Custody complete? Yes [] No [x] Not Present []

2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes [x] No [] NA []

4. Were all samples received at a temperature of >0° C to 6.0°C Yes [x] No [] NA []

5. Sample(s) in proper container(s)? Yes [x] No []

6. Sufficient sample volume for indicated test(s)? Yes [x] No []

7. Are samples (except VOA and ONG) properly preserved? Yes [x] No []

8. Was preservative added to bottles? Yes [] No [x] NA []

9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [] No [] NA [x]

10. Were any sample containers received broken? Yes [] No [x]

11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes [x] No []

12. Are matrices correctly identified on Chain of Custody? Yes [x] No []

13. Is it clear what analyses were requested? Yes [x] No []

14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes [x] No []

of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted? Checked by: jn 4/25/23

Special Handling (if applicable)

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

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: Mailing address, phone number, and Email missing on COC- TMC 4/25/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 4.7, Good, Yes, Morty, [], []

Chain-of-Custody Record

Client: Devon / Vertex

Mailing Address: On file

Phone #:

email or Fax#:

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

Accreditation: Az Compliance
 NELAC Other
 EDD (Type)

Turn-Around Time:
 Standard Rush 5 Day

Project Name:
Laguna Salado 22 Fed 4

Project #:
23E-01414

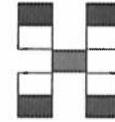
Project Manager:
Kent Stallings

Sampler: SM

On Ice: Yes No

of Coolers: 4

Cooler Temp (including CF): 4.8-c. = 4.7 (°C)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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	F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
4/21/23	8:35	Soil	BG23-01 8'	4oz jar	ice	001	✓	✓					✓			
	8:28		BG23-02 0'			002										
	9:34		BG23-02 2'			003										
	9:40		BG23-02 4'			004										
	9:55		BG23-02 6'			005										
	10:18		BG23-02 8'			006										
	8:19		BH23-40 0'			007										

Date: 4/21/23 Time: 1600 Relinquished by: [Signature] Received by: [Signature] Via: [Signature] Date: 4/21/23 Time: 1015 Remarks: Direct bill: Devon w/o # 21134488

Date: 4/25/23 Time: 1900 Relinquished by: [Signature] Received by: [Signature] Via: [Signature] Date: 4/25/23 Time: 7:20 c.c. smccarty@vertex.ca pg 1 of 1



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

September 11, 2023

Kent Stallings
Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX:

RE: Laguna Salado 22 Fed 4 Pasture

OrderNo.: 2308F18

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 12 sample(s) on 8/29/2023 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 white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-01 0'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 10:05:00 AM

Lab ID: 2308F18-001

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/30/2023 4:10:27 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2023 4:10:27 AM
Surr: DNOP	84.6	69-147		%Rec	1	8/30/2023 4:10:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/1/2023 2:29:00 PM
Surr: BFB	96.2	15-244		%Rec	1	9/1/2023 2:29:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	9/1/2023 2:29:00 PM
Toluene	ND	0.050		mg/Kg	1	9/1/2023 2:29:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/1/2023 2:29:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	9/1/2023 2:29:00 PM
Surr: 4-Bromofluorobenzene	91.7	39.1-146		%Rec	1	9/1/2023 2:29:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	8/30/2023 6:18:11 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-01 2'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 10:10:00 AM

Lab ID: 2308F18-002

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/30/2023 4:21:08 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2023 4:21:08 AM
Surr: DNOP	90.0	69-147		%Rec	1	8/30/2023 4:21:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/1/2023 2:51:00 PM
Surr: BFB	99.6	15-244		%Rec	1	9/1/2023 2:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/1/2023 2:51:00 PM
Toluene	ND	0.049		mg/Kg	1	9/1/2023 2:51:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/1/2023 2:51:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/1/2023 2:51:00 PM
Surr: 4-Bromofluorobenzene	92.8	39.1-146		%Rec	1	9/1/2023 2:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	1700	60		mg/Kg	20	8/30/2023 6:30:35 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-02 0'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 10:15:00 AM

Lab ID: 2308F18-003

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/30/2023 4:31:47 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 4:31:47 AM
Surr: DNOP	84.1	69-147		%Rec	1	8/30/2023 4:31:47 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2023 3:13:00 PM
Surr: BFB	98.2	15-244		%Rec	1	9/1/2023 3:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/1/2023 3:13:00 PM
Toluene	ND	0.048		mg/Kg	1	9/1/2023 3:13:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/1/2023 3:13:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/1/2023 3:13:00 PM
Surr: 4-Bromofluorobenzene	92.7	39.1-146		%Rec	1	9/1/2023 3:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	8/30/2023 6:43:00 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-02 2'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 10:30:00 AM

Lab ID: 2308F18-004

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/30/2023 4:42:27 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 4:42:27 AM
Surr: DNOP	87.2	69-147		%Rec	1	8/30/2023 4:42:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2023 3:35:00 PM
Surr: BFB	95.9	15-244		%Rec	1	9/1/2023 3:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/1/2023 3:35:00 PM
Toluene	ND	0.048		mg/Kg	1	9/1/2023 3:35:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/1/2023 3:35:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/1/2023 3:35:00 PM
Surr: 4-Bromofluorobenzene	91.8	39.1-146		%Rec	1	9/1/2023 3:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	970	60		mg/Kg	20	8/30/2023 7:32:38 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 standard limits. If undiluted results may be estimated.

B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-01 0'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 10:45:00 AM

Lab ID: 2308F18-005

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/30/2023 4:53:10 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2023 4:53:10 AM
Surr: DNOP	90.6	69-147		%Rec	1	8/30/2023 4:53:10 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2023 3:56:00 PM
Surr: BFB	100	15-244		%Rec	1	9/1/2023 3:56:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/1/2023 3:56:00 PM
Toluene	ND	0.048		mg/Kg	1	9/1/2023 3:56:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/1/2023 3:56:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/1/2023 3:56:00 PM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	9/1/2023 3:56:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	35000	1500		mg/Kg	500	8/31/2023 1:49:21 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-01 2'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 10:50:00 AM

Lab ID: 2308F18-006

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/30/2023 5:03:50 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/30/2023 5:03:50 AM
Surr: DNOP	79.6	69-147		%Rec	1	8/30/2023 5:03:50 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/1/2023 4:40:00 PM
Surr: BFB	96.8	15-244		%Rec	1	9/1/2023 4:40:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	9/1/2023 4:40:00 PM
Toluene	ND	0.047		mg/Kg	1	9/1/2023 4:40:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/1/2023 4:40:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	9/1/2023 4:40:00 PM
Surr: 4-Bromofluorobenzene	91.4	39.1-146		%Rec	1	9/1/2023 4:40:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	4000	150		mg/Kg	50	8/31/2023 2:01:42 PM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-02 0'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 12:30:00 PM

Lab ID: 2308F18-007

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/30/2023 5:14:33 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/30/2023 5:14:33 AM
Surr: DNOP	77.5	69-147		%Rec	1	8/30/2023 5:14:33 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/1/2023 5:02:00 PM
Surr: BFB	98.8	15-244		%Rec	1	9/1/2023 5:02:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	9/1/2023 5:02:00 PM
Toluene	ND	0.050		mg/Kg	1	9/1/2023 5:02:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/1/2023 5:02:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/1/2023 5:02:00 PM
Surr: 4-Bromofluorobenzene	92.0	39.1-146		%Rec	1	9/1/2023 5:02:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	18000	600		mg/Kg	200	8/31/2023 2:14:03 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-02 2'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 12:45:00 PM

Lab ID: 2308F18-008

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/30/2023 5:25:23 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 5:25:23 AM
Surr: DNOP	75.6	69-147		%Rec	1	8/30/2023 5:25:23 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2023 5:24:00 PM
Surr: BFB	97.8	15-244		%Rec	1	9/1/2023 5:24:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/1/2023 5:24:00 PM
Toluene	ND	0.048		mg/Kg	1	9/1/2023 5:24:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/1/2023 5:24:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/1/2023 5:24:00 PM
Surr: 4-Bromofluorobenzene	93.4	39.1-146		%Rec	1	9/1/2023 5:24:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	7800	300		mg/Kg	100	8/31/2023 2:26:24 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-03 0'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 12:40:00 PM

Lab ID: 2308F18-009

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/30/2023 5:36:14 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 5:36:14 AM
Surr: DNOP	80.6	69-147		%Rec	1	8/30/2023 5:36:14 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/1/2023 5:46:00 PM
Surr: BFB	101	15-244		%Rec	1	9/1/2023 5:46:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/1/2023 5:46:00 PM
Toluene	ND	0.049		mg/Kg	1	9/1/2023 5:46:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/1/2023 5:46:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/1/2023 5:46:00 PM
Surr: 4-Bromofluorobenzene	90.8	39.1-146		%Rec	1	9/1/2023 5:46:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	8200	300		mg/Kg	100	8/31/2023 2:38:44 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-03 2'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 12:45:00 PM

Lab ID: 2308F18-010

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/30/2023 5:47:05 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 5:47:05 AM
Surr: DNOP	78.1	69-147		%Rec	1	8/30/2023 5:47:05 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/1/2023 6:08:00 PM
Surr: BFB	96.3	15-244		%Rec	1	9/1/2023 6:08:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	9/1/2023 6:08:00 PM
Toluene	ND	0.047		mg/Kg	1	9/1/2023 6:08:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/1/2023 6:08:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	9/1/2023 6:08:00 PM
Surr: 4-Bromofluorobenzene	90.6	39.1-146		%Rec	1	9/1/2023 6:08:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	3100	150		mg/Kg	50	8/31/2023 2:51:06 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-04 0'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 1:45:00 PM

Lab ID: 2308F18-011

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/30/2023 5:57:50 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2023 5:57:50 AM
Surr: DNOP	77.0	69-147		%Rec	1	8/30/2023 5:57:50 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/1/2023 6:29:00 PM
Surr: BFB	96.9	15-244		%Rec	1	9/1/2023 6:29:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/1/2023 6:29:00 PM
Toluene	ND	0.047		mg/Kg	1	9/1/2023 6:29:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/1/2023 6:29:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	9/1/2023 6:29:00 PM
Surr: 4-Bromofluorobenzene	90.6	39.1-146		%Rec	1	9/1/2023 6:29:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	67000	3000		mg/Kg	1000	8/31/2023 5:23:56 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2308F18**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-04 2'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 1:50:00 PM

Lab ID: 2308F18-012

Matrix: SOIL

Received Date: 8/29/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/31/2023 2:23:27 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/31/2023 2:23:27 PM
Surr: DNOP	100	69-147		%Rec	1	8/31/2023 2:23:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/1/2023 12:29:17 PM
Surr: BFB	93.6	15-244		%Rec	1	9/1/2023 12:29:17 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	9/1/2023 12:29:17 PM
Toluene	ND	0.049		mg/Kg	1	9/1/2023 12:29:17 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/1/2023 12:29:17 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/1/2023 12:29:17 PM
Surr: 4-Bromofluorobenzene	106	39.1-146		%Rec	1	9/1/2023 12:29:17 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	5600	300		mg/Kg	100	8/31/2023 3:15:47 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308F18

11-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: MB-77199	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 77199	RunNo: 99351								
Prep Date: 8/30/2023	Analysis Date: 8/30/2023	SeqNo: 3626420	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-77199	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 77199	RunNo: 99351								
Prep Date: 8/30/2023	Analysis Date: 8/30/2023	SeqNo: 3626421	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.0	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308F18

11-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: LCS-77167	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77167	RunNo: 99274								
Prep Date: 8/29/2023	Analysis Date: 8/30/2023	SeqNo: 3623887	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	96.6	61.9	130			
Surr: DNOP	4.0		5.000		79.2	69	147			

Sample ID: MB-77167	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77167	RunNo: 99274								
Prep Date: 8/29/2023	Analysis Date: 8/30/2023	SeqNo: 3623890	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	10		10.00		101	69	147			

Sample ID: LCS-77177	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77177	RunNo: 99380								
Prep Date: 8/29/2023	Analysis Date: 8/31/2023	SeqNo: 3627016	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.7		5.000		114	69	147			

Sample ID: LCS-77185	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77185	RunNo: 99380								
Prep Date: 8/30/2023	Analysis Date: 8/31/2023	SeqNo: 3627017	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	61.9	130			
Surr: DNOP	6.6		5.000		131	69	147			

Sample ID: MB-77177	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77177	RunNo: 99380								
Prep Date: 8/29/2023	Analysis Date: 8/31/2023	SeqNo: 3627018	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		116	69	147			

Sample ID: MB-77185	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77185	RunNo: 99380								
Prep Date: 8/30/2023	Analysis Date: 8/31/2023	SeqNo: 3627019	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308F18

11-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: MB-77185	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77185	RunNo: 99380								
Prep Date: 8/30/2023	Analysis Date: 8/31/2023	SeqNo: 3627019	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	13		10.00		126	69	147			

Sample ID: LCS-77176	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77176	RunNo: 99380								
Prep Date: 8/29/2023	Analysis Date: 8/31/2023	SeqNo: 3627544	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.5		5.000		109	69	147			

Sample ID: LCS-77208	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77208	RunNo: 99380								
Prep Date: 8/30/2023	Analysis Date: 8/31/2023	SeqNo: 3627545	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.9		5.000		119	69	147			

Sample ID: LCS-77213	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77213	RunNo: 99380								
Prep Date: 8/30/2023	Analysis Date: 8/31/2023	SeqNo: 3627547	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		105	69	147			

Sample ID: MB-77176	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77176	RunNo: 99380								
Prep Date: 8/29/2023	Analysis Date: 8/31/2023	SeqNo: 3627552	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	13		10.00		126	69	147			

Sample ID: MB-77208	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77208	RunNo: 99380								
Prep Date: 8/30/2023	Analysis Date: 8/31/2023	SeqNo: 3627556	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	13		10.00		131	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308F18

11-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: MB-77213	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77213	RunNo: 99380								
Prep Date: 8/30/2023	Analysis Date: 8/31/2023	SeqNo: 3627557	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		108	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308F18

11-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: ics-77179	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 77179		RunNo: 99366							
Prep Date: 8/29/2023	Analysis Date: 8/31/2023		SeqNo: 3627634		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	93.6	70	130			
Surr: BFB	2000		1000		203	15	244			

Sample ID: ics-77198	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 77198		RunNo: 99366							
Prep Date: 8/30/2023	Analysis Date: 9/1/2023		SeqNo: 3627635		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1900		1000		193	15	244			

Sample ID: mb-77198	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 77198		RunNo: 99366							
Prep Date: 8/30/2023	Analysis Date: 9/1/2023		SeqNo: 3627636		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		93.9	15	244			

Sample ID: mb-77179	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 77179		RunNo: 99366							
Prep Date: 8/29/2023	Analysis Date: 8/31/2023		SeqNo: 3627706		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	980		1000		98.3	15	244			

Sample ID: ics-77164	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 77164		RunNo: 99374							
Prep Date: 8/29/2023	Analysis Date: 9/1/2023		SeqNo: 3628001		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	84.8	70	130			
Surr: BFB	2000		1000		198	15	244			

Sample ID: mb-77164	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 77164		RunNo: 99374							
Prep Date: 8/29/2023	Analysis Date: 9/1/2023		SeqNo: 3628002		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	990		1000		98.6	15	244			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308F18

11-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: ics-77172	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 77172		RunNo: 99411							
Prep Date: 8/29/2023	Analysis Date: 9/2/2023		SeqNo: 3628857		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1900		1000		191	15	244			

Sample ID: mb-77172	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 77172		RunNo: 99411							
Prep Date: 8/29/2023	Analysis Date: 9/2/2023		SeqNo: 3628859		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		93.5	15	244			

Sample ID: ics-77209	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 77209		RunNo: 99415							
Prep Date: 8/30/2023	Analysis Date: 9/1/2023		SeqNo: 3629500		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2200		1000		216	15	244			

Sample ID: mb-77209	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 77209		RunNo: 99415							
Prep Date: 8/30/2023	Analysis Date: 9/1/2023		SeqNo: 3629501		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.1	15	244			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308F18

11-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: LCS-77179	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77179		RunNo: 99366							
Prep Date: 8/29/2023	Analysis Date: 8/31/2023		SeqNo: 3627739		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	108	70	130			
Toluene	1.1	0.050	1.000	0	108	70	130			
Ethylbenzene	1.1	0.050	1.000	0	111	70	130			
Xylenes, Total	3.3	0.10	3.000	0	112	70	130			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	39.1	146			

Sample ID: LCS-77198	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77198		RunNo: 99366							
Prep Date: 8/30/2023	Analysis Date: 9/1/2023		SeqNo: 3627740		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		106	39.1	146			

Sample ID: mb-77198	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 77198		RunNo: 99366							
Prep Date: 8/30/2023	Analysis Date: 9/1/2023		SeqNo: 3627741		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		106	39.1	146			

Sample ID: mb-77179	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 77179		RunNo: 99366							
Prep Date: 8/29/2023	Analysis Date: 8/31/2023		SeqNo: 3627742		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	1.1		1.000		107	39.1	146			

Sample ID: lcs-77164	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77164		RunNo: 99374							
Prep Date: 8/29/2023	Analysis Date: 9/1/2023		SeqNo: 3628033		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.7	70	130			
Toluene	0.90	0.050	1.000	0	90.3	70	130			
Ethylbenzene	0.92	0.050	1.000	0	92.2	70	130			
Xylenes, Total	2.8	0.10	3.000	0	92.2	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2308F18

11-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: ics-77164	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 77164	RunNo: 99374								
Prep Date: 8/29/2023	Analysis Date: 9/1/2023	SeqNo: 3628033	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.94		1.000		94.3	39.1	146			

Sample ID: mb-77164	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 77164	RunNo: 99374								
Prep Date: 8/29/2023	Analysis Date: 9/1/2023	SeqNo: 3628034	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	0.90		1.000		90.5	39.1	146			

Sample ID: LCS-77172	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 77172	RunNo: 99411								
Prep Date: 8/29/2023	Analysis Date: 9/2/2023	SeqNo: 3628971	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		108	39.1	146			

Sample ID: mb-77172	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 77172	RunNo: 99411								
Prep Date: 8/29/2023	Analysis Date: 9/2/2023	SeqNo: 3628973	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		105	39.1	146			

Sample ID: ics-77209	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 77209	RunNo: 99415								
Prep Date: 8/30/2023	Analysis Date: 9/1/2023	SeqNo: 3629583	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		90.9	39.1	146			

Sample ID: mb-77209	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 77209	RunNo: 99415								
Prep Date: 8/30/2023	Analysis Date: 9/1/2023	SeqNo: 3629584	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		90.6	39.1	146			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy

Work Order Number: 2308F18

RcptNo: 1

Received By: Tracy Casarrubias 8/29/2023 7:55:00 AM

Completed By: Tracy Casarrubias 8/29/2023 8:21:59 AM

Reviewed By: *JA 8-29-23*

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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes No NA
- 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: *ms/29/23*

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: Mailing address, phone number and Email/Fax are missing on COC - -TMC 8/29/23

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0	Good	Yes	Yogi		

Chain-of-Custody Record

Client: Devon/Vertex

Mailing Address: On file

Phone #: 1

email or Fax#:

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

Accreditation: Az Compliance
 NELAC Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush 48 hr

Project Name:
Laguna Salado 22 Fed 4 Pasture

Project #:
23E-01414

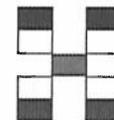
Project Manager:
Kent Stallings

Sampler: SM

On Ice: Yes No 40g

of Coolers: 1

Cooler Temp (including CF): 0.1 - 0.5 = 0 (°C)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	MTBE / TMBE / 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	CA, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8/25/23	10:05	Soil	BG23-01 0'	4oz jar	Ice	001	✓	✓					✓			
	10:10		BG23-01 2'			002										
	10:15		BG23-02 0'			003										
	10:30		BG23-02 2'			004										
	10:45		BH23-01 0'			005										
	10:50		BH23-01 2'			006										
	12:30		BH23-02 0'			007										
	12:45		BH23-02 2'			008										
	12:40		BH23-03 0'			009										
	12:45		BH23-03 2'			010										
	13:45		BH23-04 0'			011										
	13:50		BH23-04 2'			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time	Remarks: Direct bill to Devon w/att: 21134488 KStallings@vertex.ca C.C. SMcCarthy@vertex.ca pg 1 of 1
		<u>Joseph McCarty</u>	<u>Amurys</u>	<u>Courier</u>	<u>8/20/23</u>	<u>9:15</u>	
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time	
<u>8/23/23</u>	<u>11:00</u>	<u>Amurys</u>	<u>[Signature]</u>	<u>Courier</u>	<u>8/29/23</u>	<u>7:55</u>	



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

September 12, 2023

Kent Stallings
Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX:

RE: Laguna Salado 22 Fed 4 Pasture

OrderNo.: 2309072

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/2/2023 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 white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2309072**

Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-03 0'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 10:35:00 AM

Lab ID: 2309072-001

Matrix: SOIL

Received Date: 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	9/6/2023 4:28:14 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/6/2023 4:28:14 PM
Surr: DNOP	96.6	69-147		%Rec	1	9/6/2023 4:28:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/6/2023 11:52:00 PM
Surr: BFB	99.4	15-244		%Rec	1	9/6/2023 11:52:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/6/2023 11:52:00 PM
Toluene	ND	0.048		mg/Kg	1	9/6/2023 11:52:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/6/2023 11:52:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/6/2023 11:52:00 PM
Surr: 4-Bromofluorobenzene	89.4	39.1-146		%Rec	1	9/6/2023 11:52:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	17000	1500		mg/Kg	500	9/7/2023 10:03:19 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309072**

Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-03 2'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/25/2023 10:40:00 AM

Lab ID: 2309072-002

Matrix: SOIL

Received Date: 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/6/2023 4:51:58 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/6/2023 4:51:58 PM
Surr: DNOP	91.9	69-147		%Rec	1	9/6/2023 4:51:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/7/2023 12:57:00 AM
Surr: BFB	98.1	15-244		%Rec	1	9/7/2023 12:57:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	9/7/2023 12:57:00 AM
Toluene	ND	0.050		mg/Kg	1	9/7/2023 12:57:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	9/7/2023 12:57:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	9/7/2023 12:57:00 AM
Surr: 4-Bromofluorobenzene	89.0	39.1-146		%Rec	1	9/7/2023 12:57:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	4900	300		mg/Kg	100	9/7/2023 10:15:40 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309072**

Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 0'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/31/2023 9:10:00 AM

Lab ID: 2309072-003

Matrix: SOIL

Received Date: 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	9/6/2023 5:15:49 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/6/2023 5:15:49 PM
Surr: DNOP	91.6	69-147		%Rec	1	9/6/2023 5:15:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/7/2023 2:02:00 AM
Surr: BFB	96.8	15-244		%Rec	1	9/7/2023 2:02:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/7/2023 2:02:00 AM
Toluene	ND	0.048		mg/Kg	1	9/7/2023 2:02:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	9/7/2023 2:02:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	9/7/2023 2:02:00 AM
Surr: 4-Bromofluorobenzene	89.6	39.1-146		%Rec	1	9/7/2023 2:02:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	9400	600		mg/Kg	200	9/7/2023 10:28:01 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309072**

Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-05 2'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/31/2023 9:15:00 AM

Lab ID: 2309072-004

Matrix: SOIL

Received Date: 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/6/2023 5:39:41 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/6/2023 5:39:41 PM
Surr: DNOP	95.5	69-147		%Rec	1	9/6/2023 5:39:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/7/2023 2:24:00 AM
Surr: BFB	104	15-244		%Rec	1	9/7/2023 2:24:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/7/2023 2:24:00 AM
Toluene	ND	0.047		mg/Kg	1	9/7/2023 2:24:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	9/7/2023 2:24:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	9/7/2023 2:24:00 AM
Surr: 4-Bromofluorobenzene	90.1	39.1-146		%Rec	1	9/7/2023 2:24:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	9800	300		mg/Kg	100	9/7/2023 10:40:23 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 standard limits. If undiluted results may be estimated.

B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order **2309072**

Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-06 0'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/31/2023 9:20:00 AM

Lab ID: 2309072-005

Matrix: SOIL

Received Date: 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/6/2023 6:03:48 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/6/2023 6:03:48 PM
Surr: DNOP	90.9	69-147		%Rec	1	9/6/2023 6:03:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/7/2023 2:46:00 AM
Surr: BFB	101	15-244		%Rec	1	9/7/2023 2:46:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	9/7/2023 2:46:00 AM
Toluene	ND	0.048		mg/Kg	1	9/7/2023 2:46:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	9/7/2023 2:46:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	9/7/2023 2:46:00 AM
Surr: 4-Bromofluorobenzene	91.6	39.1-146		%Rec	1	9/7/2023 2:46:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	8100	600		mg/Kg	200	9/7/2023 10:52:44 AM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2309072**

Date Reported: **9/12/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-06 2'

Project: Laguna Salado 22 Fed 4 Pasture

Collection Date: 8/31/2023 9:25:00 AM

Lab ID: 2309072-006

Matrix: SOIL

Received Date: 9/2/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/6/2023 6:27:56 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/6/2023 6:27:56 PM
Surr: DNOP	84.5	69-147		%Rec	1	9/6/2023 6:27:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/7/2023 3:08:00 AM
Surr: BFB	99.8	15-244		%Rec	1	9/7/2023 3:08:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	9/7/2023 3:08:00 AM
Toluene	ND	0.047		mg/Kg	1	9/7/2023 3:08:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	9/7/2023 3:08:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	9/7/2023 3:08:00 AM
Surr: 4-Bromofluorobenzene	92.6	39.1-146		%Rec	1	9/7/2023 3:08:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	4600	300		mg/Kg	100	9/7/2023 11:05:05 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2309072

12-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: MB-77340	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 77340	RunNo: 99513								
Prep Date: 9/6/2023	Analysis Date: 9/6/2023	SeqNo: 3633388	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-77340	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 77340	RunNo: 99513								
Prep Date: 9/6/2023	Analysis Date: 9/6/2023	SeqNo: 3633389	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.7	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2309072

12-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: MB-77317	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 77317	RunNo: 99483								
Prep Date: 9/6/2023	Analysis Date: 9/6/2023	SeqNo: 3632800	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	9.1		10.00		90.7	69	147			

Sample ID: LCS-77317	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 77317	RunNo: 99483								
Prep Date: 9/6/2023	Analysis Date: 9/6/2023	SeqNo: 3632801	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	108	61.9	130			
Surr: DNOP	4.3		5.000		85.5	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2309072

12-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: mb-77310	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 77310		RunNo: 99469							
Prep Date: 9/5/2023	Analysis Date: 9/6/2023		SeqNo: 3632342		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		107	15	244			

Sample ID: 2309072-001ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BG23-03 0'	Batch ID: 77310		RunNo: 99469							
Prep Date: 9/5/2023	Analysis Date: 9/7/2023		SeqNo: 3632344		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	24.18	0	104	70	130			
Surr: BFB	2300		967.1		234	15	244			

Sample ID: 2309072-001amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BG23-03 0'	Batch ID: 77310		RunNo: 99469							
Prep Date: 9/5/2023	Analysis Date: 9/7/2023		SeqNo: 3632345		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	24.15	0	95.5	70	130	8.90	20	
Surr: BFB	2100		966.2		221	15	244	0	0	

Sample ID: LCS-77310	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 77310		RunNo: 99469							
Prep Date: 9/5/2023	Analysis Date: 9/6/2023		SeqNo: 3632755		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	70	130			
Surr: BFB	2100		1000		213	15	244			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2309072

12-Sep-23

Client: Devon Energy
Project: Laguna Salado 22 Fed 4 Pasture

Sample ID: ics-77310	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 77310		RunNo: 99469							
Prep Date: 9/5/2023	Analysis Date: 9/6/2023		SeqNo: 3632741		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	88.5	70	130			
Toluene	0.89	0.050	1.000	0	89.4	70	130			
Ethylbenzene	0.91	0.050	1.000	0	90.7	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.6	70	130			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.4	39.1	146			

Sample ID: mb-77310	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 77310		RunNo: 99469							
Prep Date: 9/5/2023	Analysis Date: 9/6/2023		SeqNo: 3632742		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	0.89		1.000		89.0	39.1	146			

Sample ID: 2309072-002ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BG23-03 2'	Batch ID: 77310		RunNo: 99469							
Prep Date: 9/5/2023	Analysis Date: 9/7/2023		SeqNo: 3632745		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	0.9940	0	91.7	70	130			
Toluene	0.92	0.050	0.9940	0	92.7	70	130			
Ethylbenzene	0.94	0.050	0.9940	0	94.6	70	130			
Xylenes, Total	2.8	0.099	2.982	0	94.5	70	130			
Surr: 4-Bromofluorobenzene	0.94		0.9940		95.0	39.1	146			

Sample ID: 2309072-002amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BG23-03 2'	Batch ID: 77310		RunNo: 99469							
Prep Date: 9/5/2023	Analysis Date: 9/7/2023		SeqNo: 3632746		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	0.9911	0	89.0	70	130	3.36	20	
Toluene	0.90	0.050	0.9911	0	90.5	70	130	2.66	20	
Ethylbenzene	0.92	0.050	0.9911	0	92.6	70	130	2.43	20	
Xylenes, Total	2.8	0.099	2.973	0	92.6	70	130	2.38	20	
Surr: 4-Bromofluorobenzene	0.90		0.9911		90.5	39.1	146	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2309072 RcptNo: 1

Received By: Tracy Casarrubias 9/2/2023 7:45:00 AM

Completed By: Tracy Casarrubias 9/2/2023 7:57:20 AM

Reviewed By: jn 9/5/23

Chain of Custody

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

Log In

- 3. Was an attempt made to cool the samples? Yes [x] No [] NA []
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [x] No [] NA []
5. Sample(s) in proper container(s)? Yes [x] No []
6. Sufficient sample volume for indicated test(s)? Yes [x] No []
7. Are samples (except VOA and ONG) properly preserved? Yes [x] No []
8. Was preservative added to bottles? Yes [] No [x] NA []
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [] No [] NA [x]
10. Were any sample containers received broken? Yes [] No [x]
11. Does paperwork match bottle labels? Yes [x] No []
12. Are matrices correctly identified on Chain of Custody? Yes [x] No []
13. Is it clear what analyses were requested? Yes [x] No []
14. Were all holding times able to be met? Yes [x] No []

of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted? Checked by: me 9/2/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: Mailing address, phone number and Email/Fax are missing on COC- TMC 9/2/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.6, Good, Yes, Yogi

Chain-of-Custody Record

Client: Devin/Vertex

Mailing Address: On file

Phone #:

email or Fax#:

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

Accreditation: Az Compliance
 NELAC Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush 48hr

Project Name:

Laguna Salado 22 Fed 4 Pasture

Project #:

23E-01414

Project Manager:

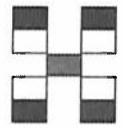
Kent Stallings

Sampler: SM

On Ice: Yes No 40g

of Coolers: 1

Cooler Temp (Including CF): 0.6 - 0 = 0.6 (°C)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
8/25/23	10:35	Soil	BG23-03 0'	4oz jar	Ice	001
8/25/23	10:40		BG23-03 2'			002
8/31/23	9:10		BH23-05 0'			003
8/31/23	9:15		BH23-05 2'			004
8/31/23	9:20		BH23-06 0'			005
8/31/23	9:25		BH23-06 2'			006

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	PF, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
✓	✓					✓			

Date: 9/1/23 Time: 9:30 Relinquished by: Steve McCarty

Received by: Admuni Via: email Date: 9/1/23 Time: 9:30

Remarks: Direct bill to: Devon W/o #: 21134488

Date: 9/1/23 Time: 7:45 Relinquished by: [Signature]

Received by: [Signature] Via: email Date: 9/2/23 Time: 7:45

c.c. smccarty@vertex.ca
kstallings@vertex.ca



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

July 31, 2023

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (505) 350-1336

FAX:

RE: Laguna Salado Fed 4

OrderNo.: 2307983

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 10 sample(s) on 7/21/2023 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 white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-01 0.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:00:00 AM

Lab ID: 2307983-001

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/23/2023 12:23:57 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2023 12:23:57 PM
Surr: DNOP	105	69-147		%Rec	1	7/23/2023 12:23:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/24/2023 9:38:52 PM
Surr: BFB	95.5	15-244		%Rec	1	7/24/2023 9:38:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/24/2023 9:38:52 PM
Toluene	ND	0.048		mg/Kg	1	7/24/2023 9:38:52 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/24/2023 9:38:52 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/24/2023 9:38:52 PM
Surr: 4-Bromofluorobenzene	119	39.1-146		%Rec	1	7/24/2023 9:38:52 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	2500	150		mg/Kg	50	7/26/2023 9:53:56 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-01 2.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:10:00 AM

Lab ID: 2307983-002

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/23/2023 12:48:23 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2023 12:48:23 PM
Surr: DNOP	88.2	69-147		%Rec	1	7/23/2023 12:48:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/24/2023 10:49:22 PM
Surr: BFB	92.6	15-244		%Rec	1	7/24/2023 10:49:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/24/2023 10:49:22 PM
Toluene	ND	0.050		mg/Kg	1	7/24/2023 10:49:22 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/24/2023 10:49:22 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/24/2023 10:49:22 PM
Surr: 4-Bromofluorobenzene	116	39.1-146		%Rec	1	7/24/2023 10:49:22 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	6100	300		mg/Kg	100	7/26/2023 10:06:21 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-02 0.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:20:00 AM

Lab ID: 2307983-003

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/23/2023 1:12:51 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/23/2023 1:12:51 PM
Surr: DNOP	91.2	69-147		%Rec	1	7/23/2023 1:12:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/24/2023 11:59:42 PM
Surr: BFB	92.6	15-244		%Rec	1	7/24/2023 11:59:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/24/2023 11:59:42 PM
Toluene	ND	0.050		mg/Kg	1	7/24/2023 11:59:42 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/24/2023 11:59:42 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/24/2023 11:59:42 PM
Surr: 4-Bromofluorobenzene	117	39.1-146		%Rec	1	7/24/2023 11:59:42 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	34000	1500		mg/Kg	500	7/26/2023 10:18:46 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-02 2.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:30:00 AM

Lab ID: 2307983-004

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/23/2023 1:37:25 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2023 1:37:25 PM
Surr: DNOP	89.4	69-147		%Rec	1	7/23/2023 1:37:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/25/2023 12:23:08 AM
Surr: BFB	94.8	15-244		%Rec	1	7/25/2023 12:23:08 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 12:23:08 AM
Toluene	ND	0.049		mg/Kg	1	7/25/2023 12:23:08 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/25/2023 12:23:08 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/25/2023 12:23:08 AM
Surr: 4-Bromofluorobenzene	120	39.1-146		%Rec	1	7/25/2023 12:23:08 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	6000	300		mg/Kg	100	7/26/2023 10:31:10 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 standard limits. If undiluted results may be estimated.

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

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-03 0.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:40:00 AM

Lab ID: 2307983-005

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/23/2023 2:01:58 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2023 2:01:58 PM
Surr: DNOP	79.0	69-147		%Rec	1	7/23/2023 2:01:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/25/2023 12:46:30 AM
Surr: BFB	93.6	15-244		%Rec	1	7/25/2023 12:46:30 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 12:46:30 AM
Toluene	ND	0.048		mg/Kg	1	7/25/2023 12:46:30 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/25/2023 12:46:30 AM
Xylenes, Total	ND	0.096		mg/Kg	1	7/25/2023 12:46:30 AM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/25/2023 12:46:30 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	970	60		mg/Kg	20	7/25/2023 9:07:50 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-03 2.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 10:50:00 AM

Lab ID: 2307983-006

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/23/2023 2:26:32 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/23/2023 2:26:32 PM
Surr: DNOP	80.9	69-147		%Rec	1	7/23/2023 2:26:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/25/2023 1:10:05 AM
Surr: BFB	94.2	15-244		%Rec	1	7/25/2023 1:10:05 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	7/25/2023 1:10:05 AM
Toluene	ND	0.050		mg/Kg	1	7/25/2023 1:10:05 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/25/2023 1:10:05 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/25/2023 1:10:05 AM
Surr: 4-Bromofluorobenzene	119	39.1-146		%Rec	1	7/25/2023 1:10:05 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	620	61		mg/Kg	20	7/25/2023 9:20:15 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-01 0.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 11:00:00 AM

Lab ID: 2307983-007

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/23/2023 2:51:05 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/23/2023 2:51:05 PM
Surr: DNOP	92.1	69-147		%Rec	1	7/23/2023 2:51:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/25/2023 1:33:29 AM
Surr: BFB	91.7	15-244		%Rec	1	7/25/2023 1:33:29 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 1:33:29 AM
Toluene	ND	0.048		mg/Kg	1	7/25/2023 1:33:29 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/25/2023 1:33:29 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/25/2023 1:33:29 AM
Surr: 4-Bromofluorobenzene	116	39.1-146		%Rec	1	7/25/2023 1:33:29 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	35000	1500		mg/Kg	500	7/26/2023 10:43:34 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-01 2.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 11:10:00 AM

Lab ID: 2307983-008

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/23/2023 3:15:40 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/23/2023 3:15:40 PM
Surr: DNOP	92.4	69-147		%Rec	1	7/23/2023 3:15:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/25/2023 1:56:52 AM
Surr: BFB	95.5	15-244		%Rec	1	7/25/2023 1:56:52 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 1:56:52 AM
Toluene	ND	0.047		mg/Kg	1	7/25/2023 1:56:52 AM
Ethylbenzene	ND	0.047		mg/Kg	1	7/25/2023 1:56:52 AM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 1:56:52 AM
Surr: 4-Bromofluorobenzene	120	39.1-146		%Rec	1	7/25/2023 1:56:52 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	6500	300		mg/Kg	100	7/26/2023 10:55:59 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-02 0.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 11:20:00 AM

Lab ID: 2307983-009

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/23/2023 4:04:54 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/23/2023 4:04:54 PM
Surr: DNOP	96.6	69-147		%Rec	1	7/23/2023 4:04:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/25/2023 2:20:16 AM
Surr: BFB	92.9	15-244		%Rec	1	7/25/2023 2:20:16 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 2:20:16 AM
Toluene	ND	0.049		mg/Kg	1	7/25/2023 2:20:16 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/25/2023 2:20:16 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/25/2023 2:20:16 AM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/25/2023 2:20:16 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	19000	1200		mg/Kg	400	7/26/2023 11:08:23 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307983**

Date Reported: **7/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-02 2.0'

Project: Laguna Salado Fed 4

Collection Date: 7/19/2023 11:30:00 AM

Lab ID: 2307983-010

Matrix: SOIL

Received Date: 7/21/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/23/2023 4:29:31 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/23/2023 4:29:31 PM
Surr: DNOP	91.8	69-147		%Rec	1	7/23/2023 4:29:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/25/2023 2:43:41 AM
Surr: BFB	93.6	15-244		%Rec	1	7/25/2023 2:43:41 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	7/25/2023 2:43:41 AM
Toluene	ND	0.048		mg/Kg	1	7/25/2023 2:43:41 AM
Ethylbenzene	ND	0.048		mg/Kg	1	7/25/2023 2:43:41 AM
Xylenes, Total	ND	0.095		mg/Kg	1	7/25/2023 2:43:41 AM
Surr: 4-Bromofluorobenzene	118	39.1-146		%Rec	1	7/25/2023 2:43:41 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	6600	300		mg/Kg	100	7/26/2023 11:20:48 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307983

31-Jul-23

Client: Devon Energy
Project: Laguna Salado Fed 4

Sample ID: MB-76439	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76439	RunNo: 98504								
Prep Date: 7/25/2023	Analysis Date: 7/25/2023	SeqNo: 3586441	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76439	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76439	RunNo: 98504								
Prep Date: 7/25/2023	Analysis Date: 7/25/2023	SeqNo: 3586442	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.8	90	110			

Sample ID: MB-76448	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76448	RunNo: 98504								
Prep Date: 7/25/2023	Analysis Date: 7/25/2023	SeqNo: 3586471	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76448	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76448	RunNo: 98504								
Prep Date: 7/25/2023	Analysis Date: 7/25/2023	SeqNo: 3586472	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.2	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307983

31-Jul-23

Client: Devon Energy
Project: Laguna Salado Fed 4

Sample ID: LCS-76387	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 76387	RunNo: 98368								
Prep Date: 7/21/2023	Analysis Date: 7/23/2023	SeqNo: 3583070	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	99.3	61.9	130			
Surr: DNOP	4.6		5.000		91.4	69	147			

Sample ID: MB-76387	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 76387	RunNo: 98451								
Prep Date: 7/21/2023	Analysis Date: 7/24/2023	SeqNo: 3583918	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	11		10.00		107	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307983

31-Jul-23

Client: Devon Energy
Project: Laguna Salado Fed 4

Sample ID: ics-76381	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 76381	RunNo: 98452								
Prep Date: 7/21/2023	Analysis Date: 7/24/2023	SeqNo: 3583843	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	94.4	70	130			
Surr: BFB	2000		1000		197	15	244			

Sample ID: mb-76381	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 76381	RunNo: 98452								
Prep Date: 7/21/2023	Analysis Date: 7/24/2023	SeqNo: 3583844	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	950		1000		95.2	15	244			

Sample ID: 2307983-001ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BG23-01 0.0'	Batch ID: 76381	RunNo: 98452								
Prep Date: 7/21/2023	Analysis Date: 7/24/2023	SeqNo: 3584038	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.8	23.99	0	89.5	70	130			
Surr: BFB	1900		959.7		199	15	244			

Sample ID: 2307983-001amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BG23-01 0.0'	Batch ID: 76381	RunNo: 98452								
Prep Date: 7/21/2023	Analysis Date: 7/24/2023	SeqNo: 3584039	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.8	24.04	0	87.0	70	130	2.62	20	
Surr: BFB	1800		961.5		190	15	244	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307983

31-Jul-23

Client: Devon Energy
Project: Laguna Salado Fed 4

Sample ID: LCS-76381	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3583856		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	114	70	130			
Toluene	1.1	0.050	1.000	0	115	70	130			
Ethylbenzene	1.2	0.050	1.000	0	117	70	130			
Xylenes, Total	3.5	0.10	3.000	0	118	70	130			
Surr: 4-Bromofluorobenzene	1.2		1.000		120	39.1	146			

Sample ID: mb-76381	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3583857		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	1.2		1.000		119	39.1	146			

Sample ID: 2307983-002ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BG23-01 2.0'	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3584057		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	105	70	130			
Toluene	1.1	0.050	0.9950	0	108	70	130			
Ethylbenzene	1.1	0.050	0.9950	0	110	70	130			
Xylenes, Total	3.3	0.10	2.985	0	109	70	130			
Surr: 4-Bromofluorobenzene	1.2		0.9950		119	39.1	146			

Sample ID: 2307983-002amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BG23-01 2.0'	Batch ID: 76381		RunNo: 98452							
Prep Date: 7/21/2023	Analysis Date: 7/24/2023		SeqNo: 3584058		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9930	0	101	70	130	3.57	20	
Toluene	1.0	0.050	0.9930	0	102	70	130	5.27	20	
Ethylbenzene	1.0	0.050	0.9930	0	103	70	130	6.15	20	
Xylenes, Total	3.1	0.099	2.979	0	105	70	130	4.57	20	
Surr: 4-Bromofluorobenzene	1.2		0.9930		119	39.1	146	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2307983 RcptNo: 1

Received By: Juan Rojas 7/21/2023 7:50:00 AM
Completed By: Tracy Casarrubias 7/21/2023 8:15:29 AM
Reviewed By: [Handwritten signature and date]

Chain of Custody

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

Log In

- 3. Was an attempt made to cool the samples? Yes [x] No [] NA []
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [x] No [] NA []
5. Sample(s) in proper container(s)? Yes [x] No []
6. Sufficient sample volume for indicated test(s)? Yes [x] No []
7. Are samples (except VOA and ONG) properly preserved? Yes [x] No []
8. Was preservative added to bottles? Yes [] No [x] NA []
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [] No [] NA [x]
10. Were any sample containers received broken? Yes [] No [x]
11. Does paperwork match bottle labels? Yes [x] No []
12. Are matrices correctly identified on Chain of Custody? Yes [x] No []
13. Is it clear what analyses were requested? Yes [x] No []
14. Were all holding times able to be met? Yes [x] No []

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

Adjusted?
Checked by: SCM 07/21/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: Mailing address, phone number and Email/Fax are missing on COC - TMC 7/21/23

16. Additional remarks:

17. Cooler Information

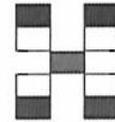
Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.7, Good, Yes, Yogi

Chain-of-Custody Record

Client: Devon
 Mailing Address: Direct Bill
 Phone #: _____
 email or Fax#: _____
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: Az Compliance
 NELAC Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush 5 Day
 Project Name: Laguna Salado Fed #4
 Project #: 23E-01414

Project Manager: Kent Stallings
 Sampler: AK
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including CF): 0.6 + 0.1 = 0.7 (°C)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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)
7-19-23	1000	Soil	B623-01 0.0'	4oz	ICE	2307983 001	✓	✓					✓			
	1010		B623-01 2.0'			002	✓	✓								
	1020		B623-02 0.0'			003	✓	✓								
	1030		B623-02 2.0'			004	✓	✓								
	1040		B623-03 0.0'			005	✓	✓								
	1050		B623-03 2.0'			006	✓	✓								
	1100		B623-01 0.0'			007	✓	✓								
	1110		B623-01 2.0'			008	✓	✓								
	1120		B623-02 0.0'	✓	✓	009	✓	✓								
	1130		B623-02 2.0'	✓	✓	010	✓	✓								

Date: _____ Time: _____ Relinquished by: _____
 Received by: Amuniz Via: _____ Date: 7/20/23 Time: 800
 Date: 7/20/23 Time: 1900 Relinquished by: Amuniz
 Received by: [Signature] Via: _____ Date: 7/21/23 Time: 7:50

Remarks: CC: Kent Stallings
Kstallings@vertex.ca

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

September 08, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Laguna Salado

OrderNo.: 2208H98

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 9 sample(s) on 8/31/2022 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 white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2208H98**

Date Reported: **9/8/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BG22-01 0ft

Project: Laguna Salado

Collection Date: 8/29/2022 10:30:00 AM

Lab ID: 2208H98-001

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/2/2022 9:08:27 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/2/2022 9:08:27 PM
Surr: DNOP	79.9	21-129		%Rec	1	9/2/2022 9:08:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2022 9:04:00 PM
Surr: BFB	93.6	37.7-212		%Rec	1	9/1/2022 9:04:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 9:04:00 PM
Toluene	ND	0.048		mg/Kg	1	9/1/2022 9:04:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/1/2022 9:04:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	9/1/2022 9:04:00 PM
Surr: 4-Bromofluorobenzene	88.0	70-130		%Rec	1	9/1/2022 9:04:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	22000	1500		mg/Kg	500	9/6/2022 11:46:24 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 Estimated value
	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 interference	

Analytical Report

Lab Order **2208H98**

Date Reported: **9/8/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BG22-01 1ft

Project: Laguna Salado

Collection Date: 8/29/2022 10:40:00 AM

Lab ID: 2208H98-002

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/2/2022 9:19:31 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/2/2022 9:19:31 PM
Surr: DNOP	82.5	21-129		%Rec	1	9/2/2022 9:19:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/1/2022 9:23:00 PM
Surr: BFB	93.7	37.7-212		%Rec	1	9/1/2022 9:23:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 9:23:00 PM
Toluene	ND	0.049		mg/Kg	1	9/1/2022 9:23:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/1/2022 9:23:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/1/2022 9:23:00 PM
Surr: 4-Bromofluorobenzene	88.7	70-130		%Rec	1	9/1/2022 9:23:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	5900	300		mg/Kg	100	9/6/2022 11:58:48 PM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Estimated value
	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 interference	

Analytical Report

Lab Order **2208H98**

Date Reported: **9/8/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BG22-01 2ft

Project: Laguna Salado

Collection Date: 8/29/2022 10:50:00 AM

Lab ID: 2208H98-003

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	9/2/2022 9:30:37 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/2/2022 9:30:37 PM
Surr: DNOP	85.2	21-129		%Rec	1	9/2/2022 9:30:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/1/2022 9:43:00 PM
Surr: BFB	93.5	37.7-212		%Rec	1	9/1/2022 9:43:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	9/1/2022 9:43:00 PM
Toluene	ND	0.049		mg/Kg	1	9/1/2022 9:43:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/1/2022 9:43:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	9/1/2022 9:43:00 PM
Surr: 4-Bromofluorobenzene	90.4	70-130		%Rec	1	9/1/2022 9:43:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	7000	300		mg/Kg	100	9/7/2022 12:11:13 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 Estimated value
	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 interference	

Analytical Report

Lab Order **2208H98**

Date Reported: **9/8/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BG22-01 4ft

Project: Laguna Salado

Collection Date: 8/29/2022 11:00:00 AM

Lab ID: 2208H98-004

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	9/2/2022 9:41:39 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	9/2/2022 9:41:39 PM
Surr: DNOP	83.2	21-129		%Rec	1	9/2/2022 9:41:39 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/1/2022 10:03:00 PM
Surr: BFB	94.1	37.7-212		%Rec	1	9/1/2022 10:03:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	9/1/2022 10:03:00 PM
Toluene	ND	0.050		mg/Kg	1	9/1/2022 10:03:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/1/2022 10:03:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/1/2022 10:03:00 PM
Surr: 4-Bromofluorobenzene	89.4	70-130		%Rec	1	9/1/2022 10:03:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	7800	300		mg/Kg	100	9/7/2022 12:23:38 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 Estimated value
	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 interference	

Analytical Report

Lab Order **2208H98**

Date Reported: **9/8/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BG22-02 0ft

Project: Laguna Salado

Collection Date: 8/29/2022 11:10:00 AM

Lab ID: 2208H98-005

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 10:03:31 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2022 10:03:31 PM
Surr: DNOP	113	21-129		%Rec	1	9/2/2022 10:03:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/1/2022 10:22:00 PM
Surr: BFB	94.2	37.7-212		%Rec	1	9/1/2022 10:22:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	9/1/2022 10:22:00 PM
Toluene	ND	0.050		mg/Kg	1	9/1/2022 10:22:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/1/2022 10:22:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	9/1/2022 10:22:00 PM
Surr: 4-Bromofluorobenzene	89.5	70-130		%Rec	1	9/1/2022 10:22:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	7000	300		mg/Kg	100	9/7/2022 12:36:03 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 Estimated value
	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 interference	

Analytical Report

Lab Order **2208H98**

Date Reported: **9/8/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BG22-02 1ft

Project: Laguna Salado

Collection Date: 8/29/2022 11:20:00 AM

Lab ID: 2208H98-006

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 10:14:29 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2022 10:14:29 PM
Surr: DNOP	89.5	21-129		%Rec	1	9/2/2022 10:14:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/1/2022 10:42:00 PM
Surr: BFB	96.1	37.7-212		%Rec	1	9/1/2022 10:42:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 10:42:00 PM
Toluene	ND	0.047		mg/Kg	1	9/1/2022 10:42:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/1/2022 10:42:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	9/1/2022 10:42:00 PM
Surr: 4-Bromofluorobenzene	89.8	70-130		%Rec	1	9/1/2022 10:42:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	3800	150		mg/Kg	50	9/7/2022 12:48:27 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 Estimated value
	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 interference	

Analytical Report

Lab Order **2208H98**

Date Reported: **9/8/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BG22-02 2ft

Project: Laguna Salado

Collection Date: 8/29/2022 11:30:00 AM

Lab ID: 2208H98-007

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 10:25:29 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2022 10:25:29 PM
Surr: DNOP	80.8	21-129		%Rec	1	9/2/2022 10:25:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/1/2022 11:02:00 PM
Surr: BFB	98.9	37.7-212		%Rec	1	9/1/2022 11:02:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	9/1/2022 11:02:00 PM
Toluene	ND	0.049		mg/Kg	1	9/1/2022 11:02:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/1/2022 11:02:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/1/2022 11:02:00 PM
Surr: 4-Bromofluorobenzene	90.3	70-130		%Rec	1	9/1/2022 11:02:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	2800	150		mg/Kg	50	9/7/2022 1:25:41 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 Estimated value
	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 interference	

Analytical Report

Lab Order **2208H98**

Date Reported: **9/8/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BG22-03 0ft

Project: Laguna Salado

Collection Date: 8/29/2022 11:40:00 AM

Lab ID: 2208H98-008

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/2/2022 10:36:24 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/2/2022 10:36:24 PM
Surr: DNOP	80.8	21-129		%Rec	1	9/2/2022 10:36:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/1/2022 11:41:00 PM
Surr: BFB	94.8	37.7-212		%Rec	1	9/1/2022 11:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 11:41:00 PM
Toluene	ND	0.047		mg/Kg	1	9/1/2022 11:41:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/1/2022 11:41:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	9/1/2022 11:41:00 PM
Surr: 4-Bromofluorobenzene	88.2	70-130		%Rec	1	9/1/2022 11:41:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	16000	1500		mg/Kg	500	9/7/2022 1:38:06 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 Estimated value
	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 interference	

Analytical Report

Lab Order **2208H98**

Date Reported: **9/8/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BG22-03 1ft

Project: Laguna Salado

Collection Date: 8/29/2022 11:50:00 AM

Lab ID: 2208H98-009

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/2/2022 10:47:24 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/2/2022 10:47:24 PM
Surr: DNOP	85.3	21-129		%Rec	1	9/2/2022 10:47:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/2/2022 12:01:00 AM
Surr: BFB	91.3	37.7-212		%Rec	1	9/2/2022 12:01:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	9/2/2022 12:01:00 AM
Toluene	ND	0.049		mg/Kg	1	9/2/2022 12:01:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	9/2/2022 12:01:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	9/2/2022 12:01:00 AM
Surr: 4-Bromofluorobenzene	87.6	70-130		%Rec	1	9/2/2022 12:01:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	13000	600		mg/Kg	200	9/7/2022 1:50:31 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 Estimated value
	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 interference	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208H98

08-Sep-22

Client: Vertex Resources Services, Inc.

Project: Laguna Salado

Sample ID: MB-69960	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69960	RunNo: 90825								
Prep Date: 9/4/2022	Analysis Date: 9/4/2022	SeqNo: 3247629	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69960	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69960	RunNo: 90825								
Prep Date: 9/4/2022	Analysis Date: 9/4/2022	SeqNo: 3247630	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.2	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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208H98

08-Sep-22

Client: Vertex Resources Services, Inc.

Project: Laguna Salado

Sample ID: LCS-69963	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 69963	RunNo: 90816								
Prep Date: 9/6/2022	Analysis Date: 9/6/2022	SeqNo: 3246556	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.1		5.000		62.4	21	129			

Sample ID: MB-69963	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 69963	RunNo: 90816								
Prep Date: 9/6/2022	Analysis Date: 9/6/2022	SeqNo: 3246558	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.7		10.00		77.0	21	129			

Sample ID: LCS-69899	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 69899	RunNo: 90763								
Prep Date: 8/31/2022	Analysis Date: 9/2/2022	SeqNo: 3246702	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	15	50.00	0	108	64.4	127			
Surr: DNOP	5.7		5.000		114	21	129			

Sample ID: MB-69899	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 69899	RunNo: 90763								
Prep Date: 8/31/2022	Analysis Date: 9/2/2022	SeqNo: 3246703	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		105	21	129			

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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208H98

08-Sep-22

Client: Vertex Resources Services, Inc.

Project: Laguna Salado

Sample ID: ics-69889	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 69889	RunNo: 90749								
Prep Date: 8/31/2022	Analysis Date: 9/1/2022	SeqNo: 3243822	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	72.3	137			
Surr: BFB	2100		1000		213	37.7	212			S

Sample ID: mb-69889	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 69889	RunNo: 90749								
Prep Date: 8/31/2022	Analysis Date: 9/1/2022	SeqNo: 3243823	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		94.0	37.7	212			

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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208H98

08-Sep-22

Client: Vertex Resources Services, Inc.

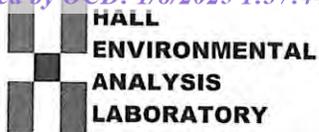
Project: Laguna Salado

Sample ID: ics-69889	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 69889	RunNo: 90749								
Prep Date: 8/31/2022	Analysis Date: 9/1/2022	SeqNo: 3243870	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	87.9	80	120			
Toluene	0.91	0.050	1.000	0	90.9	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.0	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.5	80	120			
Surr: 4-Bromofluorobenzene	0.90		1.000		90.3	70	130			

Sample ID: mb-69889	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 69889	RunNo: 90749								
Prep Date: 8/31/2022	Analysis Date: 9/1/2022	SeqNo: 3243871	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	0.89		1.000		89.5	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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc. Work Order Number: 2208H98 RcptNo: 1

Received By: Juan Rojas 8/31/2022 7:40:00 AM *Juan Rojas*

Completed By: Tracy Casarrubias 8/31/2022 8:09:45 AM

Reviewed By: *KPG* *8-31-22*

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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes No NA
- 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: *JN 8/31/22*

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.9	Good	Yes			

Chain-of-Custody Record

Client: Devon Energy (Vertex)

Mailing Address: On file

Phone #:

email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: Az Compliance

NELAC Other

EDD (Type)

Turn-Around Time:

Standard Rush 5 day

Project Name:

Laguna Salado

Project #:

NE-01927

Project Manager:

Kent Stallings

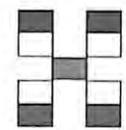
Sampler: Fernando Rodriguez

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CF): 0.9-0.5-0.9 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
<u>8/29</u>	<u>10:30</u>	<u>Soil</u>	<u>BG22-01 0FT</u>	<u>4oz jar</u>	<u>Ice</u>	<u>2208H98</u> 001
	<u>10:40</u>		<u>BG22-01 1FT</u>			002
	<u>10:50</u>		<u>BG22-01 2FT</u>			003
	<u>11:00</u>		<u>BG22-01 4FT</u>			004
	<u>11:10</u>		<u>BG22-02 0FT</u>			005
	<u>11:20</u>		<u>BG22-02 1FT</u>			006
	<u>11:30</u>		<u>BG22-02 2FT</u>			007
	<u>11:40</u>		<u>BG22-03 0FT</u>			008
	<u>11:50</u>		<u>BG22-03 1FT</u>			009



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	F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			

Date: 8/29 Time: 17:30 Relinquished by: [Signature]

Received by: [Signature] Via: [Signature] Date: 8/30/22 Time: 9:45

Remarks: cc: Kent Stallings & Monica Peppin

Date: 8/30/22 Time: 9:00 Relinquished by: [Signature]

Received by: [Signature] Via: [Signature] Date: 8/31/22 Time: 7:40



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

April 25, 2023

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Laguna Salado 5

OrderNo.: 2304663

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 26 sample(s) on 4/15/2023 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 white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-01 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:00:00 AM

Lab ID: 2304663-001

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/19/2023 1:27:09 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/19/2023 1:27:09 AM
Surr: DNOP	130	69-147		%Rec	1	4/19/2023 1:27:09 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/19/2023 1:53:00 AM
Surr: BFB	90.0	37.7-212		%Rec	1	4/19/2023 1:53:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/19/2023 1:53:00 AM
Toluene	ND	0.048		mg/Kg	1	4/19/2023 1:53:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/19/2023 1:53:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	4/19/2023 1:53:00 AM
Surr: 4-Bromofluorobenzene	84.6	70-130		%Rec	1	4/19/2023 1:53:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	5200	300		mg/Kg	100	4/20/2023 8:41:58 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-02 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:05:00 AM

Lab ID: 2304663-002

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/19/2023 1:37:54 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/19/2023 1:37:54 AM
Surr: DNOP	87.4	69-147		%Rec	1	4/19/2023 1:37:54 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/19/2023 2:15:00 AM
Surr: BFB	88.9	37.7-212		%Rec	1	4/19/2023 2:15:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/19/2023 2:15:00 AM
Toluene	ND	0.048		mg/Kg	1	4/19/2023 2:15:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/19/2023 2:15:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	4/19/2023 2:15:00 AM
Surr: 4-Bromofluorobenzene	86.4	70-130		%Rec	1	4/19/2023 2:15:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	7600	6000		mg/Kg	2000	4/20/2023 8:54:23 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-03 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:10:00 AM

Lab ID: 2304663-003

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/19/2023 1:48:38 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/19/2023 1:48:38 AM
Surr: DNOP	85.0	69-147		%Rec	1	4/19/2023 1:48:38 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/19/2023 2:36:00 AM
Surr: BFB	94.9	37.7-212		%Rec	1	4/19/2023 2:36:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/19/2023 2:36:00 AM
Toluene	ND	0.049		mg/Kg	1	4/19/2023 2:36:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/19/2023 2:36:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/19/2023 2:36:00 AM
Surr: 4-Bromofluorobenzene	85.4	70-130		%Rec	1	4/19/2023 2:36:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	31000	1500		mg/Kg	500	4/20/2023 9:06:47 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-04 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:15:00 AM

Lab ID: 2304663-004

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	4/19/2023 2:09:58 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/19/2023 2:09:58 AM
Surr: DNOP	86.7	69-147		%Rec	1	4/19/2023 2:09:58 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/19/2023 2:58:00 AM
Surr: BFB	89.4	37.7-212		%Rec	1	4/19/2023 2:58:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	4/19/2023 2:58:00 AM
Toluene	ND	0.046		mg/Kg	1	4/19/2023 2:58:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	4/19/2023 2:58:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	4/19/2023 2:58:00 AM
Surr: 4-Bromofluorobenzene	84.9	70-130		%Rec	1	4/19/2023 2:58:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	140000	15000		mg/Kg	5000	4/20/2023 9:19:12 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-05 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:20:00 AM

Lab ID: 2304663-005

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/19/2023 2:20:55 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/19/2023 2:20:55 AM
Surr: DNOP	87.0	69-147		%Rec	1	4/19/2023 2:20:55 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/19/2023 3:41:00 AM
Surr: BFB	87.2	37.7-212		%Rec	1	4/19/2023 3:41:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/19/2023 3:41:00 AM
Toluene	ND	0.048		mg/Kg	1	4/19/2023 3:41:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/19/2023 3:41:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/19/2023 3:41:00 AM
Surr: 4-Bromofluorobenzene	83.9	70-130		%Rec	1	4/19/2023 3:41:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	48000	3000		mg/Kg	1000	4/20/2023 9:31:37 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-06 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:25:00 AM

Lab ID: 2304663-006

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/19/2023 2:31:50 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/19/2023 2:31:50 AM
Surr: DNOP	111	69-147		%Rec	1	4/19/2023 2:31:50 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/19/2023 4:03:00 AM
Surr: BFB	84.9	37.7-212		%Rec	1	4/19/2023 4:03:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/19/2023 4:03:00 AM
Toluene	ND	0.049		mg/Kg	1	4/19/2023 4:03:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/19/2023 4:03:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	4/19/2023 4:03:00 AM
Surr: 4-Bromofluorobenzene	82.8	70-130		%Rec	1	4/19/2023 4:03:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	15000	600		mg/Kg	200	4/20/2023 9:44:01 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 standard limits. If undiluted results may be estimated.

B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-07 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:30:00 AM

Lab ID: 2304663-007

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/19/2023 2:42:43 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/19/2023 2:42:43 AM
Surr: DNOP	77.1	69-147		%Rec	1	4/19/2023 2:42:43 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/19/2023 4:24:00 AM
Surr: BFB	89.3	37.7-212		%Rec	1	4/19/2023 4:24:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	4/19/2023 4:24:00 AM
Toluene	ND	0.047		mg/Kg	1	4/19/2023 4:24:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	4/19/2023 4:24:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	4/19/2023 4:24:00 AM
Surr: 4-Bromofluorobenzene	84.8	70-130		%Rec	1	4/19/2023 4:24:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	4100	150		mg/Kg	50	4/20/2023 9:56:25 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-08 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:35:00 AM

Lab ID: 2304663-008

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	43	9.6		mg/Kg	1	4/19/2023 2:53:34 AM
Motor Oil Range Organics (MRO)	53	48		mg/Kg	1	4/19/2023 2:53:34 AM
Surr: DNOP	97.1	69-147		%Rec	1	4/19/2023 2:53:34 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/19/2023 4:46:00 AM
Surr: BFB	89.6	37.7-212		%Rec	1	4/19/2023 4:46:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/19/2023 4:46:00 AM
Toluene	ND	0.050		mg/Kg	1	4/19/2023 4:46:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	4/19/2023 4:46:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	4/19/2023 4:46:00 AM
Surr: 4-Bromofluorobenzene	85.6	70-130		%Rec	1	4/19/2023 4:46:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	61000	6000		mg/Kg	2000	4/20/2023 10:08:50 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-09 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:40:00 AM

Lab ID: 2304663-009

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	4/19/2023 3:14:57 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/19/2023 3:14:57 AM
Surr: DNOP	95.9	69-147		%Rec	1	4/19/2023 3:14:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/19/2023 5:08:00 AM
Surr: BFB	93.5	37.7-212		%Rec	1	4/19/2023 5:08:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	4/19/2023 5:08:00 AM
Toluene	ND	0.050		mg/Kg	1	4/19/2023 5:08:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	4/19/2023 5:08:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	4/19/2023 5:08:00 AM
Surr: 4-Bromofluorobenzene	86.7	70-130		%Rec	1	4/19/2023 5:08:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	99000	5900		mg/Kg	2000	4/20/2023 10:21:15 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-10 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:45:00 AM

Lab ID: 2304663-010

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/19/2023 3:25:46 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/19/2023 3:25:46 AM
Surr: DNOP	99.8	69-147		%Rec	1	4/19/2023 3:25:46 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/19/2023 5:29:00 AM
Surr: BFB	89.4	37.7-212		%Rec	1	4/19/2023 5:29:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/19/2023 5:29:00 AM
Toluene	ND	0.048		mg/Kg	1	4/19/2023 5:29:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/19/2023 5:29:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	4/19/2023 5:29:00 AM
Surr: 4-Bromofluorobenzene	85.3	70-130		%Rec	1	4/19/2023 5:29:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	110000	15000		mg/Kg	5000	4/20/2023 10:58:28 AM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-11 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:50:00 AM

Lab ID: 2304663-011

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/19/2023 3:36:34 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/19/2023 3:36:34 AM
Surr: DNOP	95.0	69-147		%Rec	1	4/19/2023 3:36:34 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/19/2023 5:51:00 AM
Surr: BFB	87.6	37.7-212		%Rec	1	4/19/2023 5:51:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/19/2023 5:51:00 AM
Toluene	ND	0.048		mg/Kg	1	4/19/2023 5:51:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/19/2023 5:51:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/19/2023 5:51:00 AM
Surr: 4-Bromofluorobenzene	83.8	70-130		%Rec	1	4/19/2023 5:51:00 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	16000	600		mg/Kg	200	4/20/2023 11:10:52 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-12 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 9:55:00 AM

Lab ID: 2304663-012

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/19/2023 3:47:21 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/19/2023 3:47:21 AM
Surr: DNOP	91.9	69-147		%Rec	1	4/19/2023 3:47:21 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/19/2023 6:12:00 AM
Surr: BFB	91.7	37.7-212		%Rec	1	4/19/2023 6:12:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	4/19/2023 6:12:00 AM
Toluene	ND	0.049		mg/Kg	1	4/19/2023 6:12:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/19/2023 6:12:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/19/2023 6:12:00 AM
Surr: 4-Bromofluorobenzene	87.1	70-130		%Rec	1	4/19/2023 6:12:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	2600	150		mg/Kg	50	4/21/2023 10:55:52 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-13 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:00:00 AM

Lab ID: 2304663-013

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/19/2023 5:06:51 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/19/2023 5:06:51 PM
Surr: DNOP	93.1	69-147		%Rec	1	4/19/2023 5:06:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/19/2023 12:01:53 AM
Surr: BFB	91.8	37.7-212		%Rec	1	4/19/2023 12:01:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/19/2023 12:01:53 AM
Toluene	ND	0.047		mg/Kg	1	4/19/2023 12:01:53 AM
Ethylbenzene	ND	0.047		mg/Kg	1	4/19/2023 12:01:53 AM
Xylenes, Total	ND	0.094		mg/Kg	1	4/19/2023 12:01:53 AM
Surr: 4-Bromofluorobenzene	92.9	70-130		%Rec	1	4/19/2023 12:01:53 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	33000	1500		mg/Kg	500	4/21/2023 11:08:16 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-14 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:05:00 AM

Lab ID: 2304663-014

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/19/2023 5:17:30 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/19/2023 5:17:30 PM
Surr: DNOP	91.8	69-147		%Rec	1	4/19/2023 5:17:30 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/19/2023 1:12:08 AM
Surr: BFB	105	37.7-212		%Rec	1	4/19/2023 1:12:08 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/19/2023 1:12:08 AM
Toluene	ND	0.049		mg/Kg	1	4/19/2023 1:12:08 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/19/2023 1:12:08 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/19/2023 1:12:08 AM
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	4/19/2023 1:12:08 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	35000	1500		mg/Kg	500	4/21/2023 11:20:40 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-15 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:10:00 AM

Lab ID: 2304663-015

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/19/2023 5:28:12 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/19/2023 5:28:12 PM
Surr: DNOP	92.4	69-147		%Rec	1	4/19/2023 5:28:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/19/2023 2:22:04 AM
Surr: BFB	93.6	37.7-212		%Rec	1	4/19/2023 2:22:04 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/19/2023 2:22:04 AM
Toluene	ND	0.048		mg/Kg	1	4/19/2023 2:22:04 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/19/2023 2:22:04 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/19/2023 2:22:04 AM
Surr: 4-Bromofluorobenzene	94.0	70-130		%Rec	1	4/19/2023 2:22:04 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	17000	600		mg/Kg	200	4/21/2023 11:33:05 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-16 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:15:00 AM

Lab ID: 2304663-016

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/19/2023 5:38:52 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/19/2023 5:38:52 PM
Surr: DNOP	88.2	69-147		%Rec	1	4/19/2023 5:38:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/19/2023 2:45:26 AM
Surr: BFB	108	37.7-212		%Rec	1	4/19/2023 2:45:26 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	4/19/2023 2:45:26 AM
Toluene	ND	0.049		mg/Kg	1	4/19/2023 2:45:26 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/19/2023 2:45:26 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/19/2023 2:45:26 AM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	4/19/2023 2:45:26 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	5200	300		mg/Kg	100	4/21/2023 12:10:18 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-17 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:20:00 AM

Lab ID: 2304663-017

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/19/2023 5:49:38 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/19/2023 5:49:38 PM
Surr: DNOP	86.2	69-147		%Rec	1	4/19/2023 5:49:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/19/2023 3:08:52 AM
Surr: BFB	99.4	37.7-212		%Rec	1	4/19/2023 3:08:52 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/19/2023 3:08:52 AM
Toluene	ND	0.048		mg/Kg	1	4/19/2023 3:08:52 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/19/2023 3:08:52 AM
Xylenes, Total	ND	0.096		mg/Kg	1	4/19/2023 3:08:52 AM
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	4/19/2023 3:08:52 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	530	60		mg/Kg	20	4/19/2023 4:32:40 PM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-18 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:25:00 AM

Lab ID: 2304663-018

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/19/2023 6:00:27 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/19/2023 6:00:27 PM
Surr: DNOP	95.3	69-147		%Rec	1	4/19/2023 6:00:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/19/2023 3:32:24 AM
Surr: BFB	94.1	37.7-212		%Rec	1	4/19/2023 3:32:24 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/19/2023 3:32:24 AM
Toluene	ND	0.049		mg/Kg	1	4/19/2023 3:32:24 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/19/2023 3:32:24 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/19/2023 3:32:24 AM
Surr: 4-Bromofluorobenzene	94.5	70-130		%Rec	1	4/19/2023 3:32:24 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	43000	1500		mg/Kg	500	4/21/2023 12:22:43 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-19 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:30:00 AM

Lab ID: 2304663-019

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/19/2023 6:11:16 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/19/2023 6:11:16 PM
Surr: DNOP	92.8	69-147		%Rec	1	4/19/2023 6:11:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/20/2023 12:41:46 AM
Surr: BFB	83.0	37.7-212		%Rec	1	4/20/2023 12:41:46 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	4/20/2023 12:41:46 AM
Toluene	ND	0.050		mg/Kg	1	4/20/2023 12:41:46 AM
Ethylbenzene	ND	0.050		mg/Kg	1	4/20/2023 12:41:46 AM
Xylenes, Total	ND	0.10		mg/Kg	1	4/20/2023 12:41:46 AM
Surr: 4-Bromofluorobenzene	92.2	70-130		%Rec	1	4/20/2023 12:41:46 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	59000	3000		mg/Kg	1000	4/21/2023 12:35:08 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-20 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:35:00 AM

Lab ID: 2304663-020

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/19/2023 6:22:08 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/19/2023 6:22:08 PM
Surr: DNOP	87.8	69-147		%Rec	1	4/19/2023 6:22:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/20/2023 1:05:11 AM
Surr: BFB	98.1	37.7-212		%Rec	1	4/20/2023 1:05:11 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	4/20/2023 1:05:11 AM
Toluene	ND	0.049		mg/Kg	1	4/20/2023 1:05:11 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/20/2023 1:05:11 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/20/2023 1:05:11 AM
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	4/20/2023 1:05:11 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	33000	1500		mg/Kg	500	4/21/2023 12:47:32 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-21 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:40:00 AM

Lab ID: 2304663-021

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/19/2023 6:33:00 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/19/2023 6:33:00 PM
Surr: DNOP	77.8	69-147		%Rec	1	4/19/2023 6:33:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/19/2023 4:42:51 AM
Surr: BFB	97.2	37.7-212		%Rec	1	4/19/2023 4:42:51 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	4/19/2023 4:42:51 AM
Toluene	ND	0.047		mg/Kg	1	4/19/2023 4:42:51 AM
Ethylbenzene	ND	0.047		mg/Kg	1	4/19/2023 4:42:51 AM
Xylenes, Total	ND	0.094		mg/Kg	1	4/19/2023 4:42:51 AM
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	4/19/2023 4:42:51 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	2500	150		mg/Kg	50	4/21/2023 12:59:57 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-22 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:45:00 AM

Lab ID: 2304663-022

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/19/2023 6:43:52 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/19/2023 6:43:52 PM
Surr: DNOP	79.3	69-147		%Rec	1	4/19/2023 6:43:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/19/2023 5:06:08 AM
Surr: BFB	103	37.7-212		%Rec	1	4/19/2023 5:06:08 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/19/2023 5:06:08 AM
Toluene	ND	0.048		mg/Kg	1	4/19/2023 5:06:08 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/19/2023 5:06:08 AM
Xylenes, Total	ND	0.095		mg/Kg	1	4/19/2023 5:06:08 AM
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	4/19/2023 5:06:08 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	72	60		mg/Kg	20	4/19/2023 5:34:43 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-23 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:50:00 AM

Lab ID: 2304663-023

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/19/2023 7:05:38 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/19/2023 7:05:38 PM
Surr: DNOP	91.6	69-147		%Rec	1	4/19/2023 7:05:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/19/2023 5:53:17 AM
Surr: BFB	91.1	37.7-212		%Rec	1	4/19/2023 5:53:17 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.023		mg/Kg	1	4/19/2023 5:53:17 AM
Toluene	ND	0.047		mg/Kg	1	4/19/2023 5:53:17 AM
Ethylbenzene	ND	0.047		mg/Kg	1	4/19/2023 5:53:17 AM
Xylenes, Total	ND	0.094		mg/Kg	1	4/19/2023 5:53:17 AM
Surr: 4-Bromofluorobenzene	93.0	70-130		%Rec	1	4/19/2023 5:53:17 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	3700	150		mg/Kg	50	4/21/2023 1:12:22 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-24 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 10:55:00 AM

Lab ID: 2304663-024

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/19/2023 7:16:38 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/19/2023 7:16:38 PM
Surr: DNOP	86.5	69-147		%Rec	1	4/19/2023 7:16:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/19/2023 6:16:46 AM
Surr: BFB	89.6	37.7-212		%Rec	1	4/19/2023 6:16:46 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/19/2023 6:16:46 AM
Toluene	ND	0.049		mg/Kg	1	4/19/2023 6:16:46 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/19/2023 6:16:46 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/19/2023 6:16:46 AM
Surr: 4-Bromofluorobenzene	92.2	70-130		%Rec	1	4/19/2023 6:16:46 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	42000	1500		mg/Kg	500	4/21/2023 1:24:47 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-25 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 11:00:00 AM

Lab ID: 2304663-025

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/19/2023 7:27:38 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/19/2023 7:27:38 PM
Surr: DNOP	98.6	69-147		%Rec	1	4/19/2023 7:27:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/19/2023 6:40:10 AM
Surr: BFB	108	37.7-212		%Rec	1	4/19/2023 6:40:10 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.024		mg/Kg	1	4/19/2023 6:40:10 AM
Toluene	ND	0.049		mg/Kg	1	4/19/2023 6:40:10 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/19/2023 6:40:10 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/19/2023 6:40:10 AM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	4/19/2023 6:40:10 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1700	60		mg/Kg	20	4/19/2023 6:36:45 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2304663**

Date Reported: **4/25/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: SS23-26 0'

Project: Laguna Salado 5

Collection Date: 4/13/2023 11:05:00 AM

Lab ID: 2304663-026

Matrix: SOIL

Received Date: 4/15/2023 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/19/2023 7:38:36 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/19/2023 7:38:36 PM
Surr: DNOP	81.8	69-147		%Rec	1	4/19/2023 7:38:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: JJP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/19/2023 7:03:31 AM
Surr: BFB	111	37.7-212		%Rec	1	4/19/2023 7:03:31 AM
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	0.025		mg/Kg	1	4/19/2023 7:03:31 AM
Toluene	ND	0.049		mg/Kg	1	4/19/2023 7:03:31 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/19/2023 7:03:31 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/19/2023 7:03:31 AM
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	4/19/2023 7:03:31 AM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	ND	60		mg/Kg	20	4/19/2023 6:49:10 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304663

25-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 5

Sample ID: MB-74420	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 74420	RunNo: 96171								
Prep Date: 4/19/2023	Analysis Date: 4/19/2023	SeqNo: 3482481	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-74420	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 74420	RunNo: 96171								
Prep Date: 4/19/2023	Analysis Date: 4/19/2023	SeqNo: 3482482	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304663

25-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 5

Sample ID: LCS-74375	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 74375		RunNo: 96131							
Prep Date: 4/17/2023	Analysis Date: 4/18/2023		SeqNo: 3481381		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	81.9	61.9	130			
Surr: DNOP	4.3		5.000		85.4	69	147			

Sample ID: LCS-74395	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 74395		RunNo: 96131							
Prep Date: 4/18/2023	Analysis Date: 4/19/2023		SeqNo: 3481382		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.1	69	147			

Sample ID: MB-74375	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 74375		RunNo: 96131							
Prep Date: 4/17/2023	Analysis Date: 4/18/2023		SeqNo: 3481385		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	8.7		10.00		86.6	69	147			

Sample ID: MB-74395	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 74395		RunNo: 96131							
Prep Date: 4/18/2023	Analysis Date: 4/19/2023		SeqNo: 3481386		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.8		10.00		87.7	69	147			

Sample ID: MB-74381	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 74381		RunNo: 96159							
Prep Date: 4/18/2023	Analysis Date: 4/19/2023		SeqNo: 3481897		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		87.7	69	147			

Sample ID: LCS-74381	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 74381		RunNo: 96159							
Prep Date: 4/18/2023	Analysis Date: 4/19/2023		SeqNo: 3481900		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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304663

25-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 5

Sample ID: LCS-74381	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 74381		RunNo: 96159							
Prep Date: 4/18/2023	Analysis Date: 4/19/2023		SeqNo: 3481900		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	10	50.00	0	73.3	61.9	130			
Surr: DNOP	4.1		5.000		82.7	69	147			

Sample ID: 2304663-013AMS	SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: SS23-13 0'	Batch ID: 74381		RunNo: 96159							
Prep Date: 4/18/2023	Analysis Date: 4/20/2023		SeqNo: 3481911		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	9.2	46.17	0	83.1	54.2	135			
Surr: DNOP	4.2		4.617		91.2	69	147			

Sample ID: 2304663-013AMSD	SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: SS23-13 0'	Batch ID: 74381		RunNo: 96159							
Prep Date: 4/18/2023	Analysis Date: 4/20/2023		SeqNo: 3481912		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	9.3	46.69	0	83.3	54.2	135	1.33	29.2	
Surr: DNOP	4.2		4.669		89.4	69	147	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304663

25-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 5

Sample ID: ics-74370	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 74370		RunNo: 96093							
Prep Date: 4/17/2023	Analysis Date: 4/18/2023		SeqNo: 3481111		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	85.0	70	130			
Surr: BFB	2000		1000		196	37.7	212			

Sample ID: mb-74370	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 74370		RunNo: 96093							
Prep Date: 4/17/2023	Analysis Date: 4/18/2023		SeqNo: 3481112		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		89.1	37.7	212			

Sample ID: ics-74376	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 74376		RunNo: 96123							
Prep Date: 4/17/2023	Analysis Date: 4/18/2023		SeqNo: 3481407		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	70	130			
Surr: BFB	5100		1000		509	37.7	212			S

Sample ID: mb-74376	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 74376		RunNo: 96123							
Prep Date: 4/17/2023	Analysis Date: 4/18/2023		SeqNo: 3481408		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	960		1000		96.1	37.7	212			

Sample ID: 2304663-013ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: SS23-13 0'	Batch ID: 74376		RunNo: 96123							
Prep Date: 4/17/2023	Analysis Date: 4/19/2023		SeqNo: 3481412		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.7	23.63	0	85.9	70	130			
Surr: BFB	4600		945.2		488	37.7	212			S

Sample ID: 2304663-013amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: SS23-13 0'	Batch ID: 74376		RunNo: 96123							
Prep Date: 4/17/2023	Analysis Date: 4/19/2023		SeqNo: 3481413		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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304663

25-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 5

Sample ID: 2304663-013amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: SS23-13 0'	Batch ID: 74376	RunNo: 96123								
Prep Date: 4/17/2023	Analysis Date: 4/19/2023	SeqNo: 3481413			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.7	23.47	0	95.1	70	130	9.46	20	
Surr: BFB	5000		939.0		534	37.7	212	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304663

25-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 5

Sample ID: ics-74370	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 74370		RunNo: 96093							
Prep Date: 4/17/2023	Analysis Date: 4/18/2023		SeqNo: 3481168		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	86.7	80	120			
Toluene	0.86	0.050	1.000	0	86.4	80	120			
Ethylbenzene	0.85	0.050	1.000	0	84.8	80	120			
Xylenes, Total	2.5	0.10	3.000	0	83.9	80	120			
Surr: 4-Bromofluorobenzene	0.85		1.000		85.3	70	130			

Sample ID: mb-74370	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 74370		RunNo: 96093							
Prep Date: 4/17/2023	Analysis Date: 4/18/2023		SeqNo: 3481169		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	0.85		1.000		85.4	70	130			

Sample ID: LCS-74376	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 74376		RunNo: 96123							
Prep Date: 4/17/2023	Analysis Date: 4/18/2023		SeqNo: 3481436		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	85.2	80	120			
Toluene	0.86	0.050	1.000	0	86.0	80	120			
Ethylbenzene	0.87	0.050	1.000	0	86.9	80	120			
Xylenes, Total	2.6	0.10	3.000	0	88.1	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.8	70	130			

Sample ID: mb-74376	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 74376		RunNo: 96123							
Prep Date: 4/17/2023	Analysis Date: 4/18/2023		SeqNo: 3481437		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	0.94		1.000		94.3	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2304663

25-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 5

Sample ID: 2304663-014ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: SS23-14 0'	Batch ID: 74376	RunNo: 96123								
Prep Date: 4/17/2023	Analysis Date: 4/19/2023	SeqNo: 3481441	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.024	0.9756	0	87.2	68.8	120			
Toluene	0.87	0.049	0.9756	0.01816	87.8	73.6	124			
Ethylbenzene	0.88	0.049	0.9756	0	90.1	72.7	129			
Xylenes, Total	2.7	0.098	2.927	0	90.8	75.7	126			
Surr: 4-Bromofluorobenzene	0.98		0.9756		101	70	130			

Sample ID: 2304663-014amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: SS23-14 0'	Batch ID: 74376	RunNo: 96123								
Prep Date: 4/17/2023	Analysis Date: 4/19/2023	SeqNo: 3481442	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.024	0.9794	0	85.6	68.8	120	1.44	20	
Toluene	0.86	0.049	0.9794	0.01816	85.7	73.6	124	1.90	20	
Ethylbenzene	0.88	0.049	0.9794	0	89.4	72.7	129	0.434	20	
Xylenes, Total	2.6	0.098	2.938	0	90.1	75.7	126	0.445	20	
Surr: 4-Bromofluorobenzene	0.96		0.9794		98.1	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Vertex Resources Services, Inc. Work Order Number: 2304663 RcptNo: 1

Received By: Cheyenne Cason 4/15/2023 8:40:00 AM
Completed By: Cheyenne Cason 4/17/2023 8:20:47 AM
Reviewed By: [Signature] 4/17/23

Chain of Custody

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

Log In

- 3. Was an attempt made to cool the samples? Yes [checked] No [] NA []
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [checked] No [] NA []
5. Sample(s) in proper container(s)? Yes [checked] No []
6. Sufficient sample volume for indicated test(s)? Yes [checked] No []
7. Are samples (except VOA and ONG) properly preserved? Yes [checked] No []
8. Was preservative added to bottles? Yes [] No [checked] NA []
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [] No [] NA [checked]
10. Were any sample containers received broken? Yes [] No [checked]
11. Does paperwork match bottle labels? Yes [checked] No []
12. Are matrices correctly identified on Chain of Custody? Yes [checked] No []
13. Is it clear what analyses were requested? Yes [checked] No []
14. Were all holding times able to be met? Yes [checked] No []

of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: [Signature] 4/17/23

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

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

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 1.0, Good, Not Present, Morty, [], []

Chain-of-Custody Record

Client: Devon (Vertex)

Mailing Address: On File

Phone #: ↓

email or Fax#: ↓

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

Accreditation: Az Compliance
 NELAC Other

EDD (Type)

Turn-Around Time:
 Standard Rush 5 Day

Project Name: Laguna Salado 5

Project #: 22E-01927

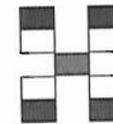
Project Manager: Kent Stallings

Sampler: Hunter Klein

On Ice: Yes No Wardy

of Coolers: 1

Cooler Temp (including CF): 1, 1-0.1=1.0 (°C)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	(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	(C,F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
4/13/23	9:00	Soil	SS23-01 0'	4oz	Ice	001	X	X					X			
	9:05		SS23-02 0'			002	X	X					X			
	9:10		SS23-03 0'			003	X	X					X			
	9:15		SS23-04 0'			004	X	X					X			
	9:20		SS23-05 0'			005	X	X					X			
	9:25		SS23-06 0'			006	X	X					X			
	9:30		SS23-07 0'			007	X	X					X			
	9:35		SS23-08 0'			008	X	X					X			
	9:40		SS23-09 0'			009	X	X					X			
	9:45		SS23-10 0'			010	X	X					X			
	9:50		SS23-11 0'			011	X	X					X			
	9:55		SS23-12 0'			012	X	X					X			

Date: 4/13/23 Time: 3:00 Relinquished by: Hunter Klein

Date: 4/14/23 Time: 9:45 Received by: Manning Via: Manning

Date: 4/16/23 Time: 08:40 Relinquished by: Manning

Date: 4/16/23 Time: 08:40 Received by: Cmc Carter Via: Cmc Carter

Remarks: CC: Kent Stallings (Vertex)

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

July 17, 2023

Kent Stallings
Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (505) 350-1336
FAX:

RE: Spud 16 State 010

OrderNo.: 2307083

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 28 sample(s) on 7/6/2023 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 white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-16 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:05:00 AM

Lab ID: 2307083-001

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/6/2023 3:51:46 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/6/2023 3:51:46 PM
Surr: DNOP	89.4	69-147		%Rec	1	7/6/2023 3:51:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/7/2023 10:30:00 PM
Surr: BFB	93.8	15-244		%Rec	1	7/7/2023 10:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/7/2023 10:30:00 PM
Toluene	ND	0.048		mg/Kg	1	7/7/2023 10:30:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/7/2023 10:30:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/7/2023 10:30:00 PM
Surr: 4-Bromofluorobenzene	92.6	39.1-146		%Rec	1	7/7/2023 10:30:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	4700	150		mg/Kg	50	7/7/2023 10:55:17 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-16 4'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:10:00 AM

Lab ID: 2307083-002

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/6/2023 4:24:53 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/6/2023 4:24:53 PM
Surr: DNOP	86.6	69-147		%Rec	1	7/6/2023 4:24:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/7/2023 10:52:00 PM
Surr: BFB	103	15-244		%Rec	1	7/7/2023 10:52:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/7/2023 10:52:00 PM
Toluene	ND	0.048		mg/Kg	1	7/7/2023 10:52:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/7/2023 10:52:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/7/2023 10:52:00 PM
Surr: 4-Bromofluorobenzene	94.3	39.1-146		%Rec	1	7/7/2023 10:52:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	5800	300		mg/Kg	100	7/7/2023 6:44:22 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-17 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:12:00 AM

Lab ID: 2307083-003

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/6/2023 4:35:56 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/6/2023 4:35:56 PM
Surr: DNOP	86.7	69-147		%Rec	1	7/6/2023 4:35:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/7/2023 11:14:00 PM
Surr: BFB	97.1	15-244		%Rec	1	7/7/2023 11:14:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/7/2023 11:14:00 PM
Toluene	ND	0.050		mg/Kg	1	7/7/2023 11:14:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/7/2023 11:14:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/7/2023 11:14:00 PM
Surr: 4-Bromofluorobenzene	93.1	39.1-146		%Rec	1	7/7/2023 11:14:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	2700	150		mg/Kg	50	7/7/2023 11:07:38 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-17 4'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:15:00 AM

Lab ID: 2307083-004

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/6/2023 4:46:56 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/6/2023 4:46:56 PM
Surr: DNOP	86.9	69-147		%Rec	1	7/6/2023 4:46:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/7/2023 11:35:00 PM
Surr: BFB	93.8	15-244		%Rec	1	7/7/2023 11:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/7/2023 11:35:00 PM
Toluene	ND	0.048		mg/Kg	1	7/7/2023 11:35:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/7/2023 11:35:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/7/2023 11:35:00 PM
Surr: 4-Bromofluorobenzene	91.9	39.1-146		%Rec	1	7/7/2023 11:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	4900	150		mg/Kg	50	7/7/2023 5:30:17 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-21 0'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:16:00 AM

Lab ID: 2307083-005

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/6/2023 4:57:53 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/6/2023 4:57:53 PM
Surr: DNOP	91.4	69-147		%Rec	1	7/6/2023 4:57:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/7/2023 11:57:00 PM
Surr: BFB	95.5	15-244		%Rec	1	7/7/2023 11:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/7/2023 11:57:00 PM
Toluene	ND	0.049		mg/Kg	1	7/7/2023 11:57:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/7/2023 11:57:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/7/2023 11:57:00 PM
Surr: 4-Bromofluorobenzene	91.4	39.1-146		%Rec	1	7/7/2023 11:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	21000	1200		mg/Kg	400	7/7/2023 7:46:06 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-21 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:20:00 AM

Lab ID: 2307083-006

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/6/2023 5:08:52 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/6/2023 5:08:52 PM
Surr: DNOP	83.0	69-147		%Rec	1	7/6/2023 5:08:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/8/2023 12:40:00 AM
Surr: BFB	96.7	15-244		%Rec	1	7/8/2023 12:40:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/8/2023 12:40:00 AM
Toluene	ND	0.050		mg/Kg	1	7/8/2023 12:40:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/8/2023 12:40:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/8/2023 12:40:00 AM
Surr: 4-Bromofluorobenzene	91.1	39.1-146		%Rec	1	7/8/2023 12:40:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	6200	300		mg/Kg	100	7/7/2023 6:56:43 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-21 4'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:25:00 AM

Lab ID: 2307083-007

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/6/2023 5:19:53 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/6/2023 5:19:53 PM
Surr: DNOP	87.9	69-147		%Rec	1	7/6/2023 5:19:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/8/2023 1:02:00 AM
Surr: BFB	93.8	15-244		%Rec	1	7/8/2023 1:02:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/8/2023 1:02:00 AM
Toluene	ND	0.050		mg/Kg	1	7/8/2023 1:02:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/8/2023 1:02:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/8/2023 1:02:00 AM
Surr: 4-Bromofluorobenzene	92.5	39.1-146		%Rec	1	7/8/2023 1:02:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	7500	300		mg/Kg	100	7/7/2023 7:09:04 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-22 0'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:30:00 AM

Lab ID: 2307083-008

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/6/2023 5:30:54 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/6/2023 5:30:54 PM
Surr: DNOP	85.6	69-147		%Rec	1	7/6/2023 5:30:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/8/2023 1:24:00 AM
Surr: BFB	91.0	15-244		%Rec	1	7/8/2023 1:24:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/8/2023 1:24:00 AM
Toluene	ND	0.049		mg/Kg	1	7/8/2023 1:24:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/8/2023 1:24:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	7/8/2023 1:24:00 AM
Surr: 4-Bromofluorobenzene	90.8	39.1-146		%Rec	1	7/8/2023 1:24:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	11000	600		mg/Kg	200	7/7/2023 7:21:25 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 standard limits. If undiluted results may be estimated.

B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-22 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:35:00 AM

Lab ID: 2307083-009

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/6/2023 5:52:47 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/6/2023 5:52:47 PM
Surr: DNOP	85.1	69-147		%Rec	1	7/6/2023 5:52:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/8/2023 1:45:00 AM
Surr: BFB	95.5	15-244		%Rec	1	7/8/2023 1:45:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/8/2023 1:45:00 AM
Toluene	ND	0.050		mg/Kg	1	7/8/2023 1:45:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/8/2023 1:45:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/8/2023 1:45:00 AM
Surr: 4-Bromofluorobenzene	92.4	39.1-146		%Rec	1	7/8/2023 1:45:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	3400	150		mg/Kg	50	7/7/2023 6:07:19 PM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-22 4'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:40:00 AM

Lab ID: 2307083-010

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/6/2023 6:03:53 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/6/2023 6:03:53 PM
Surr: DNOP	85.8	69-147		%Rec	1	7/6/2023 6:03:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/8/2023 2:07:00 AM
Surr: BFB	99.9	15-244		%Rec	1	7/8/2023 2:07:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/8/2023 2:07:00 AM
Toluene	ND	0.049		mg/Kg	1	7/8/2023 2:07:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/8/2023 2:07:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	7/8/2023 2:07:00 AM
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	7/8/2023 2:07:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	5100	150		mg/Kg	50	7/7/2023 6:19:40 PM

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-23 0'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:41:00 AM

Lab ID: 2307083-011

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/6/2023 6:14:59 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/6/2023 6:14:59 PM
Surr: DNOP	86.3	69-147		%Rec	1	7/6/2023 6:14:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/8/2023 2:29:00 AM
Surr: BFB	98.4	15-244		%Rec	1	7/8/2023 2:29:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/8/2023 2:29:00 AM
Toluene	ND	0.049		mg/Kg	1	7/8/2023 2:29:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/8/2023 2:29:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/8/2023 2:29:00 AM
Surr: 4-Bromofluorobenzene	93.2	39.1-146		%Rec	1	7/8/2023 2:29:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	11000	600		mg/Kg	200	7/7/2023 7:33:45 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-23 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:42:00 AM

Lab ID: 2307083-012

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/6/2023 6:26:04 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/6/2023 6:26:04 PM
Surr: DNOP	88.2	69-147		%Rec	1	7/6/2023 6:26:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/8/2023 2:51:00 AM
Surr: BFB	92.9	15-244		%Rec	1	7/8/2023 2:51:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/8/2023 2:51:00 AM
Toluene	ND	0.049		mg/Kg	1	7/8/2023 2:51:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	7/8/2023 2:51:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	7/8/2023 2:51:00 AM
Surr: 4-Bromofluorobenzene	92.5	39.1-146		%Rec	1	7/8/2023 2:51:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	5200	150		mg/Kg	50	7/7/2023 6:32:01 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-24 0'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:45:00 AM

Lab ID: 2307083-013

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/7/2023 5:06:54 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/7/2023 5:06:54 PM
Surr: DNOP	94.8	69-147		%Rec	1	7/7/2023 5:06:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/10/2023 10:59:00 AM
Surr: BFB	93.4	15-244		%Rec	1	7/10/2023 10:59:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/10/2023 10:59:00 AM
Toluene	ND	0.047		mg/Kg	1	7/10/2023 10:59:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	7/10/2023 10:59:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	7/10/2023 10:59:00 AM
Surr: 4-Bromofluorobenzene	94.0	39.1-146		%Rec	1	7/10/2023 10:59:00 AM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	2800	150		mg/Kg	50	7/11/2023 10:14:12 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-24 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:48:00 AM

Lab ID: 2307083-014

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/7/2023 5:25:42 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/7/2023 5:25:42 PM
Surr: DNOP	94.7	69-147		%Rec	1	7/7/2023 5:25:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/10/2023 12:04:00 PM
Surr: BFB	94.4	15-244		%Rec	1	7/10/2023 12:04:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/10/2023 12:04:00 PM
Toluene	ND	0.049		mg/Kg	1	7/10/2023 12:04:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/10/2023 12:04:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/10/2023 12:04:00 PM
Surr: 4-Bromofluorobenzene	95.3	39.1-146		%Rec	1	7/10/2023 12:04:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	2000	60		mg/Kg	20	7/7/2023 10:14:16 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-25 0'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:50:00 AM

Lab ID: 2307083-015

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	11	9.7		mg/Kg	1	7/7/2023 5:45:04 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/7/2023 5:45:04 PM
Surr: DNOP	101	69-147		%Rec	1	7/7/2023 5:45:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/10/2023 1:09:00 PM
Surr: BFB	94.9	15-244		%Rec	1	7/10/2023 1:09:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	7/10/2023 1:09:00 PM
Toluene	ND	0.046		mg/Kg	1	7/10/2023 1:09:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	7/10/2023 1:09:00 PM
Xylenes, Total	ND	0.091		mg/Kg	1	7/10/2023 1:09:00 PM
Surr: 4-Bromofluorobenzene	95.2	39.1-146		%Rec	1	7/10/2023 1:09:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	1600	60		mg/Kg	20	7/7/2023 11:15:59 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-25 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:56:00 AM

Lab ID: 2307083-016

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	1900	99		mg/Kg	10	7/7/2023 3:10:07 PM
Motor Oil Range Organics (MRO)	4400	490		mg/Kg	10	7/7/2023 3:10:07 PM
Surr: DNOP	0	69-147	S	%Rec	10	7/7/2023 3:10:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/10/2023 1:31:00 PM
Surr: BFB	93.5	15-244		%Rec	1	7/10/2023 1:31:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/10/2023 1:31:00 PM
Toluene	ND	0.050		mg/Kg	1	7/10/2023 1:31:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/10/2023 1:31:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/10/2023 1:31:00 PM
Surr: 4-Bromofluorobenzene	92.8	39.1-146		%Rec	1	7/10/2023 1:31:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	2600	150		mg/Kg	50	7/11/2023 10:26:37 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-26 0'

Project: Spud 16 State 010

Collection Date: 6/30/2023 9:58:00 AM

Lab ID: 2307083-017

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/7/2023 6:04:00 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/7/2023 6:04:00 PM
Surr: DNOP	93.5	69-147		%Rec	1	7/7/2023 6:04:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/10/2023 1:53:00 PM
Surr: BFB	93.9	15-244		%Rec	1	7/10/2023 1:53:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/10/2023 1:53:00 PM
Toluene	ND	0.047		mg/Kg	1	7/10/2023 1:53:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/10/2023 1:53:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	7/10/2023 1:53:00 PM
Surr: 4-Bromofluorobenzene	95.1	39.1-146		%Rec	1	7/10/2023 1:53:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	9000	300		mg/Kg	100	7/11/2023 11:28:38 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-26 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 10:00:00 AM

Lab ID: 2307083-018

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/7/2023 6:22:54 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/7/2023 6:22:54 PM
Surr: DNOP	92.1	69-147		%Rec	1	7/7/2023 6:22:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/10/2023 2:15:00 PM
Surr: BFB	98.4	15-244		%Rec	1	7/10/2023 2:15:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/10/2023 2:15:00 PM
Toluene	ND	0.048		mg/Kg	1	7/10/2023 2:15:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/10/2023 2:15:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	7/10/2023 2:15:00 PM
Surr: 4-Bromofluorobenzene	96.3	39.1-146		%Rec	1	7/10/2023 2:15:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	3500	150		mg/Kg	50	7/11/2023 10:39:01 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-27 0'

Project: Spud 16 State 010

Collection Date: 6/30/2023 12:05:00 PM

Lab ID: 2307083-019

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/7/2023 6:41:37 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/7/2023 6:41:37 PM
Surr: DNOP	94.4	69-147		%Rec	1	7/7/2023 6:41:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/10/2023 2:37:00 PM
Surr: BFB	95.4	15-244		%Rec	1	7/10/2023 2:37:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	7/10/2023 2:37:00 PM
Toluene	ND	0.046		mg/Kg	1	7/10/2023 2:37:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	7/10/2023 2:37:00 PM
Xylenes, Total	ND	0.092		mg/Kg	1	7/10/2023 2:37:00 PM
Surr: 4-Bromofluorobenzene	94.9	39.1-146		%Rec	1	7/10/2023 2:37:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	9800	600		mg/Kg	200	7/11/2023 11:41:02 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-27 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 12:08:00 PM

Lab ID: 2307083-020

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/7/2023 7:00:14 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/7/2023 7:00:14 PM
Surr: DNOP	92.3	69-147		%Rec	1	7/7/2023 7:00:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/10/2023 2:58:00 PM
Surr: BFB	96.4	15-244		%Rec	1	7/10/2023 2:58:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/10/2023 2:58:00 PM
Toluene	ND	0.049		mg/Kg	1	7/10/2023 2:58:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/10/2023 2:58:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/10/2023 2:58:00 PM
Surr: 4-Bromofluorobenzene	96.7	39.1-146		%Rec	1	7/10/2023 2:58:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	3300	150		mg/Kg	50	7/11/2023 10:51:25 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-28 0'

Project: Spud 16 State 010

Collection Date: 6/30/2023 12:10:00 PM

Lab ID: 2307083-021

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	12	10		mg/Kg	1	7/7/2023 7:18:51 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/7/2023 7:18:51 PM
Surr: DNOP	93.6	69-147		%Rec	1	7/7/2023 7:18:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/10/2023 3:20:00 PM
Surr: BFB	95.2	15-244		%Rec	1	7/10/2023 3:20:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/10/2023 3:20:00 PM
Toluene	ND	0.047		mg/Kg	1	7/10/2023 3:20:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/10/2023 3:20:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	7/10/2023 3:20:00 PM
Surr: 4-Bromofluorobenzene	95.3	39.1-146		%Rec	1	7/10/2023 3:20:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	5000	150		mg/Kg	50	7/11/2023 11:03:49 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BH23-28 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 12:13:00 PM

Lab ID: 2307083-022

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	7/7/2023 7:37:22 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/7/2023 7:37:22 PM
Surr: DNOP	94.1	69-147		%Rec	1	7/7/2023 7:37:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/10/2023 3:42:00 PM
Surr: BFB	98.3	15-244		%Rec	1	7/10/2023 3:42:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	7/10/2023 3:42:00 PM
Toluene	ND	0.047		mg/Kg	1	7/10/2023 3:42:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/10/2023 3:42:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	7/10/2023 3:42:00 PM
Surr: 4-Bromofluorobenzene	97.2	39.1-146		%Rec	1	7/10/2023 3:42:00 PM
EPA METHOD 300.0: ANIONS						Analyst: RBC
Chloride	2500	150		mg/Kg	50	7/11/2023 11:16:13 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-03 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 10:25:00 AM

Lab ID: 2307083-023

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/7/2023 7:55:55 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/7/2023 7:55:55 PM
Surr: DNOP	93.4	69-147		%Rec	1	7/7/2023 7:55:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/10/2023 4:26:00 PM
Surr: BFB	98.1	15-244		%Rec	1	7/10/2023 4:26:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/10/2023 4:26:00 PM
Toluene	ND	0.050		mg/Kg	1	7/10/2023 4:26:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/10/2023 4:26:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	7/10/2023 4:26:00 PM
Surr: 4-Bromofluorobenzene	97.3	39.1-146		%Rec	1	7/10/2023 4:26:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	4900	150		mg/Kg	50	7/14/2023 2:05:34 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-03 4'

Project: Spud 16 State 010

Collection Date: 6/30/2023 10:30:00 AM

Lab ID: 2307083-024

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/7/2023 8:32:42 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/7/2023 8:32:42 PM
Surr: DNOP	93.5	69-147		%Rec	1	7/7/2023 8:32:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/10/2023 4:48:00 PM
Surr: BFB	93.5	15-244		%Rec	1	7/10/2023 4:48:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/10/2023 4:48:00 PM
Toluene	ND	0.049		mg/Kg	1	7/10/2023 4:48:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/10/2023 4:48:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/10/2023 4:48:00 PM
Surr: 4-Bromofluorobenzene	95.8	39.1-146		%Rec	1	7/10/2023 4:48:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	5900	300		mg/Kg	100	7/14/2023 2:17:59 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-03 6'

Project: Spud 16 State 010

Collection Date: 6/30/2023 10:35:00 AM

Lab ID: 2307083-025

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/7/2023 8:51:10 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/7/2023 8:51:10 PM
Surr: DNOP	94.0	69-147		%Rec	1	7/7/2023 8:51:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/10/2023 5:10:00 PM
Surr: BFB	97.1	15-244		%Rec	1	7/10/2023 5:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	7/10/2023 5:10:00 PM
Toluene	ND	0.046		mg/Kg	1	7/10/2023 5:10:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	7/10/2023 5:10:00 PM
Xylenes, Total	ND	0.091		mg/Kg	1	7/10/2023 5:10:00 PM
Surr: 4-Bromofluorobenzene	96.8	39.1-146		%Rec	1	7/10/2023 5:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	8800	600		mg/Kg	200	7/14/2023 2:30:24 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-04 0'

Project: Spud 16 State 010

Collection Date: 6/30/2023 10:10:00 AM

Lab ID: 2307083-026

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/7/2023 9:09:34 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/7/2023 9:09:34 PM
Surr: DNOP	95.2	69-147		%Rec	1	7/7/2023 9:09:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/10/2023 5:32:00 PM
Surr: BFB	99.7	15-244		%Rec	1	7/10/2023 5:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.024		mg/Kg	1	7/10/2023 5:32:00 PM
Toluene	ND	0.048		mg/Kg	1	7/10/2023 5:32:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	7/10/2023 5:32:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	7/10/2023 5:32:00 PM
Surr: 4-Bromofluorobenzene	96.5	39.1-146		%Rec	1	7/10/2023 5:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	14000	600		mg/Kg	200	7/14/2023 2:42:48 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-04 2'

Project: Spud 16 State 010

Collection Date: 6/30/2023 10:15:00 AM

Lab ID: 2307083-027

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/7/2023 9:27:54 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/7/2023 9:27:54 PM
Surr: DNOP	87.0	69-147		%Rec	1	7/7/2023 9:27:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/10/2023 5:54:00 PM
Surr: BFB	96.5	15-244		%Rec	1	7/10/2023 5:54:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.025		mg/Kg	1	7/10/2023 5:54:00 PM
Toluene	ND	0.049		mg/Kg	1	7/10/2023 5:54:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	7/10/2023 5:54:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	7/10/2023 5:54:00 PM
Surr: 4-Bromofluorobenzene	96.0	39.1-146		%Rec	1	7/10/2023 5:54:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	3700	150		mg/Kg	50	7/14/2023 2:55:13 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2307083**

Date Reported: **7/17/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG23-04 4'

Project: Spud 16 State 010

Collection Date: 6/30/2023 10:20:00 AM

Lab ID: 2307083-028

Matrix: SOIL

Received Date: 7/6/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/7/2023 9:46:19 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/7/2023 9:46:19 PM
Surr: DNOP	91.8	69-147		%Rec	1	7/7/2023 9:46:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: KMN
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/10/2023 6:16:00 PM
Surr: BFB	97.3	15-244		%Rec	1	7/10/2023 6:16:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: KMN
Benzene	ND	0.023		mg/Kg	1	7/10/2023 6:16:00 PM
Toluene	ND	0.047		mg/Kg	1	7/10/2023 6:16:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	7/10/2023 6:16:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	7/10/2023 6:16:00 PM
Surr: 4-Bromofluorobenzene	96.0	39.1-146		%Rec	1	7/10/2023 6:16:00 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	3200	150		mg/Kg	50	7/14/2023 3:07:37 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307083

17-Jul-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: MB-76040	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76040	RunNo: 98000								
Prep Date: 7/6/2023	Analysis Date: 7/6/2023	SeqNo: 3565793	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76040	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76040	RunNo: 98000								
Prep Date: 7/6/2023	Analysis Date: 7/6/2023	SeqNo: 3565794	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.7	90	110			

Sample ID: MB-76059	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 76059	RunNo: 98004								
Prep Date: 7/7/2023	Analysis Date: 7/7/2023	SeqNo: 3566417	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-76059	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 76059	RunNo: 98004								
Prep Date: 7/7/2023	Analysis Date: 7/7/2023	SeqNo: 3566418	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.0	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307083

17-Jul-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: 2307083-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-16 2'	Batch ID: 76032	RunNo: 97976								
Prep Date: 7/6/2023	Analysis Date: 7/6/2023	SeqNo: 3564785	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	9.3	46.73	0	82.7	54.2	135			
Surr: DNOP	4.3		4.673		92.0	69	147			

Sample ID: 2307083-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH23-16 2'	Batch ID: 76032	RunNo: 97976								
Prep Date: 7/6/2023	Analysis Date: 7/6/2023	SeqNo: 3564786	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	9.3	46.51	0	83.3	54.2	135	0.271	29.2	
Surr: DNOP	4.2		4.651		89.9	69	147	0	0	

Sample ID: LCS-76032	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 76032	RunNo: 97976								
Prep Date: 7/6/2023	Analysis Date: 7/6/2023	SeqNo: 3564808	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.6	61.9	130			
Surr: DNOP	3.9		5.000		77.1	69	147			

Sample ID: MB-76032	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 76032	RunNo: 97976								
Prep Date: 7/6/2023	Analysis Date: 7/6/2023	SeqNo: 3564811	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	8.4		10.00		83.5	69	147			

Sample ID: MB-76038	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 76038	RunNo: 98033								
Prep Date: 7/6/2023	Analysis Date: 7/7/2023	SeqNo: 3567169	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		97.2	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307083

17-Jul-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: LCS-76038	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 76038	RunNo: 98033								
Prep Date: 7/6/2023	Analysis Date: 7/7/2023	SeqNo: 3567170			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	93.1	61.9	130			
Surr: DNOP	4.6		5.000		92.7	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307083

17-Jul-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: ics-76025	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 76025		RunNo: 97992							
Prep Date: 7/6/2023	Analysis Date: 7/7/2023		SeqNo: 3565537		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	84.8	70	130			
Surr: BFB	2000		1000		199	15	244			

Sample ID: mb-76025	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 76025		RunNo: 97992							
Prep Date: 7/6/2023	Analysis Date: 7/7/2023		SeqNo: 3565538		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	950		1000		94.6	15	244			

Sample ID: ics-76031	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 76031		RunNo: 98074							
Prep Date: 7/6/2023	Analysis Date: 7/10/2023		SeqNo: 3568737		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	88.2	70	130			
Surr: BFB	2100		1000		206	15	244			

Sample ID: mb-76031	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 76031		RunNo: 98074							
Prep Date: 7/6/2023	Analysis Date: 7/10/2023		SeqNo: 3568738		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	960		1000		95.7	15	244			

Sample ID: 2307083-013ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-24 0'	Batch ID: 76031		RunNo: 98074							
Prep Date: 7/6/2023	Analysis Date: 7/10/2023		SeqNo: 3568740		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.7	23.61	0	84.2	70	130			
Surr: BFB	1900		944.3		200	15	244			

Sample ID: 2307083-013amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH23-24 0'	Batch ID: 76031		RunNo: 98074							
Prep Date: 7/6/2023	Analysis Date: 7/10/2023		SeqNo: 3568741		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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307083

17-Jul-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: 2307083-013amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BH23-24 0'	Batch ID: 76031	RunNo: 98074								
Prep Date: 7/6/2023	Analysis Date: 7/10/2023	SeqNo: 3568741 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.7	23.63	0	81.2	70	130	3.53	20	
Surr: BFB	1900		945.2		200	15	244	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307083

17-Jul-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: ics-76025	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 76025		RunNo: 97992							
Prep Date: 7/6/2023	Analysis Date: 7/7/2023		SeqNo: 3565540		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	86.6	70	130			
Toluene	0.90	0.050	1.000	0	89.6	70	130			
Ethylbenzene	0.91	0.050	1.000	0	90.5	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.5	70	130			
Surr: 4-Bromofluorobenzene	0.95		1.000		94.9	39.1	146			

Sample ID: mb-76025	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 76025		RunNo: 97992							
Prep Date: 7/6/2023	Analysis Date: 7/7/2023		SeqNo: 3565541		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		93.1	39.1	146			

Sample ID: ics-76031	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 76031		RunNo: 98074							
Prep Date: 7/6/2023	Analysis Date: 7/10/2023		SeqNo: 3568778		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.4	70	130			
Toluene	0.89	0.050	1.000	0	89.4	70	130			
Ethylbenzene	0.90	0.050	1.000	0	90.1	70	130			
Xylenes, Total	2.7	0.10	3.000	0	89.7	70	130			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.5	39.1	146			

Sample ID: mb-76031	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 76031		RunNo: 98074							
Prep Date: 7/6/2023	Analysis Date: 7/10/2023		SeqNo: 3568779		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	0.94		1.000		94.4	39.1	146			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307083

17-Jul-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: 2307083-014ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-24 2'	Batch ID: 76031	RunNo: 98074								
Prep Date: 7/6/2023	Analysis Date: 7/10/2023	SeqNo: 3568782	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.025	0.9862	0	81.1	70	130			
Toluene	0.84	0.049	0.9862	0	84.7	70	130			
Ethylbenzene	0.85	0.049	0.9862	0	86.6	70	130			
Xylenes, Total	2.6	0.099	2.959	0	86.2	70	130			
Surr: 4-Bromofluorobenzene	0.93		0.9862		94.3	39.1	146			

Sample ID: 2307083-014amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH23-24 2'	Batch ID: 76031	RunNo: 98074								
Prep Date: 7/6/2023	Analysis Date: 7/10/2023	SeqNo: 3568783	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.025	0.9862	0	81.1	70	130	0.00123	20	
Toluene	0.84	0.049	0.9862	0	85.6	70	130	0.995	20	
Ethylbenzene	0.85	0.049	0.9862	0	86.6	70	130	0.0150	20	
Xylenes, Total	2.6	0.099	2.959	0	86.8	70	130	0.697	20	
Surr: 4-Bromofluorobenzene	0.99		0.9862		100	39.1	146	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy Work Order Number: 2307083 RcptNo: 1

Received By: Tracy Casarrubias 7/6/2023 7:35:00 AM

Completed By: Tracy Casarrubias 7/6/2023 8:40:00 AM

Reviewed By: JM 7/6/23

Chain of Custody

1. Is Chain of Custody complete? Yes [] No [x] Not Present []

2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes [x] No [] NA []

4. Were all samples received at a temperature of >0° C to 6.0°C Yes [x] No [] NA []

5. Sample(s) in proper container(s)? Yes [x] No []

6. Sufficient sample volume for indicated test(s)? Yes [x] No []

7. Are samples (except VOA and ONG) properly preserved? Yes [x] No []

8. Was preservative added to bottles? Yes [] No [x] NA []

9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [] No [] NA [x]

10. Were any sample containers received broken? Yes [] No [x]

11. Does paperwork match bottle labels? Yes [x] No []

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes [x] No []

13. Is it clear what analyses were requested? Yes [x] No []

14. Were all holding times able to be met? Yes [x] No []

(If no, notify customer for authorization.)

of preserved bottles checked for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: SCM 07/06/23

Special Handling (if applicable)

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

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: Mailing address, phone number and Email/Fax are missing on COC - TMC 7/6/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 5.8, Good, Yes, Morty, [], []

Chain-of-Custody Record

Client: Devon / Vertex

Mailing Address: On file

Phone #: _____

email or Fax#: _____

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

Accreditation: Az Compliance
 NELAC Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush 5 Day

Project Name: Spud 16 State #010

Project #: 23E-02857

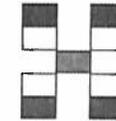
Project Manager: Kent Stallings

Sampler: SM

On Ice: Yes No marty

of Coolers: 1

Cooler Temp (including CF): 6.0 - 0.2 = 5.8 (°C)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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	CF, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6/30/23	9:05	Soil	BH23-16 2'	4oz jar	Ice	2307083 001	✓	✓					✓			
	9:10		BH23-16 4'			002										
	9:12		BH23-17 2'			003										
	9:15		BH23-17 4'			004										
	9:16		BH23-21 0'			005										
	9:20		BH23-21 2'			006										
	9:25		BH23-21 4'			007										
	9:30		BH23-22 0'			008										
	9:35		BH23-22 2'			009										
	9:40		BH23-22 4'			010										
	9:41		BH23-23 0'			011										
	9:42		BH23-23 2'			012										

Date: 7/5/23 Time: 8:56 Relinquished by: [Signature]

Date: 7/6/23 Time: 19:00 Relinquished by: [Signature]

Received by: [Signature] Via: car Date: 7/14/23 Time: 8:50

Received by: [Signature] Via: car Date: 7/6/23 Time: 7:35

Remarks: Direct bill to: Devon w/o #: 21165742

C.C. smccarty@vertex.ca pg 1 of 3

Chain-of-Custody Record

Client: Devon / Vertex

Mailing Address: On file

Phone #:

email or Fax#:

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

Accreditation: Az Compliance
 NELAC Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush 5 Day

Project Name:
Spud 16 State #010

Project #:
23E-02857

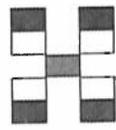
Project Manager:
Kent Stallings

Sampler: SM

On Ice: Yes No marky

of Coolers: 1

Cooler Temp (including CF): 6.0-0.2=5.8 (°C)



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)											
✓	✓					✓														

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
6/30/23	9:45	Soil	BH23-24 0'	Yuzjar	Ice	013
	9:48		BH23-24 2'			014
	9:50		BH23-25 0'			015
	9:56		BH23-25 2'			016
	9:58		BH23-26 0'			017
	10:00		BH23-26 2'			018
	12:05		BH23-27 0'			019
	12:08		BH23-27 2'			020
	12:10		BH23-28 0'			021
	2:13		BH23-28 2'			022
	10:25		BG23-03 2'			023
	10:30		BG23-03 4'			024

Date: 7/5/23 Time: 8:56 Relinquished by: [Signature]

Date: 7/5/23 Time: 8:56 Received by: [Signature] Via: _____

Date: 7/5/23 Time: 1900 Relinquished by: [Signature]

Date: 7/6/23 Time: 7:35 Received by: [Signature] Via: Car

Remarks: Direct bill to Devon w/o #: 21165742

C.C. smccarty@vertex.ca pg 2 of 3



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

June 05, 2023

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (505) 350-1336

FAX

RE: Spud 16 State 010

OrderNo.: 2305C87

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 3 sample(s) on 5/25/2023 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 white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2305C87**

Date Reported: **6/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG 23-01 0.0'

Project: Spud 16 State 010

Collection Date: 5/23/2023 10:20:00 AM

Lab ID: 2305C87-001

Matrix: SOIL

Received Date: 5/25/2023 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/27/2023 11:02:39 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/27/2023 11:02:39 AM
Surr: DNOP	71.0	69-147		%Rec	1	5/27/2023 11:02:39 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	18000	1500		mg/Kg	500	6/2/2023 12:35:16 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	5/27/2023 3:17:57 AM
Toluene	ND	0.050		mg/Kg	1	5/27/2023 3:17:57 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/27/2023 3:17:57 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/27/2023 3:17:57 AM
Surr: Dibromofluoromethane	116	73-145		%Rec	1	5/27/2023 3:17:57 AM
Surr: 1,2-Dichloroethane-d4	111	64.8-147		%Rec	1	5/27/2023 3:17:57 AM
Surr: Toluene-d8	97.6	70-130		%Rec	1	5/27/2023 3:17:57 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/27/2023 3:17:57 AM
Surr: BFB	106	70-130		%Rec	1	5/27/2023 3:17:57 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2305C87**

Date Reported: **6/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG 23-02 0.0'

Project: Spud 16 State 010

Collection Date: 5/23/2023 10:35:00 AM

Lab ID: 2305C87-002

Matrix: SOIL

Received Date: 5/25/2023 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/27/2023 11:26:47 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/27/2023 11:26:47 AM
Surr: DNOP	70.6	69-147		%Rec	1	5/27/2023 11:26:47 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	12000	600		mg/Kg	200	6/2/2023 12:47:37 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	5/27/2023 4:47:33 AM
Toluene	ND	0.048		mg/Kg	1	5/27/2023 4:47:33 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2023 4:47:33 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/27/2023 4:47:33 AM
Surr: Dibromofluoromethane	115	73-145		%Rec	1	5/27/2023 4:47:33 AM
Surr: 1,2-Dichloroethane-d4	107	64.8-147		%Rec	1	5/27/2023 4:47:33 AM
Surr: Toluene-d8	96.9	70-130		%Rec	1	5/27/2023 4:47:33 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2023 4:47:33 AM
Surr: BFB	107	70-130		%Rec	1	5/27/2023 4:47:33 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2305C87**

Date Reported: **6/5/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BG 23-03 0.0'

Project: Spud 16 State 010

Collection Date: 5/23/2023 10:45:00 AM

Lab ID: 2305C87-003

Matrix: SOIL

Received Date: 5/25/2023 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: PRD
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/27/2023 11:50:55 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/27/2023 11:50:55 AM
Surr: DNOP	71.3	69-147		%Rec	1	5/27/2023 11:50:55 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	17000	600		mg/Kg	200	6/2/2023 12:59:58 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	5/27/2023 5:17:16 AM
Toluene	ND	0.050		mg/Kg	1	5/27/2023 5:17:16 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/27/2023 5:17:16 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/27/2023 5:17:16 AM
Surr: Dibromofluoromethane	116	73-145		%Rec	1	5/27/2023 5:17:16 AM
Surr: 1,2-Dichloroethane-d4	109	64.8-147		%Rec	1	5/27/2023 5:17:16 AM
Surr: Toluene-d8	95.9	70-130		%Rec	1	5/27/2023 5:17:16 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/27/2023 5:17:16 AM
Surr: BFB	105	70-130		%Rec	1	5/27/2023 5:17:16 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 Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2305C87

05-Jun-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: MB-75263	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 75263	RunNo: 97118								
Prep Date: 5/31/2023	Analysis Date: 5/31/2023	SeqNo: 3526736	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-75263	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 75263	RunNo: 97118								
Prep Date: 5/31/2023	Analysis Date: 5/31/2023	SeqNo: 3526737	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.6	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2305C87

05-Jun-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: MB-75212	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 75212	RunNo: 97076								
Prep Date: 5/26/2023	Analysis Date: 5/26/2023	SeqNo: 3523780	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	69	147			

Sample ID: LCS-75212	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 75212	RunNo: 97076								
Prep Date: 5/26/2023	Analysis Date: 5/27/2023	SeqNo: 3523781	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	10	50.00	0	78.0	61.9	130			
Surr: DNOP	3.8		5.000		76.5	69	147			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2305C87

05-Jun-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: 2305c87-001ams	SampType: MS	TestCode: EPA Method 8260B: Volatiles								
Client ID: BG 23-01 0.0'	Batch ID: 75185	RunNo: 97079								
Prep Date: 5/25/2023	Analysis Date: 5/27/2023	SeqNo: 3524156	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9940	0	111	60.8	141			
Toluene	1.0	0.050	0.9940	0	102	15	261			
Ethylbenzene	1.0	0.050	0.9940	0	105	70	130			
Xylenes, Total	3.2	0.099	2.982	0	107	70	130			
Surr: Dibromofluoromethane	0.56		0.4970		112	73	145			
Surr: 1,2-Dichloroethane-d4	0.54		0.4970		109	64.8	147			
Surr: Toluene-d8	0.47		0.4970		94.2	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.4970		98.5	62.1	144			

Sample ID: 2305c87-001amsd	SampType: MSD	TestCode: EPA Method 8260B: Volatiles								
Client ID: BG 23-01 0.0'	Batch ID: 75185	RunNo: 97079								
Prep Date: 5/25/2023	Analysis Date: 5/27/2023	SeqNo: 3524157	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9852	0	105	60.8	141	6.28	20	
Toluene	0.97	0.049	0.9852	0	98.1	15	261	5.28	20	
Ethylbenzene	0.97	0.049	0.9852	0	98.7	70	130	7.40	0	
Xylenes, Total	3.0	0.099	2.956	0	102	70	130	5.47	0	
Surr: Dibromofluoromethane	0.56		0.4926		114	73	145	0	0	
Surr: 1,2-Dichloroethane-d4	0.53		0.4926		107	64.8	147	0	0	
Surr: Toluene-d8	0.46		0.4926		92.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.49		0.4926		98.6	62.1	144	0	0	

Sample ID: lcs-75185	SampType: LCS	TestCode: EPA Method 8260B: Volatiles								
Client ID: LCSS	Batch ID: 75185	RunNo: 97079								
Prep Date: 5/25/2023	Analysis Date: 5/26/2023	SeqNo: 3524160	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	103	70	130			
Toluene	0.93	0.050	1.000	0	93.3	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		113	73	145			
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		108	64.8	147			
Surr: Toluene-d8	0.48		0.5000		96.1	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	62.1	144			

Sample ID: mb-75185	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles								
Client ID: PBS	Batch ID: 75185	RunNo: 97079								
Prep Date: 5/25/2023	Analysis Date: 5/26/2023	SeqNo: 3524161	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2305C87

05-Jun-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: mb-75185	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles								
Client ID: PBS	Batch ID: 75185	RunNo: 97079								
Prep Date: 5/25/2023	Analysis Date: 5/26/2023	SeqNo: 3524161			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: Dibromofluoromethane	0.58		0.5000		117	73	145			
Surr: 1,2-Dichloroethane-d4	0.55		0.5000		110	64.8	147			
Surr: Toluene-d8	0.47		0.5000		93.6	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.8	62.1	144			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2305C87

05-Jun-23

Client: Devon Energy
Project: Spud 16 State 010

Sample ID: ics-75185	SampType: LCS		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: LCSS	Batch ID: 75185		RunNo: 97079							
Prep Date: 5/25/2023	Analysis Date: 5/26/2023		SeqNo: 3524133		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	81.5	70	130			
Surr: BFB	520		500.0		105	70	130			

Sample ID: mb-75185	SampType: MBLK		TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: PBS	Batch ID: 75185		RunNo: 97079							
Prep Date: 5/25/2023	Analysis Date: 5/26/2023		SeqNo: 3524134		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	520		500.0		103	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: Devon Energy

Work Order Number: 2305C87

RcptNo: 1

Received By: Juan Rojas

5/25/2023 9:35:00 AM

[Signature]

Completed By: Tracy Casarrubias

5/25/2023 10:07:19 AM

Reviewed By: [Signature] 5-25-23

Chain of Custody

1. Is Chain of Custody complete? Yes [] No [x] Not Present []

2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes [x] No [] NA []

4. Were all samples received at a temperature of >0° C to 6.0°C Yes [x] No [] NA []

5. Sample(s) in proper container(s)? Yes [x] No []

6. Sufficient sample volume for indicated test(s)? Yes [x] No []

7. Are samples (except VOA and ONG) properly preserved? Yes [x] No []

8. Was preservative added to bottles? Yes [] No [x] NA []

9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [] No [] NA [x]

10. Were any sample containers received broken? Yes [] No [x]

11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes [x] No []

12. Are matrices correctly identified on Chain of Custody? Yes [x] No []

13. Is it clear what analyses were requested? Yes [x] No []

14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes [x] No []

of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted? Checked by: [Signature] 5/25/23

Special Handling (if applicable)

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

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: Mailing
Client Instructions: Mailing address, phone number and Email are missing on COC - TMC 5/25/23

16. Additional remarks: NO Relinquished By info from client on COC. 5/25/23

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 1.7, Good, Yes, Morty, [], []

Chain-of-Custody Record

Client: Devon

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation: Az Compliance
 NELAC Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush 5 Day

Project Name:
Spud 16 State #010

Project #:
23E-02857

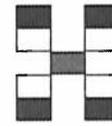
Project Manager:
Kent Stelling

Sampler: SM

On Ice: Yes No

of Coolers: 1 Marty

Cooler Temp (including CF): 17-021.7 (°C)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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)
5-23-23	1020	Soil	B623-01 0.0	402	ICE	2305087 001	↓	↓					↓			
	1035		B623-02 0.0	↓	↓	002										
	1045		B623-03 0.0	↓	↓	003										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time	Remarks:
			<u>Aluminum</u>		<u>5/21/23</u>	<u>1015</u>	
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time	
<u>5/21/23</u>	<u>1100</u>	<u>Aluminum</u>	<u>Aluminum</u>		<u>5/25/23</u>	<u>9:35</u>	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Action 418620

QUESTIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 418620
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	nKMW1109729911
Incident Name	NKMW1109729911 LAGUNA SALADO 22 FEDERAL #004H @ 30-015-36461
Incident Type	Produced Water Release
Incident Status	Remediation Plan Approved
Incident Well	[30-015-36461] LAGUNA SALADO 22 FEDERAL #004H

Location of Release Source	
<i>Please answer all the questions in this group.</i>	
Site Name	LAGUNA SALADO 22 FEDERAL #004H
Date Release Discovered	09/15/2009
Surface Owner	Private

Incident Details	
<i>Please answer all the questions in this group.</i>	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
<i>Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.</i>	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Human Error Flow Line - Injection Produced Water Released: 30 BBL Recovered: 0 BBL Lost: 30 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 418620

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 418620
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

Initial Response

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

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	<i>Not answered.</i>

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 01/08/2025
--	--

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QUESTIONS, Page 3

Action 418620

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 418620
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	Estimate or Other
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 300 and 500 (ft.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Between ½ and 1 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Zero feet, overlying, or within area
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	48000
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	11
GRO+DRO (EPA SW-846 Method 8015M)	11
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	03/01/2025
On what date will (or did) the final sampling or liner inspection occur	04/01/2025
On what date will (or was) the remediation complete(d)	04/01/2025
What is the estimated surface area (in square feet) that will be reclaimed	10075
What is the estimated volume (in cubic yards) that will be reclaimed	373
What is the estimated surface area (in square feet) that will be remediated	10075
What is the estimated volume (in cubic yards) that will be remediated	373

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 418620

QUESTIONS (continued)

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	Action Number: 418620
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:

(Select all answers below that apply.)

(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	HALFWAY DISPOSAL AND LANDFILL [FEEM0112334510]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	No
OR is the off-site disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

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.

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 01/08/2025
--	--

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 5

Action 418620

QUESTIONS (continued)

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	Action Number: 418620
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
<i>Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 418620

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 418620
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	{Unavailable.}

Remediation Closure Request	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 418620

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 418620
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	A Remediation Plan has already been approved for (Incident Number NKMW1109729911). Please review the conditions of approval (App ID: 442515) that were sent on April 10th, 2025. These conditions of approval can also be viewed on the OCD Permitting Incident Page under Incident Events.	4/17/2025