General Information

NMOCD District:	Artesia	Incident ID:	nSEB0830236670
Landowner:	Mosaic Potash Carlsbad, Inc.	RP Reference:	N/A
Client:	Devon Energy Production Company, LP	Site Location:	Laguna Salado 22 Federal #004H
Date:	14 March 2025	Project #:	23E-01414-03
Client Contact:	Jim Raley	Phone #:	575.689.7597
Vertex PM:	Chad Hensley	Phone #:	575.200.6167

Objective

The objective of the Environmental Site Remediation Work Plan is to identify areas of exceedance for areas of concern following a site investigation, during which background samples were collected for potential naturally elevated chloride levels, to address the open releases at Laguna Salado 22 Federal #004H (hereafter referred to as "the site"). The areas of environmental concern include a substructure flowline that ruptured during a rig move. The initial C-141 Release Notification was submitted on October 13, 2008. (Attachment 5). Closure criteria have been selected as per New Mexico Administrative Code 19.15.29.12. All applicable research as it pertains to closure criteria selection is presented in Attachment 1. The closure criteria for the site are presented below in Table 1.

Table 1. Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
< 50 feet	Chloride	600 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 completed on August 31, 2023. A total of Forty-one sample points (boreholes) were established. Fifty-nine samples, including at the deepest vertical distance investigated, were submitted to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for analysis. All sample points are presented on Figure 1 (Attachment 2). Based on the description of the release area, samples were collected within the area around the wellhead, working outward. Laboratory analysis results have been compared to the closure criteria and the results from the characterization activity are presented in Attachment 4. Exceedances are identified in the table as bold with a grey background and bold with a green background for off-pad criteria.

Remedial Activities

General

Areas identified with contaminant concentrations above 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. Soil will be excavated to the extents of the known contamination or in 2 feet increments until reaching the subsurface water table. The subsurface water table is based on the current and historical brine lake elevations and corroboration with excavation spud 16 State 10H. Field screening will be utilized to confirm removal of contaminated soil below the applicable closure criteria. Contaminated soils will be stored on a 30mil liner prior to disposal at an approved facility. Once excavation is complete, confirmatory samples will be collected and laboratory analysis completed to confirm closure criteria guidelines are met. Excavations will be backfilled with clean soil sourced locally.

Sample Point	Excavation Depth	Remediation Method
BH23-01	1'	Backhoe
BH23-03	1'	Backhoe
BH23-04	2-4'	Backhoe
BH23-05	6-8'	Backhoe
BH23-06	6-8'	Backhoe
BH23-07	1'	Backhoe
BH23-09	2-4'	Backhoe
BH23-11	0.5	Backhoe
BH23-12	3'	Backhoe
BH23-13	2-4'	Backhoe
BH23-14	10-12'	Backhoe
BH23-16	2-4'	Backhoe
BH23-19	2-4'	Backhoe
BH23-22	6-8'	Backhoe
BH23-32	1'	Backhoe
BH23-33	2'	Backhoe
BH23-35	2-4'	Backhoe
BH23-36	2-4'	Backhoe
BH23-37	2-4'	Backhoe
BH23-38	2-4'	Backhoe
BH23-39	2-4'	Backhoe
BG23-1	7-8'	Backhoe
BG23-2	8-9'	Backhoe

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

3/14/2025

Chad Hensley
Date
SENIOR PROJECT MANAGER, REPORT REVIEW

Attachments

Attachment 1 Closure Criteria Research
Attachment 2 Figures
Attachment 3 Daily Field Reports
Attachment 4 Laboratory Results Table and Laboratory Analysis
Attachment 5 Initial C-141 Report

ATTACHMENT 1

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	Gravelly loam	
12	Ecological Classification	Shallow	
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	Depth Well	Depth Water	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)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04326 POD14	4	2	3	23	23S	29E	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 Rcv 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

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WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD 14	BH 14	C-4326

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy, Inc.	432-221-7331

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
522 W Mermond, Suite 704	Carlsbad	NM	88220

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	17	14.49	N
	LONGITUDE	103	57	25.95	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

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.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1664	Shawn Cain	Cascade Drilling

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
5/11/2019	5/11/2019	58	58	54

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 48

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Sonic

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	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)
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) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
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-4326	POD NO. 14	TRN NO. 648985	
LOCATION 23S.29E.23.324		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES **(attach supplemental sheets to fully describe all units)**	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	4	4	Open Excavation	Y ✓ N	
4	10	6	brown-tan clayey SAND	Y ✓ N	
10	20	10	pinkish-tan silty SAND	Y ✓ N	
20	45	25	off white-tan CALICHE	Y ✓ N	
45	54	9	gray-light green DOLOMITE	✓ Y N	
54	58	4	dark gray-light gray CLAY	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.

Shawn C. Shawn Cain — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

8-23-19 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 04/30/2019)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2

National Water Information System: Web Interface

USGS Water Resources

Data Category: Water Quality | Geographic Area: United States | GO

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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: Field/Lab samples | GO

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	Hydro-logic Event	Hydro-logic Condition	Geo-logic unit	Sample type	Specif-ic conduc-tance, wat unf uS/cm @ 25 degC (00095)
1972-09-20	MDT	T	WG	9	A	312RSLR	9	2630

Questions or Comments
Automated retrievals
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Title: Water Quality Samples for USA: Sample Data
URL: https://nwis.waterdata.usgs.gov/nwis/qwdata?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2023-09-21 09:41:11 EDT
0.45 0.39 nadww02

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U.S. Fish and Wildlife Service
National Wetlands Inventory

LagunaSalado22Fed4 River 2.98 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

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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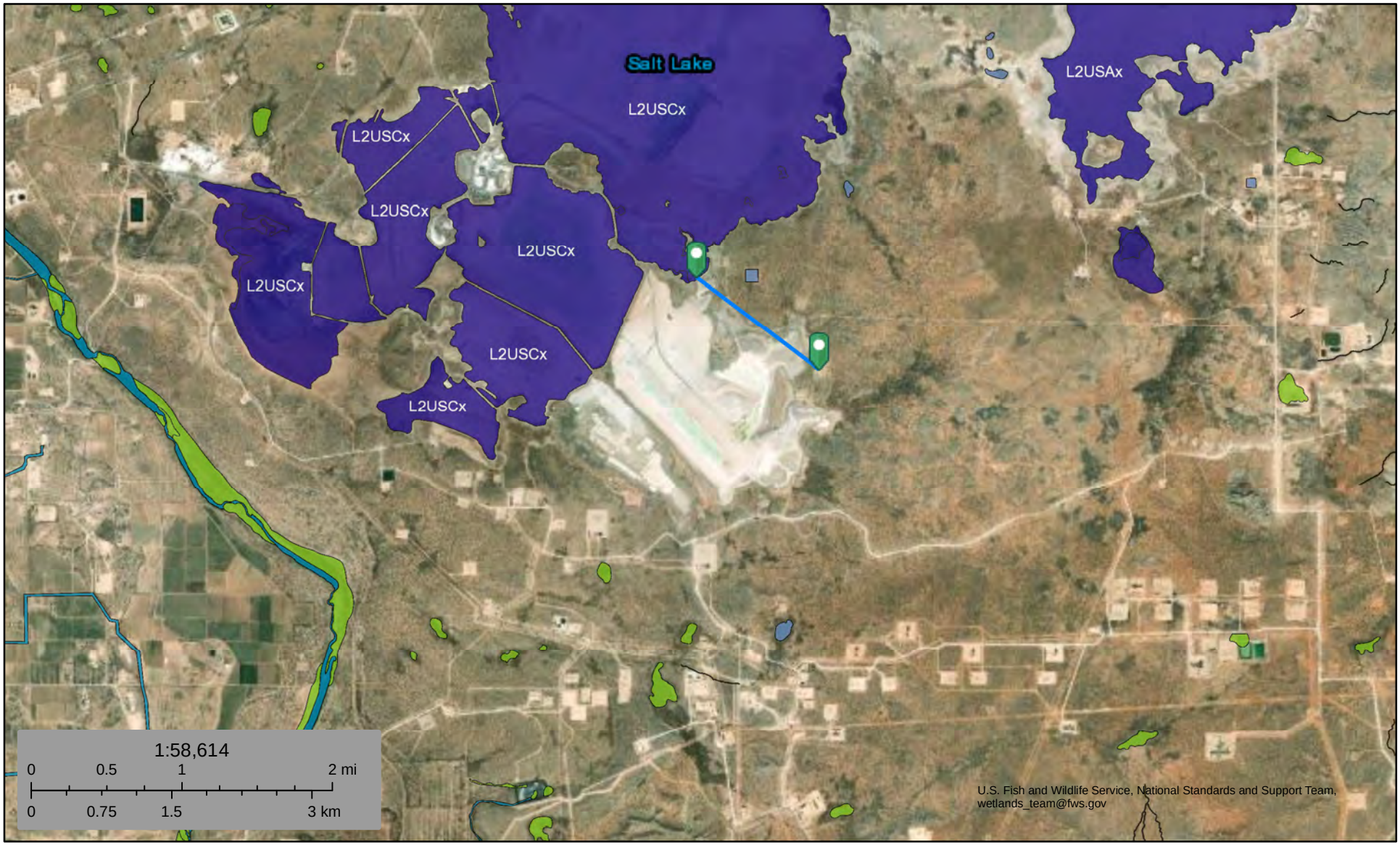
U.S. Fish and Wildlife Service
National Wetlands Inventory

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

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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U.S. Fish and Wildlife Service
National Wetlands Inventory

Laguna Salado 22 Federal #004H Playa 0.

September 19, 2023

Wetlands

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

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

U.S. Fish and Wildlife Service
National Wetlands Inventory

Laguna Salado 22 Federal #004H
Playa 0.1 miles

September 19, 2023

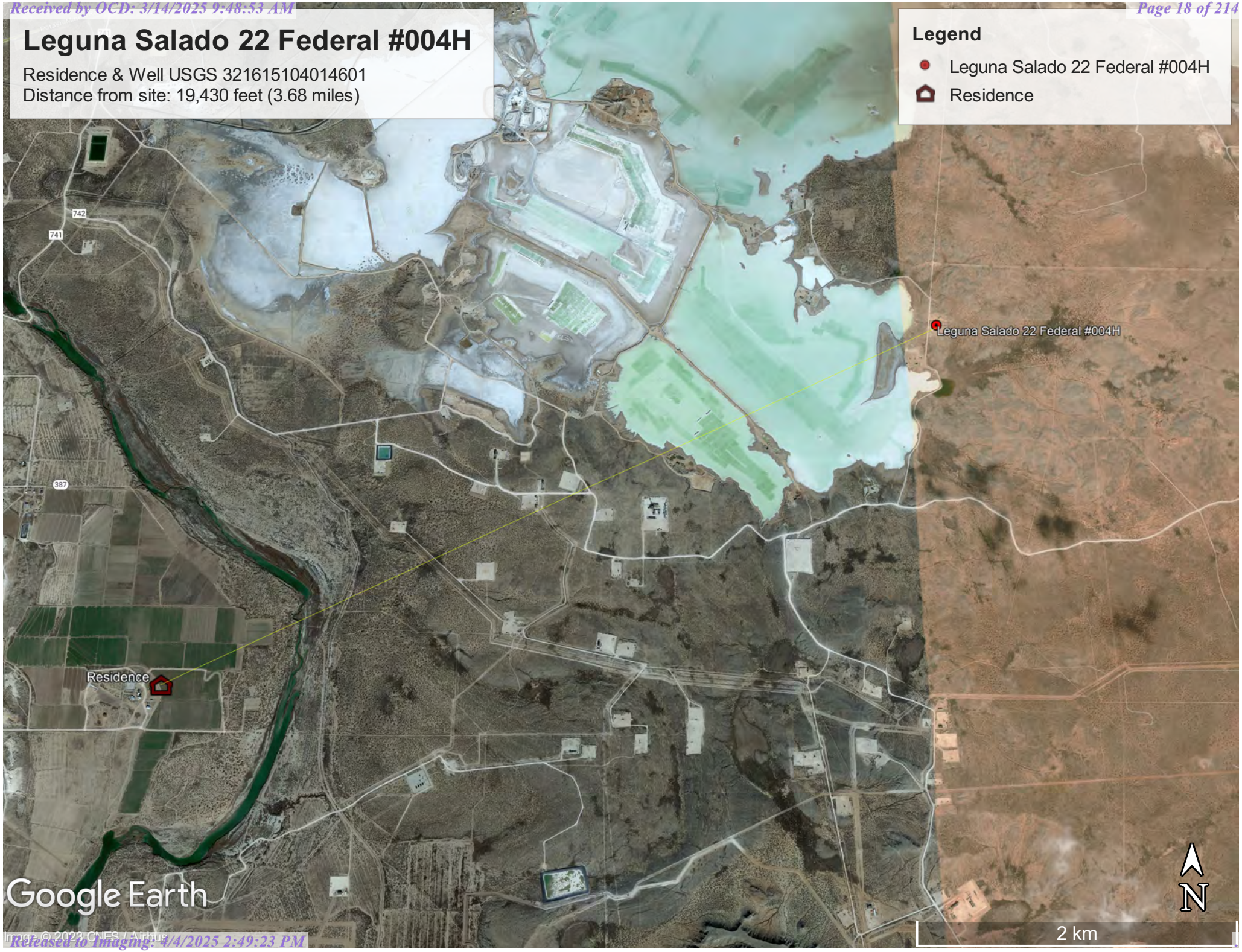
Wetlands

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

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Leguna Salado 22 Federal #004H

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



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National Water Information System: Web Interface

USGS Water Resources

Data Category: Site Information | Geographic Area: United States | GO

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- Full News

USGS 321615104014601 23S.29E.30.331322

Available data for this site SUMMARY OF ALL AVAILABLE DATA | GO

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
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

---

Questions about sites/data?
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U.S. Department of the Interior | U.S. Geological Survey

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=321615104014601

Page Contact Information: New Mexico Water Data Support Team
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)

(acre ft per annum) (R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in me

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q 64	q 16	q 4	Sec	Tws	Rng	X	Y
C 02797	CUB	MON	0	IMC	ED	C 02797						2	3	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

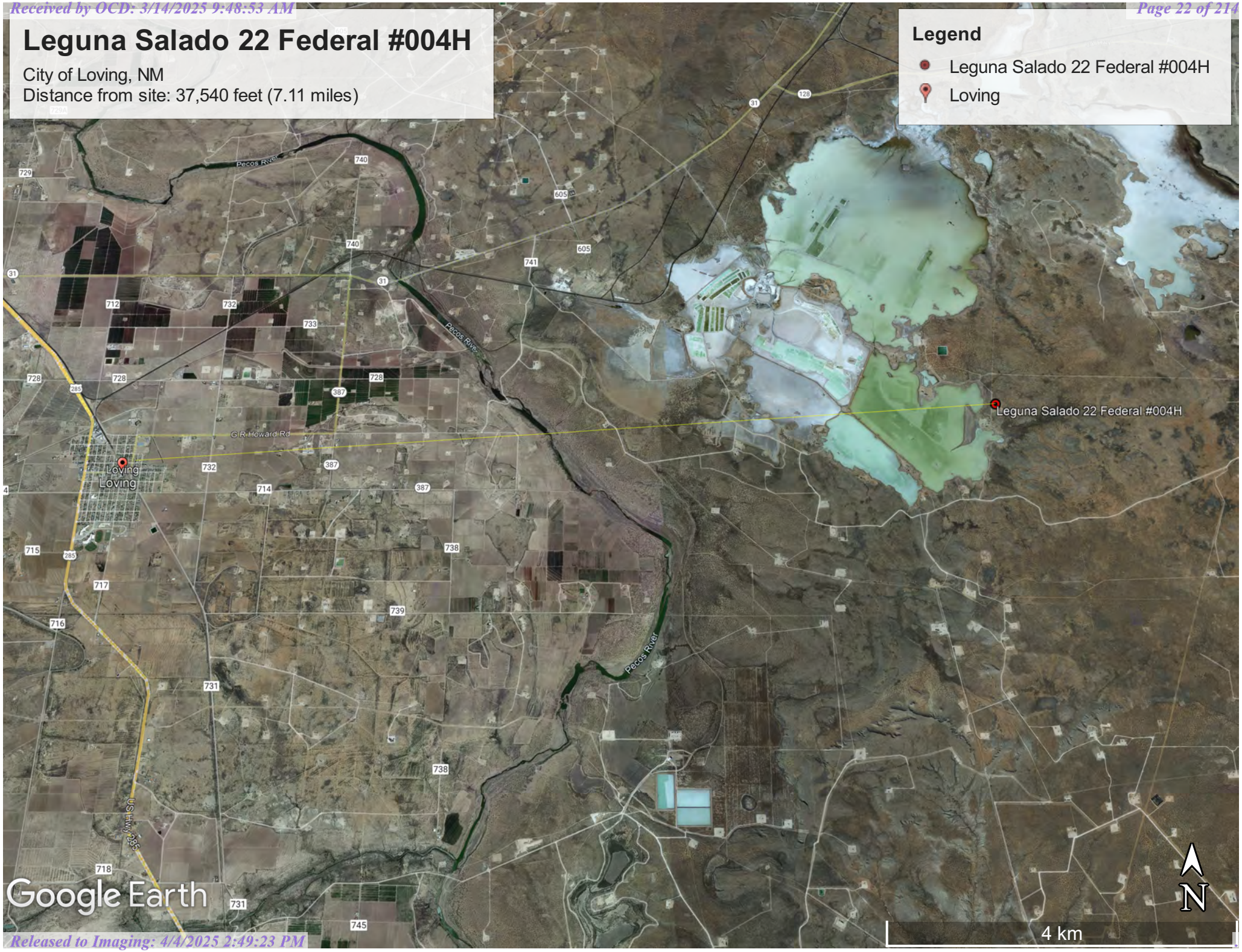
Sorted by: Distance

***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.

Leguna Salado 22 Federal #004H

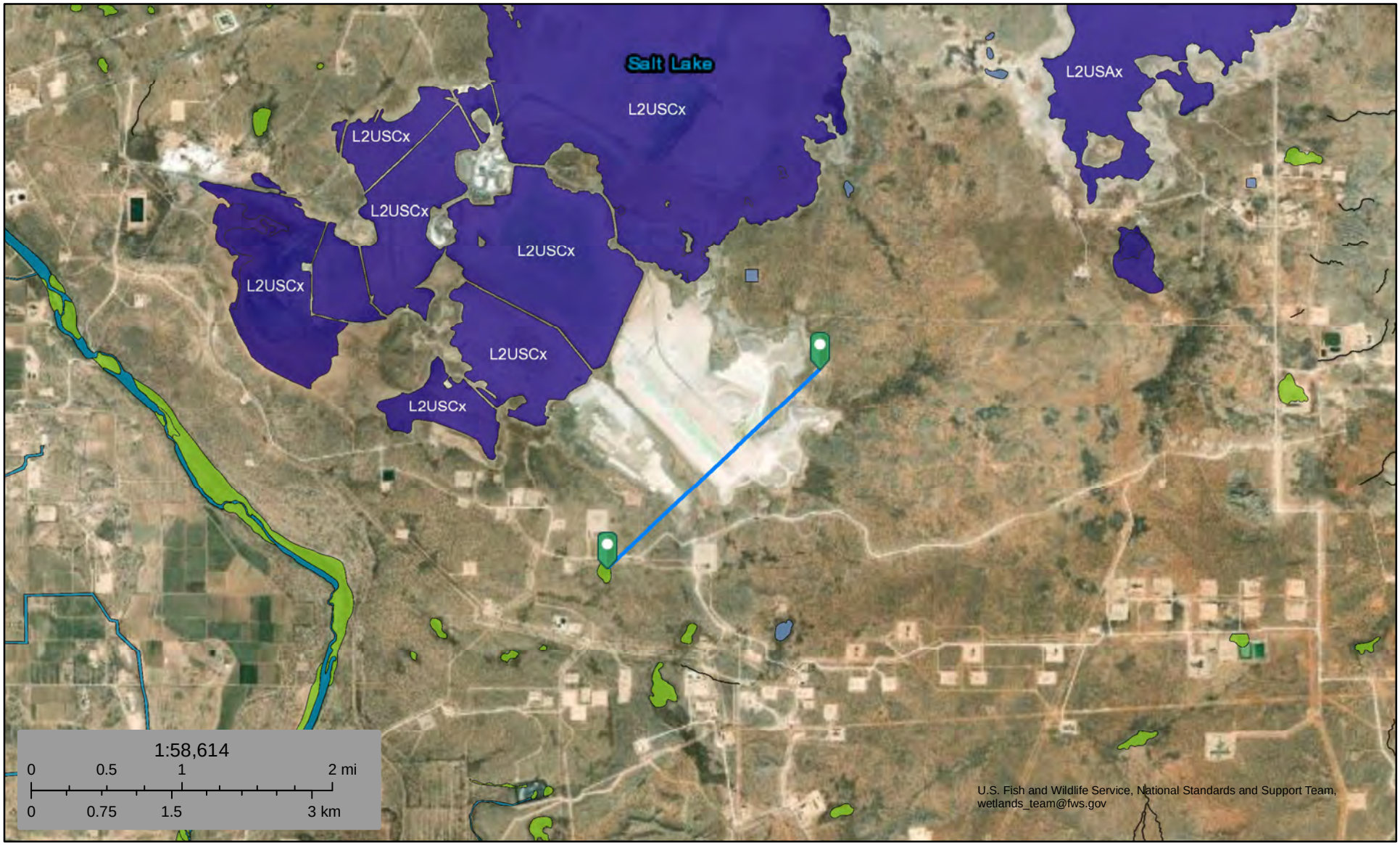
City of Loving, NM
Distance from site: 37,540 feet (7.11 miles)



Received by OCD: 3/14/2025 9:48:53 AM

U.S. Fish and Wildlife Service
National Wetlands Inventory

LagunaSalado22Fed4 Wetland 1.63 Miles



March 21, 2023

Wetlands

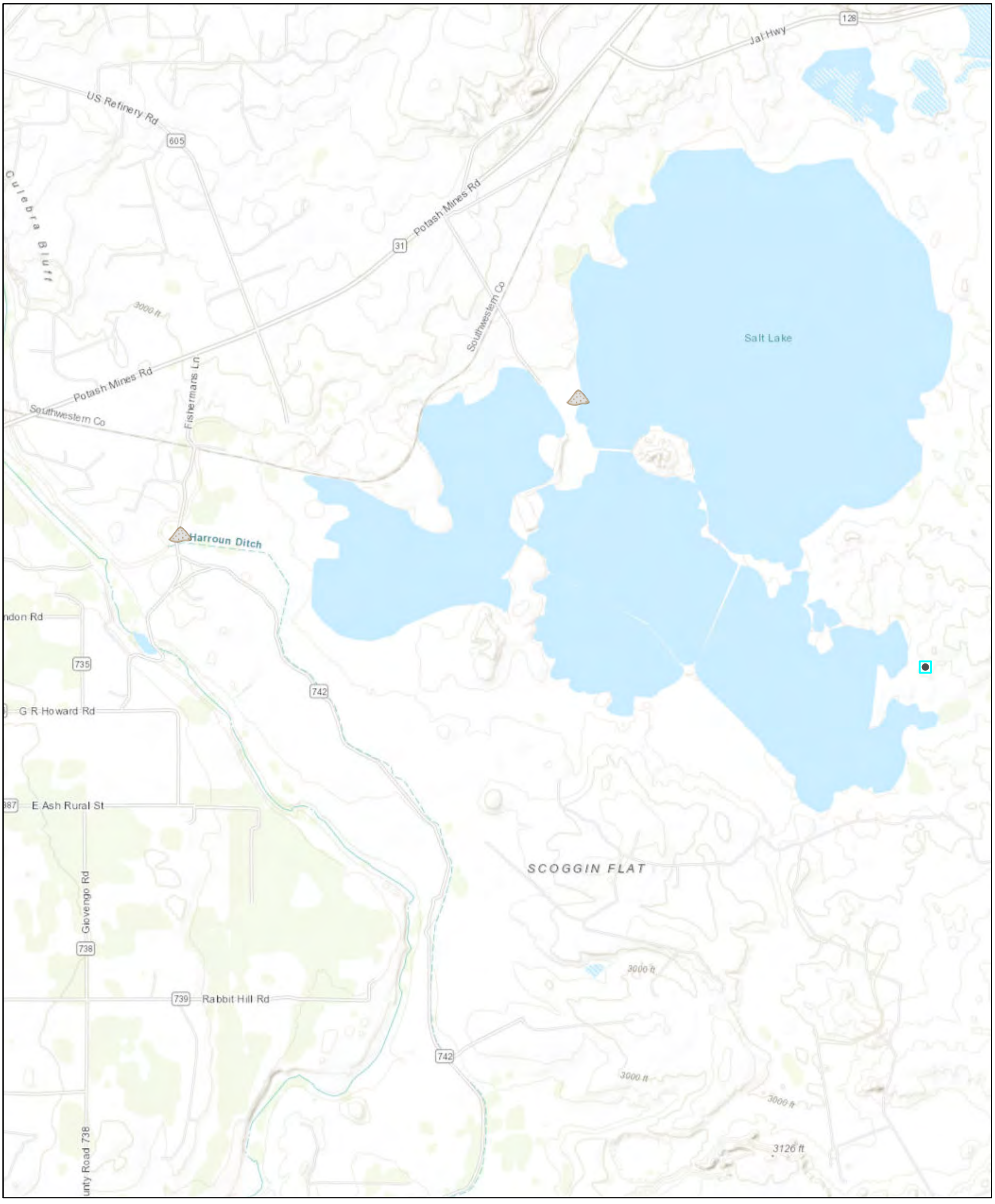
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Released to Imaging: 4/4/2025 2:49:23 PM

Leguna Salado 22 Fed 4H



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

Registered Mines

- Aggregate, Stone etc.
- Salt

1:36,112

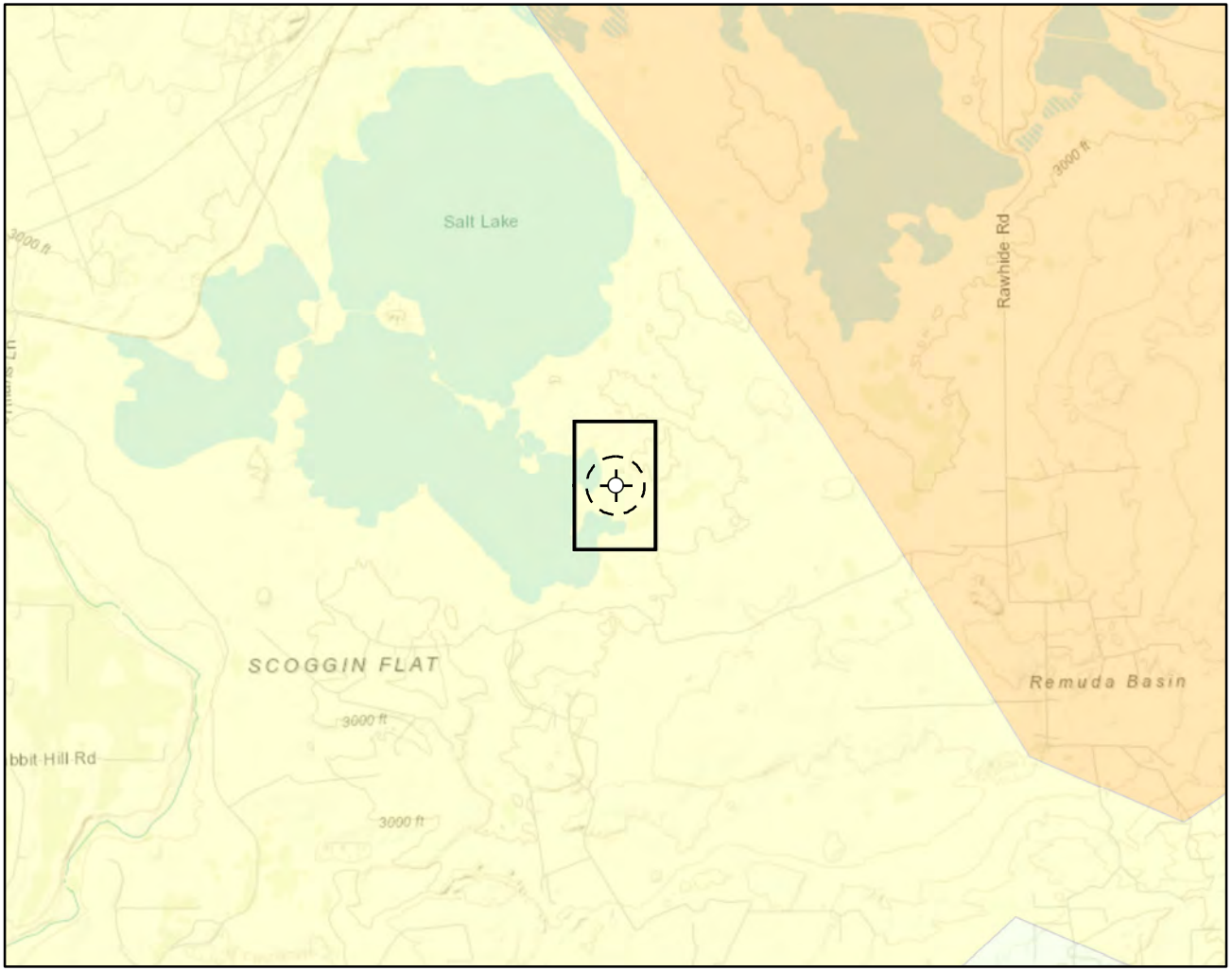
0 0.35 0.7 1.4 mi

0 0.5 1 2 km

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

EMNRD MMD GIS Coordinator

NM Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=1b5e57974664d689b47790897ca2795)



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.

VERTEX

Map Center:
Lat/Long: 32.294426, -103.973084

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

N

Karst Potential Schematic
Laguna Salado 22 Federal
#4

FIGURE:
X

devon

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.

Document Path: G:\1-Projects_US PROJECT S\Devon Energy Corporation\2023\23E-01414- Laguna Salado 22 Federal #4\Figure X Karst Potential Schematic_ Laguna Salado 22 Federal #4(23E-01414).mxd

Received by OCD: 3/14/2025 9:48:53 AM

National Flood Hazard Layer FIRMette

FEMA

103°58'42"W 32°17'55"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

103°58'4"W 32°17'25"N

Released to Imaging: 4/4/2025 2:49:23 PM

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

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
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

March 22, 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

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

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

Map Scale: 1:901 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

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 18, Sep 8, 2022

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UG	Upton gravelly loam, 0 to 9 percent slopes	4.4	100.0%
Totals for Area of Interest		**4.4**	**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 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.

Eddy Area, New Mexico

UG—Upton gravelly loam, 0 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1w64
Elevation: 1,100 to 4,400 feet
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

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

Upton

Percent of map unit: 1 percent
Ecological site: R070BC025NM - Shallow
Hydric soil rating: No

References

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USDA Natural Resources Conservation Service

Ecological site R070BC025NM
Shallow

Accessed: 03/23/2023

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 knolls, ridges, hillslopes alluvial fans and escarpments. Slopes range fro 0 to 25 percent and average about 7 percent. Direction of slope varies and is usually not significant. Elevations range from 2,842 to 4,500 feet.

Table 2. Representative physiographic features

Landforms	(1) Hill (2) Ridge (3) Fan piedmont
Flooding frequency	None
Ponding frequency	None
Elevation	2,842–4,500 ft
Slope	0–25%
Aspect	Aspect is not a significant factor

Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity – short duration thunderstorms.

Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.

The average frost-free season is 180 to 220 days. The last killing frost is late March or early April, and the first killing frost is in late October or early November.

Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of this site. Because of the shallow soil depth, the vegetation on this site can take advantage of moisture almost anytime it falls. Strong winds that blow from the west and southwest blow from January through June, which accelerates soil drying at a critical time for cool season plant growth.

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

Influencing water features

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

Soil features

The soils of this site are shallow to very shallow. Soils are derived from mixed calcareous eolian deposits derived from sedimentary rock. Surface layers are very cobbly loam, very gravelly loam, gravelly loam, cobbly loam, gravelly fine sandy loam or gravelly sandy loam.

There is an indurated caliche layer or limestone bedrock that occurs within 20 inches and averages less than 10 inches. Limestone or caliche layer may be the restrictive layer.

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

Characteristic soils:

Lozier
Potter
Tencee
Upton
Ector
Kimbrough

Table 4. Representative soil features

Surface texture	(1) Gravelly loam (2) Extremely gravelly loam (3) Extremely cobbly loam
Family particle size	(1) Loamy
Drainage class	Well drained
Permeability class	Very slow to moderately slow
Soil depth	4–20 in
Surface fragment cover <=3"	15–40%
Available water capacity (0-40in)	1 in
Calcium carbonate equivalent (0-40in)	15–60%

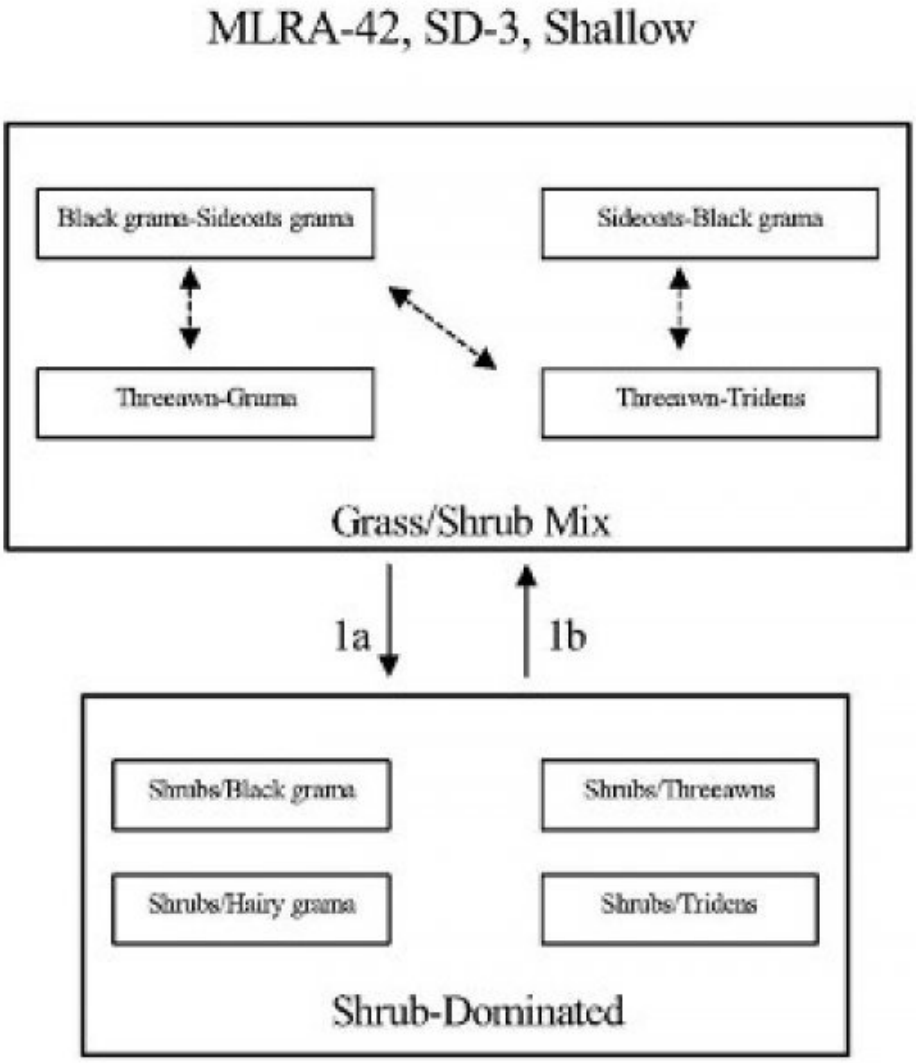
Electrical conductivity (0-40in)	0–2 mmhos/cm
Sodium adsorption ratio (0-40in)	0–1
Soil reaction (1:1 water) (0-40in)	7.4–8.4
Subsurface fragment volume <=3" (Depth not specified)	13–42%
Subsurface fragment volume >3" (Depth not specified)	0–1%

Ecological dynamics

Overview:
The Shallow site is associated with and Limestone Hills, Loamy, and Shallow Sandy sites. When associated with Limestone Hills, the Shallow site occurs on the summits, foot slopes and toeslopes of hills. Loamy sites often occur as areas between low elongated hills with rounded crests (Shallow site). When the Shallow Sandy site and Shallow site occur in association, the Shallow Sandy soils occupy the tops of low ridges and the Shallow site soils occur on the steeper sideslopes of the ridge. The historic plant community of the Shallow site has the aspect of a grassland/shrub mix, dominated by grasses, but with shrubs common throughout the site. Black grama is the dominant grass species; creosotebush, mesquite, and catclaw mimosa are common shrubs. Overgrazing and or extended drought can reduce grass cover, effect a change in grass species dominance, and may result in a shrub-dominated state. 1

State and transition model

Plant Communities and Transitional Pathways (diagram)



1a. Extended drought, overgrazing, no fire

1b. Brush control, Prescribed grazing

State 1
Grass/Shrub Mix

Community 1.1
Grass/Shrub Mix

Grassland/Shrub Mix: The historic plant community is dominated by black grama with sideoats grama as the sub-dominant. Blue grama, hairy grama, bush muhly, and sand dropseed also occur in significant amounts. Sideoats grama can occur as the dominant grass with black grama as sub-dominant on the western side of the Land Resource Unit SD-3. This may be due to higher average elevation on the west side. Retrogression within this state due to extended drought or overgrazing will cause a decrease in species such as black grama, sideoats grama, blue grama, and bush muhly. Threeawns may become the dominant grass species due to a decline in more palatable grasses or because of its ability to quickly recover following drought. Continued loss of grass cover and associated increase in amount of bare ground may result in a shrub-dominated state. Decreased fire frequencies may also be

an important component in the cause of this transition. Diagnosis: Grass cover is fairly uniform, however, surface gravel, cobble, and bare ground make up a large percent of total ground cover, and grass production during unfavorable years may only average 150-175 pounds per acre. Shrubs are common with canopy cover averaging five to ten percent. Evidence of erosion such as rills and gullies are rare, but may occur on slopes greater than eight percent.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	168	352	536
Shrub/Vine	63	131	200
Forb	20	42	64
Total	**251**	**525**	**800**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	5-10%
Grass/grasslike foliar cover	10-15%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	5-8%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	40-60%

Figure 5. Plant community growth curve (percent production by month). NM2825, R042XC025NM Shallow HCPC. R042XC025NM Shallow HCPC Warm Season Plant Community.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	3	5	10	10	25	30	12	5	0	0

State 2
Shrub-Dominated

Community 2.1
Shrub-Dominated

Shrub-Dominated: This state is characterized by an increase in shrubs and a decrease in grass cover relative to grassland/shrub mix. As grass cover decreases shrubs increase, especially creosotebush, catclaw mimosa, whitethorn acacia, and mesquite. Each of these shrub species may become dominant in localized areas or across the site, depending on the spatial variability in soil characteristics and landscape position. Black grama, threeawns, hairy grama, or hairy tridens may be the dominant grass species. Fluffgrass, burrograss and broom snakeweed increase in representation. The Shallow site is resistant to state change, due to the natural rock armor of the soil and a shallow impermeable layer. The amount of rock fragments on the soil surface assist in retarding erosion. On Shallow sites with low slope, the shallow depth to either a petrocalcic layer or limestone bedrock helps to keep water perched and available to shallow rooted grasses for extended periods. 2 Diagnosis: Shrubs are the dominant species, especially creosotebush, catclaw mimosa, whitethorn acacia, or mesquite. Grass cover is variable ranging

from patchy with large connected bare areas present to sparse with only a limited amount in shrub inter-spaces. Transition to Shrub-Dominated (1a) Overgrazing and or extended periods of drought, and suppression of natural fire regimes are thought to cause this transition. As grass cover is lost, soil fertility and available soil moisture decline, due to the reduction of organic matter and decreased infiltration.3 Shrubs have the ability to extract nutrients and water from a greater area of soil than grasses and are better able to utilize limited water. Competition by shrubs for water and nutrients limits grass recruitment and establishment. Fire historically may have played a part in suppressing shrub expansion; fire suppression may therefore facilitate shrub expansion. Key indicators of approach to transition: *Decrease or change in composition or distribution of grass cover. *Increase in size and frequency of bare patches. *Increase in amount of shrub seedlings. Transition back to Grassland/Shrub Mix (1b) Brush control is necessary to re-establish grasses. Prescribed grazing will help to ensure proper forage utilization and sustain grass cover. Once the transition is reversed and grass cover is re-established, periodic use of prescribed fire may assist in maintaining the Grassland/Shrub state.

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				105–158	
	black grama	BOER4	*Bouteloua eriopoda*	105–158	–
2				79–105	
	sideoats grama	BOCU	*Bouteloua curtipendula*	79–105	–
3				79–105	
	blue grama	BOGR2	*Bouteloua gracilis*	79–105	–
	hairy grama	BOHI2	*Bouteloua hirsuta*	79–105	–
4				26–53	
	bush muhly	MUPO2	*Muhlenbergia porteri*	26–53	–
5				16–26	
	cane bluestem	BOBA3	*Bothriochloa barbinodis*	16–26	–
6				26–53	
	sand dropseed	SPCR	*Sporobolus cryptandrus*	26–53	–
7				16–26	
	hairy woollygrass	ERPI5	*Erioneuron pilosum*	16–26	–
8				5–16	
	ear muhly	MUAR	*Muhlenbergia arenacea*	5–16	–
9				5–16	
	New Mexico feathergrass	HENE5	*Hesperostipa neomexicana*	5–16	–
10				5–16	
	low woollygrass	DAPU7	*Dasyochloa pulchella*	5–16	–
11				16–26	
	Grass, perennial	2GP	*Grass, perennial*	16–26	–
Forb					
12				11–26	
	stemless four-nerve daisy	TEACE	*Tetraneuris acaulis var. epunctata*	11–26	–
13				5–16	
	woolly groundsel	PACA15	*Packera cana*	5–16	–
14				5–16	

14				5–16	
	globemallow	SPHAE	*Sphaeralcea*	5–16	–
15				5–16	
	bladderpod	LESQU	*Lesquerella*	5–16	–
16				5–16	
	cassia	CASSI	*Cassia*	5–16	–
17				11–26	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	11–26	–
Shrub/Vine					
18				5–16	
	littleleaf sumac	RHMI3	*Rhus microphylla*	5–16	–
19				5–16	
	creosote bush	LATR2	*Larrea tridentata*	5–16	–
20				5–16	
	littleleaf ratany	KRER	*Krameria erecta*	5–16	–
21				5–16	
	javelina bush	COER5	*Condalia ericoides*	5–16	–
22				5–16	
	American tarwort	FLCE	*Flourensia cernua*	5–16	–
23				5–16	
	crown of thorns	KOSP	*Koeberlinia spinosa*	5–16	–
24				11–26	
	honey mesquite	PRGL2	*Prosopis glandulosa*	11–26	–
	honey mesquite	PRGL2	*Prosopis glandulosa*	11–26	–
25				5–16	
	catclaw mimosa	MIACB	*Mimosa aculeaticarpa var. biuncifera*	5–16	–
26				5–16	
	pricklypear	OPUNT	*Opuntia*	5–16	–
27				11–26	
	mariola	PAIN2	*Parthenium incanum*	11–26	–
	mariola	PAIN2	*Parthenium incanum*	11–26	–
28				5–16	
	broom snakeweed	GUSA2	*Gutierrezia sarothrae*	5–16	–
29				16–26	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	16–26	–

Animal community

This site provides habitats which support a resident animal community that is characterized by desert cottontail, spotted ground squirrel, Merriam's kangaroo rat, cactus mouse, white-throated woodrat, gray fox, spotted skunk, roadrunner, Swainson's hawk, white-necked raven, cactus wren, pyrrhuloxia, lark sparrow, mourning dove, scaled quail, leopard lizard, round-tailed horned lizard, prairie rattlesnake, marbled whiptail, and greater earless lizard. Where associated with limestone hills, mule deer utilize this site.

Where large woody shrubs occur, most resident birds and scissor-tailed flycatcher, morning dove, lark sparrow and

Swainson's hawk nest.

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
Lozier---------- D
Potter---------- C
Tencee---------- D
Upton---------- C
Kimbrough---------- D
Upton---------- D
Ector---------- D

Recreational uses

This site offers recreation potential for hiking, horseback riding, rock hunting, nature photography and bird hunting and birding. During years of abundant spring moisture, a colorful array of wild flowers is displayed during May and June. A few summer and fall flowers also occur.

Wood products

This site has no potential for wood production.

Other products

This site is suited for grazing by all kinds and classes of livestock during all seasons of the year. Missmanagement will cause a decrease in black grama, sideoats grama, and blue grama, bush muhly and New Mexico feathergrass. A corresponding increase in bare ground will occur. There will also be an increase in muhlys, fluffgrass, creosotebush, javalinabush, catclaw, and mesquite. This site will respond best to a system of management that rotates the season of use.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month
Similarity Index-------- Ac/AUM
100 - 76---------- 3.7 – 4.5
75 – 51---------- 4.3 – 5.5
50 – 26---------- 5.3 – 10.0
25 – 0---------- 10.1 +

Inventory data references

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains, Major Land Resource Areas of New Mexico (SD-3). This site has been mapped and correlated with soils in the following soil surveys. Eddy County, Lea County, and Chaves County.

Other references

Literature Cited:

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Contributors

David Trujillo
Don Sylvester

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):**

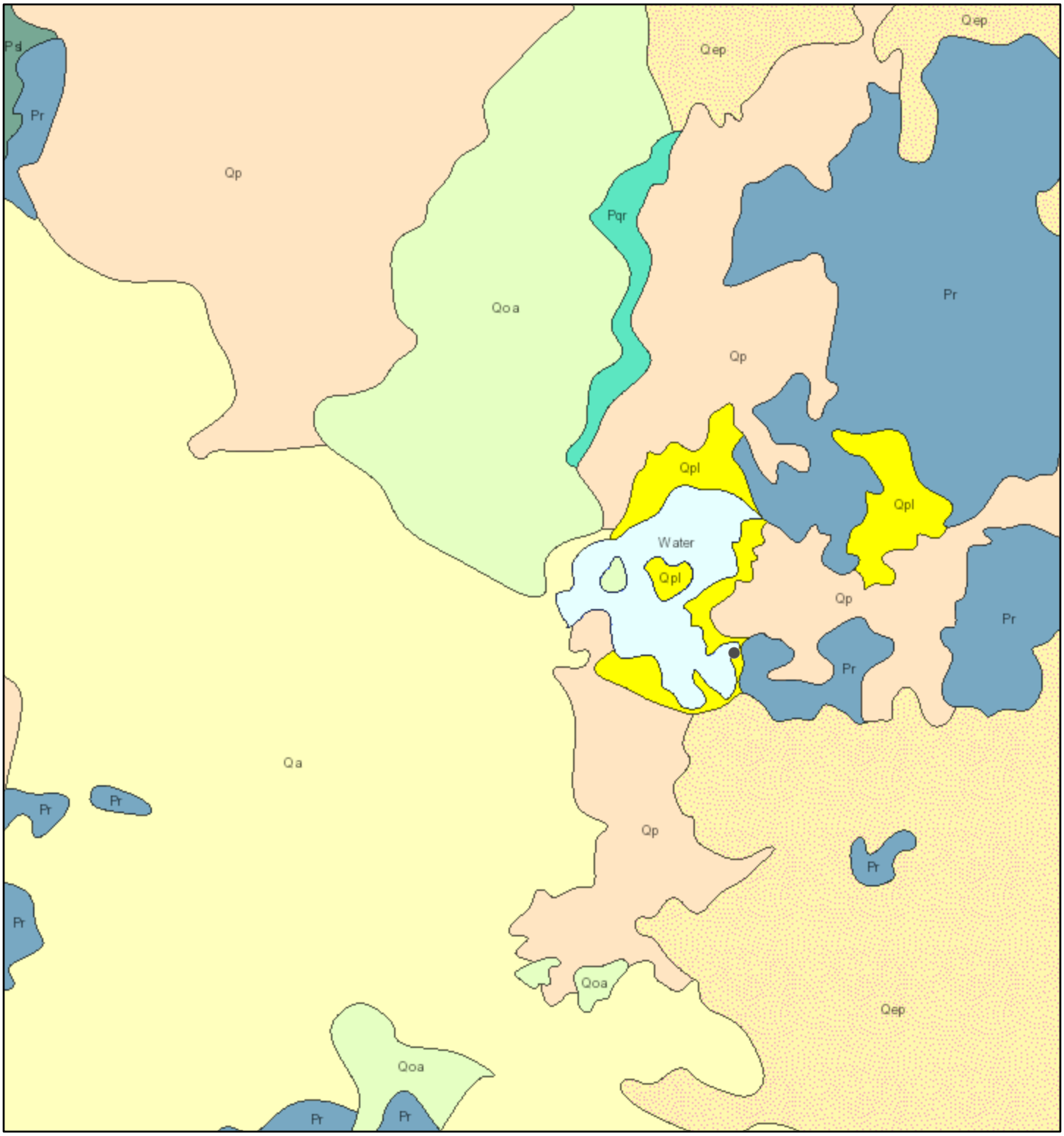
14. **Average percent litter cover (%) and depth (in):**

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

0 1 2 4 mi

0 1.5 3 6 km

Lithologic Units

- Playa——Alluvium and evaporite deposits (Holocene)
- Water——Perenial 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

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National

■ Background Samples

◐ Laguna Salado 22 Federal #004H

VERTEX

0 15 30 60 ft

NAD 1983 UTM Zone 13N
Date: Jan 29/25

Map Center:
Lat: 32.294584°N,
Long:103.973081°W

N

Background Characterization
Laguna Salado 22 Federal #004H

FIGURE: 1

devon

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 KMZ by Vertex Professional Services Ltd., 2025.

VERSATILITY. EXPERTISE.

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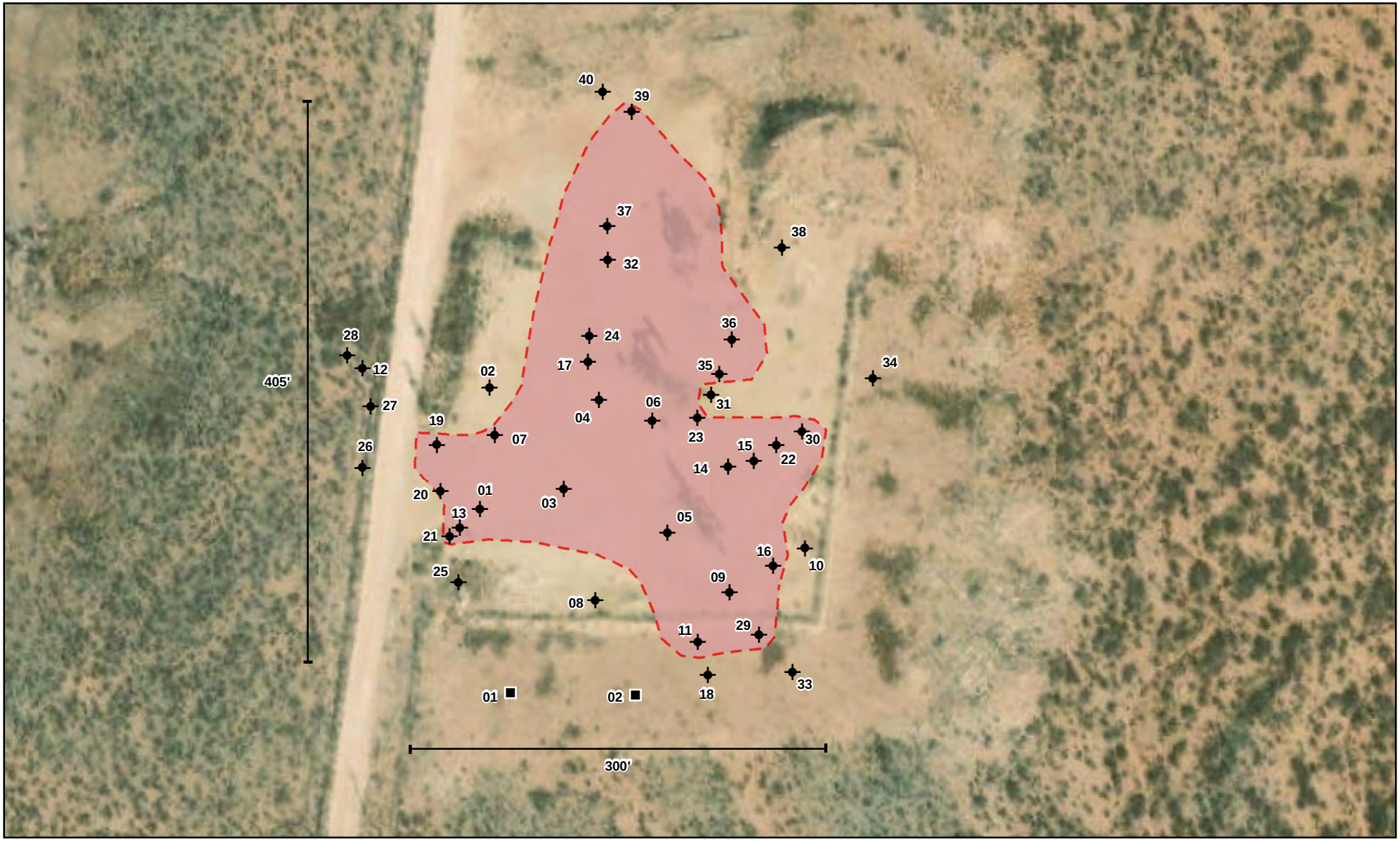

■ Background Sample (Prefixed by "BG23-") ✦ Borehole (Prefixed by "BH23-") Release Area (~59,618 sq.ft.)

VERTEX

0 25 50 Feet

Map Center:
Lat/Long: 32.294537, -103.973052

NAD 1983 UTM Zone 13N
Date: Jun 15/23

N

Characterization Schematic
Laguna Salado 22 Federal #004

FIGURE:
2

devon

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VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Devon Energy Corporation\2023\23E-01414- Laguna Salado 22 Federal #4\Figure 2 Characterization Sampling Site Schematic (23E-01414).mxd

ATTACHMENT 3

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	3/23/2023
Site Location Name:	Laguna Salado 22 Fed 4	Report Run Date:	3/23/2023 8:34 PM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	3/23/2023 7:50 AM
Departed Site	3/23/2023 2:40 PM

Daily Site Visit Report

Site Sketch

Site Sketch

Daily Site Visit Report

Field Notes

12:21 Arrived on site and filled out safety documents. Discussed work plan for the day and safety and signed safety documents. 08:15

Walked site, observing One Call markings of lines and investigating any evidence of release within and outside One Call area and in reference to C141.
No evidence was observable on site and delineation in a grid pattern was decided. 08:30

12:25 Collected sample BH23-01 at 0 ft and 1 ft, hitting refusal at 1 ft. 09:40
Soil is extremely rocky and compacted.

Collected sample BH23-02 at 0 ft and 1 ft, hitting refusal at 1 ft. 10:20
Soil is extremely rocky and compacted

Collected sample BH23-03 at 0 ft and 1 ft, hitting refusal at 1 ft. 10:55
Soil is extremely rocky and compacted

Collected sample BH23-04 at 0 ft and 1 ft, hitting refusal at 1 ft. 11:40
Soil is extremely rocky and compacted

14:15 Collected sample BH23-05 at 0 ft and 1 ft, hitting refusal at 1 ft. 12:30
Soil is extremely rocky and compacted

Collected sample BH23-06 at 0 ft and 1 ft, hitting refusal at 1 ft. 13:00
Soil is extremely rocky and compacted

Collected sample BH23-07 at 0 ft and 1 ft, hitting refusal at 1 ft. 14:00
Soil is extremely rocky and compacted

14:30 S. Carttar began field screen on samples BH23-01 through BH23-07. 14:15

14:30 S. Carttar prepared samples for lab. 15:30

14:31 Completed daily field report and S. Carttar completed daily soil sample report. 16:00.

Daily Site Visit Report

Next Steps & Recommendations

1 Continue with delineation.

Daily Site Visit Report

Site Photos

Viewing Direction: Northeast	**Viewing Direction**: Northeast
	
BH23-01 01 ft Hit refusal at 1ft.	BH23-02 01ft Hit refusal at 1 ft.
Viewing Direction: Northeast	**Viewing Direction**: Northeast
	
BH23-03 01ft, Hit Refusal at 1ft.	BH23-04 1ft, Hit refusal at 1ft.

Daily Site Visit Report

Viewing Direction: Northeast

BH23-05 01ft

Viewing Direction: Northeast

BH23-06 01ft, Hit refusal at 1ft.

Viewing Direction: Northeast

BH23-07 01ft Hit refusal at 1ft.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Stephanie McCartyM

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	3/24/2023
Site Location Name:	Laguna Salado 22 Fed 4	Report Run Date:	3/24/2023 9:15 PM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	3/24/2023 8:30 AM
Departed Site	3/24/2023 1:45 PM

Field Notes

9:22 On site. Completed safety meeting, confirmed one call area. Running secondary sweep before beginning collection of BH23-08

10:05 Ran secondary sweep. Beginning BH23-09

10:33 Ran line sweep, beginning BH23-10

13:15 Extending white lined area to include more of pad and surrounding area

13:15 Screened all samples and prepared them for lab

Next Steps & Recommendations

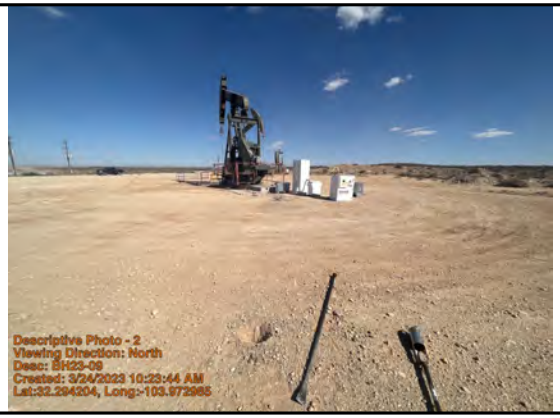
1 Complete horizontal and vertical delineation

Daily Site Visit Report

Site Photos

Viewing Direction: Northeast	**Viewing Direction**: North
	
BH23-08	West side of one call
Viewing Direction: South	**Viewing Direction**: East
	
West side of one call	North side of one call

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: Southeast
	
BH23-09	Site

Viewing Direction: East	**Viewing Direction**: West
	
Site	Site

Daily Site Visit Report

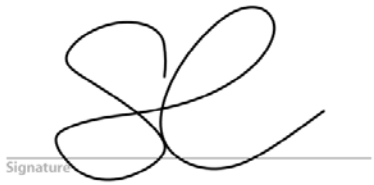
Viewing Direction: South	**Viewing Direction**: West
	
BH23-10	South side of new one-call
Viewing Direction: North	**Viewing Direction**: East
	
East side of new one-call	South side of one call

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Sally Carttar

Signature:



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	4/5/2023
Site Location Name:	Laguna Salado 22 Fed 4	Report Run Date:	4/5/2023 9:55 PM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/5/2023 8:15 AM
Departed Site	4/5/2023 4:00 PM

Field Notes

8:53 Arrived on site and filled out and signed safety documents. Prepared equipment and swept proposed sample point areas with magnetic locator.

11:20 Collected samples BH23-11 0 ‘ and 2’, hitting refusal at 3.75’. (32.294095,-103.973061)

Collected samples BH23-12 0’, 2’ and 3’. (32.294648,-103.973843)

11:21 Performed line sweep for area around proposed BH23-13 with magnetic locator.

11:38 Collected samples BH23-13 0’, 1’, 2’.

13:28 Field screened samples BH23-11 0’, 2’; BH23-12 0’, 2’, 3’; BH23-13 0’, 1’, 2’ for chlorides with EC meter.

14:56 Performed line sweep with magnetic locator for BH23-14 area.
Collected samples BH23-14 0’ and 1’. Hitting refusal at 1.25’

Field screened BH23-14 0’ and 1’ for chlorides with EC meter.

15:39 Field screened samples BH23-11 0’; BH23-12 0’; BH23-13 0’; and BH23-14 0’ for THP with Dexsil Petroflag.

15:44 Field screened all samples collected for VOCs with PID.

Daily Site Visit Report

15:51 Completed daily field report and daily soil sampling report

Next Steps & Recommendations

1 Continue delineating

Daily Site Visit Report

Site Photos

Viewing Direction: North

BH23-11 0ft-2ft

Viewing Direction: East

BH23-12 0ft-3ft

Viewing Direction: East

BH23-13 0ft - 2ft

Viewing Direction: West

BH23-14 0ft - 1ft

Daily Site Visit Report

Viewing Direction: North

Site, entire

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Stephanie McCartyM

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	4/20/2023
Site Location Name:	Laguna Salado 22 Fed 4	Report Run Date:	4/21/2023 8:50 PM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/20/2023 8:00 AM
Departed Site	4/20/2023 5:00 PM

Field Notes

13:08 Arrived on site and filled out safety documents. Met with Devon representative and contractors, discussing work plan for the day and safety and signing safety documents. 08:20.

Marked off select locations to excavate for vertical delineation and investigation. 09:00

Excavated and collected samples BH23-14 2’; BH23-14 4’; BH23-14 6’; BH23-14 8’; BH23-14 9’.
Field screened for chlorides with EC meter.
Field screening produced >600 ppm Cl for all samples. All samples beyond 2’ were consistent within around a +\- 1000 ppm Cl levels.
10:00.

14:29 Excavated and collected samples BH23-05 2’; BH23-05 4’; BH23-05 6’; BH23-14 8’;
Field screened for chlorides with EC meter.
Field screening produced >600 ppm Cl for all samples.

Field screened all samples for TPH with Dexsil Petroflag.

Daily Site Visit Report

16:44 Backfilled BH23-05 and BH23-14. 14:15

Excavated and collected samples BG23-01 0', BG23-01 2', BG23-01 4', and BG23-01 6'.
Back filled BG23-01. 15:00

Field screened samples for chlorides. All samples except BG23-01 0' screened >600 ppm Cl. 15:50

Prepared samples for lab and cleaned up for day. 16:40

16:45 Completed daily field report and daily soil sample report. 17:00

Next Steps & Recommendations
1

Daily Site Visit Report

Site Photos

Viewing Direction: South

BH23-14 2ft, 4ft, 6ft, 8ft, 9ft

Viewing Direction: East

BH23-05 2ft, 4ft, 6ft, 8ft backfilled

Viewing Direction: South

BG23-01 6ft

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Stephanie McCartyM

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	4/21/2023
Site Location Name:	Laguna Salado 22 Fed 4	Report Run Date:	4/21/2023 8:51 PM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/21/2023 7:20 AM
Departed Site	4/21/2023 12:30 PM

Field Notes

10:21 Arrived on site and filled out safety documents. Met with Devon contractors, discussing work plan for the day and safety and signing safety documents. 08:00

10:51 Performed line sweep with magnetic locator.

Collected sample BH23-40 0'.

Excavated and collected samples BG23-01 8'; BG23-02 0', BG23-02 2', BG23-02 4', BG23-02 6', and BG23-02 8'.

Field screened samples for chlorides with EC meter. Samples BH23-40 0' and BG23-02 0' were <600 ppm Cl.

12:16 Devon contractors excavator crew departed site.

Field screened BH23-40 for TPH with Dexsil Petroflag. Results <100 ppm TPH.

Completed preparing samples for lab.
Completed daily field report and daily soil sample report.

Daily Site Visit Report

Next Steps & Recommendations

1 Collect data from lab.

Daily Site Visit Report

Site Photos

Viewing Direction: South

BG23-01 8ft

Viewing Direction: North

BG23-01 8ft

Viewing Direction: South

BG23-02 4ft green clay layer

Viewing Direction: West

BG23-02 8ft red clay layer

Daily Site Visit Report

Viewing Direction: North

BG23-02 8ft

Viewing Direction: North

BG23-02 8ft

Viewing Direction: West

Prepared samples for lab, view of variation in depth layer.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Stephanie McCartyM

Signature: 

Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	8/24/2023
Site Location Name:	Laguna Salado 22 Fed 4	Report Run Date:	8/24/2023 11:36 PM
Client Contact Name:	Dale Woodall	API #:	
Client Contact Phone #:	405-318-4697		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	8/24/2023 9:15 AM
Departed Site	8/24/2023 3:45 PM

Field Notes

11:19 Arrived on site, filling out and signing safety documents. Examined site and location to determine locations for marking target sample points and sweeping for lines with magnetic locator.

14:25 Collected samples BH23-18, -25, -32 (on pad), -33, -34, -38 (on pad), and -40 (on pad) at 1 foot depth.
Field screened for chlorides with EC and also silver nitrate titration for BH23-38 1'.
Field screened for TPH with Dexsil petroflag.

14:25 Backfilled boreholes and prepared samples for lab.

Next Steps & Recommendations

1 Sand samples to lab and await lab results

2 Compose remediation work plan

Daily Site Visit Report

Site Photos

Viewing Direction: South

Site information placard

Viewing Direction: Northeast

Sample area to north and east

Viewing Direction: West

Natural salt lake approximately +\-500 ft west of pad

Viewing Direction: Southeast

BH23-32 1ft, 1ft refusal

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: Southwest
	
BH23-40 1ft, 1ft refusal	BH23-38 1ft, 1ft refusal
Viewing Direction: West	**Viewing Direction**: North
	
BH23-34 1ft	BH23-33 1ft, 1ft refusal

Daily Site Visit Report

Viewing Direction: North

BH23-18 1ft

Viewing Direction: Northeast

BH23-25 1ft

Viewing Direction: Southeast

Sample area to south and east

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Stephanie McCartyM

Signature:

ATTACHMENT 4

Client Name: Devon Energy Production Company, LP
Site Name: Laguna Salado 22 Federal #004H
NMOCD Tracking #: NSEB0830236670
Project #: 23E-01414 - 3
Lab Reports: 2303C85, 2303D22, 2304340, 2304662, 2304962 and 2308E59

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

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
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
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**
BH23-01	0	March 23, 2023	0	-	**1,090**	ND	ND	ND	10	ND	10	10	**750**
	1	March 23, 2023	0	-	643	ND	ND	ND	ND	ND	ND	ND	530
BH23-02	0	March 23, 2023	0	-	188	ND	ND	ND	ND	ND	ND	ND	120
	1	March 23, 2023	0	-	100	ND	ND	ND	ND	ND	ND	ND	61
BH23-03	0	March 23, 2023	0	-	**4,113**	ND	ND	ND	ND	ND	ND	ND	**4700**
	1	March 23, 2023	0	-	573	ND	ND	ND	ND	ND	ND	ND	490
BH23-04	0	March 23, 2023	0	-	**2,863**	ND	ND	ND	11	ND	11	11	**3100**
	1	March 23, 2023	0	-	1,688	ND	ND	ND	ND	ND	ND	ND	**1400**
BH23-05	0	March 23, 2023	0	-	**7,965**	ND	ND	ND	ND	ND	ND	ND	**8400**
	1	March 23, 2023	0	-	5,630	ND	ND	ND	ND	ND	ND	ND	**5400**
	2	April 20, 2023	-	82	**2,352**	ND	ND	ND	ND	ND	ND	ND	1000
	4	April 20, 2023	-	87	2,056	ND	ND	ND	ND	ND	ND	ND	1600
	6	April 20, 2023	-	97	2,313	ND	ND	ND	ND	ND	ND	ND	1700
BH23-06	0	March 23, 2023	0	-	505	ND	ND	ND	ND	ND	ND	ND	350
	1	March 23, 2023	0	-	670	ND	ND	ND	ND	ND	ND	ND	700
BH23-07	0	March 23, 2023	0	-	**703**	ND	ND	ND	ND	ND	ND	ND	**680**
	1	March 23, 2023	0	-	1,380	ND	ND	ND	ND	ND	ND	ND	550
BH23-08	0	March 24, 2023	0	-	380	ND	ND	ND	ND	ND	ND	ND	300
	1	March 24, 2023	0	-	363	ND	ND	ND	ND	ND	ND	ND	360
BH23-09	0	March 24, 2023	0	-	**965**	ND	ND	ND	ND	ND	ND	ND	**1100**
	1	March 24, 2023	0	-	2,045	ND	ND	ND	ND	ND	ND	ND	**2300**
BH23-10	0	March 24, 2023	0	-	233	ND	ND	ND	ND	ND	ND	ND	ND
	1	March 24, 2023	0	-	135	ND	ND	ND	ND	ND	ND	ND	ND
BH23-11	0	April 5, 2023	0	68	**1,212**	ND	ND	ND	ND	ND	ND	ND	**620**
	2	April 5, 2023	0	-	2,068	ND	ND	ND	ND	ND	ND	ND	1200
BH23-12	0	April 5, 2023	0	41	417	ND	ND	ND	ND	ND	ND	ND	ND
	2	April 5, 2023	0	-	1,140	ND	ND	ND	ND	ND	ND	ND	920
	3	April 5, 2023	0	-	1,016	ND	ND	ND	ND	ND	ND	ND	720
BH23-13	0	April 5, 2023	0	62	**2,773**	ND	ND	ND	ND	ND	ND	ND	100
	1	April 5, 2023	0	-	2,551	ND	ND	ND	ND	ND	ND	ND	450
	2	April 5, 2023	0	-	2,120	ND	ND	ND	ND	ND	ND	ND	**1500**

VERTEX

Client Name: Devon Energy Production Company, LP
Site Name: Laguna Salado 22 Federal 4
NMOCD Tracking #: NSEB0830236670,
Project #: 23E-01414 - 3
Lab Reports: 2303C85, 2303D22, 2304340, 2304662, 2304962 and 2308E59

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

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH23-14	0	April 5, 2023	0	**235**	**17,872**	ND	ND	ND	ND	ND	ND	ND	**13000**
	1	April 5, 2023	0	-	7,799	ND	ND	ND	ND	ND	ND	ND	**4900**
	2	April 20, 2023	-	29	4,539	ND	ND	ND	ND	ND	ND	ND	**2000**
	4	April 20, 2023	-	83	2,310	ND	ND	ND	ND	ND	ND	ND	1200
	6	April 20, 2023	-	43	3,231	ND	ND	ND	ND	ND	ND	ND	1900
	8	April 20, 2023	-	88	2,188	ND	ND	ND	ND	ND	ND	ND	1500
	9	April 20, 2023	-	85	3,570	ND	ND	ND	ND	ND	ND	ND	2400
BH23-15	0	April 13, 2023	-	-	**6,132**	-	-	-	-	-	-	-	-
BH23-16	0	April 13, 2023	-	-	**9,495**	ND	ND	ND	ND	ND	ND	ND	**6400**
BH23-17	0	April 13, 2023	-	-	**3,852**	-	-	-	-	-	-	-	-
BH23-18	0	April 13, 2023	-	38	196	ND	ND	ND	ND	ND	ND	ND	ND
	1	August 24, 2023	-	61	**1,086**	ND	ND	ND	ND	ND	ND	ND	ND
BH23-19	0	April 13, 2023	-	-	**8,870**	ND	ND	ND	ND	ND	ND	ND	**6400**
BH23-20	0	April 13, 2023	-	-	**1,711**	-	-	-	-	-	-	-	-
BH23-21	0	April 13, 2023	-	-	**2,681**	-	-	-	-	-	-	-	-
BH23-22	0	April 13, 2023	-	-	**11,879**	ND	ND	ND	ND	ND	ND	ND	**10000**
BH23-23	0	April 13, 2023	-	-	**2,108**	-	-	-	-	-	-	-	-
BH23-24	0	April 13, 2023	-	-	**10,058**	-	-	-	-	-	-	-	-
BH23-25	0	April 13, 2023	-	70	95	ND	ND	ND	ND	ND	ND	ND	ND
	1	August 24, 2023		61	681	ND	ND	ND	ND	ND	ND	ND	ND
BH23-26	0	April 13, 2023	-	48	0	ND	ND	ND	ND	ND	ND	ND	ND
BH23-27	0	April 13, 2023	-	40	0	ND	ND	ND	ND	ND	ND	ND	ND
BH23-28	0	April 13, 2023	-	29	0	ND	ND	ND	ND	ND	ND	ND	ND
BH23-29	0	April 13, 2023	-	-	**1,695**	-	-	-	-	-	-	-	-
BH23-30	0	April 13, 2023	-	**111**	**5,533**	-	-	-	-	-	-	-	-
BH23-31	0	April 13, 2023	-	97	932	ND	ND	ND	ND	ND	ND	ND	600
BH23-32	0	April 13, 2023	-	-	**21,751**	ND	ND	ND	ND	ND	ND	ND	**21000**
	1	August 24, 2023	-	86	903	ND	ND	ND	ND	ND	ND	ND	550
BH23-33	0	April 13, 2023	-	42	177	ND	ND	ND	ND	ND	ND	ND	110
	1	August 24, 2023	-	85	505	ND	ND	ND	ND	ND	ND	ND	750
BH23-34	0	April 13, 2023	-	35	98	ND	ND	ND	ND	ND	ND	ND	ND
	1	August 24, 2023	-	42	46	ND	ND	ND	ND	ND	ND	ND	62
BH23-35	0	April 13, 2023	-	-	**14,626**	-	-	-	-	-	-	-	-
BH23-36	0	April 13, 2023	-	-	**4,448**	-	-	-	-	-	-	-	-
BH23-37	0	April 13, 2023	-	-	**6,601**	-	-	-	-	-	-	-	-
BH23-38	0	April 13, 2023	-	-	636	ND	ND	ND	ND	ND	ND	ND	130
	1	August 24, 2023	-	138	1,975	ND	ND	ND	9.9	ND	9.9	9.9	**1800**
BH23-39	0	April 13, 2023	-	-	**2,958**	-	-	-	-	-	-	-	-
BH23-40	0	April 21, 2023	-	69	256	ND	ND	ND	10	ND	10	10	110
	1	August 24, 2023	-	45	0	ND	ND	ND	ND	ND	ND	ND	ND

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria (on-pad)
Bold and green shaded indicates exceedance outside of NMOCD Reclamation Criteria (off-pad)

VERTEX

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 03, 2023

Kent Stallings

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

RE: Laguna Salado 22 Federal 4 OrderNo.: 2303C85

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 14 sample(s) on 3/25/2023 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Laguna Salado 22 Federal 4
Lab ID: 2303C85-001 **Matrix:** SOIL

Client Sample ID: BH23-01 0'
Collection Date: 3/23/2023 8:52:00 AM
Received Date: 3/25/2023 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	10	9.5		mg/Kg	1	3/30/2023 10:58:49 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/30/2023 10:58:49 PM
Surr: DNOP	102	69-147		%Rec	1	3/30/2023 10:58:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/30/2023 1:33:00 PM
Surr: BFB	91.2	37.7-212		%Rec	1	3/30/2023 1:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	3/30/2023 1:33:00 PM
Toluene	ND	0.047		mg/Kg	1	3/30/2023 1:33:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2023 1:33:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	3/30/2023 1:33:00 PM
Surr: 4-Bromofluorobenzene	86.2	70-130		%Rec	1	3/30/2023 1:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	750	60		mg/Kg	20	3/30/2023 10:05:40 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-01 1'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 9:42:00 AM
Lab ID: 2303C85-002 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/30/2023 11:09:21 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/30/2023 11:09:21 PM
Surr: DNOP	101	69-147		%Rec	1	3/30/2023 11:09:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/30/2023 1:54:00 PM
Surr: BFB	86.2	37.7-212		%Rec	1	3/30/2023 1:54:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	3/30/2023 1:54:00 PM
Toluene	ND	0.050		mg/Kg	1	3/30/2023 1:54:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/30/2023 1:54:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	3/30/2023 1:54:00 PM
Surr: 4-Bromofluorobenzene	85.8	70-130		%Rec	1	3/30/2023 1:54:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	530	60		mg/Kg	20	3/30/2023 10:18:04 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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 **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-02 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 9:56:00 AM
Lab ID: 2303C85-003 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/30/2023 11:30:16 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/30/2023 11:30:16 PM
Surr: DNOP	102	69-147		%Rec	1	3/30/2023 11:30:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/30/2023 2:16:00 PM
Surr: BFB	91.1	37.7-212		%Rec	1	3/30/2023 2:16:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	3/30/2023 2:16:00 PM
Toluene	ND	0.048		mg/Kg	1	3/30/2023 2:16:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	3/30/2023 2:16:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	3/30/2023 2:16:00 PM
Surr: 4-Bromofluorobenzene	86.6	70-130		%Rec	1	3/30/2023 2:16:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	120	59		mg/Kg	20	3/30/2023 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-02 1'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 10:18:00 AM
Lab ID: 2303C85-004 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/30/2023 11:51:07 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/30/2023 11:51:07 PM
Surr: DNOP	106	69-147		%Rec	1	3/30/2023 11:51:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/30/2023 2:38:00 PM
Surr: BFB	92.2	37.7-212		%Rec	1	3/30/2023 2:38:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	3/30/2023 2:38:00 PM
Toluene	ND	0.048		mg/Kg	1	3/30/2023 2:38:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	3/30/2023 2:38:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	3/30/2023 2:38:00 PM
Surr: 4-Bromofluorobenzene	88.1	70-130		%Rec	1	3/30/2023 2:38:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	61	60		mg/Kg	20	3/30/2023 11:07:41 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-03 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 10:36:00 AM
Lab ID: 2303C85-005 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/31/2023 12:01:35 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/31/2023 12:01:35 AM
Surr: DNOP	97.0	69-147		%Rec	1	3/31/2023 12:01:35 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/30/2023 2:59:00 PM
Surr: BFB	91.9	37.7-212		%Rec	1	3/30/2023 2:59:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	3/30/2023 2:59:00 PM
Toluene	ND	0.047		mg/Kg	1	3/30/2023 2:59:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2023 2:59:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	3/30/2023 2:59:00 PM
Surr: 4-Bromofluorobenzene	89.8	70-130		%Rec	1	3/30/2023 2:59:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	4700	150		mg/Kg	50	3/31/2023 8:01:03 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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 **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-03 1'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 10:46:00 AM
Lab ID: 2303C85-006 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/31/2023 12:12:02 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/31/2023 12:12:02 AM
Surr: DNOP	103	69-147		%Rec	1	3/31/2023 12:12:02 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/30/2023 3:21:00 PM
Surr: BFB	88.5	37.7-212		%Rec	1	3/30/2023 3:21:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	3/30/2023 3:21:00 PM
Toluene	ND	0.050		mg/Kg	1	3/30/2023 3:21:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/30/2023 3:21:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	3/30/2023 3:21:00 PM
Surr: 4-Bromofluorobenzene	86.9	70-130		%Rec	1	3/30/2023 3:21:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	490	60		mg/Kg	20	3/30/2023 11:32:29 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Laguna Salado 22 Federal 4
Lab ID: 2303C85-007 **Matrix:** SOIL

Client Sample ID: BH23-04 0'
Collection Date: 3/23/2023 11:10:00 AM
Received Date: 3/25/2023 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	11	10		mg/Kg	1	3/31/2023 12:32:50 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/31/2023 12:32:50 AM
Surr: DNOP	106	69-147		%Rec	1	3/31/2023 12:32:50 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/30/2023 4:04:00 PM
Surr: BFB	90.3	37.7-212		%Rec	1	3/30/2023 4:04:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	3/30/2023 4:04:00 PM
Toluene	ND	0.050		mg/Kg	1	3/30/2023 4:04:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/30/2023 4:04:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	3/30/2023 4:04:00 PM
Surr: 4-Bromofluorobenzene	88.6	70-130		%Rec	1	3/30/2023 4:04:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	3100	150		mg/Kg	50	3/31/2023 8:13:27 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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 **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-04 1'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 11:32:00 AM
Lab ID: 2303C85-008 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/31/2023 12:43:15 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/31/2023 12:43:15 AM
Surr: DNOP	112	69-147		%Rec	1	3/31/2023 12:43:15 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/30/2023 4:26:00 PM
Surr: BFB	89.0	37.7-212		%Rec	1	3/30/2023 4:26:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	3/30/2023 4:26:00 PM
Toluene	ND	0.050		mg/Kg	1	3/30/2023 4:26:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/30/2023 4:26:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	3/30/2023 4:26:00 PM
Surr: 4-Bromofluorobenzene	86.1	70-130		%Rec	1	3/30/2023 4:26:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	1400	60		mg/Kg	20	3/30/2023 11:57:18 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-05 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 12:33:00 PM
Lab ID: 2303C85-009 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/31/2023 12:53:39 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/31/2023 12:53:39 AM
Surr: DNOP	98.4	69-147		%Rec	1	3/31/2023 12:53:39 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/30/2023 4:47:00 PM
Surr: BFB	92.7	37.7-212		%Rec	1	3/30/2023 4:47:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	3/30/2023 4:47:00 PM
Toluene	ND	0.050		mg/Kg	1	3/30/2023 4:47:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/30/2023 4:47:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	3/30/2023 4:47:00 PM
Surr: 4-Bromofluorobenzene	84.8	70-130		%Rec	1	3/30/2023 4:47:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	8400	300		mg/Kg	100	3/31/2023 8:25:49 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-05 1'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 12:53:00 PM
Lab ID: 2303C85-010 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/31/2023 1:04:01 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/31/2023 1:04:01 AM
Surr: DNOP	99.8	69-147		%Rec	1	3/31/2023 1:04:01 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/30/2023 5:09:00 PM
Surr: BFB	87.6	37.7-212		%Rec	1	3/30/2023 5:09:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	3/30/2023 5:09:00 PM
Toluene	ND	0.047		mg/Kg	1	3/30/2023 5:09:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2023 5:09:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	3/30/2023 5:09:00 PM
Surr: 4-Bromofluorobenzene	87.7	70-130		%Rec	1	3/30/2023 5:09:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	5400	300		mg/Kg	100	3/31/2023 8:38:13 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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 **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-06 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 1:00:00 PM
Lab ID: 2303C85-011 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/31/2023 1:14:23 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/31/2023 1:14:23 AM
Surr: DNOP	98.2	69-147		%Rec	1	3/31/2023 1:14:23 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/30/2023 5:30:00 PM
Surr: BFB	87.2	37.7-212		%Rec	1	3/30/2023 5:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	3/30/2023 5:30:00 PM
Toluene	ND	0.048		mg/Kg	1	3/30/2023 5:30:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	3/30/2023 5:30:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	3/30/2023 5:30:00 PM
Surr: 4-Bromofluorobenzene	86.1	70-130		%Rec	1	3/30/2023 5:30:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	350	59		mg/Kg	20	3/30/2023 12:34:32 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-06 1'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 1:18:00 PM
Lab ID: 2303C85-012 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/31/2023 1:35:03 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/31/2023 1:35:03 AM
Surr: DNOP	99.3	69-147		%Rec	1	3/31/2023 1:35:03 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/30/2023 5:52:00 PM
Surr: BFB	87.0	37.7-212		%Rec	1	3/30/2023 5:52:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	3/30/2023 5:52:00 PM
Toluene	ND	0.049		mg/Kg	1	3/30/2023 5:52:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	3/30/2023 5:52:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	3/30/2023 5:52:00 PM
Surr: 4-Bromofluorobenzene	87.3	70-130		%Rec	1	3/30/2023 5:52:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	700	60		mg/Kg	20	3/30/2023 12:46:56 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-07 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 1:35:00 PM
Lab ID: 2303C85-013 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/31/2023 1:45:27 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/31/2023 1:45:27 AM
Surr: DNOP	101	69-147		%Rec	1	3/31/2023 1:45:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/30/2023 6:14:00 PM
Surr: BFB	96.6	37.7-212		%Rec	1	3/30/2023 6:14:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	3/30/2023 6:14:00 PM
Toluene	ND	0.047		mg/Kg	1	3/30/2023 6:14:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/30/2023 6:14:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	3/30/2023 6:14:00 PM
Surr: 4-Bromofluorobenzene	90.8	70-130		%Rec	1	3/30/2023 6:14:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	680	60		mg/Kg	20	3/30/2023 1:24:10 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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 **2303C85**
Date Reported: **4/3/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-07 1'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/23/2023 2:02:00 PM
Lab ID: 2303C85-014 **Matrix:** SOIL **Received Date:** 3/25/2023 11:00:00 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	3/31/2023 1:55:49 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/31/2023 1:55:49 AM
Surr: DNOP	106	69-147		%Rec	1	3/31/2023 1:55:49 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/30/2023 6:35:00 PM
Surr: BFB	90.7	37.7-212		%Rec	1	3/30/2023 6:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	3/30/2023 6:35:00 PM
Toluene	ND	0.049		mg/Kg	1	3/30/2023 6:35:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	3/30/2023 6:35:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	3/30/2023 6:35:00 PM
Surr: 4-Bromofluorobenzene	87.0	70-130		%Rec	1	3/30/2023 6:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	550	59		mg/Kg	20	3/30/2023 1:36:34 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 Quanitative 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#: **2303C85**
03-Apr-23

Client: Devon Energy
Project: Laguna Salado 22 Federal 4

Sample ID: **MB-74020**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **74020**	RunNo: **95700**							
Prep Date: **3/30/2023**	Analysis Date: **3/30/2023**	SeqNo: **3463677**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-74020**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **74020**	RunNo: **95700**							
Prep Date: **3/30/2023**	Analysis Date: **3/30/2023**	SeqNo: **3463678**	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 Quanitative 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#: **2303C85**
03-Apr-23

Client: Devon Energy
Project: Laguna Salado 22 Federal 4

Sample ID: **MB-74034** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **74034** RunNo: **95677**
Prep Date: **3/30/2023** Analysis Date: **3/30/2023** SeqNo: **3463183** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.5	69	147			

Sample ID: **LCS-74034** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **74034** RunNo: **95677**
Prep Date: **3/30/2023** Analysis Date: **3/30/2023** SeqNo: **3463186** 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	81.1	61.9	130			
Surr: DNOP	4.9		5.000		97.7	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 Quanitative 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#: **2303C85**
03-Apr-23

Client: Devon Energy
Project: Laguna Salado 22 Federal 4

Sample ID: **lcs-73993**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **73993**	RunNo: **95676**
Prep Date: **3/28/2023**	Analysis Date: **3/30/2023**	SeqNo: **3462547** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.5	70	130			
Surr: BFB	2000		1000		205	37.7	212			

Sample ID: **mb-73993**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **73993**	RunNo: **95676**
Prep Date: **3/28/2023**	Analysis Date: **3/30/2023**	SeqNo: **3462548** 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	880		1000		87.8	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 Quanitative 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#: **2303C85**
03-Apr-23

Client: Devon Energy
Project: Laguna Salado 22 Federal 4

Sample ID: **lcs-73993**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **73993**	RunNo: **95676**
Prep Date: **3/28/2023**	Analysis Date: **3/30/2023**	SeqNo: **3462553** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.3	80	120			
Toluene	0.94	0.050	1.000	0	94.0	80	120			
Ethylbenzene	0.92	0.050	1.000	0	92.2	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.4	80	120			
Surr: 4-Bromofluorobenzene	0.90		1.000		89.6	70	130			

Sample ID: **mb-73993**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **73993**	RunNo: **95676**
Prep Date: **3/28/2023**	Analysis Date: **3/30/2023**	SeqNo: **3462554** 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		86.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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

Page 110 of 214

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 2303C85 | RcptNo: 1

Received By: Tracy Casarrubias 3/25/2023 11:00:00 AM

Completed By: Tracy Casarrubias 3/25/2023 11:58:31 AM

Reviewed By: JM 3/27/23

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: TML 3/25/23

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes	Yogi		

Received by OCD: 3/14/2025 9:48:53 AM

Released to Imaging: 4/4/2025 2:49:23 PM

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 Federal 4

Project #: 23E-01414

Project Manager: Kent Stallings

Sampler: SPC

On Ice: ☒ Yes ☐ No yogi

# of Coolers: 1

Cooler Temp (including CF): 4.4-0.1=4.3 (°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	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)						
3/23/23	8:52	Soil	BH23-01 0'	4 oz jar	ice	2303C85-001	✓	✓					✓									
│	9:42	│	BH23-01 1'	│	│	002	│	│					│									
│	9:56	│	BH23-02 0'	│	│	003	│	│					│									
│	10:18	│	BH23-02 1'	│	│	004	│	│					│									
│	10:36	│	BH23-03 0'	│	│	005	│	│					│									
│	10:46	│	BH23-03 1'	│	│	006	│	│					│									
│	11:10	│	BH23-04 0'	│	│	007	│	│					│									
│	11:32	│	BH23-04 1'	│	│	008	│	│					│									
│	12:33	│	BH23-05 0'	│	│	009	│	│					│									
│	12:53	│	BH23-05 1'	│	│	010	│	│					│									
│	13:00	│	BH23-06 0'	│	│	011	│	│					│									
│	13:18	│	BH23-06 1'	│	│	012	│	│					│									

Date	Time	Relinquished by	Received by	Via	Date	Time
3/23/23	19:26	Sally Carttar	[signature]		3/24/23	845
3/24/23	1900	[signature]	[signature]	Courier	3/25/23	11:00

Remarks: pending w/o #
cc scarttar@vertex.ca
p. 1/2

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.

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 Federal 4

Project #: 23E-01414

Project Manager: Kent Stallings

Sampler: SPC

On Ice: ☑ Yes ☐ No 4oz jar

# of Coolers: 1

Cooler Temp(Including CF): 4.4 -0.1=4.3 (°C)

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

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)
3/23/23	13:35	Soil	BH23-07 0'	4oz jar	ice		✓	✓					✓			
"	14:02	"	BH23-07 1'	"	"		✓	✓					✓			

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/23/23	19:26	Sally Carta				
3/24/23	1900				3/24/23	845
					3/25/23	11:00

Remarks:
pending wo #
cc scarttar@vertex.ca
P. 2 1/2

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

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

April 04, 2023

Kent Stallings

Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX:

RE: Laguna Salado 22 Federal 4 OrderNo.: 2303D22

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/28/2023 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2303D22**
Date Reported: **4/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-08 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/24/2023 9:30:00 AM
Lab ID: 2303D22-001 **Matrix:** SOIL **Received Date:** 3/28/2023 7:55:00 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	3/30/2023 4:24:15 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/30/2023 4:24:15 PM
Surr: DNOP	87.0	69-147		%Rec	1	3/30/2023 4:24:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/31/2023 6:04:14 AM
Surr: BFB	98.5	37.7-212		%Rec	1	3/31/2023 6:04:14 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/31/2023 6:04:14 AM
Toluene	ND	0.048		mg/Kg	1	3/31/2023 6:04:14 AM
Ethylbenzene	ND	0.048		mg/Kg	1	3/31/2023 6:04:14 AM
Xylenes, Total	ND	0.096		mg/Kg	1	3/31/2023 6:04:14 AM
Surr: 4-Bromofluorobenzene	87.9	70-130		%Rec	1	3/31/2023 6:04:14 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	300	60		mg/Kg	20	3/30/2023 4:55:06 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303D22**
Date Reported: **4/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-08 1'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/24/2023 10:00:00 AM
Lab ID: 2303D22-002 **Matrix:** SOIL **Received Date:** 3/28/2023 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **PRD**
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	3/30/2023 4:34:54 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	3/30/2023 4:34:54 PM
Surr: DNOP	102	69-147		%Rec	1	3/30/2023 4:34:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/31/2023 6:27:39 AM
Surr: BFB	99.7	37.7-212		%Rec	1	3/31/2023 6:27:39 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/31/2023 6:27:39 AM
Toluene	ND	0.049		mg/Kg	1	3/31/2023 6:27:39 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/31/2023 6:27:39 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/31/2023 6:27:39 AM
Surr: 4-Bromofluorobenzene	88.9	70-130		%Rec	1	3/31/2023 6:27:39 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	360	59		mg/Kg	20	3/30/2023 5:07:31 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303D22**
Date Reported: **4/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-09 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/24/2023 10:10:00 AM
Lab ID: 2303D22-003 **Matrix:** SOIL **Received Date:** 3/28/2023 7:55:00 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	3/30/2023 4:45:36 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/30/2023 4:45:36 PM
Surr: DNOP	92.5	69-147		%Rec	1	3/30/2023 4:45:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/31/2023 6:51:04 AM
Surr: BFB	101	37.7-212		%Rec	1	3/31/2023 6:51:04 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/31/2023 6:51:04 AM
Toluene	ND	0.047		mg/Kg	1	3/31/2023 6:51:04 AM
Ethylbenzene	ND	0.047		mg/Kg	1	3/31/2023 6:51:04 AM
Xylenes, Total	ND	0.094		mg/Kg	1	3/31/2023 6:51:04 AM
Surr: 4-Bromofluorobenzene	89.9	70-130		%Rec	1	3/31/2023 6:51:04 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	1100	60		mg/Kg	20	3/30/2023 5:19:56 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303D22**
Date Reported: **4/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-09 1'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/24/2023 10:20:00 AM
Lab ID: 2303D22-004 **Matrix:** SOIL **Received Date:** 3/28/2023 7:55:00 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	3/30/2023 5:07:00 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/30/2023 5:07:00 PM
Surr: DNOP	153	69-147	S	%Rec	1	3/30/2023 5:07:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/31/2023 7:14:28 AM
Surr: BFB	98.6	37.7-212		%Rec	1	3/31/2023 7:14:28 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	3/31/2023 7:14:28 AM
Toluene	ND	0.049		mg/Kg	1	3/31/2023 7:14:28 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/31/2023 7:14:28 AM
Xylenes, Total	ND	0.097		mg/Kg	1	3/31/2023 7:14:28 AM
Surr: 4-Bromofluorobenzene	87.7	70-130		%Rec	1	3/31/2023 7:14:28 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	2300	59		mg/Kg	20	3/30/2023 5:32:21 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303D22**
Date Reported: **4/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-10 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/24/2023 10:35:00 AM
Lab ID: 2303D22-005 **Matrix:** SOIL **Received Date:** 3/28/2023 7:55:00 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	3/30/2023 5:17:41 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/30/2023 5:17:41 PM
Surr: DNOP	95.2	69-147		%Rec	1	3/30/2023 5:17:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/31/2023 7:37:58 AM
Surr: BFB	99.9	37.7-212		%Rec	1	3/31/2023 7:37:58 AM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/31/2023 7:37:58 AM
Toluene	ND	0.049		mg/Kg	1	3/31/2023 7:37:58 AM
Ethylbenzene	ND	0.049		mg/Kg	1	3/31/2023 7:37:58 AM
Xylenes, Total	ND	0.099		mg/Kg	1	3/31/2023 7:37:58 AM
Surr: 4-Bromofluorobenzene	88.1	70-130		%Rec	1	3/31/2023 7:37:58 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	3/30/2023 5:44:46 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2303D22**
Date Reported: **4/4/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-10 1'
Project: Laguna Salado 22 Federal 4
Collection Date: 3/24/2023 10:50:00 AM
Lab ID: 2303D22-006 **Matrix:** SOIL **Received Date:** 3/28/2023 7:55:00 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	3/31/2023 2:48:43 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/31/2023 2:48:43 PM
Surr: DNOP	106	69-147		%Rec	1	3/31/2023 2:48:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/31/2023 9:58:39 PM
Surr: BFB	98.8	37.7-212		%Rec	1	3/31/2023 9:58:39 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	3/31/2023 9:58:39 PM
Toluene	ND	0.050		mg/Kg	1	3/31/2023 9:58:39 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/31/2023 9:58:39 PM
Xylenes, Total	ND	0.10		mg/Kg	1	3/31/2023 9:58:39 PM
Surr: 4-Bromofluorobenzene	90.3	70-130		%Rec	1	3/31/2023 9:58:39 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	3/31/2023 6:45:02 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 Quanitative 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#: **2303D22**

04-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Federal 4

Sample ID: **MB-74038**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **74038**	RunNo: **95700**							
Prep Date: **3/30/2023**	Analysis Date: **3/30/2023**	SeqNo: **3463712**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-74038**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **74038**	RunNo: **95700**							
Prep Date: **3/30/2023**	Analysis Date: **3/30/2023**	SeqNo: **3463713**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.7	90	110			

Sample ID: **MB-74065**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **74065**	RunNo: **95704**							
Prep Date: **3/31/2023**	Analysis Date: **3/31/2023**	SeqNo: **3464415**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-74065**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **74065**	RunNo: **95704**							
Prep Date: **3/31/2023**	Analysis Date: **3/31/2023**	SeqNo: **3464416**	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			

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 Quanitative 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#: **2303D22**

04-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Federal 4

Sample ID: **MB-74015** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **74015** RunNo: **95677**

Prep Date: **3/29/2023** Analysis Date: **3/30/2023** SeqNo: **3462620** 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		102	69	147			

Sample ID: **LCS-74015** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **74015** RunNo: **95677**

Prep Date: **3/29/2023** Analysis Date: **3/30/2023** SeqNo: **3462621** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.5	61.9	130			
Surr: DNOP	5.5		5.000		110	69	147			

Sample ID: **MB-74042** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **74042** RunNo: **95708**

Prep Date: **3/30/2023** Analysis Date: **3/31/2023** SeqNo: **3465049** 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		97.5	69	147			

Sample ID: **LCS-74042** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **74042** RunNo: **95708**

Prep Date: **3/30/2023** Analysis Date: **3/31/2023** SeqNo: **3465054** 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	78.9	61.9	130			
Surr: DNOP	4.7		5.000		93.5	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 Quanitative 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#: **2303D22**

04-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Federal 4

Sample ID: **lcs-74005**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **74005**	RunNo: **95669**
Prep Date: **3/29/2023**	Analysis Date: **3/30/2023**	SeqNo: **3463607** 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		194	37.7	212			

Sample ID: **mb-74005**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **74005**	RunNo: **95669**
Prep Date: **3/29/2023**	Analysis Date: **3/30/2023**	SeqNo: **3463608** 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		103	37.7	212			

Sample ID: **lcs-74028**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **74028**	RunNo: **95705**
Prep Date: **3/30/2023**	Analysis Date: **3/31/2023**	SeqNo: **3464993** 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	90.8	70	130			
Surr: BFB	1900		1000		195	37.7	212			

Sample ID: **mb-74028**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **74028**	RunNo: **95705**
Prep Date: **3/30/2023**	Analysis Date: **3/31/2023**	SeqNo: **3464994** 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		102	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 Quanitative 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#: **2303D22**

04-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Federal 4

Sample ID: **LCS-74005**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **74005**	RunNo: **95669**							
Prep Date: **3/29/2023**	Analysis Date: **3/30/2023**	SeqNo: **3463614**	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	91.4	80	120			
Toluene	0.91	0.050	1.000	0	90.9	80	120			
Ethylbenzene	0.89	0.050	1.000	0	89.3	80	120			
Xylenes, Total	2.7	0.10	3.000	0	88.8	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.1	70	130			

Sample ID: **mb-74005**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **74005**	RunNo: **95669**							
Prep Date: **3/29/2023**	Analysis Date: **3/30/2023**	SeqNo: **3463615**	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	0.92		1.000		91.8	70	130			

Sample ID: **LCS-74028**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **74028**	RunNo: **95705**							
Prep Date: **3/30/2023**	Analysis Date: **3/31/2023**	SeqNo: **3465021**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.3	80	120			
Toluene	0.92	0.050	1.000	0	92.3	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.1	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.9	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.5	70	130			

Sample ID: **mb-74028**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **74028**	RunNo: **95705**							
Prep Date: **3/30/2023**	Analysis Date: **3/31/2023**	SeqNo: **3465022**	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		92.8	70	130			

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 Quanitative 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#: **2303D22**

04-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Federal 4

Sample ID: **2303d22-006ams**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-10 1'**	Batch ID: **74028**	RunNo: **95705**
Prep Date: **3/30/2023**	Analysis Date: **3/31/2023**	SeqNo: **3465026** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	0.9911	0	96.2	68.8	120			
Toluene	0.95	0.050	0.9911	0	95.5	73.6	124			
Ethylbenzene	0.95	0.050	0.9911	0	96.0	72.7	129			
Xylenes, Total	2.8	0.099	2.973	0	95.8	75.7	126			
Surr: 4-Bromofluorobenzene	0.89		0.9911		89.7	70	130			

Sample ID: **2303d22-006amsd**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-10 1'**	Batch ID: **74028**	RunNo: **95705**
Prep Date: **3/30/2023**	Analysis Date: **3/31/2023**	SeqNo: **3465027** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	0.9891	0	97.6	68.8	120	1.27	20	
Toluene	0.97	0.049	0.9891	0	98.0	73.6	124	2.34	20	
Ethylbenzene	0.98	0.049	0.9891	0	98.7	72.7	129	2.53	20	
Xylenes, Total	2.9	0.099	2.967	0	97.9	75.7	126	2.04	20	
Surr: 4-Bromofluorobenzene	0.90		0.9891		90.7	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 Quanitative 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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: **2303D22** RcptNo: **1**

Received By: **Juan Rojas** **3/28/2023 7:55:00 AM**

Completed By: **Desiree Dominguez** **3/28/2023 8:36:45 AM**

Reviewed By: DAD 3/28/23

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: JW 3/28/23

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: _____

16. Additional remarks:

Client information missing on COC. -DAD 3/28/23

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.7	Good	Not Present	Morty		

Received by OCD: 3/14/2025 9:48:53 AM

Released to Imaging: 4/4/2025 2:49:23 PM

Chain-of-Custody Record

Client: Vertex (Devon)

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 Federal 4

Project #: 23E-01414

Project Manager: Kent Stallings

Sampler: SPC

On Ice: ☐ Yes ☐ No

# of Coolers: 1 Marty

Cooler Temp(including CF): 0.8-0.1=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. 2303D22	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)
3/24/23	9:30	Soil	BH23-08 0'	4oz jar	ice	-001	✓	✓					✓			
	10:00		BH23-08 1'			-002										
	10:10		BH23-09 0'			-003										
	10:20		BH23-09 1'			-004										
	10:35		BH23-10 0'			-005										
	10:50		BH23-10 1'			-006										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/24/23	15:09	Sally Carthar			3/27/23	915
3/27/23	1900		Courier		3/28/23	7:55

Remarks:
direct bill Devon, pending W/O #
cc scarthar@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

Hall Environmental Analysis Laboratory
4901 Hawkins NE
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April 19, 2023

Kent Stallings

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

RE: Laguna Salado Federal 4 OrderNo.: 2304340

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 10 sample(s) on 4/7/2023 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,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2304340**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Laguna Salado Federal 4
Lab ID: 2304340-001 **Matrix:** SOIL

Client Sample ID: BH23-11 0'
Collection Date: 4/5/2023 9:15:00 AM
Received Date: 4/7/2023 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	4/11/2023 12:30:08 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/11/2023 12:30:08 AM
Surr: DNOP	92.1	69-147		%Rec	1	4/11/2023 12:30:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/10/2023 11:10:00 PM
Surr: BFB	87.3	37.7-212		%Rec	1	4/10/2023 11:10:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	4/10/2023 11:10:00 PM
Toluene	ND	0.047		mg/Kg	1	4/10/2023 11:10:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/10/2023 11:10:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	4/10/2023 11:10:00 PM
Surr: 4-Bromofluorobenzene	87.8	70-130		%Rec	1	4/10/2023 11:10:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	620	60		mg/Kg	20	4/11/2023 10:55:17 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304340**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Laguna Salado Federal 4
Lab ID: 2304340-002 **Matrix:** SOIL

Client Sample ID: BH23-11 2'
Collection Date: 4/5/2023 9:20:00 AM
Received Date: 4/7/2023 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	4/11/2023 12:40:44 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/11/2023 12:40:44 AM
Surr: DNOP	91.6	69-147		%Rec	1	4/11/2023 12:40:44 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/10/2023 11:31:00 PM
Surr: BFB	89.8	37.7-212		%Rec	1	4/10/2023 11:31:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	4/10/2023 11:31:00 PM
Toluene	ND	0.050		mg/Kg	1	4/10/2023 11:31:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/10/2023 11:31:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/10/2023 11:31:00 PM
Surr: 4-Bromofluorobenzene	87.9	70-130		%Rec	1	4/10/2023 11:31:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	1600	60		mg/Kg	20	4/11/2023 11:07:42 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304340**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-12 0'
Project: Laguna Salado Federal 4
Collection Date: 4/5/2023 10:10:00 AM
Lab ID: 2304340-003 **Matrix:** SOIL **Received Date:** 4/7/2023 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	4/11/2023 12:51:20 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/11/2023 12:51:20 AM
Surr: DNOP	97.8	69-147		%Rec	1	4/11/2023 12:51:20 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2023 12:14:00 AM
Surr: BFB	91.0	37.7-212		%Rec	1	4/11/2023 12:14:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	4/11/2023 12:14:00 AM
Toluene	ND	0.049		mg/Kg	1	4/11/2023 12:14:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2023 12:14:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/11/2023 12:14:00 AM
Surr: 4-Bromofluorobenzene	88.1	70-130		%Rec	1	4/11/2023 12:14:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	ND	60		mg/Kg	20	4/11/2023 11:20:07 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304340**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Laguna Salado Federal 4
Lab ID: 2304340-004 **Matrix:** SOIL

Client Sample ID: BH23-12 2'
Collection Date: 4/5/2023 10:15:00 AM
Received Date: 4/7/2023 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	9.4		mg/Kg	1	4/11/2023 1:01:57 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/11/2023 1:01:57 AM
Surr: DNOP	82.0	69-147		%Rec	1	4/11/2023 1:01:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2023 12:36:00 AM
Surr: BFB	91.2	37.7-212		%Rec	1	4/11/2023 12:36:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	4/11/2023 12:36:00 AM
Toluene	ND	0.049		mg/Kg	1	4/11/2023 12:36:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2023 12:36:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/11/2023 12:36:00 AM
Surr: 4-Bromofluorobenzene	89.0	70-130		%Rec	1	4/11/2023 12:36:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	920	60		mg/Kg	20	4/11/2023 11:57:21 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304340**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Client Sample ID: BH23-12 3'
Project: Laguna Salado Federal 4
Collection Date: 4/5/2023 10:20:00 AM
Lab ID: 2304340-005 **Matrix:** SOIL **Received Date:** 4/7/2023 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	4/11/2023 1:12:35 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/11/2023 1:12:35 AM
Surr: DNOP	101	69-147		%Rec	1	4/11/2023 1:12:35 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/11/2023 12:57:00 AM
Surr: BFB	87.4	37.7-212		%Rec	1	4/11/2023 12:57:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	4/11/2023 12:57:00 AM
Toluene	ND	0.048		mg/Kg	1	4/11/2023 12:57:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/11/2023 12:57:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	4/11/2023 12:57:00 AM
Surr: 4-Bromofluorobenzene	88.2	70-130		%Rec	1	4/11/2023 12:57:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	770	60		mg/Kg	20	4/12/2023 12:09:45 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304340**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Laguna Salado Federal 4
Lab ID: 2304340-006 **Matrix:** SOIL

Client Sample ID: BH23-13 0'
Collection Date: 4/5/2023 10:55:00 AM
Received Date: 4/7/2023 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	4/11/2023 1:23:11 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/11/2023 1:23:11 AM
Surr: DNOP	88.2	69-147		%Rec	1	4/11/2023 1:23:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2023 1:19:00 AM
Surr: BFB	88.1	37.7-212		%Rec	1	4/11/2023 1:19:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	4/11/2023 1:19:00 AM
Toluene	ND	0.049		mg/Kg	1	4/11/2023 1:19:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2023 1:19:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/11/2023 1:19:00 AM
Surr: 4-Bromofluorobenzene	87.1	70-130		%Rec	1	4/11/2023 1:19:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	100	60		mg/Kg	20	4/12/2023 12:46:58 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304340**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Laguna Salado Federal 4
Lab ID: 2304340-007 **Matrix:** SOIL

Client Sample ID: BH23-13 1'
Collection Date: 4/5/2023 11:17:00 AM
Received Date: 4/7/2023 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	10		mg/Kg	1	4/11/2023 1:44:21 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/11/2023 1:44:21 AM
Surr: DNOP	99.8	69-147		%Rec	1	4/11/2023 1:44:21 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/11/2023 1:40:00 AM
Surr: BFB	89.2	37.7-212		%Rec	1	4/11/2023 1:40:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	4/11/2023 1:40:00 AM
Toluene	ND	0.048		mg/Kg	1	4/11/2023 1:40:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/11/2023 1:40:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/11/2023 1:40:00 AM
Surr: 4-Bromofluorobenzene	88.7	70-130		%Rec	1	4/11/2023 1:40:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	450	60		mg/Kg	20	4/12/2023 12:59:23 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304340**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Laguna Salado Federal 4
Lab ID: 2304340-008 **Matrix:** SOIL

Client Sample ID: BH23-13 2'
Collection Date: 4/5/2023 11:33:00 AM
Received Date: 4/7/2023 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	9.8		mg/Kg	1	4/11/2023 1:55:01 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/11/2023 1:55:01 AM
Surr: DNOP	91.6	69-147		%Rec	1	4/11/2023 1:55:01 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/11/2023 2:02:00 AM
Surr: BFB	87.2	37.7-212		%Rec	1	4/11/2023 2:02:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	4/11/2023 2:02:00 AM
Toluene	ND	0.048		mg/Kg	1	4/11/2023 2:02:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/11/2023 2:02:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	4/11/2023 2:02:00 AM
Surr: 4-Bromofluorobenzene	88.9	70-130		%Rec	1	4/11/2023 2:02:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	1500	60		mg/Kg	20	4/12/2023 1:11:48 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304340**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Laguna Salado Federal 4
Lab ID: 2304340-009 **Matrix:** SOIL

Client Sample ID: BH23-14 0'
Collection Date: 4/5/2023 2:20:00 PM
Received Date: 4/7/2023 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	4/11/2023 2:05:39 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/11/2023 2:05:39 AM
Surr: DNOP	91.8	69-147		%Rec	1	4/11/2023 2:05:39 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/11/2023 2:23:00 AM
Surr: BFB	96.5	37.7-212		%Rec	1	4/11/2023 2:23:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	4/11/2023 2:23:00 AM
Toluene	ND	0.048		mg/Kg	1	4/11/2023 2:23:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	4/11/2023 2:23:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	4/11/2023 2:23:00 AM
Surr: 4-Bromofluorobenzene	86.9	70-130		%Rec	1	4/11/2023 2:23:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	13000	600		mg/Kg	200	4/12/2023 5:18:24 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304340**
Date Reported: **4/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy
Project: Laguna Salado Federal 4
Lab ID: 2304340-010 **Matrix:** SOIL

Client Sample ID: BH23-14 1'
Collection Date: 4/5/2023 2:35:00 PM
Received Date: 4/7/2023 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	10		mg/Kg	1	4/11/2023 2:16:19 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/11/2023 2:16:19 AM
Surr: DNOP	86.9	69-147		%Rec	1	4/11/2023 2:16:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2023 2:45:00 AM
Surr: BFB	85.7	37.7-212		%Rec	1	4/11/2023 2:45:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	4/11/2023 2:45:00 AM
Toluene	ND	0.049		mg/Kg	1	4/11/2023 2:45:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2023 2:45:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	4/11/2023 2:45:00 AM
Surr: 4-Bromofluorobenzene	87.9	70-130		%Rec	1	4/11/2023 2:45:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	4900	150		mg/Kg	50	4/13/2023 10:45:07 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 Quanitative 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#: **2304340**

19-Apr-23

Client: Devon Energy

Project: Laguna Salado Federal 4

Sample ID:	**MB-74258**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**74258**	RunNo:	**95942**					
Prep Date:	**4/11/2023**	Analysis Date:	**4/11/2023**	SeqNo:	**3474458**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID:	**LCS-74258**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**74258**	RunNo:	**95942**					
Prep Date:	**4/11/2023**	Analysis Date:	**4/11/2023**	SeqNo:	**3474459**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.9	90	110			

Sample ID:	**MB-74272**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**74272**	RunNo:	**95984**					
Prep Date:	**4/12/2023**	Analysis Date:	**4/12/2023**	SeqNo:	**3475680**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID:	**LCS-74272**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**74272**	RunNo:	**95984**					
Prep Date:	**4/12/2023**	Analysis Date:	**4/12/2023**	SeqNo:	**3475681**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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#: **2304340**

19-Apr-23

Client: Devon Energy

Project: Laguna Salado Federal 4

Sample ID: **LCS-74202**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **74202**	RunNo: **95894**
Prep Date: **4/7/2023**	Analysis Date: **4/10/2023**	SeqNo: **3472132** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.2	69	147			

Sample ID: **MB-74202**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **74202**	RunNo: **95894**
Prep Date: **4/7/2023**	Analysis Date: **4/10/2023**	SeqNo: **3472133** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		87.2	69	147			

Sample ID: **LCS-74212**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **74212**	RunNo: **95894**
Prep Date: **4/7/2023**	Analysis Date: **4/10/2023**	SeqNo: **3472642** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	61.9	130			
Surr: DNOP	5.6		5.000		113	69	147			

Sample ID: **MB-74212**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **74212**	RunNo: **95894**
Prep Date: **4/7/2023**	Analysis Date: **4/10/2023**	SeqNo: **3472644** 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		102	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 Quanitative 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#: **2304340**

19-Apr-23

Client: Devon Energy

Project: Laguna Salado Federal 4

Sample ID: **lcs-74206**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **74206**	RunNo: **95904**
Prep Date: **4/7/2023**	Analysis Date: **4/10/2023**	SeqNo: **3472695** 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	92.2	70	130			
Surr: BFB	1900		1000		191	37.7	212			

Sample ID: **mb-74206**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **74206**	RunNo: **95904**
Prep Date: **4/7/2023**	Analysis Date: **4/10/2023**	SeqNo: **3472696** 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		88.9	37.7	212			

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 Quanitative 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#: **2304340**

19-Apr-23

Client: Devon Energy

Project: Laguna Salado Federal 4

Sample ID: **lcs-74206**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **74206**	RunNo: **95904**
Prep Date: **4/7/2023**	Analysis Date: **4/10/2023**	SeqNo: **3472712** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	89.7	80	120			
Toluene	0.89	0.050	1.000	0	88.7	80	120			
Ethylbenzene	0.86	0.050	1.000	0	86.4	80	120			
Xylenes, Total	2.6	0.10	3.000	0	85.6	80	120			
Surr: 4-Bromofluorobenzene	0.90		1.000		90.1	70	130			

Sample ID: **mb-74206**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **74206**	RunNo: **95904**
Prep Date: **4/7/2023**	Analysis Date: **4/10/2023**	SeqNo: **3472713** 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	0.88		1.000		88.3	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 Quanitative 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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 2304340 | RcptNo: 1

Received By: Tracy Casarrubias 4/7/2023 7:30:00 AM

Completed By: Tracy Casarrubias 4/7/2023 7:58:26 AM

Reviewed By: ~~dc~~ 4/7/23
dc 4/7/23

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: JM 4/7/23

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: Missing mailing address, phone number, and Email on COC - TMC 4/7/23

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good	Yes	Yogi		

Received by OCD: 3/14/2025 9:48:53 AM

Released to Imaging: 4/4/2025 2:49:23 PM

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 Federal 4

Project #: 23E-01414

Project Manager: Kent Stallings

Sampler: SM

On Ice: ☑ Yes ☐ No 4091

# of Coolers: 1

Cooler Temp (including CF): 5.4-0=5.4 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2304340	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)
4/5/23	9:15	Soil	BH23-11 0'	4 oz jar	Ice	001	✓	✓					✓			
4/5/23	9:20		BH23-11 2'			002										
4/5/23	10:10		BH23-12 0'			003										
4/5/23	10:15		BH23-12 2'			004										
4/5/23	10:20		BH23-12 3'			005										
4/5/23	10:55		BH23-13 0'			006										
4/5/23	11:17		BH23-13 1'			007										
4/5/23	11:33		BH23-13 2'			008										
4/5/23	14:20		BH23-14 0'			009										
4/5/23	14:35		BH23-14 1'			010										

Analysis Request

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
4/5/23	18:10	Joseph McCarty				
4/6/23	1900				4/6/23	915
					4/7/23	730

Remarks: Direct bill Devon, w/o #21134488

C.C. SMccarty@vertex.ca pg 1 of 1

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

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

April 27, 2023

Kent Stallings

Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX

RE: Laguna Salado 22 Federal 4 OrderNo.: 2304662

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 13 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-16 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 4/13/2023 8:55:00 AM
Lab ID: 2304662-001 **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	8.4		mg/Kg	1	4/18/2023 11:08:20 PM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	4/18/2023 11:08:20 PM
Surr: DNOP	98.8	69-147		%Rec	1	4/18/2023 11:08:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/18/2023 6:57:09 PM
Surr: BFB	86.1	37.7-212		%Rec	1	4/18/2023 6:57:09 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/18/2023 6:57:09 PM
Toluene	ND	0.048		mg/Kg	1	4/18/2023 6:57:09 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/18/2023 6:57:09 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/18/2023 6:57:09 PM
Surr: 4-Bromofluorobenzene	91.1	70-130		%Rec	1	4/18/2023 6:57:09 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	6400	300		mg/Kg	100	4/19/2023 8:55:38 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-18 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 4/13/2023 9:24:00 AM
Lab ID: 2304662-002 **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	8.9		mg/Kg	1	4/18/2023 11:19:00 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/18/2023 11:19:00 PM
Surr: DNOP	76.1	69-147		%Rec	1	4/18/2023 11:19:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/18/2023 7:20:29 PM
Surr: BFB	86.0	37.7-212		%Rec	1	4/18/2023 7:20:29 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/18/2023 7:20:29 PM
Toluene	ND	0.048		mg/Kg	1	4/18/2023 7:20:29 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/18/2023 7:20:29 PM
Xylenes, Total	ND	0.095		mg/Kg	1	4/18/2023 7:20:29 PM
Surr: 4-Bromofluorobenzene	92.5	70-130		%Rec	1	4/18/2023 7:20:29 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 10:37:01 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-19 0'
Project: Laguna Salado 22 Federal 4 **Collection Date:** 4/13/2023 9:30:00 AM
Lab ID: 2304662-003 **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: **PRD**
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	4/19/2023 3:52:18 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	4/19/2023 3:52:18 PM
Surr: DNOP	84.9	69-147		%Rec	1	4/19/2023 3:52:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/18/2023 7:43:49 PM
Surr: BFB	106	37.7-212		%Rec	1	4/18/2023 7:43:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.023		mg/Kg	1	4/18/2023 7:43:49 PM
Toluene	ND	0.047		mg/Kg	1	4/18/2023 7:43:49 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/18/2023 7:43:49 PM
Xylenes, Total	ND	0.094		mg/Kg	1	4/18/2023 7:43:49 PM
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	4/18/2023 7:43:49 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	6400	300		mg/Kg	100	4/19/2023 9:08:03 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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 **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-22 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 4/13/2023 11:40:00 AM
Lab ID: 2304662-004 **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: **PRD**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/19/2023 4:02:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/19/2023 4:02:57 PM
Surr: DNOP	75.2	69-147		%Rec	1	4/19/2023 4:02:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/18/2023 8:07:12 PM
Surr: BFB	93.5	37.7-212		%Rec	1	4/18/2023 8:07:12 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	4/18/2023 8:07:12 PM
Toluene	ND	0.050		mg/Kg	1	4/18/2023 8:07:12 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/18/2023 8:07:12 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/18/2023 8:07:12 PM
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	4/18/2023 8:07:12 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	10000	600		mg/Kg	200	4/19/2023 9:20:27 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	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-25 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 4/13/2023 12:13:00 PM
Lab ID: 2304662-005 **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: **PRD**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/19/2023 4:13:34 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/19/2023 4:13:34 PM
Surr: DNOP	92.0	69-147		%Rec	1	4/19/2023 4:13:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/18/2023 8:30:40 PM
Surr: BFB	92.5	37.7-212		%Rec	1	4/18/2023 8:30:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/18/2023 8:30:40 PM
Toluene	ND	0.048		mg/Kg	1	4/18/2023 8:30:40 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/18/2023 8:30:40 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/18/2023 8:30:40 PM
Surr: 4-Bromofluorobenzene	94.5	70-130		%Rec	1	4/18/2023 8:30:40 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 11:14:03 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-26 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 4/13/2023 12:23:00 PM
Lab ID: 2304662-006 **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	9.4		mg/Kg	1	4/20/2023 10:05:49 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/20/2023 10:05:49 AM
Surr: DNOP	71.4	69-147		%Rec	1	4/20/2023 10:05:49 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/18/2023 8:54:08 PM
Surr: BFB	98.5	37.7-212		%Rec	1	4/18/2023 8:54:08 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	4/18/2023 8:54:08 PM
Toluene	ND	0.050		mg/Kg	1	4/18/2023 8:54:08 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/18/2023 8:54:08 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/18/2023 8:54:08 PM
Surr: 4-Bromofluorobenzene	94.7	70-130		%Rec	1	4/18/2023 8:54:08 PM
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Chloride	ND	60		mg/Kg	20	4/18/2023 11:26:24 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-27 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 4/13/2023 12:32:00 PM
Lab ID: 2304662-007 **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: **PRD**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/19/2023 4:45:31 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/19/2023 4:45:31 PM
Surr: DNOP	135	69-147		%Rec	1	4/19/2023 4:45:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/18/2023 9:17:31 PM
Surr: BFB	99.2	37.7-212		%Rec	1	4/18/2023 9:17:31 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.024		mg/Kg	1	4/18/2023 9:17:31 PM
Toluene	ND	0.049		mg/Kg	1	4/18/2023 9:17:31 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/18/2023 9:17:31 PM
Xylenes, Total	ND	0.098		mg/Kg	1	4/18/2023 9:17:31 PM
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	4/18/2023 9:17:31 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	4/19/2023 11:46:28 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-28 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 4/13/2023 12:35:00 PM
Lab ID: 2304662-008 **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: **PRD**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/26/2023 10:55:36 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/26/2023 10:55:36 AM
Surr: DNOP	90.2	69-147		%Rec	1	4/26/2023 10:55:36 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **JJP**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/18/2023 9:40:49 PM
Surr: BFB	99.9	37.7-212		%Rec	1	4/18/2023 9:40:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: **JJP**
Benzene	ND	0.025		mg/Kg	1	4/18/2023 9:40:49 PM
Toluene	ND	0.049		mg/Kg	1	4/18/2023 9:40:49 PM
Ethylbenzene	ND	0.049		mg/Kg	1	4/18/2023 9:40:49 PM
Xylenes, Total	ND	0.099		mg/Kg	1	4/18/2023 9:40:49 PM
Surr: 4-Bromofluorobenzene	94.7	70-130		%Rec	1	4/18/2023 9:40:49 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	4/19/2023 11:58:52 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-31 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 4/13/2023 1:15:00 PM
Lab ID: 2304662-009 **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	9.2		mg/Kg	1	4/19/2023 12:01:36 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/19/2023 12:01:36 AM
Surr: DNOP	83.6	69-147		%Rec	1	4/19/2023 12:01:36 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/18/2023 10:39:00 PM
Surr: BFB	90.1	37.7-212		%Rec	1	4/18/2023 10:39:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	4/18/2023 10:39:00 PM
Toluene	ND	0.048		mg/Kg	1	4/18/2023 10:39:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	4/18/2023 10:39:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	4/18/2023 10:39:00 PM
Surr: 4-Bromofluorobenzene	83.0	70-130		%Rec	1	4/18/2023 10:39:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	600	61		mg/Kg	20	4/19/2023 12:11:17 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-32 0'
Project: Laguna Salado 22 Federal 4 **Collection Date:** 4/13/2023 1:15:00 PM
Lab ID: 2304662-010 **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	9.0		mg/Kg	1	4/19/2023 12:33:39 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/19/2023 12:33:39 AM
Surr: DNOP	92.7	69-147		%Rec	1	4/19/2023 12:33:39 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/18/2023 11:44:00 PM
Surr: BFB	93.3	37.7-212		%Rec	1	4/18/2023 11:44:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.024		mg/Kg	1	4/18/2023 11:44:00 PM
Toluene	ND	0.047		mg/Kg	1	4/18/2023 11:44:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	4/18/2023 11:44:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	4/18/2023 11:44:00 PM
Surr: 4-Bromofluorobenzene	85.2	70-130		%Rec	1	4/18/2023 11:44:00 PM
EPA METHOD 300.0: ANIONS						Analyst: **JTT**
Chloride	21000	15000		mg/Kg	5000	4/21/2023 3:37:57 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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-33 0'
Project: Laguna Salado 22 Federal 4 **Collection Date:** 4/13/2023 1:35:00 PM
Lab ID: 2304662-011 **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	9.9		mg/Kg	1	4/19/2023 12:44:21 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/19/2023 12:44:21 AM
Surr: DNOP	77.9	69-147		%Rec	1	4/19/2023 12:44:21 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/19/2023 12:49:00 AM
Surr: BFB	85.4	37.7-212		%Rec	1	4/19/2023 12:49:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	4/19/2023 12:49:00 AM
Toluene	ND	0.050		mg/Kg	1	4/19/2023 12:49:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	4/19/2023 12:49:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	4/19/2023 12:49:00 AM
Surr: 4-Bromofluorobenzene	83.2	70-130		%Rec	1	4/19/2023 12:49:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	110	60		mg/Kg	20	4/19/2023 12:36:06 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-34 0'
Project: Laguna Salado 22 Federal 4
Collection Date: 4/13/2023 1:40:00 PM
Lab ID: 2304662-012 **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	9.5		mg/Kg	1	4/19/2023 11:23:03 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/19/2023 11:23:03 AM
Surr: DNOP	69.9	69-147		%Rec	1	4/19/2023 11:23:03 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/19/2023 1:10:00 AM
Surr: BFB	90.0	37.7-212		%Rec	1	4/19/2023 1:10:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.025		mg/Kg	1	4/19/2023 1:10:00 AM
Toluene	ND	0.049		mg/Kg	1	4/19/2023 1:10:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	4/19/2023 1:10:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	4/19/2023 1:10:00 AM
Surr: 4-Bromofluorobenzene	83.7	70-130		%Rec	1	4/19/2023 1:10:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **CAS**
Chloride	ND	60		mg/Kg	20	4/19/2023 1:13:20 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2304662**
Date Reported: **4/27/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. **Client Sample ID:** BH23-38 0'
Project: Laguna Salado 22 Federal 4 **Collection Date:** 4/13/2023 2:45:00 PM
Lab ID: 2304662-013 **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: **DGH**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/19/2023 1:05:48 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/19/2023 1:05:48 AM
Surr: DNOP	73.2	69-147		%Rec	1	4/19/2023 1:05:48 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **CCM**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/19/2023 1:32:00 AM
Surr: BFB	91.3	37.7-212		%Rec	1	4/19/2023 1:32:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **CCM**
Benzene	ND	0.023		mg/Kg	1	4/19/2023 1:32:00 AM
Toluene	ND	0.046		mg/Kg	1	4/19/2023 1:32:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	4/19/2023 1:32:00 AM
Xylenes, Total	ND	0.092		mg/Kg	1	4/19/2023 1:32:00 AM
Surr: 4-Bromofluorobenzene	85.2	70-130		%Rec	1	4/19/2023 1:32:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **SNS**
Chloride	130	60		mg/Kg	20	4/19/2023 1:51:20 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 Quanitative 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#: **2304662**

27-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Federal 4

Sample ID: **MB-74407** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **74407** RunNo: **96135**

Prep Date: **4/19/2023** Analysis Date: **4/19/2023** SeqNo: **3482355** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-74407** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **74407** RunNo: **96135**

Prep Date: **4/19/2023** Analysis Date: **4/19/2023** SeqNo: **3482356** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.5	90	110			

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 Quanitative 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#: **2304662**
27-Apr-23

Client: Vertex Resources Services, Inc.
Project: Laguna Salado 22 Federal 4

Sample ID: **2304662-009AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-31 0'** Batch ID: **74375** RunNo: **96131**
Prep Date: **4/17/2023** Analysis Date: **4/19/2023** SeqNo: **3481330** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	49.90	0	81.6	54.2	135			
Surr: DNOP	4.5		4.990		90.8	69	147			

Sample ID: **LCS-74366** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **74366** RunNo: **96131**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3481380** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.7	61.9	130			
Surr: DNOP	5.3		5.000		106	69	147			

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: **MB-74366** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **74366** RunNo: **96131**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3481384** 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		108	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			

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 Quanitative 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#: **2304662**
27-Apr-23

Client: Vertex Resources Services, Inc.
Project: Laguna Salado 22 Federal 4

Sample ID: **2304662-009AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-31 0'** Batch ID: **74375** RunNo: **96131**
Prep Date: **4/17/2023** Analysis Date: **4/19/2023** SeqNo: **3481403** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	31	9.0	45.00	0	68.9	54.2	135	27.0	29.2	
Surr: DNOP	3.2		4.500		70.9	69	147	0	0	

Sample ID: **MB-74388** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **74388** RunNo: **96159**
Prep Date: **4/18/2023** Analysis Date: **4/19/2023** SeqNo: **3481896** 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	8.1		10.00		81.0	69	147			

Sample ID: **LCS-74388** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **74388** RunNo: **96159**
Prep Date: **4/18/2023** Analysis Date: **4/19/2023** SeqNo: **3481899** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.4	61.9	130			
Surr: DNOP	4.8		5.000		95.5	69	147			

Sample ID: **2304662-003AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-19 0'** Batch ID: **74388** RunNo: **96159**
Prep Date: **4/18/2023** Analysis Date: **4/20/2023** SeqNo: **3481903** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	35	9.1	45.58	0	75.8	54.2	135			
Surr: DNOP	3.7		4.558		80.2	69	147			

Sample ID: **2304662-003AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **BH23-19 0'** Batch ID: **74388** RunNo: **96159**
Prep Date: **4/18/2023** Analysis Date: **4/20/2023** SeqNo: **3481904** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	34	9.1	45.54	0	74.5	54.2	135	1.78	29.2	
Surr: DNOP	3.6		4.554		78.3	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 Quanitative 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#: **2304662**

27-Apr-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Federal 4

Sample ID: **LCS-74565** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **74565** RunNo: **96315**

Prep Date: **4/26/2023** Analysis Date: **4/26/2023** SeqNo: **3488063** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.2	61.9	130			
Surr: DNOP	4.5		5.000		89.8	69	147			

Sample ID: **MB-74565** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **74565** RunNo: **96315**

Prep Date: **4/26/2023** Analysis Date: **4/26/2023** SeqNo: **3488064** 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			

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 Quanitative 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#: **2304662**
27-Apr-23

Client: Vertex Resources Services, Inc.
Project: Laguna Salado 22 Federal 4

Sample ID: **lcs-74359** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **74359** RunNo: **96123**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3480902** 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	93.7	70	130			
Surr: BFB	5100		1000		507	37.7	212			S

Sample ID: **mb-74359** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **74359** RunNo: **96123**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3480903** 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	880		1000		87.5	37.7	212			

Sample ID: **lcs-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: **2304662-009ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-31 0'** Batch ID: **74370** RunNo: **96093**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3481115** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	24.20	0	93.0	70	130			
Surr: BFB	2000		968.1		209	37.7	212			

Sample ID: **2304662-009amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-31 0'** Batch ID: **74370** RunNo: **96093**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3481116** 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 Quanitative 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#: **2304662**
27-Apr-23

Client: Vertex Resources Services, Inc.
Project: Laguna Salado 22 Federal 4

Sample ID: **2304662-009amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BH23-31 0'** Batch ID: **74370** RunNo: **96093**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3481116** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	23.88	0	93.2	70	130	1.17	20	
Surr: BFB	2000		955.1		210	37.7	212	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 Quanitative 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#: **2304662**
27-Apr-23

Client: Vertex Resources Services, Inc.
Project: Laguna Salado 22 Federal 4

Sample ID: **LCS-74359** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **74359** RunNo: **96123**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3480930** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	83.7	80	120			
Toluene	0.85	0.050	1.000	0	85.1	80	120			
Ethylbenzene	0.86	0.050	1.000	0	85.6	80	120			
Xylenes, Total	2.6	0.10	3.000	0	86.8	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.2	70	130			

Sample ID: **mb-74359** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **74359** RunNo: **96123**
Prep Date: **4/17/2023** Analysis Date: **4/18/2023** SeqNo: **3480931** 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	0.92		1.000		92.0	70	130			

Sample ID: **lcs-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			

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 Quanitative 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#: **2304662**
27-Apr-23

Client: Vertex Resources Services, Inc.
Project: Laguna Salado 22 Federal 4

Sample ID: **2304662-010ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-32 0'** Batch ID: **74370** RunNo: **96093**
Prep Date: **4/17/2023** Analysis Date: **4/19/2023** SeqNo: **3481173** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.024	0.9497	0	95.3	68.8	120			
Toluene	0.92	0.047	0.9497	0	96.6	73.6	124			
Ethylbenzene	0.91	0.047	0.9497	0	95.8	72.7	129			
Xylenes, Total	2.7	0.095	2.849	0	94.8	75.7	126			
Surr: 4-Bromofluorobenzene	0.81		0.9497		85.1	70	130			

Sample ID: **2304662-010amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BH23-32 0'** Batch ID: **74370** RunNo: **96093**
Prep Date: **4/17/2023** Analysis Date: **4/19/2023** SeqNo: **3481174** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.024	0.9506	0	97.3	68.8	120	2.08	20	
Toluene	0.93	0.048	0.9506	0	98.3	73.6	124	1.90	20	
Ethylbenzene	0.92	0.048	0.9506	0	97.1	72.7	129	1.40	20	
Xylenes, Total	2.7	0.095	2.852	0	95.7	75.7	126	1.07	20	
Surr: 4-Bromofluorobenzene	0.82		0.9506		85.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 2304662 RcptNo: 1

Received By: Cheyenne Cason 4/15/2023 8:40:00 AM

Completed By: Cheyenne Cason 4/17/2023 8:10:55 AM

Reviewed By: JN 4/17/23

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: _____ 4/17/23

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: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present	Morty		

Received by OCD: 3/14/2025 9:48:53 AM

Released to Imaging: 4/4/2025 2:49:23 PM

Chain-of-Custody Record

Client: Devon/Vertex

Mailing Address: On file

Phone #: On file

email or Fax#: On file

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
X Standard ☐ Rush 5 Day

Project Name:
Laguna Salado 22 Federal 4

Project #:
23E-01414

Project Manager:
Kent Stallings

Sampler: SM

On Ice: ⊗ Yes ☐ No Mark

# of Coolers: 1

Cooler Temp(including CF): 1.1-0.1=1.0

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2304662	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)
4/13/23	8:55	Soil	BES23-16 0'	4 oz jar	ice	001	X	X					X			
	9:24		BES23-18 0'			002	X	X					X			
	9:30		BES23-19 0'			003	X	X					X			
	11:40		BES23-22 0'			004	X	X					X			
	12:13		BES23-25 0'			005	X	X					X			
	12:23		BES23-26 0'			006	X	X					X			
	12:32		BES23-27 0'			007	X	X					X			
	12:35		BES23-28 0'			008	X	X					X			
	13:15		BES23-31 0'			009	X	X					X			
	13:15		BES23-32 0'			010	X	X					X			
	13:35		BES23-33 0'			011	X	X					X			
	13:40		BES23-34 0'			012	X	X					X			

Date	Time	Relinquished by	Received by	Via	Date	Time
4/13/23	18:30	Steph Mccarty				
4/14/23	9:00				4/14/23	945
					4/15/23	0840

Analysis Request

Remarks: Direct bill to: Devon W/O #: 21134488
c.c smccarty@vertex.ca Pg. 1of 2

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.

Chain-of-Custody Record

Client: Devon/Vertex

Mailing Address: On file

Phone #: On file

email or Fax#: On file

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
X Standard ☒ Rush 5 Day

Project Name:
Laguna Salado 22 Federal 4

Project #:
23E-01414

Project Manager:
Kent Stallings

Sampler: SM
On Ice: ⊗ Yes ☐ No Mandy
# of Coolers: 1
Cooler Temp(including CF): 1.1-0.1=1.0

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2304662	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)
4/13/23	14:45	Soil	BES23-38 0'	4 oz jar	ice	013	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/13/23	18:30	Steph Mccarty				
4/14/23	1900				4/14/23	945
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			CMC courier		4/15/23	0840

Remarks: Direct bill to: Devon W/O #: 21134488
c.c smccarty@vertex.ca Pg. 2of 2

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

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,

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
Project: Laguna Salado 22 Fed 4
Lab ID: 2304962-001 **Matrix:** SOIL

Client Sample ID: BH23-14 2'
Collection Date: 4/20/2023 8:52:00 AM
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.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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 **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 Quanitative 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 Quanitative 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
Project: Laguna Salado 22 Fed 4
Lab ID: 2304962-004 **Matrix:** SOIL

Client Sample ID: BH23-14 8'
Collection Date: 4/20/2023 10:00:00 AM
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 Quanitative 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
Project: Laguna Salado 22 Fed 4
Lab ID: 2304962-005 **Matrix:** SOIL

Client Sample ID: BH23-14 9'
Collection Date: 4/20/2023 10:26:00 AM
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 Quanitative 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.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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 **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 Quanitative 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 Quanitative 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 Quanitative 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 Quanitative 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 Quanitative 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.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative 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: **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: **lcs**	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: **lcs**	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 Quanitative 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 Quanitative 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 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 Quanitative 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 Quanitative 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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: MG 4/24/23

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: JR 4/22/23

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: _____

16. Additional remarks:

Client missing mailing address,phone number and email address on COC. JR 4/22/23

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good	No	Morty		

Received by OCD: 3/14/2025 9:48:53 AM

Released to Imaging: 4/4/2025 2:49:23 PM

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 (Marty)

Cooler Temp(including CF): 2.4-0.1=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. 2304962	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)
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		BH23-05 2'			-006										
	11:36		BH23-05 4'			-007										
	12:19		BH23-05 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:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/20/23	1840				4/21/23	930
4/21/23	1900			courier	4/22/23	7:30

Remarks: Direct bill: Devon W/O 21134488

c.c. SMccarty@vertex.ca

pg 1 of 1

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

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

Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL:
FAX:

RE: Laguna Salado 22 Fed 004 OrderNo.: 2308E59

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/26/2023 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2308E59**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-18 1'
Project: Laguna Salado 22 Fed 004
Collection Date: 8/24/2023 12:30:00 PM
Lab ID: 2308E59-001 **Matrix:** SOIL **Received Date:** 8/26/2023 8:25:00 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	8/31/2023 8:25:29 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/31/2023 8:25:29 PM
Surr: DNOP	80.3	69-147		%Rec	1	8/31/2023 8:25:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/2/2023 5:21:00 AM
Surr: BFB	95.7	15-244		%Rec	1	9/2/2023 5:21:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	9/2/2023 5:21:00 AM
Toluene	ND	0.047		mg/Kg	1	9/2/2023 5:21:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	9/2/2023 5:21:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	9/2/2023 5:21:00 AM
Surr: 4-Bromofluorobenzene	88.5	39.1-146		%Rec	1	9/2/2023 5:21:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	8/31/2023 8:59:12 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2308E59**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-25 1'
Project: Laguna Salado 22 Fed 004
Collection Date: 8/24/2023 12:45:00 PM
Lab ID: 2308E59-002 **Matrix:** SOIL **Received Date:** 8/26/2023 8:25:00 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	8/31/2023 8:50:20 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/31/2023 8:50:20 PM
Surr: DNOP	84.1	69-147		%Rec	1	8/31/2023 8:50:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/2/2023 5:43:00 AM
Surr: BFB	97.2	15-244		%Rec	1	9/2/2023 5:43:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	9/2/2023 5:43:00 AM
Toluene	ND	0.050		mg/Kg	1	9/2/2023 5:43:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	9/2/2023 5:43:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	9/2/2023 5:43:00 AM
Surr: 4-Bromofluorobenzene	90.9	39.1-146		%Rec	1	9/2/2023 5:43:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	8/31/2023 9:11:36 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2308E59**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-32 1'
Project: Laguna Salado 22 Fed 004
Collection Date: 8/24/2023 11:20:00 AM
Lab ID: 2308E59-003 **Matrix:** SOIL **Received Date:** 8/26/2023 8:25:00 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	8/31/2023 9:15:14 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/31/2023 9:15:14 PM
Surr: DNOP	90.7	69-147		%Rec	1	8/31/2023 9:15:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/2/2023 6:04:00 AM
Surr: BFB	99.6	15-244		%Rec	1	9/2/2023 6:04:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	9/2/2023 6:04:00 AM
Toluene	ND	0.049		mg/Kg	1	9/2/2023 6:04:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	9/2/2023 6:04:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	9/2/2023 6:04:00 AM
Surr: 4-Bromofluorobenzene	91.0	39.1-146		%Rec	1	9/2/2023 6:04:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	550	60		mg/Kg	20	8/31/2023 9:24:00 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2308E59**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-33 1'
Project: Laguna Salado 22 Fed 004
Collection Date: 8/24/2023 12:20:00 PM
Lab ID: 2308E59-004 **Matrix:** SOIL **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **SB**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/5/2023 3:05:09 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/5/2023 3:05:09 PM
Surr: DNOP	89.7	69-147		%Rec	1	9/5/2023 3:05:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/2/2023 6:26:00 AM
Surr: BFB	99.8	15-244		%Rec	1	9/2/2023 6:26:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.025		mg/Kg	1	9/2/2023 6:26:00 AM
Toluene	ND	0.049		mg/Kg	1	9/2/2023 6:26:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	9/2/2023 6:26:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	9/2/2023 6:26:00 AM
Surr: 4-Bromofluorobenzene	93.3	39.1-146		%Rec	1	9/2/2023 6:26:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	750	60		mg/Kg	20	8/31/2023 10:01:14 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2308E59**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-34 1'
Project: Laguna Salado 22 Fed 004
Collection Date: 8/24/2023 12:05:00 PM
Lab ID: 2308E59-005 **Matrix:** SOIL **Received Date:** 8/26/2023 8:25:00 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	9/5/2023 3:29:04 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/5/2023 3:29:04 PM
Surr: DNOP	91.8	69-147		%Rec	1	9/5/2023 3:29:04 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/2/2023 6:48:00 AM
Surr: BFB	94.8	15-244		%Rec	1	9/2/2023 6:48:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	9/2/2023 6:48:00 AM
Toluene	ND	0.047		mg/Kg	1	9/2/2023 6:48:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	9/2/2023 6:48:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	9/2/2023 6:48:00 AM
Surr: 4-Bromofluorobenzene	92.1	39.1-146		%Rec	1	9/2/2023 6:48:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	62	60		mg/Kg	20	8/31/2023 10:13:39 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2308E59**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-38 1'
Project: Laguna Salado 22 Fed 004
Collection Date: 8/24/2023 11:00:00 AM
Lab ID: 2308E59-006 **Matrix:** SOIL **Received Date:** 8/26/2023 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **DGH**
Diesel Range Organics (DRO)	9.9	9.3		mg/Kg	1	8/31/2023 10:29:35 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/31/2023 10:29:35 PM
Surr: DNOP	93.6	69-147		%Rec	1	8/31/2023 10:29:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/2/2023 7:10:00 AM
Surr: BFB	96.3	15-244		%Rec	1	9/2/2023 7:10:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.024		mg/Kg	1	9/2/2023 7:10:00 AM
Toluene	ND	0.047		mg/Kg	1	9/2/2023 7:10:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	9/2/2023 7:10:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	9/2/2023 7:10:00 AM
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	9/2/2023 7:10:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	1800	60		mg/Kg	20	8/31/2023 10:26:04 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2308E59**
Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.
Client Sample ID: BH23-40 1'
Project: Laguna Salado 22 Fed 004
Collection Date: 8/24/2023 10:50:00 AM
Lab ID: 2308E59-007 **Matrix:** SOIL **Received Date:** 8/26/2023 8:25:00 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	8/31/2023 10:54:15 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/31/2023 10:54:15 PM
Surr: DNOP	92.0	69-147		%Rec	1	8/31/2023 10:54:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **KMN**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/2/2023 7:31:00 AM
Surr: BFB	98.3	15-244		%Rec	1	9/2/2023 7:31:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: **KMN**
Benzene	ND	0.023		mg/Kg	1	9/2/2023 7:31:00 AM
Toluene	ND	0.046		mg/Kg	1	9/2/2023 7:31:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	9/2/2023 7:31:00 AM
Xylenes, Total	ND	0.091		mg/Kg	1	9/2/2023 7:31:00 AM
Surr: 4-Bromofluorobenzene	87.8	39.1-146		%Rec	1	9/2/2023 7:31:00 AM
EPA METHOD 300.0: ANIONS						Analyst: **RBC**
Chloride	ND	60		mg/Kg	20	8/31/2023 10:38:29 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 Quanitative 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#: **2308E59**

11-Sep-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Fed 004

Sample ID: **MB-77246**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **77246**	RunNo: **99401**
Prep Date: **8/31/2023**	Analysis Date: **8/31/2023**	SeqNo: **3627582** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-77246**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **77246**	RunNo: **99401**
Prep Date: **8/31/2023**	Analysis Date: **8/31/2023**	SeqNo: **3627583** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	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 Quanitative 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#: **2308E59**

11-Sep-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Fed 004

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: **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: **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: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	103	61.9	130			
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			

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 Quanitative 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#: **2308E59**

11-Sep-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Fed 004

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			

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: **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		108	69	147			

Sample ID: **MB-77297**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **PBS**	Batch ID: **77297**	RunNo: **99445**							
Prep Date: **9/5/2023**	Analysis Date: **9/5/2023**	SeqNo: **3630327**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.9		10.00		89.1	69	147			

Sample ID: **LCS-77297**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**							
Client ID: **LCSS**	Batch ID: **77297**	RunNo: **99445**							
Prep Date: **9/5/2023**	Analysis Date: **9/5/2023**	SeqNo: **3630328**	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	107	61.9	130			
Surr: DNOP	4.2		5.000		84.4	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 Quanitative 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#: **2308E59**

11-Sep-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Fed 004

Sample ID: **lcs-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: **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	92.2	70	130			
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: **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		98.1	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 Quanitative 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#: **2308E59**

11-Sep-23

Client: Vertex Resources Services, Inc.

Project: Laguna Salado 22 Fed 004

Sample ID: **lcs-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: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.6	70	130			
Toluene	0.91	0.050	1.000	0	90.7	70	130			
Ethylbenzene	0.93	0.050	1.000	0	92.8	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.0	70	130			
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: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		90.6	39.1	146			

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 2308E59

RcptNo: 1

Received By: Cheyenne Cason 8/26/2023 8:25:00 AM

Completed By: Cheyenne Cason 8/26/2023 9:33:13 AM

Reviewed By: Jaqueline Rodriguez 8.26.23

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 CMC 8/26/23

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: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.9	Good	Not Present	Morty		

Received by OCD: 3/14/2025 9:48:53 AM

Released to Imaging: 4/4/2025 2:49:23 PM

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 004

Project #: 23E-01414

Project Manager: KentStallings

Sampler: SM

On Ice: ☑ Yes ☐ No Monty

# of Coolers: 3 / 4.9-0.2 = 4.7

Cooler Temp(including CF): ~~3.9-0.2=3.7~~ 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. 2308E59	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)
8/24/23	12:30	Soil	BH23-18 1'	4oz jar	Ice	001	✓	✓					✓			
	12:45		BH23-25 1'			002										
	11:20		BH23-32 1'			003										
	12:20		BH23-33 1'			004										
	12:05		BH23-34 1'			005										
	11:00		BH23-38 1'			006										
↓	10:50	↓	BH23-40 1'	↓	↓	007	↓	↓					↓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/25/23	800	Jeff McCarty			8/25/23	800
8/25/23	1900		Omc courier		8/26/23	0825

Remarks: Direct bill to: Devon
W/O#: 21134488
cc.. kStallings@vertex.ca
SMccarty@vertex.ca

pg 1 of 1

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.

ATTACHMENT 6

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

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

OCT 21 2008
OCD-ARTESIA

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☐ Final Report

Name of Company **Devon Energy** 6137	Contact **Pete Thomas – Drilling Superintendent**
Address **6488 Seven Rivers Hwy – P.O. Box 250**	Telephone No. **432-556-7156**
Facility Name **Laguna Salado 22 Fed 4H**	Facility Type **Battery**

LAGUNA SALADO 22 FEDERAL 004H

Surface Owner BLM	Mineral Owner	Lease No.

30-015-36461

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	22	23S	~~28~~ 29E					Eddy

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release **Oil & Produced Water**	Volume of Release **4 bbls Oil** **17 bbls Produced Water**	Volume Recovered **4 bbls Oil** **15 bbls Produced Water**
Source of Release **During a rig move the sub-structure ruptured a flow-line**	Date and Hour of Occurrence **10/13/08 – 5:00 PM**	Date and Hour of Discovery **10/13/08 – 5:00 PM**
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☐ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.*
Immediately constructed a dike around area and shut well in.

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: Mykol Horner

Printed Name: **Mykol Horner**

Title: **Field Tech 1**

E-mail Address: **mykol.horner@dvn.com**

Date: Phone: **575-748-0160**

OIL CONSERVATION DIVISION

Approved by District Supervisor: TGumby SB

Approval Date: 10-28-08 Expiration Date: ~~12-29-08~~ 11-28-08

Remediation Actions to be completed and Final C-141 submitted with confirmation analyses/documentation on or before the Expiration Date.

Conditions of Approval:

Within 30 days, on or before 11-28-08, completion of a remediation work plan based on delineation should be finalized and submitted for approval to the Division summarizing all actions taken and/or to be taken to mitigate environmental damage

Attached ☐

2RP - 260

Notify OCD 48 hours prior to obtaining samples where analyses are to be presented to OCD

State of New Mexico
Oil Conservation Division

Incident ID	NSEB0830236670
District RP	2RP-260-0
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	NSEB0830236670
District RP	2RP-260-0
Facility ID	
Application ID	

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

Printed Name: Dale Woodall Title: Env. Professional

Signature: Date:

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NSEB0830236670
District RP	2RP-260-0
Facility ID	
Application ID	

Remediation Plan

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

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

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

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Dale Woodall Title: Env. Professional

Signature: _____ Date: _____

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

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

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442527
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nSEB0830236670**
Incident Name	**NSEB0830236670 LAGUNA SALADO 22 FEDERAL #004H @ 30-015-36461**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-015-36461] LAGUNA SALADO 22 FEDERAL #004H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	LAGUNA SALADO 22 FEDERAL #004H
Date Release Discovered	10/13/2008
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
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	
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.	
Crude Oil Released (bbls) Details	Cause: Normal Operations | Flow Line - Production | Crude Oil | Released: 4 BBL | Recovered: 4 BBL | Lost: 0 BBL.
Produced Water Released (bbls) Details	Cause: Normal Operations | Flow Line - Production | Produced Water | Released: 17 BBL | Recovered: 15 BBL | Lost: 2 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.*

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 (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442527
	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	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
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.	

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	*Not answered.*
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: 03/14/2025

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 (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442527
	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
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.	
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)	13000
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	10
GRO+DRO (EPA SW-846 Method 8015M)	10
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	06/01/2025
On what date will (or did) the final sampling or liner inspection occur	07/01/2025
On what date will (or was) the remediation complete(d)	08/01/2025
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	59618
What is the estimated volume (in cubic yards) that will be remediated	1500
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.	

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 (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442527
	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	LEA LAND LANDFILL [fEEM0112342028]
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	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
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: 03/14/2025
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 (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442527
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
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.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442527
	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	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 442527
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
scwells	Remediation plan approved with conditions: Based on the data provided in Table 3, the area of BH23-11 should be excavated to at least 2' depth instead of the proposed.5 depth listed under Remedial Activities. In addition, under the Site Characterization portion of the C-141 application the minimum distances to the following should be updated with next report submission: any other significant watercourse is located 500 feet east and a 100-year floodplain is located between 300-500 feet to the west. Submit remediation closure report to the OCD by 7/3/2025.	4/4/2025