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

State of New Mexico **Energy Minerals and Natural** Resources Department

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

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

Incident ID	nAPP2218654480
District RP	
Facility ID	
Application ID	

Closure

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

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

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

Note that Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate ODG	C District office must be notified 2 days prior to final sampling)
□ Description of remediation activities	
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rer human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regular restore, reclaim, and re-vegetate the impacted surface area to the coaccordance with 19.15.29.13 NMAC including notification to the Orinted Name: Chase Settle	ntions. The responsible party acknowledges they must substantially inditions that existed prior to the release or their final land use in DCD when reclamation and re-vegetation are complete. Title: Rep Safety and Environmental
Signature: <u>Chase Settle</u>	Date: 01/18/2023
email: <u>chase_settle@eogresources.com</u>	Telephone: <u>575-748-4171</u>
OCD Only	
Received by: Robert Hamlet	Date: <u>5/18/2023</u>
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.
Closure Approved by: Robert Hamlet	Date: <u>5/18/2023</u>
Printed Name: Robert Hamlet	Title: Environmental Specialist - Advanced
B.J	



January 18, 2023 Vertex Project #: 22E-00716-10

Spill Closure Report: Routh Deep SWD #2 (Section 14, Township 19 South, Range 24 East)

API: 30-015-23585 County: Eddy

Incident ID: nAPP2218654480

Prepared For: EOG Resources, Inc.

104 South 4th Street Artesia, NM 88210

New Mexico Oil Conservation Division - District 2

811 South 1st Street Artesia, New Mexico 88210

EOG Resources, Inc. retained Vertex Resource Services Inc. (Vertex) to conduct an assessment for a historical contamination discovered during the battery decommissioning at the Routh Deep SWD #2, API 30-015-23585, incident nAPP2218654480 (hereafter referred to as "Routh"). This letter provides a description of the Site Assessment and includes a request for Incident Closure.

Background

The site is located at N 32.66643, W -104.55615 approximately 9 miles northwest of Seven Rivers, New Mexico on private property. The legal location for the site is Section 14, Township 19 South and Range 24 East in Eddy County, New Mexico. An aerial photograph and site schematic are included in Figure 1 and 2, Attachment 1.

The Geological Map of New Mexico (New Mexico Bureau of Geology and Mineral Resources, 2014 – 2017) indicates the site's surface geology is comprised primarily of Qp - Piedmont alluvial deposits (Holocene to lower Pleistocene). Predominant soil texture on the site is Loamy. Ecological settings of the area include vegetation of black grama, tobosa, bunch grasses, threeawns, soaptree yucca, ephedra, fourwing saltbush, with other forbs subdominant.

There is no surface water located at Routh. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 New Mexico Administrative Code (NMAC), is the Pecos River located approximately 14.7 miles southeast of the site. There are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

Incident Description

The impacts were reported on June 30, 2022, due to historical contamination discovered in the storage tank area as well as on the production pad. Laboratory analysis for vertical delineation is included in Table 2, Attachment 2. The New Mexico Oil Conservation Division (NMOCD) C-141 Report is included in Attachment 3 and the daily field reports with site photographs are included in Attachment 4.

2022 Spill Assessment and Closure August 2022

Closure Criteria Determination

The depth to groundwater was determined by drilling a borehole permitted by the New Mexico Office of the State Engineer (NMOSE) within a 0.5-mile radius of the site. The borehole was drilled to a depth of 108 feet, was left open as per requirements on the WR-07 Application for Permit to Drill a Well With No Water Right and an interface probe lowered into the bottom of the borehole to investigate if groundwater may have accumulated during the 72 hour waiting period. No water was found present at that time. The borehole was then plugged as per requirements on the WR-08, Well Plugging Plan of Operations. Documentation used in Closure Criteria Determination research is included in Attachment 5.

	Criteria Worksheet		
	ne: Routh SWD ordinates:	X: 32.666419	Y: -104.556698
•	cific Conditions	Value	Unit
1	Depth to Groundwater	>108	feet
т	Within 300 feet of any continuously flowing	>100	ieet
2	watercourse or any other significant watercourse	77,590	feet
	Within 200 feet of any lakebed, sinkhole or playa		
3	lake (measured from the ordinary high-water	59,872	feet
3	mark)	33,672	1000
	Within 300 feet from an occupied residence,		
4	school, hospital, institution or church	12,714	feet
	i) Within 500 feet of a spring or a private, domestic		
	fresh water well used by less than five households	5,918	feet
5	for domestic or stock watering purposes, or	_,,,,	
	ii) Within 1000 feet of any fresh water well or		_
	spring	5,918	feet
	Within incorporated municipal boundaries or		
	within a defined municipal fresh water field		
	covered under a municipal ordinance adopted		
6	pursuant to Section 3-27-3 NMSA 1978 as	No	(Y/N)
	amended, unless the municipality specifically		
	approves		
7	Within 300 feet of a wetland	1,609	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	, , , , , , , , , , , , , , , , , , , ,		Critical
			High
9	Within an unstable area (Karst Map)	Medium	Medium
			Low
10	Within a 100-year Floodplain	Nondetermined	year
			,
		Upton-Reagan	
11	Soil Type	complex	
12	Ecological Classification	Loamy	
13	Geology	Qp	
		~~r	
			<50'
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	>100'	51-100'
vertex.ca			>100'

3101 Boyd Drive, Carlsbad, New Mexico 88220, USA | P 575.725.5001

The closure criteria determined for the site are associated with the following constituent concentration limits as presented in Table 1.

Table 1. Closure Criteria for Soils to Re	emediation & Reclamatio	n Standards
	Constituent	Limit
0.4 foot bgs (10.15.20.12)	Chloride	600 mg/kg
0-4 feet bgs (19.15.29.13)	TPH (GRO+DRO+MRO)	100 mg/kg
	Chloride	20,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
DTGW > 100 feet (19.15.29.12)	GRO+DRO	1,000 mg/kg
	ВТЕХ	50 mg/kg
	Benzene	10 mg/kg

TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics, BTEX – benzene, toluene, ethylbenzene and xylenes

Remedial Actions Taken

Remediation efforts began on June 14, 2022, and were completed on September 19, 2022. Delineation was completed during the remediation process. Vertex personnel supervised the excavation of impacted soils with field screening on a total of 254 sample points which consisted of analysis using a photo ionization detector (volatile hydrocarbons), Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons), and titration (chlorides). Field screening results were used to identify areas requiring further remediation from those areas showing concentrations below determined closure criteria levels. Soils were removed to a depth ranging from 4 feet to 10 feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. Field screening and laboratory analysis results are presented in Table 3, Attachment 2.

During remediation efforts on the southernmost sidewall of the excavation, composite sample points WES08, WES09 and WES10 were collected from 0 to 4 feet bgs and represent an area no greater than 150 feet by 4 feet equaling 600 square feet total. These sample points meet the strictest criteria for horizontal delineation of the excavation under Table 1 of 19.15.29.12 NMAC. Composite sample points WES17 and WES18 were additionally collected from 4 to 9 feet bgs on the southernmost side wall of the excavation and account for an 80 foot by 5 foot area totaling 400 square feet respectively. WES17 and WES18 are under closure criteria for a depth of 4 feet bgs and greater, while WES08, WES09 and WES10 on the same side wall meet the strictest criteria in the top 4 feet as outlined in 19.15.29.13 NMAC Reclamation Standards.

This site has been decommissioned with reclamation activities to follow the completed remediation. The northernmost side wall located at the edge of the historic drilling pit will be addressed concurrently with the reclamation. This sidewall will be sloped to a 45-degree angle to allow for the placement of a geosynthetic clay liner (GCL) which will be installed over the surface area of the pit to address the field screen results from the sidewall that were above criterium. Placement of a GCL over the top of the historical drill pit and down the sloped sidewall will effectively segregate the remediated area and prevent migration of any further impacts from the pit. The GCL will provide protection of impact

2022 Spill Assessment and Closure August 2022

migration through the vadose zone with the sloped sidewall assisting any shedding of excess water that may accumulate through natural precipitation events.

Notification that confirmatory samples were being collected was provided to the NMOCD on July 21, 2022, July 29, 2022, August 4, 2022, August 11, 2022, August 18, 2022, August 25, 2022, and September 15, 2022. The notifications are all included in Attachment 6. Confirmatory composite samples were collected from the base and walls of the excavation in 200 square foot increments. A total of 254 samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to Hall Environmental Analysis Laboratory under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). Laboratory results are presented in Table 3, Attachment 2 and the laboratory data report can be found in Attachment 7. All confirmatory samples collected and analyzed were below closure criteria for the site.

Closure Request

The impacted area was fully delineated, remediated and will be backfilled with local soils. Confirmatory samples were analyzed by the laboratory and found to be below allowable concentrations as per the NMAC Closure Criteria for Soils Impacted by a Release locations "greater than 100 feet to groundwater". Based on these findings, EOG Resources, Inc. requests closure of Incident nAPP2218654480.

Should you have any questions or concerns, please do not hesitate to contact the undersigned at 575.988.2681 or mmoffitt@vertex.ca.

Michael Moffitt Michael Moffitt, B.Sc.

1/18/2023

Date

PROJECT MANAGER, REPORTING

Attachments

Attachment 1. Figures

Attachment 2. Tables

Attachment 3. NMOCD C-141

Attachment 4. Daily Field Reports with Pictures

Attachment 5. Closure Criteria for Soils Impacted by a Release Research Determination Documentation

Attachment 6. Confirmatory Sample Notifications

Attachment 7. Laboratory Data Reports and COCs

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References

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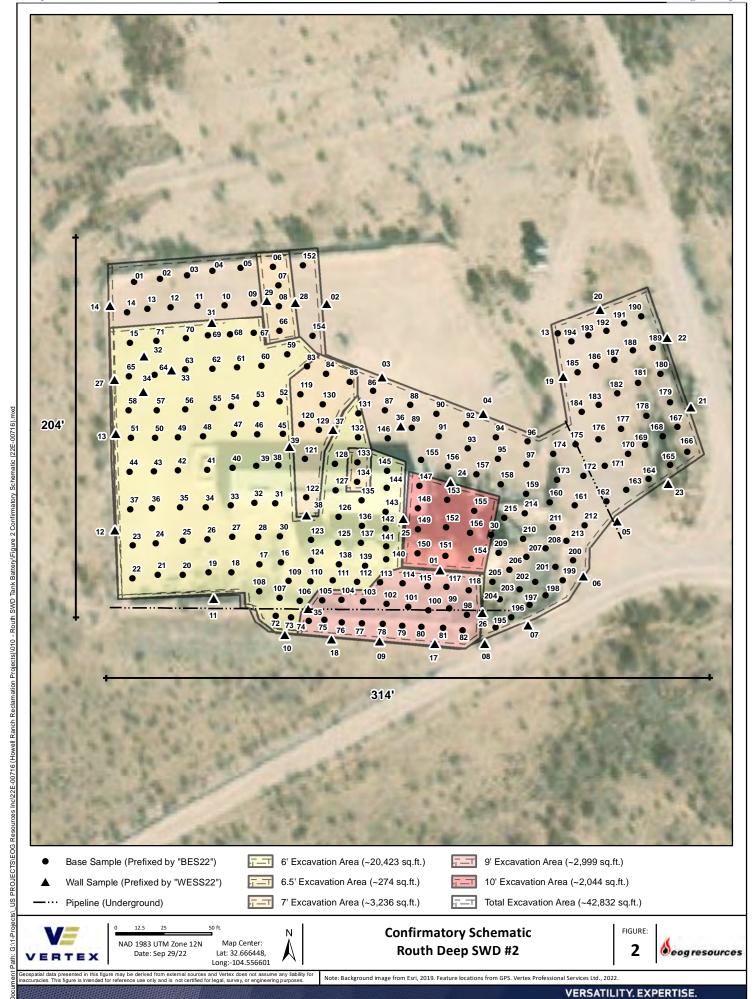
Limitations

This report has been prepared for the sole benefit of EOG Resources, Inc. This document may not be used by any other person or entity, with the exception of the New Mexico Oil Conservation Division, without the express written consent of Vertex Resource Services Inc. (Vertex) and EOG Resources, Inc. Any use of this report by a third party, or any reliance on decisions made based on it, or damages suffered as a result of the use of this report are the sole responsibility of the user.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

ATTACHMENT 1





ATTACHMENT 2

Project #: 22E-00716-10

Lab Reports: 2207414, 2207416, 2207745

	Table 2	2. Vertical Charac	terization	Sample F	ield Scree	n and Labo	oratory Re	sults - Dep	oth to Gro	undwater	>100 feet	bgs	
S	ample Descri	ption	Fi	eld Screeni	ng			Petrole	eum Hydro	carbons			
			ds			Vol	atile			Extractable)		Inorganic
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)
TP22-01	6-10'	July 7, 2022	0	77	0	ND	ND	ND	ND	ND	ND	ND	190
TP22-02	5-10'	July 7, 2022	0	58	170	ND	ND	ND	ND	ND	ND	ND	230
TP22-03	5-10'	July 7, 2022	0	48	418	ND	ND	ND	ND	ND	ND	ND	580
TP22-04	6'	July 7, 2022	0	75	0	ND	ND	ND	ND	ND	ND	ND	200
TP22-05	10'	July 7, 2022	0	41	89	ND	ND	ND	ND	ND	ND	ND	180
TP22-06	10'	July 7, 2022	0	45	0	ND	ND	ND	ND	ND	ND	ND	170
TP22-07	4'	July 8, 2022	-	66	518	ND	ND	ND	ND	ND	ND	ND	360
TP22-08	4'	July 8, 2022	-	55	181	ND	ND	ND	ND	ND	ND	ND	350
TP22-09	4'	July 8, 2022	-	69	160	ND	ND	ND	ND	ND	ND	ND	310
TP22-10	4'	July 8, 2022	-	53	173	ND	ND	ND	ND	ND	ND	ND	180
TP22-11	4'	July 8, 2022	-	48	125	ND	ND	ND	ND	ND	ND	ND	430
BH22-11	0'	July 13, 2022	0	103	23	ND	ND	ND	ND	ND	ND	ND	290

[&]quot;ND" Not Detected at the Reporting Limit



[&]quot;-" indicates not analyzed/assessed

Project #: 22E-00716-10

Lab Reports: 2207E17, 2207F05, 2207F70, 2208151, 2208249, 2208347, 2208418, 2208F02, 2208E18, 2208B92, 2208I06, 2208C66, 2208A99,

		Table 3. Confirmato	rv Sample	Field Scr	een and La	boratory	Results - [Depth to G	roundwa	ter >100 f	eet bgs		
	Sample Desc			eld Screeni		Join atory	resures i		um Hydro		200 253		
		,				Vol	atile			Extractable	•		Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene (mg/kg)	BTEX (Total)	ন্ত্ৰ Gasoline Range Organics স্থ (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum	Chloride Concentration
BES22-01	4	July 26, 2022	0	3	392	ND	(mg/kg) ND	ND	20	ND	20	20	360
BES22-02	4	July 26, 2022	0	11	620	ND	ND	ND	15	ND	15	15	340
BES22-03	4	July 26, 2022	0	0	269	ND	ND	ND	ND	ND	ND	ND	210
BES22-04	4	July 26, 2022	0	0	148	ND	ND	ND	ND	ND	ND	ND	170
BES22-05	4	July 26, 2022	0	0	144	ND	ND	ND	ND	ND	ND	ND	120
BES22-06	7	July 29, 2022	-	-	398	ND	ND	ND	ND	ND	ND	ND	450
BES22-07	7	July 29, 2022	-	47	385	ND	ND	ND	ND	ND	ND	ND	420
BES22-08	4	July 29, 2022	-	-	2	ND	ND	ND	ND	ND	ND	ND	85
BES22-09	4	July 26, 2022	0	0	505	ND	ND	ND	44	ND	44	44	650
BES22-10	6	July 29, 2022	-	46	0	ND	ND	ND	ND	ND	ND	ND	130
BES22-11	4	July 26, 2022	0	0	500	ND	ND	ND	ND	ND	ND	ND	600
BES22-12	6	July 29, 2022	-	81	685	ND	ND	ND	ND	ND	ND	ND	720
BES22-13	4	August 29, 2022	-	40	972	ND	ND	ND	ND	ND	ND	ND	230
BES22-14	4	August 29, 2022	-	61	1,233	ND	ND	ND	ND	ND	ND	ND	360
BES22-15	4	August 29, 2022	-	31	1,060	ND	ND	ND	ND	ND	ND	ND	470
BES22-16	7	July 29, 2022	-	19	206	ND	ND	ND	ND	ND	ND	ND	160
BES22-17	7	July 29, 2022	-	-	284	ND	ND	ND	ND	ND	ND	ND	160
BES22-18	6	July 27, 2022	0	68	450	ND	ND	ND	ND	ND	ND	ND	350
BES22-19	6	July 27, 2022	0	45	447	ND ND	ND ND	ND ND	ND F0	ND OF	ND F0	ND 153	ND 720
BES22-20 BES22-21	6	July 27, 2022 July 27, 2022	0	46 50	447 72	ND ND	ND ND	ND ND	58 ND	95 ND	58 ND	153 ND	730 ND
BES22-21	6	July 27, 2022 July 27, 2022	0	28	252	ND ND	ND ND	ND	ND ND	ND ND	ND	ND ND	150
BES22-23	6	July 27, 2022	0	61	150	ND	ND	ND	ND	ND	ND	ND	ND
BES22-24	6	July 27, 2022	0	33	125	ND	ND	ND	ND	ND	ND	ND	ND
BES22-25	6	July 27, 2022	0	38	165	ND	ND	ND	ND	ND	ND	ND	ND
BES22-26	6	July 27, 2022	0	100	712	ND	ND	ND	ND	ND	ND	ND	1100
BES22-27	6	July 27, 2022	0	112	442	ND	ND	ND	ND	ND	ND	ND	220
BES22-28	6	July 27, 2022	0	84	295	ND	ND	ND	320	380	320	700	270
BES22-29	6	July 27, 2022	0	86	250	ND	ND	ND	ND	58	ND	58	240
BES22-30	6	July 27, 2022	0	90	625	ND	ND	ND	510	1200	510	1710	650
BES22-31	6	July 27, 2022	0	60	150	ND	ND	ND	ND	ND	ND	ND	ND
BES22-32	6	July 27, 2022	0	42	175	ND	ND	ND	ND	ND	ND	ND	110
BES22-33	6	July 27, 2022	0	93	190	ND	ND	ND	ND	ND	ND	ND	ND
BES22-34	6	July 28, 2022	0	32	150	ND	ND	ND	ND	ND	ND	ND ND	ND 170
BES22-35	7	July 29, 2022	-	- 117	164 213	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	170 330
BES22-36 BES22-37	6	July 29, 2022 August 29, 2022	-	41	932	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	220
BES22-37	6	July 28, 2022	0	23	355	ND ND	ND ND	ND	ND	ND	ND	ND ND	140
BES22-39	7	July 29, 2022	-	-	164	ND	ND	ND	ND	ND	ND	ND	320
BES22-40	6	July 28, 2022	0	93	840	ND	ND	ND	ND	ND	ND	ND	540
BES22-41	6	July 28, 2022	0	66	337	ND	ND	ND	ND	ND	ND	ND	390
BES22-42	6	July 28, 2022	0	51	310	ND	ND	ND	ND	ND	ND	ND	160
BES22-43	6	July 28, 2022	0	46	415	ND	ND	ND	ND	ND	ND	ND	170
BES22-44	6	July 28, 2022	0	20	350	ND	ND	ND	ND	ND	ND	ND	280
BES22-45	6	July 28, 2022	0	80	575	ND	ND	ND	ND	ND	ND	ND	570
BES22-46	7	July 29, 2022	-	-	253	ND	ND	ND	ND	ND	ND	ND	210
BES22-47	7	July 29, 2022	-	54	454	ND	ND	ND	ND	ND	ND	ND	390
BES22-48	6	July 28, 2022	0	114	570	ND	ND	ND	ND	ND	ND	ND	420
BES22-49	6	July 28, 2022	0	78	415	ND	ND	ND	ND	ND	ND	ND	320
BES22-50	6	July 28, 2022	0	77	380	ND	ND	ND	ND	ND	ND	ND	310
BES22-51	6	July 28, 2022	0	24	475	ND	ND	ND	ND	ND	ND	ND	240
BES22-52	6	July 28, 2022	0	93	580	ND	ND	ND	ND	ND	ND	ND	260



Project #: 22E-00716-10

Lab Reports: 2207E17, 2207F05, 2207F70, 2208151, 2208249, 2208347, 2208418, 2208F02, 2208E18, 2208B92, 2208I06, 2208C66, 2208A99,

		Table 3. Confirmato	rv Sample	Field Scr	een and La	boratory	Results - I	Depth to G	roundwa	ter >100 f	eet bgs		
	Sample Desc			eld Screen					um Hydro		201.260		
		,			Ī	Vol	atile			Extractable	•		Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds	Extractable Organic Gompounds (PetroFlag)	Chloride Concentration	Benzene (mg/kg)	(mg/kg) (g/kg) (g/kg)	(GRO) GRO	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(mg/kg)	Total Petroleum	(s) Chloride Concentration
DEC22 E2	C	1											
BES22-53 BES22-54	6	July 28, 2022	0	76 99	541 481	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	370 460
BES22-55	6	July 28, 2022 July 28, 2022	0	142	575	ND ND	ND	ND ND	ND ND	ND	ND ND	ND	660
BES22-56	6	July 28, 2022	0	110	500	ND	ND	ND	53	93	53	146	350
BES22-57	6	July 28, 2022	0	100	375	ND	ND	ND	26	68	26	94	64
BES22-58	6	July 28, 2022	0	84	420	ND	ND	ND	ND	ND	ND	ND	160
BES22-59	6	July 28, 2022	0	76	525	ND	ND	ND	ND	ND	ND	ND	350
BES22-60	6	July 28, 2022	0	91	560	ND	ND	ND	ND	ND	ND	ND	570
BES22-61	6	August 1, 2022	-	-	434	ND	ND	ND	ND	ND	ND	ND	480
BES22-62	6	August 1, 2022	-	-	370	ND	ND	ND	ND	ND	ND	ND	420
BES22-63	6	August 1, 2022	-	36	40	ND	ND	ND	ND	ND	ND	ND	110
BES22-64	7	August 2, 2022	-	-	500	ND	ND	ND	ND	ND	ND	ND	240
BES22-65	7	August 2, 2022	-	18	568	ND	ND	ND	ND	ND	ND	ND	230
BES22-66	7	August 1, 2022	-	96	477	ND	ND	ND	ND	ND	ND	ND	340
BES22-67	5	August 1, 2022	-	-	307	ND	ND	ND	ND	ND	ND	ND	250
BES22-68	5	August 1, 2022	-	-	115	ND	ND	ND	ND	ND	ND	ND	140
BES22-69	5	August 1, 2022	-	39	116	ND	ND	ND	ND	ND	ND	ND	96
BES22-70	5	August 1, 2022	-	-	392	ND	ND	ND	ND	ND	ND	ND	380
BES22-71	5	August 1, 2022	-	-	591	ND	ND	ND	ND	ND	ND	ND	410
BES22-72	6	August 2, 2022	-	-	54	ND	ND	ND	ND	ND	ND	ND	ND
BES22-73	6	August 17, 2022	-	49	531	ND	ND	ND	ND	ND	ND	ND	280
BES22-74	9	August 3, 2022	-	38	559	ND	ND	ND	ND	ND	ND	ND	370
BES22-75	9	August 17, 2022	-	461 655	47 41	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	180 320
BES22-76 BES22-77	9	August 17, 2022 August 17, 2022	-	1,388	67	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	560
BES22-77	9	August 17, 2022 August 17, 2022	-	936	57	ND ND	ND	ND	ND ND	ND	ND ND	ND	440
BES22-79	9	August 17, 2022	-	1,037	58	ND	ND	ND	ND	ND	ND	ND	400
BES22-80	9	August 17, 2022		613	51	ND	ND	ND	ND	ND	ND	ND	410
BES22-81	7	August 2, 2022	_	85	473	ND	ND	ND	57	83	57	140	520
BES22-82	7	August 2, 2022	-	-	440	ND	ND	ND	31	69	31	100	530
BES22-83	7	August 4, 2022	0	56	212	ND	ND	ND	ND	ND	ND	ND	98
BES22-84	7	August 4, 2022	0	50	261	ND	ND	ND	ND	ND	ND	ND	100
BES22-85	7	August 10, 2022	0	31	499	ND	ND	ND	ND	ND	ND	ND	190
BES22-86	4	August 2, 2022		_	111	ND	ND	ND	ND	ND	ND	ND	150
BES22-87	4	August 2, 2022	-	38	238	ND	ND	ND	ND	ND	ND	ND	350
BES22-88	4	August 2, 2022	-	-	213	ND	ND	ND	ND	ND	ND	ND	300
BES22-89	4	August 3, 2022	-	-	350	ND	ND	ND	ND	ND	ND	ND	280
BES22-90	4	August 3, 2022	-	-	316	ND	ND	ND	ND	ND	ND	ND	280
BES22-91	4	August 3, 2022	-	90	453	ND	ND	ND	ND	ND	ND	ND	390
BES22-92	4	August 3, 2022	-	-	326	ND	ND	ND	ND	ND	ND	ND	330
BES22-93	4	August 3, 2022	-	-	67	ND	ND	ND	ND 25	ND	ND 25	ND 25	75
BES22-94	4	August 3, 2022	-	-	0	ND	ND	ND	25 ND	ND	25 ND	25 ND	92
BES22-95	4	August 3, 2022	- -	-	0	ND	ND	ND	ND	ND	ND	ND	70
BES22-96	4	August 3, 2022	-	-	115	ND	ND	ND	ND	ND	ND	ND	110 68
BES22-97	6 9	August 10, 2022	0	- 54	0 578	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	660
BES22-98 BES22-99	9	August 10, 2022	0	29	691	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	940
BES22-99 BES22-100	9	August 10, 2022 August 10, 2022	0	40	1,164	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	530
BES22-100 BES22-101	9	August 10, 2022 August 10, 2022	0	31	225	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	310
BES22-101	9	August 10, 2022 August 10, 2022	0	37	844	ND ND	ND	ND	ND	ND	ND	ND	650
BES22-102	9	August 10, 2022	0	23	678	ND	ND	ND	ND	ND	ND	ND	580
BES22-104	9	August 10, 2022	0	36	780	ND	ND	ND	ND	ND	ND	ND	580
JEJZZ 104	,	, was 10, 2022			,,,,,	.,,,	.,,,	.,,,	.,,,	110	110	.,,,	



Project #: 22E-00716-10

Lab Reports: 2207E17, 2207F05, 2207F70, 2208151, 2208249, 2208347, 2208418, 2208F02, 2208E18, 2208B92, 2208I06, 2208C66, 2208A99,

Sample Depth (n) Sample Date Sample Date Sample Depth (n) Sample Date Sample Date			Table 3. Confirmato	rv Sample	Field Scr	een and La	aboratory	Results - I	Depth to G	roundwa	ter >100 f	eet bgs		
Sample ID Depth (H) Sample Date		Sample Desc										201.260		
SEST-2-105 6 August 10, 2022 0 555 740 ND ND ND ND ND ND ND N		·	1			Ī	Vol	atile				2		Inorganic
BESS2-2105 6	Sample ID	Depth (ft)	Sample Date							Diesel (DRO)				Chloride Concentration
6ESS2-2100 6 August 10, 2022 0 74 3,478 ND N	DEC22 10E	6	August 10, 2022											910
BESS2-107 6 August 10, 2022 0 93 867 ND ND ND ND ND ND ND N														1600
BESS2-108 6 August 10, 2022 0 62 1,272 ND														530
BESS22-110 6			• .											470
BESS2-111														800
BESS2-111 6 August 10, 2022 0 100 1,890 ND ND ND ND ND ND ND N												ND		2400
BESS22-112 6 August 10, 2022 0 114 1,984 ND												ND		850
BES22-115		6	• .	0	114	1,984	ND	ND	ND	ND	ND	ND	ND	1400
BES22-115 9 August 4, 2022 0 42 297 ND ND ND ND ND ND	BES22-113	9	August 4, 2022	0	23	0	ND	ND	ND	ND	ND	ND	ND	ND
BESS2-117 9	BES22-114	9	August 4, 2022	0	49	98	ND	ND	ND	ND	ND	ND	ND	68
BES22-118 9	BES22-115	9	August 4, 2022	0	42	297	ND	ND	ND	ND	ND	ND	ND	99
BES22-118 9	BES22-116	9	August 4, 2022				ND	ND	ND	31	50	31		ND
BES22-119 8	BES22-117	9	August 4, 2022	0			ND		ND		ND			150
BES22-120			August 4, 2022				ND							63
BES22-121 8 August 4, 2022 0 54 567 ND ND <td></td> <td>100</td>														100
BES22-122 8 August 4, 2022 0 52 385 ND ND <td></td> <td></td> <td><u> </u></td> <td></td> <td>150</td>			<u> </u>											150
BES22-123														190
BESS2-124 6														120
BES22-125														ND
BES22-126 6		1												530
BES22-127 6 August 10, 2022 0 82 497 ND SES22-128 6 August 10, 2022 0 124 1,108 ND														540
BES22-128 6 August 10, 2022 0 124 1,108 ND ND ND ND ND ND ND N														410 570
BES22-139 7 August 10, 2022 0 56 705 ND ND ND ND ND ND ND N														200
BES22-130 7														590
BES22-131 6														140
BES22-132 6														2300
BES22-133 6		1												3300
BES22-133 6.5 September 19, 2022 - 86 3,840 ND <														12000
BES22-134 6 August 11, 2022 0 79 9,732 ND ND ND ND ND ND ND N														2200
BES22-135 6 August 11, 2022 0 96 4,023 ND				0	79	9,732	ND	ND	ND	ND	ND	ND	ND	11000
BES22-136 6 August 11, 2022 0 101 2,748 ND N				-	95		ND	ND	ND	ND	ND	ND	ND	3900
BES22-137 6 August 11, 2022 0 98 1,819 ND	BES22-135	6	August 11, 2022	0	96	4,023	ND	ND	ND	ND	ND	ND	ND	5600
BES22-138 6 August 11, 2022 0 101 238 ND ND<	BES22-136	6	August 11, 2022	0	101	2,748	ND	ND	ND	ND	ND	ND	ND	3100
BES22-139 6 August 11, 2022 0 580 1,802 ND N			• .	0			ND		ND			ND		1700
BES22-140 6 August 11, 2022 0 32 186 ND ND </td <td></td> <td></td> <td>• .</td> <td></td> <td>170</td>			• .											170
BES22-141 6 August 11, 2022 0 96 281 ND ND </td <td></td> <td>1100</td>														1100
BES22-142 6 August 11, 2022 0 88 435 ND ND </td <td></td> <td></td> <td>•</td> <td></td> <td>150</td>			•											150
BES22-143 6 August 11, 2022 0 97 5,322 ND														530
BES22-144 6 August 11, 2022 0 111 5,701 ND N		1												540
BES22-145 6 August 11, 2022 0 93 1,480 ND														5900
BES22-146 5 August 11, 2022 0 90 551 ND ND </td <td></td> <td>5600</td>														5600
BES22-147 10 August 11, 2022 0 149 1,082 ND														1300 450
BES22-148 10 August 11, 2022 0 135 1,408 ND		1												470
BES22-149 10 August 11, 2022 0 98 1,031 ND N														440
BES22-150 10 August 11, 2022 0 83 1,316 ND N		1												360
BES22-151 10 August 11, 2022 0 163 1,049 ND														350
BES22-152 4 August 23, 2022 0 20 0 ND ND ND ND ND ND ND ND ND 1														190
		1												140
														ND
														ND



Project #: 22E-00716-10

Lab Reports: 2207E17, 2207F05, 2207F70, 2208151, 2208249, 2208347, 2208418, 2208F02, 2208E18, 2208B92, 2208I06, 2208C66, 2208A99,

Sample ID Depth (ft) Sample Date Sample Date Sample Date Sample ID Depth (ft) Sample Date Sample ID Sample	Column	Inorganic Unorganic Unorganic
Sample ID Depth (ft) Sample Date Sam	kg) (mg/kg) ND ND ND ND ND ND ND ND ND N	(mg/kg) 230 340 150 260 420 580
	kg) (mg/kg) ND ND ND ND ND ND ND ND ND N	(mg/kg) 230 340 150 260 420 580
BES22-155 4 August 19, 2022 0 - 590 ND ND <th>ND ND N</th> <th>230 340 150 260 420 580</th>	ND N	230 340 150 260 420 580
BES22-156 4 August 19, 2022 0 127 655 ND ND<	ND N	340 150 260 420 580
BES22-157 4 August 19, 2022 0 62 458 ND ND </td <td>ND ND ND ND ND ND ND ND ND</td> <td>150 260 420 580</td>	ND ND ND ND ND ND ND ND ND	150 260 420 580
BES22-158 4 August 19, 2022 0 97 676 ND ND </td <td>ND ND ND ND ND ND ND</td> <td>260 420 580</td>	ND ND ND ND ND ND ND	260 420 580
BES22-159 4 August 19, 2022 0 78 438 ND ND </td <td>ND ND ND ND ND</td> <td>420 580</td>	ND ND ND ND ND	420 580
BES22-160 4 August 19, 2022 0 84 684 ND ND </td <td>ND ND ND ND</td> <td>580</td>	ND ND ND ND	580
BES22-161 4 August 19, 2022 0 88 567 ND ND </td <td>ND ND</td> <td>560</td>	ND ND	560
BES22-162 4 August 19, 2022 0 60 632 ND ND </td <td></td> <td>300</td>		300
BES22-163 4 August 19, 2022 0 76 727 ND ND ND ND ND ND ND ND	ND	290
BES22-164 4 August 19, 2022 0 82 715 ND	ND ND	710
	ND ND	660
BES22-165 4 August 19, 2022 0 74 480 ND ND ND ND ND ND ND ND	ND ND	680
BES22-166 4 August 19, 2022 0 - 559 ND ND ND ND ND ND ND ND	ND ND	930
BES22-167 4 August 19, 2022 0 - 598 ND ND ND 25 ND 25	25	530
BES22-168 4 August 19, 2022 0 - 689 ND ND ND ND ND ND ND ND		490
BES22-169 4 August 19, 2022 0 - 1,179 ND ND ND ND ND ND ND ND		770
BES22-170 4 August 19, 2022 0 68 1,070 ND ND ND ND ND ND ND ND		680
BES22-171 4 August 19, 2022 0 38 1,127 ND ND ND ND ND ND ND		460
BES22-172		950
BES22-173		460
BES22-174 4 August 19, 2022 0 53 616 ND		1100
BES22-175 4 August 19, 2022 0 67 672 ND		860
BES22-176		540 1300
BES22-177		1200
BES22-179		540
BES22-180		230
BES22-181		430
BES22-182		600
BES22-183 4 August 19, 2022 0 61 1,304 ND ND ND ND ND ND ND ND ND		1100
BES22-184 4 August 19, 2022 0 80 1,692 ND ND ND ND ND ND ND ND ND	ND ND	1400
BES22-185 4 August 19, 2022 0 93 1,882 ND ND ND ND ND ND ND ND ND	ND ND	1300
BES22-186 4 August 19, 2022 0 64 1,739 ND ND ND ND ND ND ND ND ND	ND ND	850
BES22-187 4 August 19, 2022 0 113 1,117 ND ND ND ND ND ND ND ND		930
BES22-188 4 August 19, 2022 0 90 1,526 ND ND ND ND ND ND ND ND		780
BES22-189 4 August 19, 2022 0 75 1,423 ND ND ND ND ND ND ND		340
BES22-190 4 August 19, 2022 0 80 2,020 ND		1400
BES22-191 4 August 19, 2022 0 63 1,352 ND		1100
BES22-192 4 August 23, 2022 0 22 10 ND		ND ND
BES22-193		ND ND
BES22-194		ND ND
BES22-195		ND ND
BES22-197		ND
BES22-198		ND
BES22-199		ND
BES22-200		ND
BES22-201		210
BES22-202		140
BES22-203		ND
BES22-204 4 August 23, 2022 0 32 168 ND ND ND ND ND ND ND ND		120
BES22-205 4 August 23, 2022 0 58 62 ND ND ND ND ND ND ND ND	ND ND	63
BES22-206 4 August 23, 2022 0 121 0 ND ND ND ND ND ND ND ND	ND ND	ND



Project #: 22E-00716-10

Lab Reports: 2207E17, 2207F05, 2207F70, 2208151, 2208249, 2208347, 2208418, 2208F02, 2208E18, 2208B92, 2208I06, 2208C66, 2208A99,

		Table 3. Confirmato				boratory	Results - I	_			eet bgs	-	
	Sample Desc	ription	Fi	eld Screeni	ng			Petrole	eum Hydro				
			spunoc	(g)	<u> </u>	Vol	atile	ics		Extractable	=		Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	el Range Organics)	Motor Oil Range Organics (MRO)	GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(PID)	(ppm)	(ppm)	គ្គ (mg/kg)	(mg/kg)	(gk/gm) (GRO)	(mg/kg) (DRO)	(mg/kg)	(mg/kg)	(mg/kg)	일 (mg/kg)
BES22-207	4	August 23, 2022	0	38	460	ND	ND	ND	ND	ND	ND	ND	390
BES22-208	4	August 23, 2022	0	44	502	ND	ND	ND	ND	ND	ND	ND	420
BES22-209	4	August 29, 2022	-	83	1,232	ND	ND	ND	ND	ND	ND	ND	460
BES22-210	4	August 29, 2022	-	81	1,063	ND	ND	ND	ND	ND	ND	ND	450
BES22-211	4	August 29, 2022	-	81	815	ND	ND	ND	ND	ND	ND	ND	500
BES22-212	4	August 29, 2022	-	59	482	ND	ND	ND	ND	ND	ND	ND	710
BES22-213	4	August 29, 2022	-	75	727	ND	ND	ND	ND	ND	ND	ND	500
BES22-214	4	August 29, 2022	-	86	802	ND	ND	ND	ND	ND	ND	ND	470
BES22-215	4	August 29, 2022	-	74	783	ND	ND	ND	ND	ND	ND	ND	760
WES22-01	6-10	August 1, 2022	-	120	232	ND	ND	ND	ND	ND	ND	ND	150
WES22-02	0-4	August 9, 2022	-	51	405	ND	ND	ND	ND	ND	ND	ND	270
WES22-03	0-4	August 5, 2022	-	24	392	ND	ND	ND	ND	ND	ND	ND	350
WES22-03	4-7	August 23, 2022	0	0	20	ND	ND	ND	ND	ND	ND	ND	ND
WES22-04	0-4	August 9, 2022	-	90	421	ND	ND	ND	ND	ND	ND	ND	280
WES22-05	0-4	August 16, 2022	-	35	601	ND	ND	ND	ND	ND	ND	ND	690
WES22-05	0-4	September 19, 2022	-	49	530	ND	ND	ND	ND	ND	ND	ND	600
WES22-06	0-4	August 9, 2022	-	55	414	ND	ND	ND	ND	ND	ND	ND	250
WES22-07	0-4	August 19, 2022	-	-	490	ND	ND	ND	ND	ND	ND	ND	190
WES22-08	0-4	August 5, 2022	-	79	12	ND	ND	ND	ND	ND	ND	ND	ND
WES22-09	0-4	August 5, 2022	-	38	323	ND	ND	ND	ND	ND	ND	ND	360
WES22-10	0-4	August 5, 2022	-	31	437	ND	ND	ND	ND	ND	ND	ND	400
WES22-10	4-9	August 17, 2022	-	1,117	57	ND	ND	ND	ND	ND	ND	ND	740
WES22-11	0-4	August 8, 2022	-	65	47	ND	ND	ND	ND	ND	ND	ND	ND
WES22-11	4-6	August 22, 2022	0	-	0	ND	ND	ND	ND	ND	ND	ND	ND
WES22-12	0-4	August 8, 2022	-	37	41	ND	ND	ND	ND	ND	ND	ND	ND
WES22-12	4-6	August 22, 2022	0	-	0	ND	ND	ND	ND	ND	ND	ND	ND
WES22-13	0-4	August 8, 2022	-	88	363	ND	ND	ND	ND	ND	ND	ND	340
WES22-13	4-6	August 22, 2022	0	-	0	ND	ND	ND	ND	ND	ND	ND	ND
WES22-14	0-4	August 8, 2022	-	112	525	ND	ND	ND	ND	ND	ND	ND	ND 4000
WES22-17	4-9	August 17, 2022	-	2,680	50	ND	ND	ND	ND	ND	ND	ND	1900
WES22-18	4-9	August 17, 2022	-	1,098	76	ND	ND	ND	ND	ND	ND	ND	650
WES22-19	0-4 0-4	August 19, 2022	0	16	335	ND	ND	ND	ND	ND	ND	ND	200
WES22-20		August 20, 2022	0	16 80	233 615	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	80 470
WES22-21 WES22-22	0-4 0-4	August 29, 2022 August 23, 2022	0	24	498	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	350
WES22-22 WES22-23	0-4	August 23, 2022 August 19, 2022	0	-	498	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND	280
WES22-23	4-10	August 19, 2022 August 22, 2022	0	-	0	ND	ND ND	ND	ND ND	ND ND	ND ND	ND	ND
WES22-25	6-10	August 22, 2022 August 22, 2022	0	-	0	ND	ND	ND	ND	ND	ND ND	ND	ND
WES22-25	4-9	August 22, 2022 August 22, 2022	0	_	23	ND	ND	ND	ND	ND	ND	ND	80
WES22-27	4-9	August 22, 2022 August 22, 2022	0	_	49	ND	ND	ND	ND	ND	ND	ND	ND
WES22-28	4-7	August 23, 2022	0	55	0	ND	ND	ND	ND	ND	ND	ND	ND
WES22-29	4-7	August 23, 2022 August 23, 2022	0	28	28	ND	ND	ND	ND	ND	ND	ND	ND
WES22-30	4-10	August 23, 2022 August 23, 2022	0	29	106	ND	ND	ND	ND	ND	ND	ND	200
WES22-30	4-10	August 29, 2022	-	31	379	ND	ND	ND	ND	ND	ND	ND	200
WES22-31	4-0	August 29, 2022 August 29, 2022	-	36	499	ND	ND ND	ND	ND	ND	ND ND	ND	180
WES22-32 WES22-33	4-7	August 29, 2022 August 29, 2022	-	35	532	ND	ND	ND	ND	ND	ND ND	ND	250
VV LJZZ-JJ	4-7	August 29, 2022 August 29, 2022		34	204	ND	ND	ND	ND	ND	ND	ND	120



Site Name: Routh Deep SWD #2 NMOCD Tracking #: nAPP2218654480

Project #: 22E-00716-10

Lab Reports: 2207E17, 2207F05, 2207F70, 2208151, 2208249, 2208347, 2208418, 2208F02, 2208E18, 2208B92, 2208I06, 2208C66, 2208A99,

2208879, 2208818, 2208698, 2208490, 2208578, 2209A31

		Table 3. Confirmato	ry Sample	Field Scr	een and La	boratory	Results - I	Depth to G	iroundwa	er >100 fe	eet bgs		
	Sample Desc	ription	Fi	eld Screeni	ng			Petrole	um Hydrod	arbons			
			ds			Vol	atile			Extractable			Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compoun (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)
WES22-35	4-9	August 29, 2022	-	71	150	ND	ND	ND	ND	ND	ND	ND	80
WES22-36	4-6	August 29, 2022	,	87	24	ND	ND	ND	ND	ND	ND	ND	120
WES22-37	6-7	August 29, 2022	-	43	571	ND	ND	ND	ND	ND	ND	ND	870
WES22-38	6-7	August 29, 2022	-	39	686	ND	ND	ND	ND	ND	ND	ND	390
WES22-39	6-7	August 29, 2022	-	70	928	ND	ND	ND	ND	ND	ND	ND	130

[&]quot;ND" Not Detected at the Reporting Limit

Bold and green shaded indicates exceedance outside of NMOCD Reclamation Criteria



[&]quot;-" indicates not analyzed/assessed

ATTACHMENT 3

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

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	nAPP2218654480
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

			•		•		
Responsible Party EOG Resources, Inc.				OGRID 7	1311		
Contact Name Chase Settle				Contact Te	elephone 575-748-1471		
Contact ema	Contact email chase settle@eogresources.com				nAPP2218654480		
Contact mail	ling address	104 S. 4th Stree	t Artesia, NM 882	10			
			Location	of Release So	ource		
Latitude	32.6664	3					
Latitude	32.0004.	<i>3</i>	(NAD 83 in dec	Longitude _ cimal degrees to 5 decim	-104.55615 nal places)		
Site Name	D (1 D)	CIVID IIO		Site Type	OWD		
Date Release	Routh Deep Discovered			API# (if app	SWD		
		6/30/2022			30-013-23363		
Unit Letter	Section	Township	Range	Coun	ity		
В	14	19S	24E	Eddy			
Surface Owne	r: State	☐ Federal ☐ T	ribal X Private (A	Name: Howe	ll Revocable Trust		
Surface Owne	i state			vame)		
			Nature and	l Volume of I	Release		
	Materia	ıl(s) Released (Select a	ll that apply and attach	calculations or specific	justification for the volumes provided below)		
Crude Oi	1	Volume Release	,		Volume Recovered (bbls)		
X Produced	Water	Volume Release	ed (bbls) Unknow	n	Volume Recovered (bbls) 0		
Is the concentration of dissolved chlori produced water >10,000 mg/l?			tion of dissolved cl		X Yes No		
Condensate Volume Released (bbls)			ed (bbls)		Volume Recovered (bbls)		
☐ Natural Gas Volume Released (Mcf)			ed (Mcf)		Volume Recovered (Mcf)		
Other (describe) Volume/Weight Released (provide unit			Released (provide	e units)	S) Volume/Weight Recovered (provide units)		
Cause of Rel	ease				<u> </u>		
					in the containment area around the produced water tanks.		
	Based on the area footprint, it was determined by a third party environmental consultant that the volume most likely crossed the reportable threshold.						

Received by OCD: 1/18/2023/22:22:39PM State of New Mexico Page 2 Oil Conservation Division Page 22eof 556

Incident ID	nAPP2218654480
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?				
Yes X No					
If YES, was immediate no	otice given to the OCD? By whom? To wh	om? When and by what means (phone, email, etc)?			
	Initial Ro	esponse			
The responsible p	party must undertake the following actions immediatel	y unless they could create a safety hazard that would result in injury			
\overline{X} The source of the rele	ease has been stopped.				
\overline{X} The impacted area ha	s been secured to protect human health and	the environment.			
X Released materials ha	ave been contained via the use of berms or c	ikes, absorbent pads, or other containment devices.			
	ecoverable materials have been removed and				
If all the actions described	d above have <u>not</u> been undertaken, explain	why:			
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.					
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.					
Printed Name: Chase S	Settle	Title: Rep Safety & Environmental Sr			
Signature: Chase	Settle	Date: 07/05/2022			
email: Chase_Settle	@eogresources.com	Telephone: 575-748-1471			
OCD Only					
Received by:	Harimon	07/06/2022 Date:			

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. **Santa Fe, NM 87505**

CONDITIONS

Action 122867

CONDITIONS

Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	122867
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-	7/6/2022

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

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	nAPP2218654480
District RP	
Facility ID	
Application ID	

Closure

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

Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office

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

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)				
☐ Description of remediation activities				
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.				
Printed Name: Chase Settle	Title: Rep Safety and Environmental			
Signature: Chase Settle	Date:01/18/2023			
email: <u>chase_settle@eogresources.com</u>	Telephone: <u>575-748-4171</u>			
OCD Only				
Received by:	Date:			
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.				
Closure Approved by:	Date:			
Printed Name:	Title:			

ATTACHMENT 4



Client:	EOG Resources Inc.	Inspection Date:	6/15/2022	
Site Location Name:	Routh Deep SWD #2	Report Run Date:	6/15/2022 11:31 PM	
Client Contact Name:	Chase Settle	API #:		
Client Contact Phone #:	575-703-6537			
Unique Project ID		Project Owner:		
Project Reference #		Project Manager:		
Summary of Times				
Arrived at Site	6/15/2022 9:55 AM			
Departed Site	6/15/2022 4:35 PM			
		Field Not	es	

- **9:56** Arrived at site and met with Standard Safety personnel. Filled out safety paperwork.
- 9:57 Crews are continuing excavation of the site. Materials are still being stockpiled at northeast corner
- **16:26** Done for the day, will bring out trucks to haul off possible contaminated materials.

Next Steps & Recommendations

1 Haul off possible contaminated soil to disposal



Site Photos



Southwest corner of site



Viewing Direction: Northeast

Westplant Room Research

Westplant Room R

Stockpile at northeast corner



Progress at western portions of site





Progress at southern perimeter



Daily Site Visit Signature

Inspector: Fernando Rodriguez

Signature: Signature



Client:	EOG Resources Inc.	Inspection Date:	7/13/2022
Site Location Name:	Routh Deep SWD #2	Report Run Date:	7/13/2022 10:38 PM
Client Contact Name:	Chase Settle	API #:	
Client Contact Phone #:	575-703-6537		
Unique Project ID		Project Owner:	
Project Reference #		— Project Manager:	
		Summary of	Times
Arrived at Site	7/13/2022 8:15 AM		
Departed Site	7/13/2022 3:15 PM		
		P'.ld No.	

Field Notes

- **8:41** Loaded the first round of 8 trucks, completed safety meeting, and ran magnetic locator.
- 10:15 Samples came back clean except under truck loading area. Will reassess once we are loading trucks elsewhere.
- **10:38** Potholing into pasture to complete delineation of hot walls
- 10:41 Collecting BH22-08 with auger to avoid tearing up pasture with trackhoe
- 14:38 Backfilling all excavated boreholes

Next Steps & Recommendations

1 Continue excavation



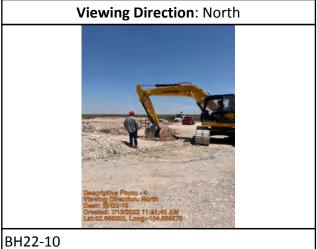
Site Photos



Sampling area from this morning













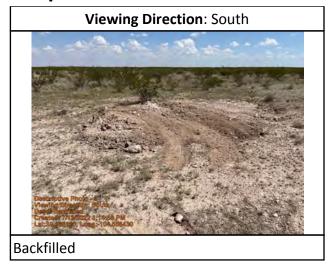
3H2Z-11





Run on 7/13/2022 10:38 PM UTC Powered by www.krinkleldar.com Page 3 of 5







Daily Site Visit Signature

Inspector: Sally Carttar

Signature:



Client:	EOG Resources Inc.	Inspection Date:	9/19/2022
Site Location Name:	Routh Deep SWD #2	Report Run Date:	9/19/2022 10:25 PM
Client Contact Name:	Chase Settle	API #:	
Client Contact Phone #:	575-703-6537		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	
		Summary of	Times
Arrived at Site	9/19/2022 9:15 AM		
Departed Site	9/19/2022 3:30 PM		

- 9:22 Discussing excavation plan to remove contaminated soils from base and wall of excavation
- 10:47 Completed safety meeting and discussed excavation plan with operators. Ran magnetic locator in excavation areas
- 11:30 Sent the truck to landfill

Next Steps & Recommendations

Field Notes

- 1 Apply for site closure once DTGW is confirmed
- 2 Continue with backfill



Site Photos



4' excavation into lease road east of pad



Viewing Direction: Southwest



Todays excavation



Toward pit area from dry hole marker





Remaining pad



Pad and excavation toward direction of cattle guard



Excavation

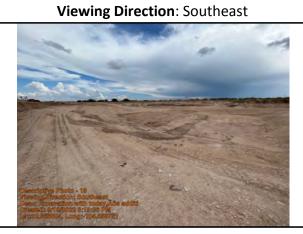


Walls against remaining pad





Toward pit north of pad



Excavation with today's addition





Run on 9/19/2022 10:25 PM UTC Powered by www.krinkleldar.com Page 4 of 7





Bam line, today's wall excavation, and ramps

Viewing Direction: Southwest

Planning to excavate BES22-133 and 134 down 6"



Scraping the base



Run on 9/19/2022 10:25 PM UTC Powered by www.krinkleldar.com Page 5 of 7





Taking out the ramp to resample the wall



Toward pad



Excavation east of pad



Toward battery



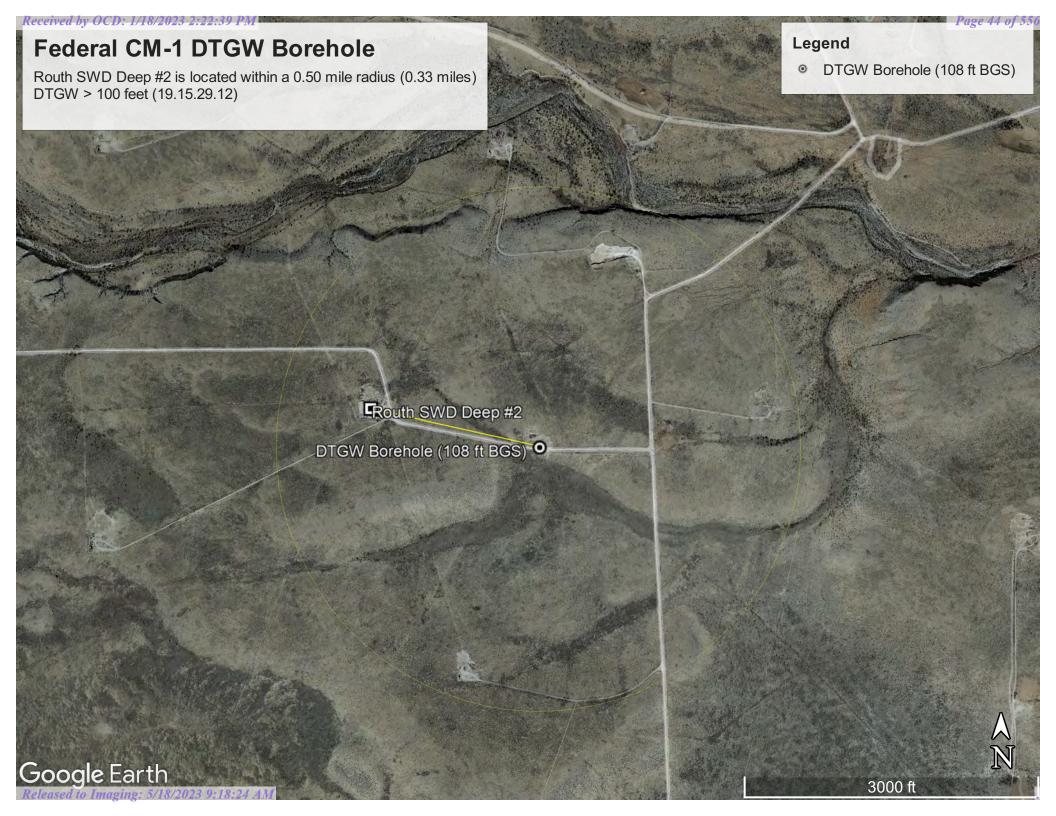
Daily Site Visit Signature

Inspector: Sally Carttar

Signature:

ATTACHMENT 5

N	> ^			_	GER SERVICES, INC.	Ranger Environr P.O. Box 201179 Austin, Texas 78 Phone: (512)335 Fax: (512)335-0	3720 5-1785	BORI PAGE 1 OF	NG	NU	MBER SB-1
CLIENT	EOG Res	ources,	Inc.					CM-1			
	CT NUMBER								exico		
DATE S	STARTED _	9/26/22			COMPLETED	9/26/22	GROUND WATER LEVELS	2.			
DRILLII	NG CONTRA	CTOR	HCI				AT TIME OF DRILLII				
							AT THE OF DIVIDEN				
						P. Finn	AI I LIV DIVILLING	-			
GPS C	OORDINATE	S <u>32.6</u>	6546	743°,	-104.55115675°			•			
о ОЕРТН (ft)	SOIL SAMPLE ANALYSIS	GROUNDWATER LEVELS (BTOC)	GRAPHIC LOG			N	MATERIAL DESCRIPTION		Casii		/ELL DIAGRAM De: 2" Diameter Temp.
5 -			9	4.0	(GM) Silty Gravel	l, brown to tan, firm	to stiff				
- 10 15 20 30 35 40 55 60 70 80 85 90 100 -				60.0 65.0 80.0 85.0	(ML) Clayey Sanc (ML) Clayey Sanc (ML) Clayey Sanc	dy Silt, tan to pink, s dy Silt, dark red, sof dy Silt, reddish-brow					– Riser
105 -				105.0 108.0	-	dy Silt, light brown t	o light red, very soft to firm				Temporary Well Screen
- 40					NOTE: 72 the tempor Instruments the tempora	hours after compl rary well for the p s electronic water ary well. Following	108.0 feet- Dry upon comple letion Ranger personnel eva resence of water utilizing a meter. No water was detec completion of the investigation is plugged and abandoned.	iluated Heron cted in			





6/27/2022, 12:29:45 PM GIS WATERS PODs

Pending

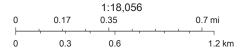
OSE District Boundary New Mexico State Trust Lands

Both Estates SiteBoundaries

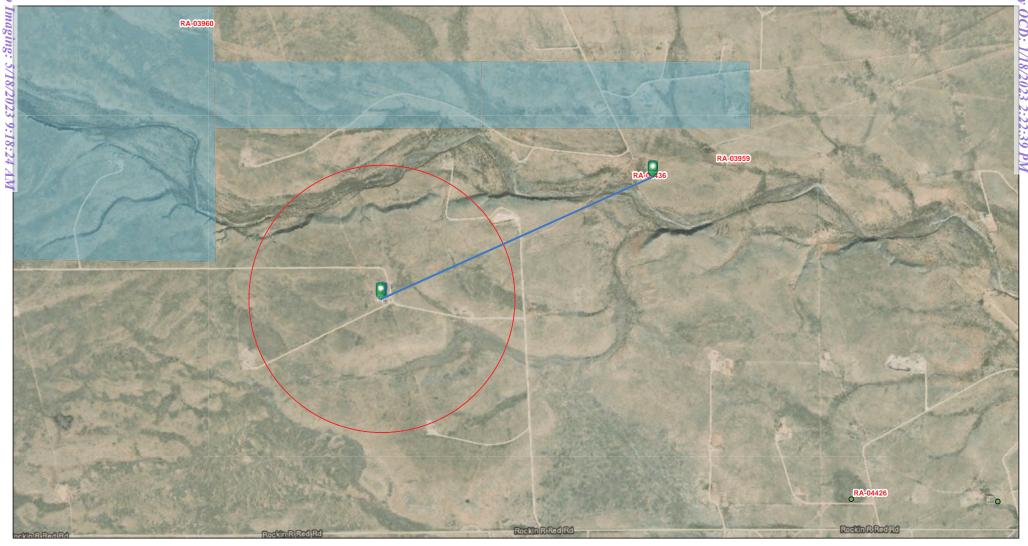
Water Right Regulations

Closure Area

Subsurface Estate



Esri, HERE, GeoTechnologies, Inc., Esri, HERE, Garmin, GeoTechnologies, Inc., U.S. Department of Energy Office of Legacy Management, Maxar



6/27/2022, 12:37:16 PM

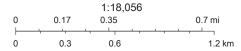
Override 1

OSE District Boundary New Mexico State Trust Lands

GIS WATERS PODs Water Right Regulations

Pending Closure Area Both Estates

SiteBoundaries



Esri, HERE, GeoTechnologies, Inc., Esri, HERE, Garmin, GeoTechnologies, Inc., U.S. Department of Energy Office of Legacy Management, Maxar



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

 \mathbf{X}

RA 06436 19S 24E 4 12

543083 3615122*

Driller License: 406 **Driller Company:** TIDWELL, CLYDE J.

Driller Name:

Drill Start Date: 01/30/1979 **Drill Finish Date:**

02/04/1979

Plug Date:

Shallow

Log File Date:

02/04/1979 **PCW Rcv Date:** Source:

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size:

Depth Well:

Depth Water:

300 feet

Meter Number:

4261

Meter Make:

MCCROMETER

14-01823 **Meter Serial Number:**

Meter Multiplier:

100.0000

Number of Dials: Unit of Measure:

6 Gallons **Meter Type: Return Flow Percent:** Diversion

Usage Multiplier:

Reading Frequency:

Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr Comment	Mtr Amount Online
01/11/2000	2000	0	A	RPT	0
07/11/2000	2000	0	A	RPT	0
10/11/2000	2000	0	A	RPT	0
01/03/2001	2000	0	A	RPT	0
04/09/2001	2001	0	A	RPT	0
07/09/2001	2001	0	A	RPT not water used this quater	0
01/23/2002	2001	16020	A	RPT	0
04/04/2002	2002	16020	A	RPT	0
07/06/2002	2002	23670	A	RPT	0.023
10/09/2002	2002	26528	A	RPT	0.009
01/14/2003	2002	32468	A	RPT	0.018
04/16/2003	2003	35292	A	RPT	0.009
08/18/2003	2003	53990	A	tw	0.057
10/28/2003	2003	57574	A	tw	0.011
01/08/2004	2004	57574	A	tw	0
04/15/2004	2004	61694	A	sj	0.013
07/06/2004	2004	61694	A	sj	0
10/02/2004	2004	92200	A	sj	0.094
01/10/2005	2004	108867	A	sj	0.051
04/11/2005	2005	109923	A	RPT	0.003
07/09/2005	2005	112043	A	RPT	0.007
10/04/2005	2005	116328	Α	RPT	0.013
12/31/2005	2005	129760	A	ch	0.041
02/27/2006	2006	140575	A	ch	0.033
03/01/2006	2006	0	A	RPT Initial reading	0

07/07/2006	2006	29996	A	RPT	9.205
10/02/2006	2006	44829	A	RPT	4.552
04/10/2007	2007	52670	A	RPT	2.406
07/09/2007	2007	55001	A	RPT	0.715
10/10/2007	2007	55501	A	RPT	0.153
01/08/2008	2007	57425	A	RPT	0.590
04/08/2008	2008	58751	A	RPT	0.407
07/08/2008	2008	61160	A	RPT	0.739
10/09/2008	2008	61589	A	RPT	0.132
01/08/2009	2008	62400	A	RPT	0.249
01/01/2010	2009	65837	A	RPT	1.055
10/05/2011	2011	20693	A	RPT Final reading/Temp Meter	6.350
10/05/2011	2011	0	A	RPT Initial reading/Temp meter	0
10/05/2011	2011	70831	A	RPT	1.533
07/09/2012	2012	6707	A	RPT Temp Meter/Final Reading	1.329
07/09/2012	2012	2376	A	RPT Temp Meter/Initial Reading	0
05/08/2013	2013	84373	A	RPT	4.156
05/08/2013	2013	70831	A	RPT Old Meter Reinstalled/New read	0
07/10/2013	2013	84727	A	RPT	0.109
10/01/2013	2013	85221	A	RPT	0.152
01/01/2014	2013	243320	R	RPT Corrected reading	48.519
04/01/2014	2014	244217	A	RPT Corrected reading	0.275
07/01/2014	2014	271687	A	RPT	8.430
10/01/2014	2014	304194	A	RPT	9.976
07/01/2015	2015	344217	A	RPT	12.283
10/08/2015	2015	344217	A	RPT	0
01/01/2016	2016	344217	A	ap	0
04/01/2016	2016	344217	A	ap	0
07/01/2016	2016	344217	A	ap	0
10/01/2016	2016	344217	A	ap	0
01/01/2017	2017	344217	A	ap	0
04/04/2017	2017	181180	A	ap newmeterstartedw/181180	0
07/06/2017	2017	236029	A	ap	16.833
10/06/2017	2017	257069	A	ap	6.457
01/03/2018	2018	289625	A	ap	9.991
04/01/2018	2018	289625	A	ap	0
07/01/2018	2018	289625	A	ap	0
10/01/2018	2018	289625	A	RPT	0
01/01/2019	2019	289625	A	RPT	0
04/01/2019	2019	289625	A	RPT	0
07/01/2019	2019	289625	A	RPT	0
10/01/2019	2019	289734	A	RPT	0.033
01/01/2020	2020	289734	A	RPT	0
10/01/2020	2020	323186	A	RPT	10.266
01/01/2021	2020	323186	A	RPT	0
07/01/2021	2021	337019	A	WEB	4.245 X
09/01/2021	2021	337019	A	WEB	0 X
01/01/2022	2022	341063	A	WEB	1.241 X
01/22/2022	2022	27158	A	RPT First Reading Replaced Meter	0

01/22/2022 04/01/2022	2022 2022	341077 30695	A A	RPT RPT	Last reading for meter	(
x **VTD Mot	er Amounts:	Voor		Amount		
"" I I D Met	er Amounts:					
		2000		0		
		2001		0		
		2002		0.050		
		2003		0.077		
		2004		0.158		
		2005		0.064		
		2006		13.790		
		2007		3.864		
		2008		1.527		
		2009		1.055		
		2010		0		
		2011		7.883		
		2012		1.329		
		2013		52.936		
		2014		18.681		
		2015		12.283		
		2016		0		
		2017		23.290		
		2018		9.991		
		2019		0.033		
		2020		10.266		
		2021		4.245		
		2022		2.330		

^{*}UTM location was derived from PLSS - see Help

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

6/27/22 12:31 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag POD Number Q64 Q16 Q4 Sec Tws Rng

X

RA 06436 3 1 4 12 19S 24E

543083 3615122*

Driller License: 406 Driller Company: TIDWELL, CLYDE J.

Driller Name:

Drill Start Date: 01/30/1979 **Drill Fin**

Drill Finish Date: 02/04/1979 **Plug Date:**

Log File Date: 02/04/1979 **PCW Rcv Date:** Source: Shallow

Pump Type: Pipe Discharge Size: Estimated Yield:

Casing Size: Depth Well: Depth Water: 300 feet

Meter Number: 4261 Meter Make: MCCROMETER

Meter Serial Number:14-01823Meter Multiplier:100.0000Number of Dials:6Meter Type:Diversion

Unit of Measure: Gallons Return Flow Percent:

Usage Multiplier: Reading Frequency: Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr Comment	Mtr Amount Online
01/11/2000	2000	0	A	RPT	0
07/11/2000	2000	0	A	RPT	0
10/11/2000	2000	0	A	RPT	0
01/03/2001	2000	0	A	RPT	0
04/09/2001	2001	0	A	RPT	0
07/09/2001	2001	0	A	RPT not water used this quater	0
01/23/2002	2001	16020	A	RPT	0
04/04/2002	2002	16020	A	RPT	0
07/06/2002	2002	23670	A	RPT	0.023
10/09/2002	2002	26528	A	RPT	0.009
01/14/2003	2002	32468	A	RPT	0.018
04/16/2003	2003	35292	A	RPT	0.009
08/18/2003	2003	53990	A	tw	0.057
10/28/2003	2003	57574	A	tw	0.011
01/08/2004	2004	57574	A	tw	0
04/15/2004	2004	61694	A	sj	0.013
07/06/2004	2004	61694	A	sj	0
10/02/2004	2004	92200	A	sj	0.094
01/10/2005	2004	108867	A	sj	0.051
04/11/2005	2005	109923	A	RPT	0.003
07/09/2005	2005	112043	A	RPT	0.007
10/04/2005	2005	116328	A	RPT	0.013
12/31/2005	2005	129760	A	ch	0.041
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03/01/2006	2006	0	A	RPT Initial reading	0

07/07/2006	2006	29996	A	RPT	9.205
10/02/2006	2006	44829	A	RPT	4.552
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07/09/2007	2007	55001	A	RPT	0.715
10/10/2007	2007	55501	A	RPT	0.153
01/08/2008	2007	57425	A	RPT	0.590
04/08/2008	2008	58751	A	RPT	0.407
07/08/2008	2008	61160	A	RPT	0.739
10/09/2008	2008	61589	A	RPT	0.132
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07/09/2012	2012	2376	A	RPT Temp Meter/Initial Reading	0
05/08/2013	2013	84373	A	RPT	4.156
05/08/2013	2013	70831	A	RPT Old Meter Reinstalled/New read	0
07/10/2013	2013	84727	A	RPT	0.109
10/01/2013	2013	85221	A	RPT	0.152
01/01/2014	2013	243320	R	RPT Corrected reading	48.519
04/01/2014	2014	244217	A	RPT Corrected reading	0.275
07/01/2014	2014	271687	A	RPT	8.430
10/01/2014	2014	304194	A	RPT	9.976
07/01/2015	2015	344217	A	RPT	12.283
10/08/2015	2015	344217	A	RPT	0
01/01/2016	2016	344217	A	ap	0
04/01/2016	2016	344217	A	ap	0
07/01/2016	2016	344217	A	ap	0
10/01/2016	2016	344217	Α	ap	0
01/01/2017	2017	344217	A	ap	0
04/04/2017	2017	181180	A	ap newmeterstartedw/181180	0
07/06/2017	2017	236029	A	ap	16.833
10/06/2017	2017	257069	A	ap	6.457
01/03/2018	2018	289625	Α	ap	9.991
04/01/2018	2018	289625	A	ap	0
07/01/2018	2018	289625	A	ap	0
10/01/2018	2018	289625	A	RPT	0
01/01/2019	2019	289625	A	RPT	0
04/01/2019	2019	289625	A	RPT	0
07/01/2019	2019	289625	A	RPT	0
10/01/2019	2019	289734	A	RPT	0.033
01/01/2020	2020	289734	A	RPT	0
10/01/2020	2020	323186	A	RPT	10.266
01/01/2021	2020	323186	A	RPT	0
07/01/2021	2021	337019	A	WEB	4.245 X
09/01/2021	2021	337019	A	WEB	0 X
01/01/2022	2022	341063	A	WEB	1.241 X
01/22/2022	2022	27158	A	RPT First Reading Replaced Meter	0

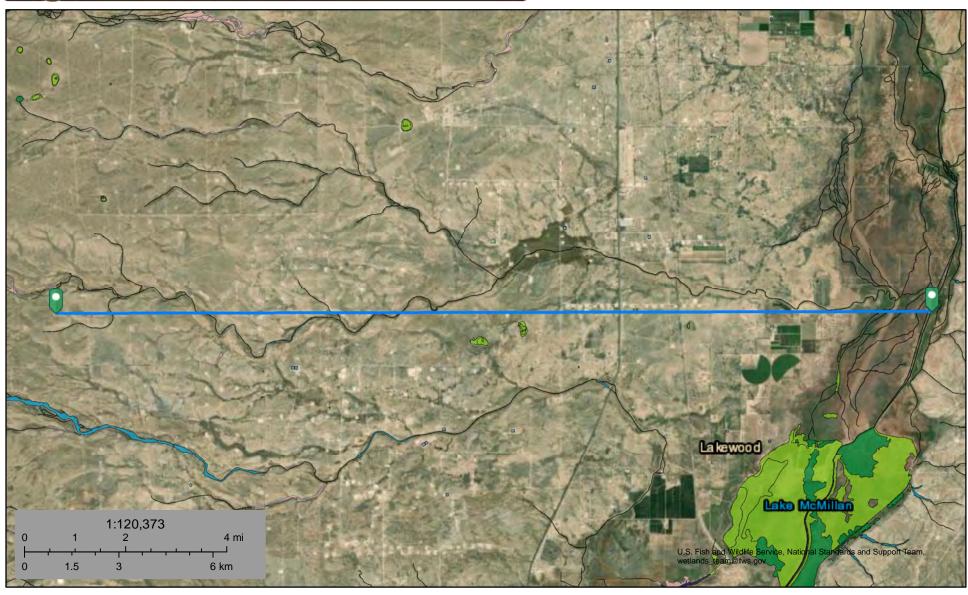
						-
01/22/2022	2022	341077			Last reading for meter	0.004
04/01/2022	2022	30695	A	RPT		1.08
**YTD Met	er Amounts:	Year		Amount		
		2000		0		
		2001		0		
		2002		0.050		
		2003		0.077		
		2004		0.158		
		2005		0.064		
		2006		13.790		
		2007		3.864		
		2008		1.527		
		2009		1.055		
		2010		0		
		2011		7.883		
		2012		1.329		
		2013		52.936		
		2014		18.681		
		2015		12.283		
		2016		0		
		2017		23.290		
		2018		9.991		
		2019		0.033		
		2020		10.266		
		2021		4.245		
		2022		2.330		

^{*}UTM location was derived from PLSS - see Help

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

6/27/22 12:31 PM

POINT OF DIVERSION SUMMARY



June 27, 2022

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

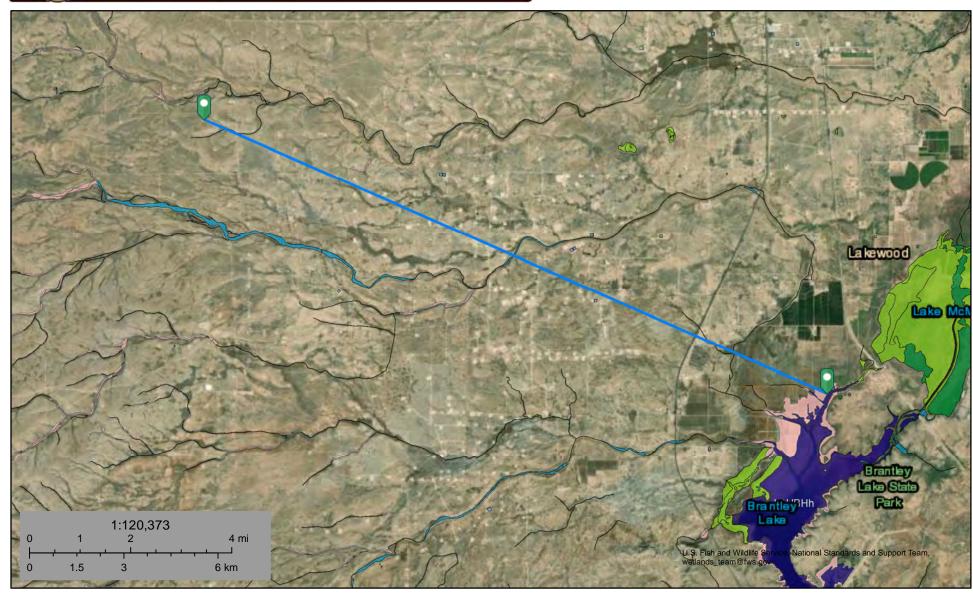
Freshwater Pond

Lake

Riverine

Other

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.



June 27, 2022

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

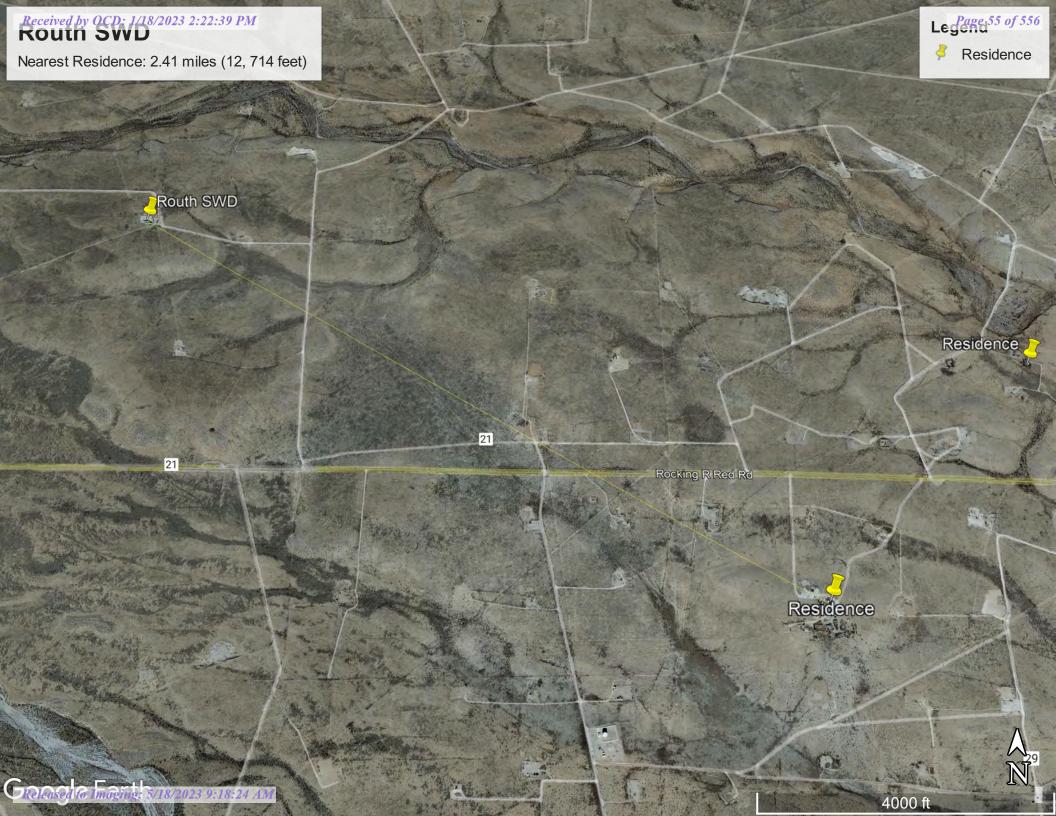
Freshwater Pond

Lake

Riverine

Other

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.





New Mexico Office of the State Engineer

Water Right Summary

get image list

WR File Number: RA 06436 Subbasin: RA Cross Reference:

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: DCL DECLARATION

Total Acres: 0 Subfile: - Header: -

Total Diversion: 43.5 Cause/Case: -

Owner: JAMES H & BETTY R HOWELL REVOCABLE TRUST

Contact: ALAN HOWELL

Documents	on	File
------------------	----	------

				Sta	itus		From/			
	Trn#	Doc	File/Act	1	2	Transaction Desc.	To	Acres	Diversion	Consumptive
gg ima		COWNE	E 2013-09-30	CHG	PRC	RA 06436	T		0	
	207182	COWNI	E 2001-02-28	CHG	PRC	RA 06436	T		3	
	<u>247678</u>	DCL 1	1995-09-19	DCL	PRC	RA 06436	T	0	40.5	
	<u>252693</u>	72121	1995-05-03	PMT	MTR	RA 06436	T		3	
ima		72121	<u>1979-01-25</u>	PMT	APR	RA 06436	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

 POD Number
 Well Tag
 Source
 64 Q16 Q4 Sec
 Tws Rng
 X
 Y
 Other Location Desc

 RA 06436
 Shallow
 3
 1
 4
 12
 19S
 24E
 543083
 3615122*

An () after northing value indicates UTM location was derived from PLSS - see Help

Priority Summary

PriorityStatusAcresDiversionPod Number12/31/1929DCL043.5RA 06436Shallow

Place of Use

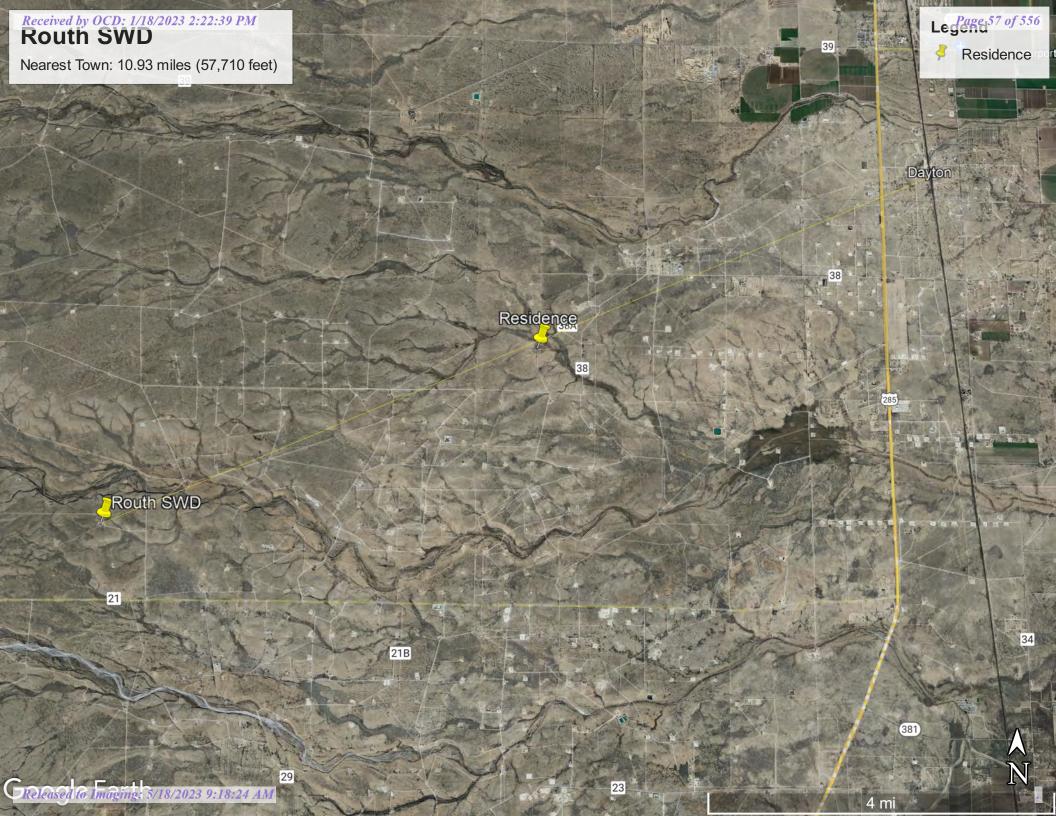
256 64 Q16 Q4Sec Tws Rng Acres Diversion CU Use Priority Status Other Location Desc STK DCL NO PLACE OF USE GIVEN

Source

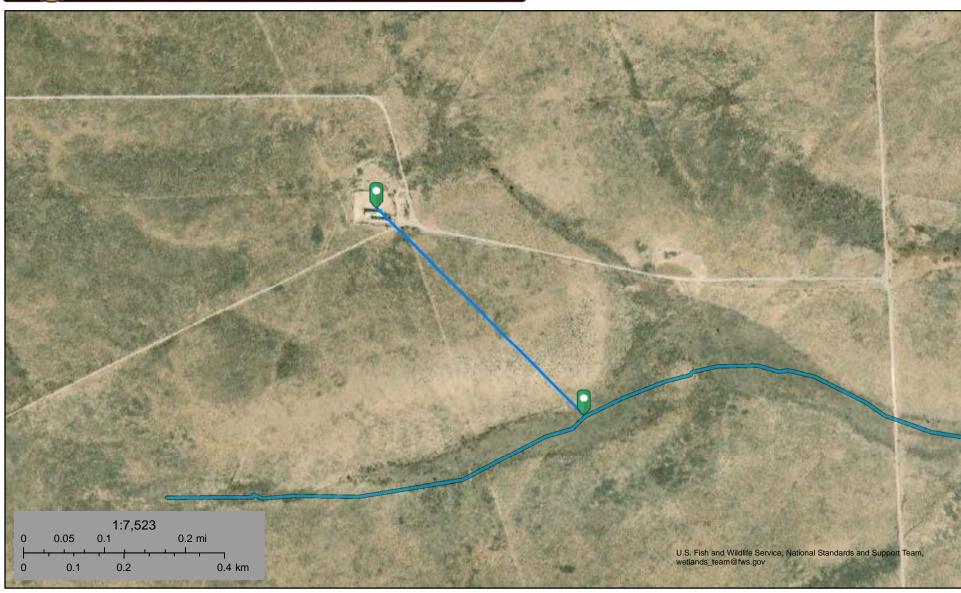
AcresDiversionCUUsePrioritySourceDescription040.5STK12/31/1929GWSHALLOW

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

6/27/22 12:31 PM WATER RIGHT SUMMARY







June 27, 2022

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

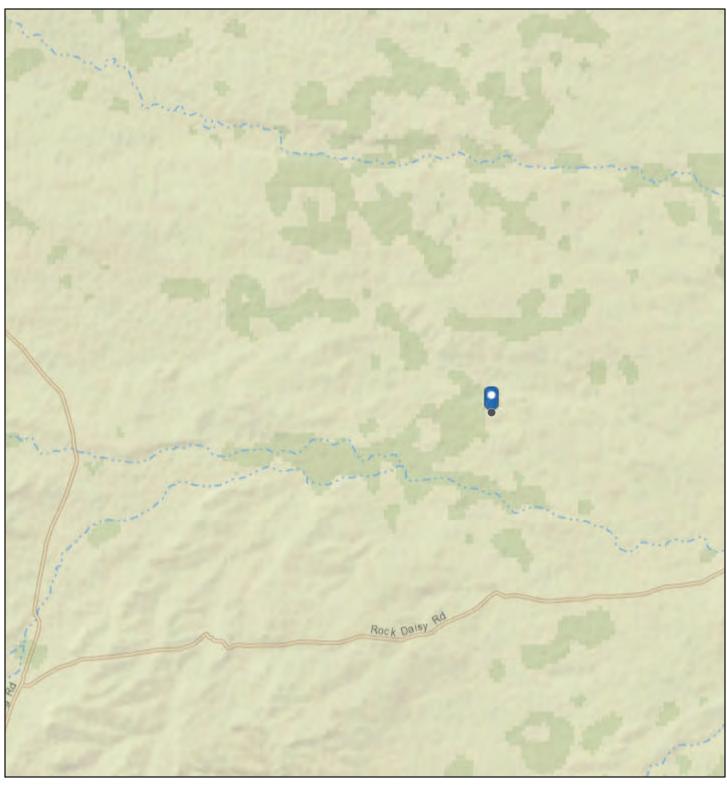
Freshwater Pond

Lake

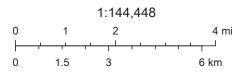
Other

Riverine

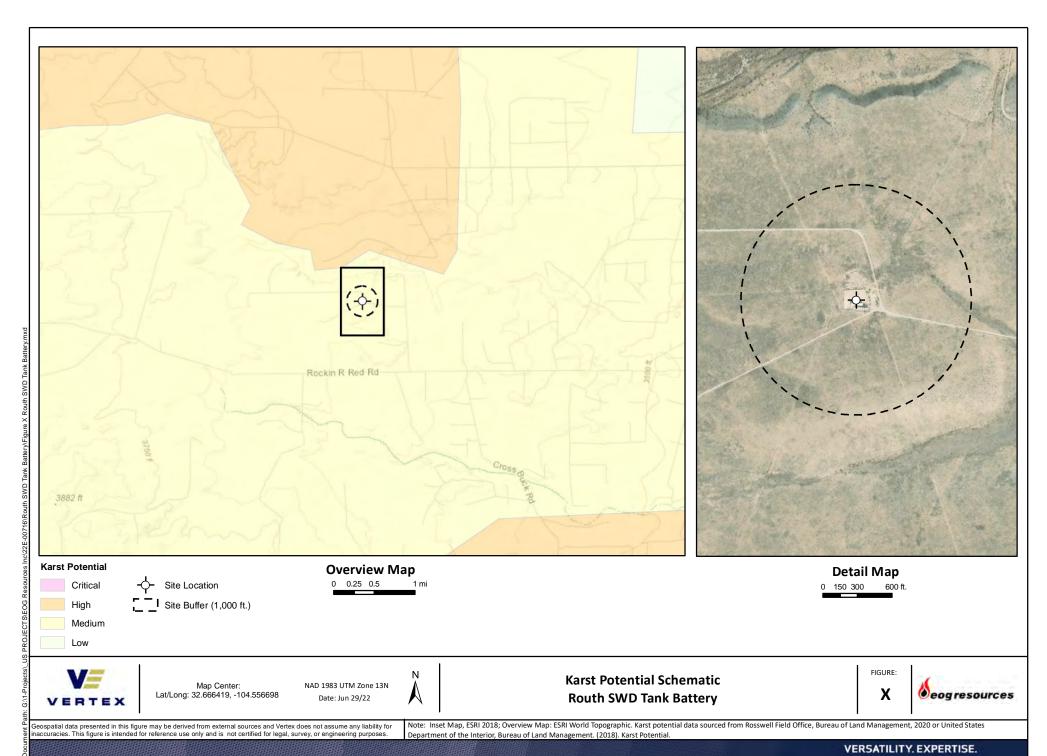
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



6/27/2022, 1:03:20 PM



National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.



ORelease To Imaging: 5/18/2023 998:24 AM

Received by OCD: 1/18/2023 2:22:39 PM National Flood Hazard Layer FIRMette





Without Base Flood Elevation (BFE) With BFE or Depth Zone AE, AO, AH, VE, AR SPECIAL FLOOD HAZARD AREAS Regulatory Floodway 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 OTHER AREAS OF FLOOD HAZARD Area with Flood Risk due to Levee Zone D NO SCREEN Area of Minimal Flood Hazard Zone X Effective LOMRs OTHER AREAS Area of Undetermined Flood Hazard Zone D - - - Channel, Culvert, or Storm Sewer **GENERAL** STRUCTURES | LILLIL Levee, Dike, or Floodwall 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation **Coastal Transect** Base Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary **Coastal Transect Baseline** OTHER Profile Baseline **FEATURES** Hydrographic Feature Digital Data Available No Digital Data Available MAP PANELS Unmapped The pin displayed on the map is an approximate

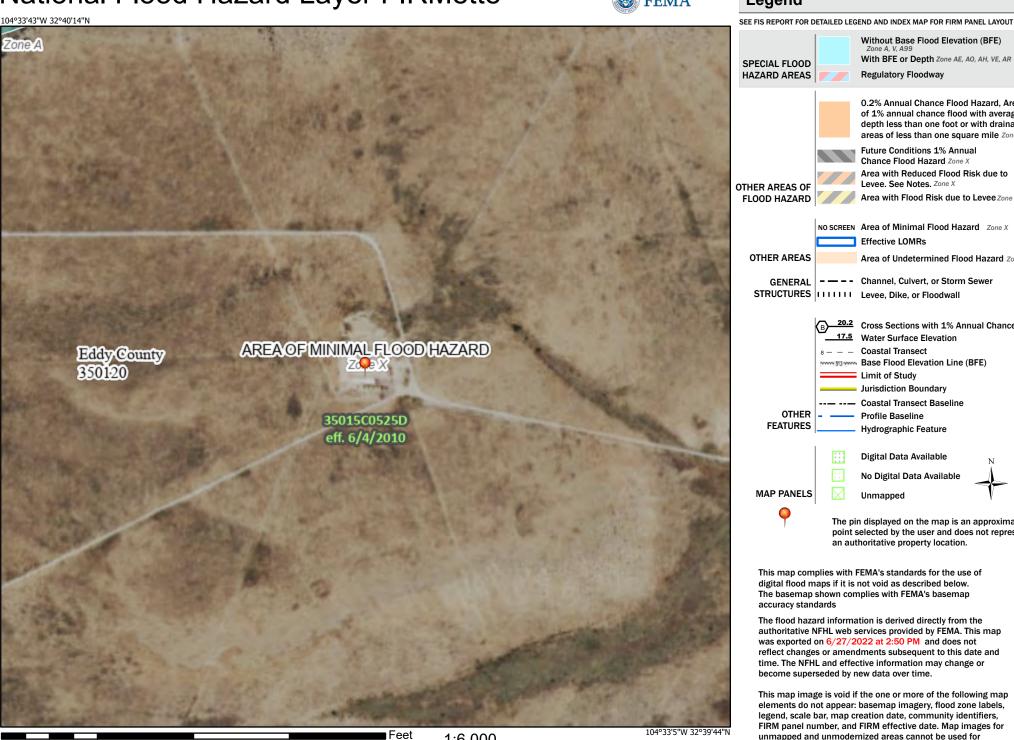
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

point selected by the user and does not represent

an authoritative property location.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/27/2022 at 2:50 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.



2.000



MAP LEGEND

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Water Features

Transportation

Background

Spoil Area

Stony Spot

Wet Spot

Other

Rails

US Routes

Major Roads

Local Roads

Very Stony Spot

Special Line Features

Streams and Canals

Interstate Highways

Aerial Photography

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

... Gravelly Spot

Candfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

+ Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

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 17, Sep 12, 2021

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

Date(s) aerial images were photographed: Feb 27, 2020—Feb 28, 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
UR	Upton-Reagan complex, 0 to 9 percent slopes	3.7	100.0%
Totals for Area of Interest		3.7	100.0%

Eddy Area, New Mexico

UR—Upton-Reagan complex, 0 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1w65 Elevation: 1,100 to 5,400 feet

Mean annual precipitation: 6 to 15 inches

Mean annual air temperature: 60 to 70 degrees F

Frost-free period: 180 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Upton and similar soils: 55 percent Reagan and similar soils: 35 percent Minor components: 10 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

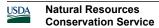
mmhos/cm)

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: R042XC025NM - Shallow

Hydric soil rating: No

Description of Reagan

Setting

Landform: Fan remnants, alluvial fans Landform position (three-dimensional): Rise

Down-slope shape: Convex, linear

Across-slope shape: Linear

Parent material: Alluvium and/or eolian deposits

Typical profile

H1 - 0 to 8 inches: loam H2 - 8 to 60 inches: loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 40 percent Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0

mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Moderate (about 8.2

inches)

Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: B

Ecological site: R042XC007NM - Loamy

Hydric soil rating: No

Minor Components

Reagan

Percent of map unit: 5 percent

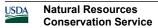
Ecological site: R042XC007NM - Loamy

Hydric soil rating: No

Pima

Percent of map unit: 5 percent

Ecological site: R042XC017NM - Bottomland



Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico Survey Area Data: Version 17, Sep 12, 2021

Ecological Reference Worksheet

Author(s)	/ participant(s)):	John T	unberg	j.,						
Contact fo	or lead author	:	505-70	51-4488	8		Reference site used? Yes/No N				
Date:	2/12/2010	M	LRA:	42.3	Ecological Site:	Loamy	This <u>must</u> be verified based on soil	ls			
and climat	e (see Ecologica	l Site	e Desci	ription)	. Current plant com	munity <u>cannot</u> ł	be used to identify the ecological site.				

<u>Indicators:</u> For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above and below average years for <u>each</u> community within the reference state, when appropriate & (3) site data. Continue description on separate sheet.

1. Number and extent of rills: There should not be any rills.

After wildfires, or abnormally high human or herbivore impacts or extended drought or combinations of these disturbances rills may double in number on steeper slopes at the margins of this site after high-intensity summer thunderstorms. Any rills formed should not be long lived or interconnected and should heal rapidly.

2. Presence of water flow patterns: There can be evidence of sheet flow.

There can be a few flow patterns that should be short and discontinuous. There can be some sheet flow. Water flow patterns should only be present following intense storm events on upper slope limits at the margins of this site. Numerous obstructions alter flow paths. Flow pattern length and numbers may double after wildfires, or abnormally high human or herbivore impacts or extended drought or combinations of these disturbances.

3. Number and height of erosional pedestals or terracettes: Pedestals should be rare. Terracettes can occure and should be discontinuous.

There can be a few pedestals that should be less than 1 inch high. Terracettes can be common and should be discontinuous. If present plant or rock pedestals and terracettes are almost always in flow patterns. Wind caused pedestals are rare and only would be on the site following after wildfires, or abnormally high human or herbivore impacts or extended drought or combinations of these disturbances. These would show signs of healing within 1 year after event.

- 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground): Bare ground can make up to 50% of the ground cover on this site according to the ESD. Bare patch size should be small.
- 5. Number of gullies and erosion associated with gullies:

Gullies and erosion associated with gullies should be rare are infrequent. Typically, gullies if present will only follow the micro topography. Natural drainages with little to no active cutting are common on this site. There should not be any accelerated erosion. After high-intensity summer thunderstorms or after wildfire, or abnormally high human or herbivore impacts or extended drought or combinations of these disturbances then gully formation would be accelerated for a year or two. Evidence of healing within 1 year of event and continuing after that.

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

There should not be any wind scoured, blowouts and/or depositional areas. However there can be potential for depositional areas. Wind erosion is minimal when the site is in a well vegetated condition. Significant wind erosion would only be present following high-intensity summer thunderstorms, after wildfire, or abnormally high human or herbivore impacts or extended drought or combinations of these disturbances. After rain events, exposed soil surfaces form physical crusts that tend to reduce wind erosion. Deposition from off site sources can be common on this site and is in fact a primary soil forming process. This site is succeptable to wind erosion when vegetation is removed or significantly decreased.

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

Litter should be small (less than "1 in diameter) and its movement should be minimal. This site has adequate vegetation to stop litter movement after short distances. Most of the litter movement on this site will be litter that has been transported onto the site from adjacent sites. Litter produced on this site stays on the site and only travels short distances.

8. Soil surface (top few mm) resistance to erosion (stability) values are averages - most sites will show a range of values for both plant canopy and interspaces, if different):

This site can be susceptible to alluvial erosion. Stability values are estimated to be 1-2 in interspaces and 3-5 at bases of vegetation. This would be

9. Soil surface structures and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different):

The SOM content should be less than 1%. A--0 to 6 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; hard, friable, slightly sticky; surface 1/2 to 2 inches has weak thin to medium platy structure; common very fine and fine pores; common very fine, fine and medium roots; strongly calcareous; slightly alkaline (pH 7.6); clear smooth boundary. (4 to 8 inches thick)

10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff:

Overall, infiltration rates should be slow for this site but can be higher around bases of grasses than in interspaces and around bases of shrubs. The soils of this site are deep to moderately deep. The moderately deep soils have either a petrocalcic, petrogypsic or gypsum horizon between 30 and 40 inches. Surface textures are loam, silt loam, very fine sandy loam, or clay loam. Substratum textures are loam, silty clay loam, or silt loams. Subsoil textures are silt loam, clay loam silty clay loam, gravelly loam, gravelly clay loam or very gravelly loam. Permeability is moderate to slow and the available water holding capacity is high to moderate.

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

There should not be any compaction layers on this site. There are soil profile features in the top 9 inches of the soil profile that would be mistaken for a management induced soil compaction layer. Management induced compaction layers will be more difficult to penetrate than clay lenses.

12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: indicate much greater than (>>), greater than (>), and equal to (=):

black grama >> tobosa > C 4 bunch grasses (dropseeds) > C4 midgrasses (threeawns) >= soaptree yucca, ephedra, fourwing saltbush >= forbs (croton, desert marigold, globemallow, > broom snakeweed, prickly pear, = other forbs.

- 13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Black grama and bunchgrasses can show decadence in centers of plants.
- 14. Average percent litter cover (______%) and depth (_____inches).

 Average 15% cover and 0.75 inch deep. (As per ESD)
- 15. Expected annual production (this is TOTAL above-ground production, not just forage production):

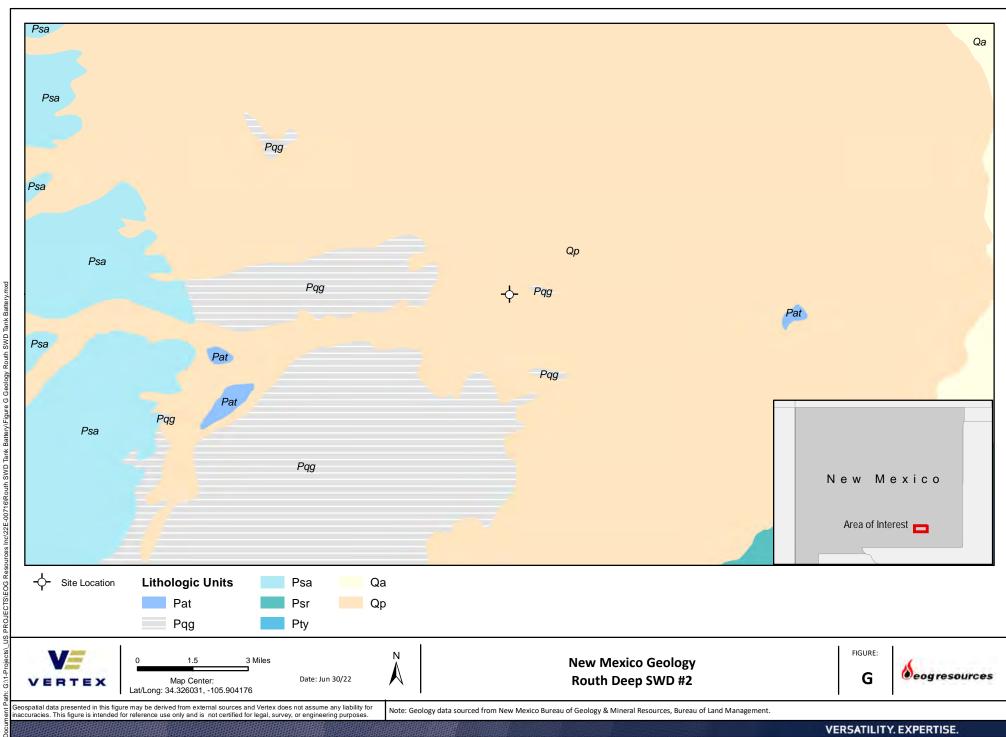
(Low Production 650 lbs./ac.) (Average RV Production 925 lbs./ac.) (High Production 1200 lbs./ac.) After wildfires, high herbivore impacts, extended drought, or combinations of these disturbances, can cause production to be significantly reduced (100-200 lbs per ac. the first growing season following a wildfire) and recover slowly under below average precipitation regimes.

16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "can, and often do, continue to increase regardless of the management of the site and may eventually dominate

Tarbush, creosote and mesquite can be invaders to this site. Invasive plants should not occur in reference plant community. However, lovegrass, Russian thistle, kochia, and other nonnative annuals may initially invade following extended disturbance. Mesquite and tarbush and creosote and lovegrass are the greatest threat to dominate this site in the long term after disturbance (primarily following wildfire exclusion but also includes high human or herbivore impacts and extended drought). Mesquite and tarbush and creosote and lovegrass are most likely to retain dominance if allowed to alter natural fire regime (this alteration may require poor land management combined with years of wet winter-spring; dry summer-fall conditions). Any of these invaded communities represent a departure from the reference state.

17. Perennial plant reproductive capability:

Black grama reproduces by seed sporadically and reproduction by tiller and stolon can be common. The C4 midgrasses should have high reproductive potential and rapidly recover from drought in the absence of additional stresses (grazing).



ATTACHMENT 6

Monica Peppin

From: Chase Settle < Chase_Settle@eogresources.com>

Sent: Thursday, July 21, 2022 10:23 AM

To: Monica Peppin

Subject: FW: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

From: Tina Huerta <Tina_Huerta@eogresources.com>

Sent: Thursday, July 21, 2022 10:16 AM

To: Alan & Cheryl <ahowell@pvtn.net>; Austin Weyant <austin@atkinseng.com>; Jennifer Nobui <Jennifer.Nobui@state.nm.us>; Jocelyn Harimon <Jocelyn.Harimon@state.nm.us>; Mike Bratcher

<mike.bratcher@state.nm.us>; Robert Hamlet <Robert.Hamlet@state.nm.us>

Cc: Andrea Felix < Andrea_Felix@eogresources.com >; Katie Jamison < Katie_Jamison@eogresources.com >; Michael

Yemm < Michael_Yemm@eogresources.com>; BODEE EUDY < BODEE_EUDY@eogresources.com>

Subject: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

Good Morning,

EOG Resources, Inc. respectfully submits notification of sampling to be conducted at the below location.

Routh Deep SWD 2 14-19S-24E Eddy County, NM nAPP2218654480

Sampling will begin at 8:00 a.m. on Tuesday, July 26, 2022 and continue through Friday, July 29, 2022.

Thank you,

Tina Hverta Regulatory Specialist

Direct: 575.748.4168

Cell: 575.703.3121

Email: tina huerta@eogresources.com



Artesia Division

From: Yvette Moore <Yvette_Moore@eogresources.com>

Sent: Friday, July 29, 2022 11:40 AM

To: Monica Peppin

Subject: FW: Routh Deep SWD #2 (nAPP2218654480) Sampling notification

Subject: Routh Deep SWD #2 (nAPP2218654480) Sampling notification

Good Afternoon,

EOG Resources, Inc. respectfully submits notification of sampling to be conducted at the below location.

Routh Deep SWD #2 14-19S-24E; Eddy County, NM nAPP2218654480

Sampling will begin at 7:00 a.m. on Monday, August 1, 2022 and continue through Friday, August 5, 2022.

Thank you,

Miriam Morales

From: Chase Settle < Chase_Settle@eogresources.com>

Sent: Thursday, August 4, 2022 1:17 PM

To: Monica Peppin
Cc: Michael Moffitt

Subject: FW: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

From: Tina Huerta <Tina_Huerta@eogresources.com>

Sent: Thursday, August 4, 2022 1:12 PM

To: Alan & Cheryl <ahowell@pvtn.net>; Austin Weyant <austin@atkinseng.com>; Jennifer Nobui <Jennifer.Nobui@state.nm.us>; Jocelyn Harimon <Jocelyn.Harimon@state.nm.us>; Mike Bratcher

<mike.bratcher@state.nm.us>; Robert Hamlet <Robert.Hamlet@state.nm.us>

Cc: Andrea Felix <Andrea_Felix@eogresources.com>; Katie Jamison <Katie_Jamison@eogresources.com>; Michael

Yemm <Michael_Yemm@eogresources.com>; BODEE EUDY <BODEE_EUDY@eogresources.com>

Subject: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

Good Morning,

EOG Resources, Inc. respectfully submits notification of sampling to be conducted at the below location.

Routh Deep SWD 2 B-14-19S-24E Eddy County, NM nAPP2218654480

Sampling will begin at 1:30 p.m. on Monday, August 8, 2022 and continue through Friday, August 12, 2022.

Thank you,

Tina Huerta

Regulatory Specialist

Direct: 575.748.4168

Cell: 575.703.3121

Email: tina huerta@eogresources.com



From: Chase Settle < Chase_Settle@eogresources.com>

Sent: August 15, 2022 12:18 PM **To:** Monica Peppin; Michael Moffitt

Subject: FW: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

From: Tina Huerta <Tina_Huerta@eogresources.com>

Sent: Thursday, August 11, 2022 8:38 AM

To: Alan & Cheryl <ahowell@pvtn.net>; Austin Weyant <austin@atkinseng.com>; Jennifer Nobui <Jennifer.Nobui@state.nm.us>; Jocelyn Harimon <Jocelyn.Harimon@state.nm.us>; Mike Bratcher

<mike.bratcher@state.nm.us>; Robert Hamlet <Robert.Hamlet@state.nm.us>

Cc: Andrea Felix < Andrea Felix@eogresources.com>; Katie Jamison < Katie Jamison@eogresources.com>; Michael

Yemm < Michael_Yemm@eogresources.com>; BODEE EUDY < BODEE_EUDY@eogresources.com>

Subject: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

Good Morning,

EOG Resources, Inc. respectfully submits notification of sampling to be conducted at the below location.

Routh Deep SWD 2 B-14-19S-24E Eddy County, NM nAPP2218654480

Sampling will begin at 8:00 a.m. on Monday, August 15, 2022 and continue through Friday, August 19, 2022.

Thank you,

Tina Huerta

Regulatory Specialist

Direct. 575.748.4168

Cell: 575.703.3121

Email: tina huerta@eogresources.com



From: Chase Settle

To: <u>Michael Moffitt</u>; <u>Monica Peppin</u>

Subject: FW: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

Date: August 26, 2022 9:18:35 AM

Attachments: <u>image001.png</u>

From: Tina Huerta <Tina_Huerta@eogresources.com>

Sent: Thursday, August 25, 2022 7:25 AM

To: Alan & Cheryl <ahowell@pvtn.net>; Austin Weyant <austin@atkinseng.com>; Jennifer Nobui <Jennifer.Nobui@state.nm.us>; Jocelyn Harimon <Jocelyn.Harimon@state.nm.us>; Mike Bratcher <mike.bratcher@state.nm.us>; Robert Hamlet <Robert.Hamlet@state.nm.us>

Cc: Andrea Felix <Andrea_Felix@eogresources.com>; Katie Jamison

<Katie_Jamison@eogresources.com>; Michael Yemm <Michael_Yemm@eogresources.com>

Subject: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

Good Morning,

EOG Resources, Inc. respectfully submits notification of sampling to be conducted at the below location.

Routh Deep SWD 2 B-14-19S-24E Eddy County, NM nAPP2218654480

Sampling will begin at 8:00 a.m. on Monday, August 29, 2022.

Thank you,

Tina Hverta Regulatory Specialist Direct: 575.748.4168 Cell: 575.703.3121

Email: tina huerta@eogresources.com

eog resources

From: Chase Settle

To: <u>Michael Moffitt</u>; <u>Monica Peppin</u>

Subject: FW: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

Date: September 19, 2022 11:32:39 AM

Attachments: <u>image001.png</u>

From: Tina Huerta <Tina_Huerta@eogresources.com>

Sent: Thursday, August 18, 2022 10:43 AM

To: Alan & Cheryl <ahowell@pvtn.net>; Austin Weyant <austin@atkinseng.com>; Jennifer Nobui <Jennifer.Nobui@state.nm.us>; Jocelyn Harimon <Jocelyn.Harimon@state.nm.us>; Mike Bratcher <mike.bratcher@state.nm.us>; Robert Hamlet <Robert.Hamlet@state.nm.us>

Cc: Andrea Felix <Andrea_Felix@eogresources.com>; Katie Jamison

<Katie_Jamison@eogresources.com>; Michael Yemm <Michael_Yemm@eogresources.com>; BODEE EUDY <BODEE_EUDY@eogresources.com>

Subject: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

Good Morning,

EOG Resources, Inc. respectfully submits notification of sampling to be conducted at the below location.

Routh Deep SWD 2 14-19S-24E Eddy County, NM nAPP2218654480

Sampling will begin at 9:30 a.m. on Monday, August 22, 2022 and continue through Tuesday, August 23, 2022.

Thank you,

Tina Hverta Regulatory Specialist Direct: 575.748.4168 Cell: 575.703.3121

Email: tina huerta@eogresources.com

eog resources

From: Chase Settle < Chase Settle@eogresources.com>

Sent: September 15, 2022 8:31 AM

To: Michael Moffitt
Cc: Monica Peppin

Subject: FW: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

From: Tina Huerta <Tina_Huerta@eogresources.com>

Sent: Thursday, September 15, 2022 8:09 AM

To: Alan & Cheryl <ahowell@pvtn.net>; Austin Weyant <austin@atkinseng.com>; Jennifer Nobui <Jennifer.Nobui@state.nm.us>; Jocelyn Harimon <Jocelyn.Harimon@state.nm.us>; Mike Bratcher <mike.bratcher@state.nm.us>; Robert Hamlet <Robert.Hamlet@state.nm.us>

Cc: Andrea Felix <Andrea_Felix@eogresources.com>; Katie Jamison <Katie_Jamison@eogresources.com>; Michael

Yemm < Michael_Yemm@eogresources.com>; Terrence Gant < Terry_Gant@eogresources.com>

Subject: Routh Deep SWD 2 (nAPP2218654480) Sampling Notification

Good Morning,

EOG Resources, Inc. respectfully submits notification of sampling to be conducted at the below location.

Routh Deep SWD 2 B-14-19S-24E Eddy County, NM nAPP2218654480

Sampling will begin at 8:00 a.m. on Monday, September 19, 2022 and continue through Friday, September 23, 2022.

Thank you,

Tina Huerta

Regulatory Specialist

Direct. 575.748.4168

Cell: 575.703.3121

Email: tina huerta@eogresources.com



ATTACHMENT 7



July 19, 2022

Monica Peppin Vertex Resources Services, Inc. 3101 Boyd Drive Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Routh SWD Tank Battery

OrderNo.: 2207414

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/12/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: TP22-07

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/8/2022 8:30:00 AM

 Lab ID:
 2207414-001
 Matrix: SOIL
 Received Date: 7/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE (ORGANICS				Analyst: ED
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	7/14/2022 11:18:41 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	7/14/2022 11:18:41 PM
Surr: DNOP	88.4	51.1-141	%Rec	1	7/14/2022 11:18:41 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/15/2022 4:10:19 AM
Surr: BFB	96.9	37.7-212	%Rec	1	7/15/2022 4:10:19 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	7/15/2022 4:10:19 AM
Toluene	ND	0.049	mg/Kg	1	7/15/2022 4:10:19 AM
Ethylbenzene	ND	0.049	mg/Kg	1	7/15/2022 4:10:19 AM
Xylenes, Total	ND	0.099	mg/Kg	1	7/15/2022 4:10:19 AM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	7/15/2022 4:10:19 AM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	360	60	mg/Kg	20	7/16/2022 12:49:27 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 9

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: TP22-08

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/8/2022 9:00:00 AM

 Lab ID:
 2207414-002
 Matrix: SOIL
 Received Date: 7/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	RGANICS				Analyst: ED
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	7/14/2022 11:32:54 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/14/2022 11:32:54 PM
Surr: DNOP	81.2	51.1-141	%Rec	1	7/14/2022 11:32:54 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/15/2022 4:33:58 AM
Surr: BFB	96.0	37.7-212	%Rec	1	7/15/2022 4:33:58 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	7/15/2022 4:33:58 AM
Toluene	ND	0.049	mg/Kg	1	7/15/2022 4:33:58 AM
Ethylbenzene	ND	0.049	mg/Kg	1	7/15/2022 4:33:58 AM
Xylenes, Total	ND	0.098	mg/Kg	1	7/15/2022 4:33:58 AM
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	7/15/2022 4:33:58 AM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	350	60	mg/Kg	20	7/16/2022 1:26:40 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: TP22-09

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/8/2022 9:15:00 AM

 Lab ID:
 2207414-003
 Matrix: SOIL
 Received Date: 7/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE C	RGANICS				Analyst: ED
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	7/14/2022 11:47:10 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	7/14/2022 11:47:10 PM
Surr: DNOP	81.6	51.1-141	%Rec	1	7/14/2022 11:47:10 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/16/2022 2:24:55 AM
Surr: BFB	98.8	37.7-212	%Rec	1	7/16/2022 2:24:55 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	7/16/2022 2:24:55 AM
Toluene	ND	0.048	mg/Kg	1	7/16/2022 2:24:55 AM
Ethylbenzene	ND	0.048	mg/Kg	1	7/16/2022 2:24:55 AM
Xylenes, Total	ND	0.095	mg/Kg	1	7/16/2022 2:24:55 AM
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	7/16/2022 2:24:55 AM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	310	59	mg/Kg	20	7/16/2022 1:39:04 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: TP22-10

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/8/2022 9:30:00 AM

 Lab ID:
 2207414-004
 Matrix: SOIL
 Received Date: 7/12/2022 7:20:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: ED
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	7/15/2022 12:01:24 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/15/2022 12:01:24 AM
Surr: DNOP	115	51.1-141	%Rec	1	7/15/2022 12:01:24 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	7/16/2022 2:48:32 AM
Surr: BFB	95.5	37.7-212	%Rec	1	7/16/2022 2:48:32 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	7/16/2022 2:48:32 AM
Toluene	ND	0.046	mg/Kg	1	7/16/2022 2:48:32 AM
Ethylbenzene	ND	0.046	mg/Kg	1	7/16/2022 2:48:32 AM
Xylenes, Total	ND	0.093	mg/Kg	1	7/16/2022 2:48:32 AM
Surr: 4-Bromofluorobenzene	99.4	70-130	%Rec	1	7/16/2022 2:48:32 AM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	180	60	mg/Kg	20	7/16/2022 1:51:29 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: TP22-11

Routh SWD Tank Battery **Project: Collection Date:** 7/8/2022 9:45:00 AM 2207414-005 **Received Date:** 7/12/2022 7:20:00 AM Lab ID: Matrix: SOIL

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: ED
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	7/15/2022 12:15:39 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/15/2022 12:15:39 AM
Surr: DNOP	98.6	51.1-141	%Rec	1	7/15/2022 12:15:39 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/16/2022 3:59:23 AM
Surr: BFB	96.4	37.7-212	%Rec	1	7/16/2022 3:59:23 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	7/16/2022 3:59:23 AM
Toluene	ND	0.049	mg/Kg	1	7/16/2022 3:59:23 AM
Ethylbenzene	ND	0.049	mg/Kg	1	7/16/2022 3:59:23 AM
Xylenes, Total	ND	0.099	mg/Kg	1	7/16/2022 3:59:23 AM
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	7/16/2022 3:59:23 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	430	60	mg/Kg	20	7/16/2022 5:38:08 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits
- Sample pH Not In Range
- RL

Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2207414**

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-68826 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 68826 RunNo: 89565

Prep Date: 7/16/2022 Analysis Date: 7/16/2022 SeqNo: 3188064 Units: mq/Kq

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

Chloride ND 1.5

Sample ID: LCS-68826 SampType: Ics TestCode: EPA Method 300.0: Anions Client ID: LCSS Batch ID: 68826 RunNo: 89565 Prep Date: 7/16/2022 Analysis Date: 7/16/2022 SeqNo: 3188065 Units: mg/Kg %RPD **RPDLimit** Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit Qual

Chloride 14 1.5 15.00 0 96.1 90 110

Sample ID: MB-68821 TestCode: EPA Method 300.0: Anions SampType: mblk Client ID: PBS Batch ID: 68821 RunNo: 89568 Prep Date: Analysis Date: 7/15/2022 SeqNo: 3188216 Units: mg/Kg 7/15/2022 Analyte Result PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual LowLimit

Sample ID: LCS-68821 SampType: Ics TestCode: EPA Method 300.0; Anions

Client ID: LCSS Batch ID: 68821 RunNo: 89568

ND

Prep Date: 7/15/2022 Analysis Date: 7/15/2022 SeqNo: 3188217 Units: mg/Kg

Result **PQL** SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Analyte LowLimit Chloride 14 1.5 15.00 n 92.3 90 110

Qualifiers:

Chloride

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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2207414**

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-68751	SampT	уре: МВ	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: PBS	Batch	n ID: 687	7 51	F	RunNo: 89	9486				
Prep Date: 7/13/2022	Analysis D	oate: 7/	14/2022	5	SeqNo: 31	186456	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.3		10.00		83.3	51.1	141			

Sample ID: LCS-68751	SampT	ype: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch	n ID: 687	751	F	RunNo: 89	9486					
Prep Date: 7/13/2022	Analysis D	Date: 7/	14/2022	9	SeqNo: 3	186457	Units: mg/K	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	41	15	50.00	0	81.7	64.4	127				
Surr: DNOP	3.8		5.000		76.0	51.1	141				

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2207414**

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: Ics-68721 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 68721 RunNo: 89504 Prep Date: 7/12/2022 Analysis Date: 7/14/2022 SeqNo: 3184960 Units: %Rec SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result SPK value LowLimit Qual Surr: BFB 1800 1000 180 37.7 212 Sample ID: mb-68721 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 68721 RunNo: 89504 Prep Date: 7/12/2022 Analysis Date: 7/14/2022 SeqNo: 3184961 Units: %Rec %REC **RPDLimit** Analyte Result **PQL** SPK value SPK Ref Val LowLimit HighLimit %RPD Qual Surr: BFB 820 1000 82.4 37.7 212

Sample ID: Ics-68726 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 68726 RunNo: 89504 Prep Date: Analysis Date: 7/15/2022 SeqNo: 3184981 Units: mg/Kg 7/12/2022 SPK value SPK Ref Val Result PQL %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Gasoline Range Organics (GRO) 22 5.0 0 87.9 72.3 25.00 137 Surr: BFB 1800 1000 180 37.7 212

Sample ID: mb-68726 TestCode: EPA Method 8015D: Gasoline Range SampType: MBLK Client ID: PBS Batch ID: 68726 RunNo: 89504 Units: mg/Kg Prep Date: 7/12/2022 Analysis Date: 7/15/2022 SeqNo: 3184982 %REC %RPD **RPDLimit** Analyte Result PQL SPK value SPK Ref Val LowLimit HighLimit Qual Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 830 1000 83.2 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

0.82

WO#: **2207414**

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Surr: 4-Bromofluorobenzene

Sample ID: Ics-68721 SampType: LCS TestCode: EPA Method 8021B: Volatiles
Client ID: LCSS Batch ID: 68721 RunNo: 89504

1.000

Prep Date: 7/12/2022 Analysis Date: 7/14/2022 SeqNo: 3185011 Units: %Rec

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

Surr: 4-Bromofluorobenzene 0.83 1.000 83.5 70 130

Sample ID: mb-68721 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: 68721 RunNo: 89504 Prep Date: 7/12/2022 Analysis Date: 7/14/2022 SeqNo: 3185012 Units: %Rec %RPD **RPDLimit** Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit Qual

81 9

130

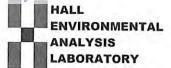
Sample ID: Ics-68726 TestCode: EPA Method 8021B: Volatiles SampType: LCS Client ID: LCSS Batch ID: 68726 RunNo: 89504 Prep Date: Analysis Date: 7/15/2022 SeqNo: 3185032 Units: mg/Kg 7/12/2022 POI SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Analyte Result I owl imit 0.025 91.3 Benzene 0.91 1.000 0 80 Toluene 0.92 0.050 1.000 0 91.8 80 120 Ethylbenzene 0.90 0.050 1.000 0 90.5 80 120 0 Xylenes, Total 2.7 0.10 3.000 89.9 80 120 Surr: 4-Bromofluorobenzene 0.83 1.000 83.2 70 130

Sample ID: mb-68726 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: **PBS** Batch ID: 68726 RunNo: 89504 Prep Date: Analysis Date: 7/15/2022 SeqNo: 3185033 Units: mg/Kg 7/12/2022 SPK value SPK Ref Val %REC %RPD **RPDLimit** Qual Analyte Result **PQL** LowLimit HighLimit Benzene ND 0.025 Toluene ND 0.050 Ethylbenzene ND 0.050 Xylenes, Total ND 0.10 Surr: 4-Bromofluorobenzene 0.83 1.000 82.7 70 130

Qualifiers:

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

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

Sample Log-In Check List

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com Client Name: Vertex Resources Work Order Number: 2207414 RcptNo: 1 Services, Inc. Chal Salogota Received By: Cheyenne Cason 7/12/2022 7:20:00 AM Completed By: Sean Livingston 7/12/2022 8:17:32 AM Reviewed By: 117/12/22 Chain of Custody 1. Is Chain of Custody complete? Yes V Not Present 2. How was the sample delivered? Courier Log In 3. Was an attempt made to cool the samples? No 🗌 Yes V NA 🗌 4. Were all samples received at a temperature of >0° C to 6.0°C No L Yes 🗸 NA 🗌 5. Sample(s) in proper container(s)? Yes V No 🗌 6. Sufficient sample volume for indicated test(s)? No 🗌 Yes V 7. Are samples (except VOA and ONG) properly preserved? Yes V No 🗌 8. Was preservative added to bottles? No V NA 🗌 Yes _ 9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes No 🗌 NA V 10. Were any sample containers received broken? Yes L No V # of preserved bottles checked 11. Does paperwork match bottle labels? Yes 🗸 No for pH: (Note discrepancies on chain of custody) (<2 or ≥12 unless noted) Adjusted? 12. Are matrices correctly identified on Chain of Custody? No 🗌 Yes V 13. Is it clear what analyses were requested? Yes V No 🗌 Checked by: 120 7.12.22 14. Were all holding times able to be met? Yes V No 🗌 (If no, notify customer for authorization.) Special Handling (if applicable)

5. Was client notified of all discrepancies with this order?	Yes 🗌 No 🗌 NA 🕨
Person Notified: By Whom:	Date: 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	0.6	Good				
2	0.9	Good				
3	2.5	Good				

100 100	HALL ENVIRONMENTAL ANALYSIS LABORATORY		601	4107						S) UNS								E 06	ge 91
Toject Name: Routh SWN Tank battery Project Manager: No nica Peppin Sampler: Zach Englact F Cooler Templomouna crise, 9-0 = 0.9 Type and # Type Cooler Templomouna crise, 9-0 = 0.9 Type and # Type And Silvas Cooler Templomouna crise, 9-0 = 0.9 Type and # Type And Silvas Cooler Templomouna crise, 9-0 = 0.9 Type and # Type And Silvas Cooler Templomouna crise, 9-0 = 0.9 Type and # Type And Silvas Cooler Templomouna crise, 9-0 = 0.9 Type and # Type And Silvas Cooler Templomouna crise, 9-0 = 0.9 And Silvas And A	HALL ENVI	www.hallenvironmental.com	Hawkins NE - Albuquer	Analysis			r 8270 NO ₂ ,	10 o tals O ₃ ,	93 83 8 Me 3r, <i>N</i> (AOA)	РАНs к С) F, 1 7) P, 1	>				>				as softe
Turn-Around Time: Routh SWN Tank battery Project Name: 22E - 00716 - 10 Project Manager: Monica Peppin On Ice: IX Yes IX No Hot Sings IX IX Type and # Type IX IX Type and # Type IX IX Type IX			4901 F	2.5	(0)	M / O	80 / C	GBG	ITM ITM	08:H9T	>				→			Remarks:	3
Sampler: Zacontainer Type and # T	Rush 5	VOTATOR ROTTO	2	116-10	er: 7.	Rppin	Engla	0.5.0	9-0:0.9	rvative 727	9	200	500	h00	300			Date 7	Date
Sample Name TP22 - 07 TP22 - 10 TP22 - 11	Standard Dripot Name:	Routh SW	Project #:	22E-00	Project Manage	Monica	Sampler: Zacl	olers:	Cooler Temp(inc					,	>			\dashv \downarrow	100
Matrix Matrix Soil Soil	Level Record	1.12	21			☐ Level 4 (Full Validation	☐ Az Compliance ☐ Other			Sample Name	TP22-07	TP22-08	TP22-04	TP22-10	TP22-11			ad by:	Relinquished by:
	Chain-of-	Mailing Address: A.		Phone #:		QA/QC Package: ☐ Standard	Accreditation:	□ EDD (Type)		Date Time	7-8-22 8:30	1 9:00	9:15	9:30	4:45			Date: Time: 7-11-10-10-10-10-10-10-10-10-10-10-10-10-	Date: Time:



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

July 19, 2022

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

FAX:

RE: Routh SWD Tank Battery OrderNo.: 2207416

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/12/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: TP22-01 6-10'

Project: Routh SWD Tank Battery Collection Date: 7/7/2022 1:35:00 PM

Lab ID: 2207416-001 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: ED
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	7/15/2022 12:29:47 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/15/2022 12:29:47 AM
Surr: DNOP	85.4	51.1-141	%Rec	1	7/15/2022 12:29:47 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	7/16/2022 4:23:02 AM
Surr: BFB	96.3	37.7-212	%Rec	1	7/16/2022 4:23:02 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	7/16/2022 4:23:02 AM
Toluene	ND	0.047	mg/Kg	1	7/16/2022 4:23:02 AM
Ethylbenzene	ND	0.047	mg/Kg	1	7/16/2022 4:23:02 AM
Xylenes, Total	ND	0.094	mg/Kg	1	7/16/2022 4:23:02 AM
Surr: 4-Bromofluorobenzene	99.9	70-130	%Rec	1	7/16/2022 4:23:02 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	190	59	mg/Kg	20	7/16/2022 6:15:09 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 12

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: TP22-02 5-10'

Project: Routh SWD Tank Battery **Collection Date:** 7/7/2022 9:40:00 AM

Lab ID: 2207416-002 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: ED
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	7/15/2022 12:43:55 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	7/15/2022 12:43:55 AM
Surr: DNOP	80.4	51.1-141	%Rec	1	7/15/2022 12:43:55 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/16/2022 4:46:38 AM
Surr: BFB	95.4	37.7-212	%Rec	1	7/16/2022 4:46:38 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	7/16/2022 4:46:38 AM
Toluene	ND	0.048	mg/Kg	1	7/16/2022 4:46:38 AM
Ethylbenzene	ND	0.048	mg/Kg	1	7/16/2022 4:46:38 AM
Xylenes, Total	ND	0.095	mg/Kg	1	7/16/2022 4:46:38 AM
Surr: 4-Bromofluorobenzene	98.2	70-130	%Rec	1	7/16/2022 4:46:38 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	230	60	mg/Kg	20	7/16/2022 6:27:29 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: TP22-03 5-10'

Project: Routh SWD Tank Battery **Collection Date:** 7/7/2022 9:45:00 AM

Lab ID: 2207416-003 **Matrix:** SOIL **Received Date:** 7/12/2022 7:20:00 AM

Analyses	Result	Result RL Qual			Date Analyzed		
EPA METHOD 8015M/D: DIESEL RANGE C	RGANICS				Analyst: ED		
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	7/15/2022 12:58:07 AM		
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	7/15/2022 12:58:07 AM		
Surr: DNOP	82.0	51.1-141	%Rec	1	7/15/2022 12:58:07 AM		
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB		
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	7/16/2022 5:10:11 AM		
Surr: BFB	96.6	37.7-212	%Rec	1	7/16/2022 5:10:11 AM		
EPA METHOD 8021B: VOLATILES					Analyst: NSB		
Benzene	ND	0.024	mg/Kg	1	7/16/2022 5:10:11 AM		
Toluene	ND	0.047	mg/Kg	1	7/16/2022 5:10:11 AM		
Ethylbenzene	ND	0.047	mg/Kg	1	7/16/2022 5:10:11 AM		
Xylenes, Total	ND	0.094	mg/Kg	1	7/16/2022 5:10:11 AM		
Surr: 4-Bromofluorobenzene	99.0	70-130	%Rec	1	7/16/2022 5:10:11 AM		
EPA METHOD 300.0: ANIONS					Analyst: JTT		
Chloride	580	60	mg/Kg	20	7/16/2022 7:29:11 PM		

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: TP22-04 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/7/2022 1:30:00 PM

 Lab ID:
 2207416-004
 Matrix: SOIL
 Received Date: 7/12/2022 7:20:00 AM

Analyses	Result	al Units	DF	Date Analyzed		
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: ED	
Diesel Range Organics (DRO)	22	15	mg/Kg	1	7/15/2022 1:12:09 AM	
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	7/15/2022 1:12:09 AM	
Surr: DNOP	79.1	51.1-141	%Rec	1	7/15/2022 1:12:09 AM	
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB	
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	7/16/2022 5:33:45 AM	
Surr: BFB	99.0	37.7-212	%Rec	1	7/16/2022 5:33:45 AM	
EPA METHOD 8021B: VOLATILES					Analyst: NSB	
Benzene	ND	0.023	mg/Kg	1	7/16/2022 5:33:45 AM	
Toluene	ND	0.046	mg/Kg	1	7/16/2022 5:33:45 AM	
Ethylbenzene	ND	0.046	mg/Kg	1	7/16/2022 5:33:45 AM	
Xylenes, Total	ND	0.091	mg/Kg	1	7/16/2022 5:33:45 AM	
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	7/16/2022 5:33:45 AM	
EPA METHOD 300.0: ANIONS					Analyst: JTT	
Chloride	200	60	mg/Kg	20	7/16/2022 7:41:32 PM	

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: TP22-05 10'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/7/2022 9:30:00 AM

 Lab ID:
 2207416-005
 Matrix: SOIL
 Received Date: 7/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: ED
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	7/15/2022 1:26:23 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/15/2022 1:26:23 AM
Surr: DNOP	78.8	51.1-141	%Rec	1	7/15/2022 1:26:23 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/16/2022 5:57:25 AM
Surr: BFB	97.8	37.7-212	%Rec	1	7/16/2022 5:57:25 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	7/16/2022 5:57:25 AM
Toluene	ND	0.049	mg/Kg	1	7/16/2022 5:57:25 AM
Ethylbenzene	ND	0.049	mg/Kg	1	7/16/2022 5:57:25 AM
Xylenes, Total	ND	0.099	mg/Kg	1	7/16/2022 5:57:25 AM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	7/16/2022 5:57:25 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	180	60	mg/Kg	20	7/16/2022 7:53:52 PM

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

Qualifiers:

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

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Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: TP22-06 10

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/7/2022 9:35:00 AM

 Lab ID:
 2207416-006
 Matrix: SOIL
 Received Date: 7/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: ED **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 15 mg/Kg 1 7/15/2022 8:09:21 PM Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 7/15/2022 8:09:21 PM Surr: DNOP 73.3 51.1-141 %Rec 1 7/15/2022 8:09:21 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM Gasoline Range Organics (GRO) ND 7/15/2022 11:29:00 AM 4.9 mg/Kg 1 Surr: BFB 86.3 37.7-212 %Rec 1 7/15/2022 11:29:00 AM **EPA METHOD 8021B: VOLATILES** Analyst: CCM Benzene ND 0.024 7/15/2022 11:29:00 AM mg/Kg 1 Toluene ND 0.049 mg/Kg 1 7/15/2022 11:29:00 AM Ethylbenzene ND 0.049 mg/Kg 1 7/15/2022 11:29:00 AM Xylenes, Total ND 0.098 mg/Kg 1 7/15/2022 11:29:00 AM Surr: 4-Bromofluorobenzene 83.9 70-130 %Rec 1 7/15/2022 11:29:00 AM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride mg/Kg 7/16/2022 8:06:14 PM 170 60 20

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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

2207416

WO#:

19-Jul-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-68832 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 68832 RunNo: 89565

Prep Date: 7/16/2022 Analysis Date: 7/16/2022 SeqNo: 3188094 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-68832 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 68832 RunNo: 89565

Prep Date: 7/16/2022 Analysis Date: 7/16/2022 SeqNo: 3188095 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 94.4 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

2207416 19-Jul-22

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Project: Routh S	WD Tank Battery											
Sample ID: MB-68752	SampType: MB	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: PBS	Batch ID: 687	752	RunNo: 89486									
Prep Date: 7/13/2022	Analysis Date: 7/1	14/2022	5	SeqNo: 3186430	Units: mg/Kg							
Analyte	Result PQL	SPK value	SPK Ref Val	%REC LowLim	it HighLimit	%RPD	RPDLimit	Qual				
Diesel Range Organics (DRO)	ND 15											
Motor Oil Range Organics (MRO)	ND 50											
Surr: DNOP	8.1	10.00		80.8 51.	1 141							
Sample ID: LCS-68752	SampType: LC:	s	Tes	tCode: EPA Metho	d 8015M/D: Dies	el Range	Organics					
Client ID: LCSS	Batch ID: 687	752	F	RunNo: 89486								
Prep Date: 7/13/2022	Analysis Date: 7/1	14/2022	5	SeqNo: 3186431	Units: mg/Kg	Units: mg/Kg						
Analyte	Result PQL	SPK value	SPK Ref Val	%REC LowLim	it HighLimit	%RPD	RPDLimit	Qual				
Diesel Range Organics (DRO)	44 15	50.00	0	88.3 64.	4 127							
Surr: DNOP	3.8	5.000		76.1 51.	1 141							
Sample ID: MB-68751	SampType: MB	BLK	Tes	tCode: EPA Metho	d 8015M/D: Dies	el Range	Organics					
Client ID: PBS	Batch ID: 687	751	F	RunNo: 89486								
Prep Date: 7/13/2022	Analysis Date: 7/1	14/2022	5	SeqNo: 3186456	Units: mg/Kg	Units: mg/Kg						
Analyte	Result PQL	SPK value	SPK Ref Val	%REC LowLim	it HighLimit	%RPD	RPDLimit	Qual				
Diesel Range Organics (DRO)	ND 15											
Motor Oil Range Organics (MRO)	ND 50											
Surr: DNOP	8.3	10.00		83.3 51.	1 141							
Sample ID: LCS-68751	SampType: LC	s	Tes	tCode: EPA Metho	d 8015M/D: Dies	el Range	Organics					
Client ID: LCSS	Batch ID: 687	751	F	RunNo: 89486								
Prep Date: 7/13/2022	Analysis Date: 7/1	14/2022	5	SeqNo: 3186457	Units: mg/Kg							
Analyte	Result PQL	SPK value	SPK Ref Val	%REC LowLim	it HighLimit	%RPD	RPDLimit	Qual				
Diesel Range Organics (DRO)	41 15	50.00	0	81.7 64.	4 127							
Surr: DNOP	3.8	5.000		76.0 51.	1 141							

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 8 of 12

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207416**

19-Jul-22

Project:	Routh SWD Tank Battery
Client:	Vertex Resources Services, Inc.

Project:	Routh SV	VD Tank B	attery										
Sample ID:	lcs-68721	SampT	ype: LC	s	TestCode: EPA Method 8015D: Gasoline Range								
Client ID:	LCSS	Batch	ID: 68	721	RunNo: 89504								
Prep Date:	7/12/2022	Analysis D	ate: 7/	14/2022	5	SeqNo: 31	184960	Units: %Rec					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: BFB		1800		1000		180	37.7	212					
Sample ID:	e ID: mb-68721 SampType: MBLK TestCode: EPA Method 8015D: Gasoline R												
Client ID:	PBS	Batch	ID: 68	721	F	RunNo: 89	9504						
Prep Date:	7/12/2022	Analysis D	ate: 7/	14/2022	S	SeqNo: 31	184961	Units: %Red	;				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: BFB		820		1000		82.4	37.7	212					
Sample ID:	lcs-68726	SampT	ype: LC	:s	Tes	tCode: EF	PA Method	8015D: Gasol	ine Range				
Client ID:	LCSS	726	F	RunNo: 89	9504								
Prep Date:	7/12/2022	Analysis D	ate: 7/	15/2022	\$	SeqNo: 31	g						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
_	ge Organics (GRO)	22	5.0	25.00	0	87.9	72.3	137					
Surr: BFB		1800		1000		180	37.7	212					
Sample ID:	mb-68726	SampT	ype: ME	BLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID:	PBS	Batch	ID: 68	726	F	RunNo: 89							
Prep Date:	7/12/2022	Analysis D	ate: 7/	15/2022	5	SeqNo: 31	184982	Units: mg/Kg					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Rang Surr: BFB	ge Organics (GRO)	ND 830	5.0	1000		83.2	37.7	212					
	mb-68728	•	ype: ME					8015D: Gasol	ine Range				
Client ID:	PBS		ID: 68			RunNo: 89		Llatia na					
Prep Date:	7/12/2022	Analysis D	ate: 7/			SeqNo: 3	186586	Units: mg/K	g				
Analyte	(000)	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: BFB	ge Organics (GRO)	ND 830	5.0	1000		83.0	37.7	212					
	0007440 000-				T				D				
	2207416-006ams	•	ype: MS					8015D: Gasol	ine Kange				
Client ID:	TP22-06 10'	Baich	ID: 68			RunNo: 89		Haites as a Res					
Dron Data	7/12/2022	Analysis D	ata: 7/	45/2022	C	Spallo o	106500		~				
Prep Date: Analyte	7/12/2022	Analysis D Result	ate: 7/ PQL		SPK Ref Val	SeqNo: 31	LowLimit	Units: mg/K HighLimit	g %RPD	RPDLimit	Qual		

Qualifiers:

Surr: BFB

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Gasoline Range Organics (GRO)

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference

19

1600

B Analyte detected in the associated Method Blank

80.4

173

70

37.7

130

212

E Estimated value

0

23.56

942.5

- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 9 of 12

Hall Environmental Analysis Laboratory, Inc.

2207416 19-Jul-22

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: 2207416-006amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range
Client ID: TP22-06 10' Batch ID: 68728 RunNo: 89532

Prep Date: 7/12/2022 Analysis Date: 7/15/2022 SeqNo: 3186589 Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 20 4.7 23.65 84.8 70 130 5.80 20 Surr: BFB 1800 946.1 186 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 10 of 12

Hall Environmental Analysis Laboratory, Inc.

0.83

WO#: 2207416

19-Jul-22

Client: Vertex Resources Services, Inc. **Project:** Routh SWD Tank Battery

Surr: 4-Bromofluorobenzene

Sample ID: Ics-68721 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 68721 RunNo: 89504

Prep Date: 7/12/2022 Analysis Date: 7/14/2022 SeqNo: 3185011 Units: %Rec

SPK Ref Val %RPD **RPDLimit** Analyte Result SPK value %REC LowLimit HighLimit Qual

83.5

70

130

Sample ID: mb-68721 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

1.000

Client ID: PBS Batch ID: 68721 RunNo: 89504

Prep Date: 7/12/2022 Analysis Date: 7/14/2022 SeqNo: 3185012 Units: %Rec

RPDLimit Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD Qual

Surr: 4-Bromofluorobenzene 0.82 1.000 81.9 130

Sample ID: Ics-68726 TestCode: EPA Method 8021B: Volatiles SampType: LCS Client ID: LCSS Batch ID: 68726 RunNo: 89504 Analysis Date: 7/15/2022 SeqNo: 3185032 Units: mg/Kg Prep Date: 7/12/2022 POI SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Analyte Result I owl imit 0.025 91.3 Benzene 0.91 1.000 0 80 Toluene 0.92 0.050 1.000 0 91.8 80 120 Ethylbenzene 0.90 0.050 1.000 0 90.5 80 120 0 Xylenes, Total 2.7 0.10 3.000 89.9 80 120 Surr: 4-Bromofluorobenzene 0.83 1.000 83.2 70 130

Sample ID: mb-68726 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: **PBS** Batch ID: 68726 RunNo: 89504 Analysis Date: 7/15/2022 SeqNo: 3185033

Prep Date: 7/12/2022 Units: mg/Kg

SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result POI LowLimit HighLimit Qual Benzene ND 0.025 ND 0.050 Toluene ND 0.050 Ethylbenzene Xylenes, Total ND 0.10 1.000 Surr: 4-Bromofluorobenzene 0.83 82.7 70 130

Sample ID: mb-68728 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: **PBS** Batch ID: 68728 RunNo: 89532

Prep Date: Analysis Date: 7/15/2022 SeqNo: 3186634 7/12/2022 Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC %RPD **RPDLimit** Qual LowLimit HighLimit Benzene ND 0.025 Toluene ND 0.050

Ethylbenzene ND 0.050 Xylenes, Total ND 0.10

Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

POL Practical Quanitative Limit % Recovery outside of range due to dilution or matrix interference

- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

Page 11 of 12

Hall Environmental Analysis Laboratory, Inc.

2207416 19-Jul-22

WO#:

Client: Vertex Resources Services, Inc.
Project: Routh SWD Tank Battery

Sample ID: mb-68728 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 68728 RunNo: 89532

Prep Date: 7/12/2022 Analysis Date: 7/15/2022 SeqNo: 3186634 Units: mg/Kg

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

Surr: 4-Bromofluorobenzene 0.85 1.000 84.7 70 130

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 12 of 12



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 Res Services, I		Work	Order Num	ber: 220	7416		RcptN	o: 1	
Received By:	Cheyenne	Cason	7/12/20	22 7:20:00	AM		Chal			
Completed By:	Sean Livi	ngston	7/12/20	22 8:26:38	AM		Chul	n -		
Reviewed By:	Jn7/1	2/22					5,-0,	<i>yor</i>		
Chain of Cus	tody									
1. Is Chain of Cu	ustody comp	lete?			Yes	~	No 🗌	Not Present		
2. How was the	sample deliv	vered?			Cou	<u>rier</u>				
Log In										
3. Was an attem	pt made to	cool the sampl	les?		Yes	~	No 🗌	NA 🗌		
4. Were all samp	oles received	l at a tempera	ture of >0° C	to 6.0°C	Yes	V	No 🗌	NA 🗆		
5. Sample(s) in p	oroper conta	iner(s)?			Yes	V	No 🗌			
6. Sufficient sam	ple volume f	or indicated te	est(s)?		Yes	V	No 🗆			
7. Are samples (except VOA	and ONG) pro	perly preserve	ed?	Yes	V	No 🗌			
8. Was preservat			10 To		Yes		No 🔽	NA 🗌		
9. Received at le	ast 1 vial wit	h headspace	<1/4" for AQ V	OA?	Yes		No 🗆	NA 🗹		
10. Were any sam	nple containe	ers received b	roken?		Yes		No 🗹	# of preserved bottles checked	/	/
11. Does paperwo (Note discrepa)		Yes	V	No 🗆	for pH:	or 12 unless note	ed)
12. Are matrices of	orrectly iden	tified on Chair	n of Custody?		Yes	~	No 🗆	Adjusted?		
13. Is it clear what	analyses w	ere requested	?		Yes	V	No 🗌		- 2 .	31 6
14. Were all holdin (If no, notify cu					Yes	~	No 🗆	Checked by:	KPC 7.1	3.23
Special Handli										
15. Was client no			with this order?	,	Yes		No 🗆	NA 🗹		
Person	Notified:			Date	:					
By Who	m:			Via:	☐ eM	ail 🔲	Phone Fax	☐ In Person		
Regardi	ng:									
Client Ir	structions:									
16. Additional rer	marks:									
17. Cooler Infor	mation									
Cooler No	Target Total Control	Condition	Seal Intact	Seal No	Seal D	ate	Signed By			
1	0.6	Good	LEAST THREE							
2	0.9	Good								
3	2.5	Good								

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	ANAI VSTS I ABODATODA		www.nailenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109	Tel 505-345-3975	Anal	*C	PO₄, SŒ SIMS PCB's	1) (1) (3270	3 NO (A	ides d 5 d 5 d 5 d 5 d 5 d 5 d 5 d 5 d 5 d 5	etici 83 Me -, N (AC	PH:801 1081 Pe 108 (Me 1081 Py 1081 Pi 1081 Pi 1081 Pi 1081 Pi	3 3 3 8	-				-			100	direct oill for
	<u> </u>					(1208) s	.WB.	L /	38	(Ĉ)	\X∃TEX		1 2				حــ			Remarks:	
	5 par		ROWTH SIND TANK BOTHUN		0 -		. Z	ebent	oN □	9020-90	1.020-1	2.5 - 0 = 2.5 HEAL No.	3	200	500	1.00	200	200			This 30	Date Time
Time:	M Rush_	hi	SWD Tam		01-014:00-	ger:	Movica Peppin	zach Englebert	Ves J		ling C	Preservative Tvne	3	_							Via:	Via: V
Turn-Around Time:	Standard	Project Name:	Rowth S	Project #:	22E-	Project Manager	Mow	Sampler: 20		# of Coolers: 3	Cooler Temp(including CF): 6. 4	Container Type and #	-	5-							Received by:	Received by:
Chain-of-Custody Record	(۲)						☐ Level 4 (Full Validation)	0				Sample Name	01-0-10	101-5 70-	.03 8-10'	·04 6'	.01 50-	.01 90-			artan	0
Sustod	(E09)		1 lile	9			□ Leve	☐ Az Compliance	Jer					TP22-02	TP22-03	TP22-04	TP22-05	TP22-06			🔾	Relinquishe@by:
in-of-(Vertex		ress: DM			#:	age:		□ Other	(əc		Matrix	10		45	30 /	30	- 32				8
Cha	Client: V		Mailing Address:		Phone #:	email or Fax#;	QA/QC Package: □ Standard	Accreditation:		☐ EDD (Type)		Date Time	7/7 13:35	1 9:40	9:45	13:30	9:30	9:35			Date: Time: 7/7 4:30	1 Time:



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

July 25, 2022

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

FAX:

RE: Routh SWD Tank Battery OrderNo.: 2207745

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/15/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 7/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BH22-11 0'

Project: Routh SWD Tank Battery
 Collection Date: 7/13/2022 11:20:00 AM

 Lab ID: 2207745-001
 Matrix: SOIL
 Received Date: 7/15/2022 7:45:00 AM

Analyses	Result	al Units	DF	Date Analyzed		
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: ED	
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	7/19/2022 7:33:45 PM	
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/19/2022 7:33:45 PM	
Surr: DNOP	53.0	51.1-141	%Rec	1	7/19/2022 7:33:45 PM	
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM	
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/19/2022 6:09:00 PM	
Surr: BFB	96.6	37.7-212	%Rec	1	7/19/2022 6:09:00 PM	
EPA METHOD 8021B: VOLATILES					Analyst: BRM	
Benzene	ND	0.024	mg/Kg	1	7/19/2022 6:09:00 PM	
Toluene	ND	0.049	mg/Kg	1	7/19/2022 6:09:00 PM	
Ethylbenzene	ND	0.049	mg/Kg	1	7/19/2022 6:09:00 PM	
Xylenes, Total	ND	0.098	mg/Kg	1	7/19/2022 6:09:00 PM	
Surr: 4-Bromofluorobenzene	91.2	70-130	%Rec	1	7/19/2022 6:09:00 PM	
EPA METHOD 300.0: ANIONS					Analyst: JTT	
Chloride	290	60	mg/Kg	20	7/20/2022 12:49:16 PM	

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 5

Hall Environmental Analysis Laboratory, Inc.

2207745 25-Jul-22

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-68909 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 68909 RunNo: 89636

Prep Date: 7/20/2022 Analysis Date: 7/20/2022 SeqNo: 3192269 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-68909 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 68909 RunNo: 89636

Prep Date: 7/20/2022 Analysis Date: 7/20/2022 SeqNo: 3192270 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 92.4 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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 2 of 5

Hall Environmental Analysis Laboratory, Inc.

5.0

5.000

2207745 25-Jul-22

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-68872	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 68872	RunNo: 89602	
Prep Date: 7/18/2022	Analysis Date: 7/19/2022	SeqNo: 3191316	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 15		
Motor Oil Range Organics (MRO)	ND 50		
Surr: DNOP	8.2 10.00	81.9 51.1	141
Sample ID: LCS-68872	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 68872	RunNo: 89602	
Prep Date: 7/18/2022	Analysis Date: 7/19/2022	SeqNo: 3191317	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	42 15 50.00	0 84.5 64.4	127
Surr: DNOP	3.3 5.000	66.6 51.1	141
Sample ID: MB-68860	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 68860	RunNo: 89602	
Prep Date: 7/18/2022	Analysis Date: 7/19/2022	SeqNo: 3191354	Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Surr: DNOP	5.6 10.00	55.9 51.1	141
Sample ID: LCS-68860	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 68860	RunNo: 89642	
Prep Date: 7/18/2022	Analysis Date: 7/20/2022	SeqNo: 3192049	Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Prep Date: 7/18/2022	Analysis Date: 7/20/2022	SeqNo: 3192049	

Qualifiers:

Surr: DNOP

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

100

51.1

141

- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 5

Hall Environmental Analysis Laboratory, Inc.

2207745 25-Jul-22

WO#:

Client: Vertex Resources Services, Inc. **Project:** Routh SWD Tank Battery

Sample ID: Ics-68856 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 68856 RunNo: 89616 Units: mg/Kg Prep Date: 7/18/2022 Analysis Date: 7/19/2022 SeqNo: 3190178 **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Analyte Result Qual Gasoline Range Organics (GRO) 24 5.0 25.00 0 95.5 72.3 137 Surr: BFB 2000 1000 197 37.7 212

Sample ID: mb-68856 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 68856 RunNo: 89616 Prep Date: 7/18/2022 Analysis Date: 7/19/2022 SeqNo: 3190179 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

99.8

37.7

212

Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank

Estimated value

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Limit Page 4 of 5

Hall Environmental Analysis Laboratory, Inc.

2207745 25-Jul-22

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

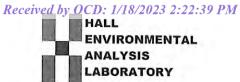
Sample ID: Ics-68856	SampType: LCS TestCode: EPA Method						8021B: Volati	les		
Client ID: LCSS	Batc	h ID: 688	356	RunNo: 89616						
Prep Date: 7/18/2022	Analysis [Date: 7/	19/2022	5	SeqNo: 31	190226	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.9	80	120			
Toluene	0.96	0.050	1.000	0	95.6	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.9	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.7	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.5	70	130			

Sample ID: mb-68856	Samp	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: PBS	Batcl	h ID: 688	356	F	RunNo: 8	9616				
Prep Date: 7/18/2022	Analysis [Date: 7/ *	19/2022	9	SeqNo: 3	190227	Units: mg/K	g		
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		96.0	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 5



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:	220	7745			RcptNo:	1
Received By: Juan Rojas	7/15/2022 7:45:00 AM			Lian	E. 9)		
Completed By: Cheyenne Cason	7/15/2022 9:28:33 AM			Clean	1		
Reviewed By: KPC 7:15				Carre			
Chain of Custody							
1. Is Chain of Custody complete?		Yes	~	No		Not Present	
2. How was the sample delivered?		Cou	rier				
<u>Log In</u>							
Was an attempt made to cool the sample	es?	Yes	V	No		NA 🗆	
4. Were all samples received at a temperate	ure of >0° C to 6.0°C	Yes	V	No		NA 🗆	
5. Sample(s) in proper container(s)?		Yes	V	No			
6. Sufficient sample volume for indicated tes	st(s)?	Yes	V	No			
7. Are samples (except VOA and ONG) prop	perly preserved?	Yes	V	No			
8. Was preservative added to bottles?		Yes		No	V	NA 🗆	
9. Received at least 1 vial with headspace <	1/4" for AQ VOA?	Yes		No		NA 🗸	
10. Were any sample containers received bro	oken?	Yes		No	~	_	70
11. Does paperwork match bottle labels?		Yes	V	No		# of preserved bottles checked for pH:	4/15/22
(Note discrepancies on chain of custody)	70.00.00						12 unless noted)
12. Are matrices correctly identified on Chain		Yes		No	П	Adjusted?	
13. Is it clear what analyses were requested? 14. Were all holding times able to be met?		Yes Yes		No	П	Checked by:	
(If no, notify customer for authorization.)		res	V	No		Checked by.	
Special Handling (if applicable)							
15. Was client notified of all discrepancies w	th this order?	Yes		No		NA 🗹	
Person Notified:	Date:				_		
By Whom:	Via:	eMa	iil 🔲	Phone [Fax	☐ In Person	
Regarding:							
Client Instructions:							
16. Additional remarks:							
17. Cooler Information Cooler No Temp °C Condition 1 1.2 Good	Seal Intact Seal No Se	eal Da	ite	Signed E	Зу		

NTAL Series	d) -			23 2	22.	:39 PM												Page 114 of
HALL ENVIRONMENTAL	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Anal	†O		1) 270 270	.40 04. 04. NG	VO,	etho y 83 sr, N OA)	5081 Pe 508 (M 50RA 5 50RA 5 50 (V	8 4 7 8 8	>					ks: Olivect bill Eost
					_	1208) s				ITM			>					Remarks:
I urn-Around Time: ☑ Standard 🕅 Rush 5 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	Project Name:	KULUM SIMI) BANK DALLENG	Project #:	276-00416-10	Project Manager:	Monica Pappin	Sampler: Sally Carthar	On Ice: A-Yes D No		Cooler Temp(including cF): 1, 2~0~1,2 (°C)	Container Preservative HEAL No.	i ype	1 to m 100					Received by: Via: Date Time WWW
Chain-of-Custody Record		ss: On tile	0			e: □ Level 4 (Full Validation)	□ Az Cor		1 1		Matrix Sample Name	2.10	11.771LQ 110S					Relinquished by: Relinquished by:
Client:	() () () () () () () ()	Mailing Address:		Phone #:	email or Fax#:	QA/QC Package: □ Standard	Accreditation:	□ NELAC	□ EDD (Type)		Date Time							Date: Time: A13 5:02 Date: Time:



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

August 04, 2022

Monica Peppin EOG 105 South Fourth Street Artesia, NM 88210 TEL: FAX:

RE: Routh SWD Tank Battery OrderNo.: 2207E17

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/28/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

and st

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order **2207E17**

Date Reported: 8/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES-02

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/26/2022 2:10:00 PM

 Lab ID:
 2207E17-001
 Matrix: SOIL
 Received Date: 7/28/2022 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	:: JTT
Chloride	340	60	mg/Kg	20	8/1/2022 9:37:01 PM	69186
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	: DGH
Diesel Range Organics (DRO)	15	15	mg/Kg	1	8/1/2022 3:29:19 PM	69157
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/1/2022 3:29:19 PM	69157
Surr: DNOP	73.4	21-129	%Rec	1	8/1/2022 3:29:19 PM	69157
EPA METHOD 8015D: GASOLINE RANGE					Analys	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/29/2022 12:59:08 PM	69132
Surr: BFB	102	37.7-212	%Rec	1	7/29/2022 12:59:08 PM	69132
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.024	mg/Kg	1	7/29/2022 12:59:08 PM	69132
Toluene	ND	0.049	mg/Kg	1	7/29/2022 12:59:08 PM	69132
Ethylbenzene	ND	0.049	mg/Kg	1	7/29/2022 12:59:08 PM	69132
Xylenes, Total	ND	0.098	mg/Kg	1	7/29/2022 12:59:08 PM	69132
Surr: 4-Bromofluorobenzene	93.8	70-130	%Rec	1	7/29/2022 12:59:08 PM	69132

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Surr: 4-Bromofluorobenzene

CLIENT: EOG

Analytical Report

Lab Order **2207E17**

Date Reported: 8/4/2022

7/29/2022 1:22:47 PM

69132

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BES-03

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/26/2022 2:30:00 PM

 Lab ID:
 2207E17-002
 Matrix: SOIL
 Received Date: 7/28/2022 7:30:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride 210 60 mg/Kg 20 8/1/2022 9:49:22 PM 69186 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: DGH Diesel Range Organics (DRO) 15 mg/Kg 8/1/2022 3:53:50 PM 69157 Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 8/1/2022 3:53:50 PM 69157 Surr: DNOP 51.1 8/1/2022 3:53:50 PM 21-129 %Rec 69157 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 7/29/2022 1:22:47 PM 69132 5.0 mg/Kg Surr: BFB 101 37.7-212 %Rec 7/29/2022 1:22:47 PM 69132 **EPA METHOD 8021B: VOLATILES** Analyst: NSB ND 0.025 7/29/2022 1:22:47 PM 69132 Benzene mg/Kg Toluene ND 0.050 mg/Kg 7/29/2022 1:22:47 PM 69132 Ethylbenzene ND 0.050 mg/Kg 1 7/29/2022 1:22:47 PM 69132 Xylenes, Total ND 0.10 mg/Kg 7/29/2022 1:22:47 PM 69132

93.0

70-130

%Rec

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order **2207E17**

Hall Environmental Analysis Laboratory, Inc. Date Reported: 8/4/2022

CLIENT: EOG Client Sample ID: BES-04

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/26/2022 2:15:00 PM

 Lab ID:
 2207E17-003
 Matrix: SOIL
 Received Date: 7/28/2022 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: JTT
Chloride	170	60	mg/Kg	20	8/1/2022 10:01:43 PM	69186
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/1/2022 4:18:16 PM	69157
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/1/2022 4:18:16 PM	69157
Surr: DNOP	43.1	21-129	%Rec	1	8/1/2022 4:18:16 PM	69157
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/29/2022 1:46:22 PM	69132
Surr: BFB	105	37.7-212	%Rec	1	7/29/2022 1:46:22 PM	69132
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	7/29/2022 1:46:22 PM	69132
Toluene	ND	0.049	mg/Kg	1	7/29/2022 1:46:22 PM	69132
Ethylbenzene	ND	0.049	mg/Kg	1	7/29/2022 1:46:22 PM	69132
Xylenes, Total	ND	0.099	mg/Kg	1	7/29/2022 1:46:22 PM	69132
Surr: 4-Bromofluorobenzene	96.7	70-130	%Rec	1	7/29/2022 1:46:22 PM	69132

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

porting Limit Page 3 of 11

CLIENT: EOG

Analytical Report

Lab Order **2207E17**

Date Reported: 8/4/2022

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BES-05

Project: Routh SWD Tank Battery **Collection Date:** 7/26/2022 2:00:00 PM

Lab ID: 2207E17-004 **Matrix:** SOIL **Received Date:** 7/28/2022 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	:: JTT
Chloride	120	60	mg/Kg	20	8/1/2022 10:14:05 PM	69186
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/1/2022 5:07:01 PM	69157
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/1/2022 5:07:01 PM	69157
Surr: DNOP	60.6	21-129	%Rec	1	8/1/2022 5:07:01 PM	69157
EPA METHOD 8015D: GASOLINE RANGE					Analys	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/29/2022 2:10:01 PM	69132
Surr: BFB	103	37.7-212	%Rec	1	7/29/2022 2:10:01 PM	69132
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.025	mg/Kg	1	7/29/2022 2:10:01 PM	69132
Toluene	ND	0.050	mg/Kg	1	7/29/2022 2:10:01 PM	69132
Ethylbenzene	ND	0.050	mg/Kg	1	7/29/2022 2:10:01 PM	69132
Xylenes, Total	ND	0.099	mg/Kg	1	7/29/2022 2:10:01 PM	69132
Surr: 4-Bromofluorobenzene	95.6	70-130	%Rec	1	7/29/2022 2:10:01 PM	69132

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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CLIENT: EOG

Analytical Report

Lab Order **2207E17**

Date Reported: 8/4/2022

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BES-09

Project: Routh SWD Tank Battery **Collection Date:** 7/26/2022 2:20:00 PM

Lab ID: 2207E17-005 **Matrix:** SOIL **Received Date:** 7/28/2022 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: JTT
Chloride	650	60	mg/Kg	20	8/1/2022 10:26:26 PM	69186
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	t: DGH
Diesel Range Organics (DRO)	44	15	mg/Kg	1	8/1/2022 5:31:31 PM	69157
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/1/2022 5:31:31 PM	69157
Surr: DNOP	62.6	21-129	%Rec	1	8/1/2022 5:31:31 PM	69157
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/29/2022 3:21:05 PM	69132
Surr: BFB	104	37.7-212	%Rec	1	7/29/2022 3:21:05 PM	69132
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.025	mg/Kg	1	7/29/2022 3:21:05 PM	69132
Toluene	ND	0.049	mg/Kg	1	7/29/2022 3:21:05 PM	69132
Ethylbenzene	ND	0.049	mg/Kg	1	7/29/2022 3:21:05 PM	69132
Xylenes, Total	ND	0.098	mg/Kg	1	7/29/2022 3:21:05 PM	69132
Surr: 4-Bromofluorobenzene	97.6	70-130	%Rec	1	7/29/2022 3:21:05 PM	69132

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order **2207E17**

Date Reported: 8/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES-11

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/26/2022 2:25:00 PM

 Lab ID:
 2207E17-006
 Matrix: SOIL
 Received Date: 7/28/2022 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: JTT
Chloride	600	60	mg/Kg	20	8/1/2022 10:38:46 PM	69186
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/1/2022 5:56:00 PM	69157
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/1/2022 5:56:00 PM	69157
Surr: DNOP	59.8	21-129	%Rec	1	8/1/2022 5:56:00 PM	69157
EPA METHOD 8015D: GASOLINE RANGE					Analys	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/29/2022 3:44:51 PM	69132
Surr: BFB	105	37.7-212	%Rec	1	7/29/2022 3:44:51 PM	69132
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.025	mg/Kg	1	7/29/2022 3:44:51 PM	69132
Toluene	ND	0.049	mg/Kg	1	7/29/2022 3:44:51 PM	69132
Ethylbenzene	ND	0.049	mg/Kg	1	7/29/2022 3:44:51 PM	69132
Xylenes, Total	ND	0.098	mg/Kg	1	7/29/2022 3:44:51 PM	69132
Surr: 4-Bromofluorobenzene	95.4	70-130	%Rec	1	7/29/2022 3:44:51 PM	69132

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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CLIENT: EOG

Analytical Report

Lab Order **2207E17**Date Reported: **8/4/2022**

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BES-01

Project: Routh SWD Tank Battery **Collection Date:** 7/26/2022 2:05:00 PM

Lab ID: 2207E17-007 **Matrix:** SOIL **Received Date:** 7/28/2022 7:30:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: NAI
Chloride	360	60	mg/Kg	20	8/2/2022 9:25:12 AM	69186
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	t: DGH
Diesel Range Organics (DRO)	20	15	mg/Kg	1	8/1/2022 6:20:39 PM	69157
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/1/2022 6:20:39 PM	69157
Surr: DNOP	71.3	21-129	%Rec	1	8/1/2022 6:20:39 PM	69157
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/29/2022 4:08:30 PM	69132
Surr: BFB	103	37.7-212	%Rec	1	7/29/2022 4:08:30 PM	69132
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.025	mg/Kg	1	7/29/2022 4:08:30 PM	69132
Toluene	ND	0.050	mg/Kg	1	7/29/2022 4:08:30 PM	69132
Ethylbenzene	ND	0.050	mg/Kg	1	7/29/2022 4:08:30 PM	69132
Xylenes, Total	ND	0.10	mg/Kg	1	7/29/2022 4:08:30 PM	69132
Surr: 4-Bromofluorobenzene	95.2	70-130	%Rec	1	7/29/2022 4:08:30 PM	69132

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

2207E17 04-Aug-22

WO#:

Client: EOG

Project: Routh SWD Tank Battery

Sample ID: MB-69186 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: **PBS** Batch ID: **69186** RunNo: **89935**

Prep Date: 8/1/2022 Analysis Date: 8/1/2022 SeqNo: 3204018 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69186 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69186 RunNo: 89935

Prep Date: 8/1/2022 Analysis Date: 8/1/2022 SeqNo: 3204020 Units: mg/Kg

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

Chloride 15 1.5 15.00 0 97.4 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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 8 of 11

Hall Environmental Analysis Laboratory, Inc.

2207E17 04-Aug-22

WO#:

Client: EOG

Project: Routh SWD Tank Battery

Sample ID: LCS-69157	SampT	ype: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch	n ID: 69 1	157	F	RunNo: 89	9930					
Prep Date: 7/29/2022	Analysis D	oate: 8/	1/2022	9	SeqNo: 32	203710	Units: mg/K	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	42	15	50.00	0	84.0	64.4	127				
Surr: DNOP	3.6		5 000		73.0	21	129				

Sample ID: MB-69157 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: Batch ID: 69157 RunNo: 89930 PBS Prep Date: Analysis Date: 8/1/2022 SeqNo: 3203711 7/29/2022 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) ND 15 50

Motor Oil Range Organics (MRO) ND Surr: DNOP 8.0 10.00 80.4 21 129

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

2207E17 04-Aug-22

WO#:

Client: EOG

Surr: BFB

Project: Routh SWD Tank Battery

Sample ID: mb-69132 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 69132 RunNo: 89888

Prep Date: 7/28/2022 Analysis Date: 7/29/2022 SeqNo: 3203001 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

Sample ID: Ics-69132 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

1000

Client ID: LCSS Batch ID: 69132 RunNo: 89888

2000

Prep Date: 7/28/2022 Analysis Date: 7/29/2022 SeqNo: 3203002 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 100 72.3 137

196

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

0.98

2207E17 04-Aug-22

WO#:

Client: EOG

Surr: 4-Bromofluorobenzene

Project: Routh SWD Tank Battery

Sample ID: mb-69132 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 69132 RunNo: 89888

Prep Date: 7/28/2022 Analysis Date: 7/29/2022 SeqNo: 3203043 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 0.95 1.000 95.2 70 130

1.000

Sample ID: LCS-69132	Samp	Type: LC	S	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 69132			RunNo: 89888								
Prep Date: 7/28/2022	Analysis I	Date: 7/ 2	29/2022	;	SeqNo: 32	203044	Units: mg/K	g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	1.0	0.025	1.000	0	102	80	120					
Toluene	1.1	0.050	1.000	0	106	80	120					
Ethylbenzene	1.1	0.050	1.000	0	106	80	120					
Xvlenes. Total	3.2	0.10	3.000	0	106	80	120					

98.1

70

130

Qualifiers:

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

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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: EOG Work Order Number: 2207E17 RcptNo: 1 Received By: Juan Rojas 7/28/2022 7:30:00 AM Completed By: Cheyenne Cason 7/28/2022 7:49:27 AM Reviewed By: 717 7/25/2 Chain of Custody 1. Is Chain of Custody complete? Yes V 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 No Yes 🗸 NA 🗌 Sample(s) in proper container(s)? Yes V No 🗌 6. Sufficient sample volume for indicated test(s)? Yes V No 🗌 7. Are samples (except VOA and ONG) properly preserved? No 🗌 8. Was preservative added to bottles? Yes No V NA 🗌 9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes No 🗌 NA V 10. Were any sample containers received broken? Yes _ No V # of preserved bottles checked 11. Does paperwork match bottle labels? Yes V No 🗌 for pH: (Note discrepancies on chain of custody) 2 of >12 unless noted) 12. Are matrices correctly identified on Chain of Custody? Yes V No 🗌 KPG 7 -28-22 13. Is it clear what analyses were requested? V No Checked by: KM 72727 14. Were all holding times able to be met? Yes V No 🗌 (If no, notify customer for authorization.) 1-28-27 Special Handling (if applicable) 15. Was client notified of all discrepancies with this order? Yes No NA V 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

3.2

Good

Not Present

Client: ES C	Standard KRush S DW	
	:: 3	www.hallenvironmental.com
Mailing Address: Oい よいと		4901 Hawkins NE - Albuquerque, NM 87109
	Project #:	10
Phone #:	1	Analysis
email or Fax#:	Project Manager:	†O
QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)	Movica Peppin	's (802's
on:	Sampler:	280 (1.)728 ,201
□ NELAC □ Other	On Ice: Tes DNo	98/88 504 50 V 8 S 8 N
□ EDD (Type)		od (GF)
	Cooler Temp(including CF): 3 C/-0.223 2	destices of the Methors of 8 Methors
Date Time Matrix Sample Name	Container Preservative HEAL No. Type and # Type	2081 Р 8081 Р ВВРАНЗ I РАНЗ I РСКА ВВСВО (У
7/36 14: 5 50, \ BES-02	ICE	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
(14:30 (BES - C 3		
(14:15) BES-OY	() co3	
(14:00 (BE5 - 65	h00 /	
14:30 / 355-09	\$ (005	
(14:45 (BES: 11		
(14:05 (BES-01	1 007	
Date: Time: Relinquished by:	Received by: Via: Date Time	Remarks:
7/26 4:09m Joseph BasaraS	MOLLY TO THE PART TO	٠. ٥
Relinquished by:	Received by: Via: Date Time	30 2111 TO COD



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

August 09, 2022

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

FAX:

RE: Routh SWD OrderNo.: 2207F05

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 16 sample(s) on 7/29/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order **2207F05**Date Reported: **8/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-18 6'

Project: Routh SWD
 Collection Date: 7/27/2022 10:40:00 AM

 Lab ID: 2207F05-001
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 4:36:08 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/3/2022 4:36:08 PM
Surr: DNOP	111	21-129	%Rec	1	8/3/2022 4:36:08 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/1/2022 2:23:48 PM
Surr: BFB	103	37.7-212	%Rec	1	8/1/2022 2:23:48 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/1/2022 2:23:48 PM
Toluene	ND	0.050	mg/Kg	1	8/1/2022 2:23:48 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/1/2022 2:23:48 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/1/2022 2:23:48 PM
Surr: 4-Bromofluorobenzene	93.9	70-130	%Rec	1	8/1/2022 2:23:48 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	350	61	mg/Kg	20	8/2/2022 3:47:57 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order **2207F05**Date Reported: **8/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-19 6'

 Project:
 Routh SWD
 Collection Date: 7/27/2022 10:45:00 AM

 Lab ID:
 2207F05-002
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/2/2022 6:54:29 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/2/2022 6:54:29 PM
Surr: DNOP	105	21-129	%Rec	1	8/2/2022 6:54:29 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/1/2022 3:35:38 PM
Surr: BFB	105	37.7-212	%Rec	1	8/1/2022 3:35:38 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/1/2022 3:35:38 PM
Toluene	ND	0.049	mg/Kg	1	8/1/2022 3:35:38 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/1/2022 3:35:38 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/1/2022 3:35:38 PM
Surr: 4-Bromofluorobenzene	98.8	70-130	%Rec	1	8/1/2022 3:35:38 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	ND	60	mg/Kg	20	8/2/2022 4:00:18 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order **2207F05**Date Reported: **8/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-20 6'

 Project:
 Routh SWD
 Collection Date: 7/27/2022 10:50:00 AM

 Lab ID:
 2207F05-003
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	58	13	mg/Kg	1	8/2/2022 7:19:14 PM
Motor Oil Range Organics (MRO)	95	42	mg/Kg	1	8/2/2022 7:19:14 PM
Surr: DNOP	101	21-129	%Rec	1	8/2/2022 7:19:14 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/1/2022 4:47:13 PM
Surr: BFB	100	37.7-212	%Rec	1	8/1/2022 4:47:13 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/1/2022 4:47:13 PM
Toluene	ND	0.049	mg/Kg	1	8/1/2022 4:47:13 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/1/2022 4:47:13 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/1/2022 4:47:13 PM
Surr: 4-Bromofluorobenzene	94.2	70-130	%Rec	1	8/1/2022 4:47:13 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	730	60	mg/Kg	20	8/2/2022 4:37:21 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order **2207F05**Date Reported: **8/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-21 6'

 Project:
 Routh SWD
 Collection Date: 7/27/2022 10:55:00 AM

 Lab ID:
 2207F05-004
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/2/2022 8:08:27 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/2/2022 8:08:27 PM
Surr: DNOP	96.2	21-129	%Rec	1	8/2/2022 8:08:27 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/1/2022 5:11:01 PM
Surr: BFB	106	37.7-212	%Rec	1	8/1/2022 5:11:01 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/1/2022 5:11:01 PM
Toluene	ND	0.050	mg/Kg	1	8/1/2022 5:11:01 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/1/2022 5:11:01 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/1/2022 5:11:01 PM
Surr: 4-Bromofluorobenzene	96.2	70-130	%Rec	1	8/1/2022 5:11:01 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	ND	60	mg/Kg	20	8/2/2022 4:49:41 PM

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

Qualifiers:

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

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Date Reported: 8/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-22 6'

Routh SWD **Project:** Collection Date: 7/27/2022 11:00:00 AM 2207F05-005 Lab ID: Matrix: SOIL Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/2/2022 8:32:53 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/2/2022 8:32:53 PM
Surr: DNOP	112	21-129	%Rec	1	8/2/2022 8:32:53 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/1/2022 5:34:52 PM
Surr: BFB	103	37.7-212	%Rec	1	8/1/2022 5:34:52 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/1/2022 5:34:52 PM
Toluene	ND	0.050	mg/Kg	1	8/1/2022 5:34:52 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/1/2022 5:34:52 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/1/2022 5:34:52 PM
Surr: 4-Bromofluorobenzene	96.1	70-130	%Rec	1	8/1/2022 5:34:52 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	150	60	mg/Kg	20	8/2/2022 5:02:01 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Sample pH Not In Range

Page 5 of 20 RL Reporting Limit

Lab Order 2207F05 Date Reported: 8/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-23 6'

Routh SWD **Project:** Collection Date: 7/27/2022 11:05:00 AM 2207F05-006 Lab ID: Matrix: SOIL Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/2/2022 9:22:05 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/2/2022 9:22:05 PM
Surr: DNOP	101	21-129	%Rec	1	8/2/2022 9:22:05 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/1/2022 7:09:56 PM
Surr: BFB	101	37.7-212	%Rec	1	8/1/2022 7:09:56 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/1/2022 7:09:56 PM
Toluene	ND	0.048	mg/Kg	1	8/1/2022 7:09:56 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/1/2022 7:09:56 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/1/2022 7:09:56 PM
Surr: 4-Bromofluorobenzene	97.3	70-130	%Rec	1	8/1/2022 7:09:56 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	ND	60	mg/Kg	20	8/2/2022 5:14:22 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Sample pH Not In Range

Page 6 of 20 RL Reporting Limit

Date Reported: 8/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-24 6'

 Project:
 Routh SWD
 Collection Date: 7/27/2022 11:10:00 AM

 Lab ID:
 2207F05-007
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/2/2022 9:46:37 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/2/2022 9:46:37 PM
Surr: DNOP	95.8	21-129	%Rec	1	8/2/2022 9:46:37 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/1/2022 7:33:48 PM
Surr: BFB	104	37.7-212	%Rec	1	8/1/2022 7:33:48 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	8/1/2022 7:33:48 PM
Toluene	ND	0.046	mg/Kg	1	8/1/2022 7:33:48 PM
Ethylbenzene	ND	0.046	mg/Kg	1	8/1/2022 7:33:48 PM
Xylenes, Total	ND	0.092	mg/Kg	1	8/1/2022 7:33:48 PM
Surr: 4-Bromofluorobenzene	95.4	70-130	%Rec	1	8/1/2022 7:33:48 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	ND	60	mg/Kg	20	8/2/2022 5:51:26 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-25 6'

 Project:
 Routh SWD
 Collection Date: 7/27/2022 11:15:00 AM

 Lab ID:
 2207F05-008
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/2/2022 10:11:10 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/2/2022 10:11:10 PM
Surr: DNOP	81.5	21-129	%Rec	1	8/2/2022 10:11:10 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/1/2022 7:57:33 PM
Surr: BFB	102	37.7-212	%Rec	1	8/1/2022 7:57:33 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	8/1/2022 7:57:33 PM
Toluene	ND	0.047	mg/Kg	1	8/1/2022 7:57:33 PM
Ethylbenzene	ND	0.047	mg/Kg	1	8/1/2022 7:57:33 PM
Xylenes, Total	ND	0.094	mg/Kg	1	8/1/2022 7:57:33 PM
Surr: 4-Bromofluorobenzene	95.4	70-130	%Rec	1	8/1/2022 7:57:33 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	ND	59	mg/Kg	20	8/2/2022 6:03:46 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-26 6'

Project: Routh SWD
 Collection Date: 7/27/2022 11:20:00 AM

 Lab ID: 2207F05-009
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/2/2022 10:35:50 PM
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/2/2022 10:35:50 PM
Surr: DNOP	56.3	21-129	%Rec	1	8/2/2022 10:35:50 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/1/2022 8:21:13 PM
Surr: BFB	98.2	37.7-212	%Rec	1	8/1/2022 8:21:13 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	8/1/2022 8:21:13 PM
Toluene	ND	0.046	mg/Kg	1	8/1/2022 8:21:13 PM
Ethylbenzene	ND	0.046	mg/Kg	1	8/1/2022 8:21:13 PM
Xylenes, Total	ND	0.092	mg/Kg	1	8/1/2022 8:21:13 PM
Surr: 4-Bromofluorobenzene	94.4	70-130	%Rec	1	8/1/2022 8:21:13 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	1100	60	mg/Kg	20	8/2/2022 6:16:07 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-27 6'

 Project:
 Routh SWD
 Collection Date: 7/27/2022 11:25:00 AM

 Lab ID:
 2207F05-010
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/2/2022 11:00:19 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/2/2022 11:00:19 PM
Surr: DNOP	77.3	21-129	%Rec	1	8/2/2022 11:00:19 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/1/2022 8:44:55 PM
Surr: BFB	100	37.7-212	%Rec	1	8/1/2022 8:44:55 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/1/2022 8:44:55 PM
Toluene	ND	0.048	mg/Kg	1	8/1/2022 8:44:55 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/1/2022 8:44:55 PM
Xylenes, Total	ND	0.096	mg/Kg	1	8/1/2022 8:44:55 PM
Surr: 4-Bromofluorobenzene	95.4	70-130	%Rec	1	8/1/2022 8:44:55 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	220	60	mg/Kg	20	8/2/2022 6:28:29 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-28 6'

 Project:
 Routh SWD
 Collection Date: 7/27/2022 11:30:00 AM

 Lab ID:
 2207F05-011
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE C	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	320	29	mg/Kg	2	8/3/2022 5:49:56 PM
Motor Oil Range Organics (MRO)	380	96	mg/Kg	2	8/3/2022 5:49:56 PM
Surr: DNOP	106	21-129	%Rec	2	8/3/2022 5:49:56 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/1/2022 9:08:35 PM
Surr: BFB	101	37.7-212	%Rec	1	8/1/2022 9:08:35 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	8/1/2022 9:08:35 PM
Toluene	ND	0.047	mg/Kg	1	8/1/2022 9:08:35 PM
Ethylbenzene	ND	0.047	mg/Kg	1	8/1/2022 9:08:35 PM
Xylenes, Total	ND	0.094	mg/Kg	1	8/1/2022 9:08:35 PM
Surr: 4-Bromofluorobenzene	91.7	70-130	%Rec	1	8/1/2022 9:08:35 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	270	60	mg/Kg	20	8/2/2022 7:05:31 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: **8/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-29 6'

 Project:
 Routh SWD
 Collection Date: 7/27/2022 11:35:00 AM

 Lab ID:
 2207F05-012
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: DGH
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	8/3/2022 6:38:59 PM
Motor Oil Range Organics (MRO)	58	45	mg/Kg	1	8/3/2022 6:38:59 PM
Surr: DNOP	92.8	21-129	%Rec	1	8/3/2022 6:38:59 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/1/2022 9:56:01 PM
Surr: BFB	97.9	37.7-212	%Rec	1	8/1/2022 9:56:01 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	8/1/2022 9:56:01 PM
Toluene	ND	0.047	mg/Kg	1	8/1/2022 9:56:01 PM
Ethylbenzene	ND	0.047	mg/Kg	1	8/1/2022 9:56:01 PM
Xylenes, Total	ND	0.093	mg/Kg	1	8/1/2022 9:56:01 PM
Surr: 4-Bromofluorobenzene	95.1	70-130	%Rec	1	8/1/2022 9:56:01 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	240	60	mg/Kg	20	8/2/2022 7:17:52 PM

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

Qualifiers:

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

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Lab Order **2207F05**Date Reported: **8/9/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-30 6'

Project: Routh SWD
 Collection Date: 7/27/2022 11:40:00 AM

 Lab ID: 2207F05-013
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	510	270		mg/Kg	20	8/3/2022 12:14:02 AM
Motor Oil Range Organics (MRO)	1200	900		mg/Kg	20	8/3/2022 12:14:02 AM
Surr: DNOP	0	21-129	S	%Rec	20	8/3/2022 12:14:02 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/1/2022 10:43:21 PM
Surr: BFB	94.4	37.7-212		%Rec	1	8/1/2022 10:43:21 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/1/2022 10:43:21 PM
Toluene	ND	0.048		mg/Kg	1	8/1/2022 10:43:21 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/1/2022 10:43:21 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/1/2022 10:43:21 PM
Surr: 4-Bromofluorobenzene	88.3	70-130		%Rec	1	8/1/2022 10:43:21 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	650	60		mg/Kg	20	8/2/2022 7:30:12 PM

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

Qualifiers:

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

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Date Reported: 8/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-31 6'

 Project:
 Routh SWD
 Collection Date: 7/27/2022 11:45:00 AM

 Lab ID:
 2207F05-014
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE C	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/3/2022 12:38:30 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/3/2022 12:38:30 AM
Surr: DNOP	88.8	21-129	%Rec	1	8/3/2022 12:38:30 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/1/2022 11:30:35 PM
Surr: BFB	96.6	37.7-212	%Rec	1	8/1/2022 11:30:35 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/1/2022 11:30:35 PM
Toluene	ND	0.050	mg/Kg	1	8/1/2022 11:30:35 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/1/2022 11:30:35 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/1/2022 11:30:35 PM
Surr: 4-Bromofluorobenzene	93.5	70-130	%Rec	1	8/1/2022 11:30:35 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	ND	60	mg/Kg	20	8/2/2022 7:42:34 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-32 6'

 Project:
 Routh SWD
 Collection Date: 7/27/2022 2:00:00 PM

 Lab ID:
 2207F05-015
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 1:03:14 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/3/2022 1:03:14 AM
Surr: DNOP	93.4	21-129	%Rec	1	8/3/2022 1:03:14 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/1/2022 11:54:10 PM
Surr: BFB	95.8	37.7-212	%Rec	1	8/1/2022 11:54:10 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	8/1/2022 11:54:10 PM
Toluene	ND	0.046	mg/Kg	1	8/1/2022 11:54:10 PM
Ethylbenzene	ND	0.046	mg/Kg	1	8/1/2022 11:54:10 PM
Xylenes, Total	ND	0.091	mg/Kg	1	8/1/2022 11:54:10 PM
Surr: 4-Bromofluorobenzene	89.6	70-130	%Rec	1	8/1/2022 11:54:10 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	110	60	mg/Kg	20	8/2/2022 7:54:55 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical ReportLab Order **2207F05**

Date Reported: 8/9/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-33 6'

 Project:
 Routh SWD
 Collection Date: 7/27/2022 2:05:00 PM

 Lab ID:
 2207F05-016
 Matrix: SOIL
 Received Date: 7/29/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE (ORGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 1:27:47 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/3/2022 1:27:47 AM
Surr: DNOP	97.8	21-129	%Rec	1	8/3/2022 1:27:47 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/2/2022 12:41:19 AM
Surr: BFB	100	37.7-212	%Rec	1	8/2/2022 12:41:19 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/2/2022 12:41:19 AM
Toluene	ND	0.047	mg/Kg	1	8/2/2022 12:41:19 AM
Ethylbenzene	ND	0.047	mg/Kg	1	8/2/2022 12:41:19 AM
Xylenes, Total	ND	0.095	mg/Kg	1	8/2/2022 12:41:19 AM
Surr: 4-Bromofluorobenzene	93.8	70-130	%Rec	1	8/2/2022 12:41:19 AM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	ND	60	mg/Kg	20	8/2/2022 8:07:15 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

2207F05 09-Aug-22

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD

Sample ID: MB-69202 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69202 RunNo: 89954

Prep Date: 8/2/2022 Analysis Date: 8/2/2022 SeqNo: 3206533 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69202 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69202 RunNo: 89954

Prep Date: 8/2/2022 Analysis Date: 8/2/2022 SeqNo: 3206534 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 96.0 90 110

Sample ID: MB-69209 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69209 RunNo: 89954

Prep Date: 8/2/2022 Analysis Date: 8/2/2022 SeqNo: 3206565 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69209 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69209 RunNo: 89954

Prep Date: 8/2/2022 Analysis Date: 8/2/2022 SeqNo: 3206566 Units: mg/Kg

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

Chloride 15 1.5 15.00 0 96.8 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

2207F05

WO#:

09-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD

Sample ID: LCS-69190	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	n ID: 69 ′	190	F	RunNo: 8	9958				
Prep Date: 8/1/2022	Analysis D	ate: 8/ 2	2/2022	8	SeqNo: 3	206471	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	15	50.00	0	92.5	64.4	127			
Surr: DNOP	4.8		5.000		95.3	21	129			
Sample ID: MB-69190	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch	n ID: 69 ′	190	F	RunNo: 8	9958				
Prep Date: 8/1/2022	Analysis D	ate: 8/ 2	2/2022	\$	SeqNo: 3	206472	Units: mg/k	ίg		

Ciletti ID. PB3	Datti	11D. 69	190	Г	CUITINO. O	9930				
Prep Date: 8/1/2022	Analysis D	ate: 8/	2/2022	9	SeqNo: 3	206472	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		109	21	129			

Sample ID: 2207F05-001AMS	SampT	ype: MS	5	Test	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: BES22-18 6'	Batch	ID: 69	190	R	tunNo: 90	0023				
Prep Date: 8/1/2022	Analysis D	ate: 8/	3/2022	S	SeqNo: 3	207967	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	14	45.25	0	127	36.1	154			
Surr: DNOP	4.6		4.525		102	21	129			

Sample ID: 2207F05-001AMSD	SampT	ype: M \$	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: BES22-18 6'	Batch	ID: 69	190	F	RunNo: 9	0023				
Prep Date: 8/1/2022	Analysis D	ate: 8/	3/2022	S	SeqNo: 3	207968	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	13	44.48	0	113	36.1	154	13.3	33.9	
Surr: DNOP	3.8		4.448		86.1	21	129	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2207F05**

09-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD

Sample ID: mb-69167 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: **PBS** Batch ID: **69167** RunNo: **89924**

Prep Date: 7/29/2022 Analysis Date: 8/1/2022 SeqNo: 3203746 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 101 37.7 212

Sample ID: Ics-69167 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 69167 RunNo: 89924

Prep Date: 7/29/2022 Analysis Date: 8/1/2022 SeqNo: 3203747 Units: mg/Kg

Result Analyte PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 26 5.0 25.00 O 106 72.3 137

Surr: BFB 2000 1000 203 37.7 212

Sample ID: 2207f05-001ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: **BES22-18 6'** Batch ID: **69167** RunNo: **89924**

Prep Date: 7/29/2022 Analysis Date: 8/1/2022 SeqNo: 3203749 Units: mg/Kg

RPDLimit Result SPK value SPK Ref Val %REC %RPD Analyte PQL LowLimit HighLimit Qual Gasoline Range Organics (GRO) 25 4.9 24.63 0 103 70 130 Surr: BFB 985.2 205 2000 37.7 212

Sample ID: 2207f05-001amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: BES22-18 6' Batch ID: 69167 RunNo: 89924

Prep Date: 7/29/2022 Analysis Date: 8/1/2022 SeqNo: 3203750 Units: mg/Kg

Result SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** PQL LowLimit Qual Gasoline Range Organics (GRO) 25 5.0 24.75 102 70 0.0129 130 20 Surr: BFB 2100 990.1 208 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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2207F05

09-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD

Sample ID: mb-69167 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 69167 RunNo: 89924

Prep Date: 7/29/2022 Analysis Date: 8/1/2022 SeqNo: 3203780 Units: mg/Kg

PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Analyte Result 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 95.8 70 130

Sample ID: LCS-69167 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 69167 RunNo: 89924

Prep Date: 7/29/2022	Analysis L	Date: 8/	1/2022	8	SeqNo: 3203781		Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.8	80	120			
Toluene	0.97	0.050	1.000	0	96.9	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.4	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.1	80	120			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.2	70	130			

Sample ID: 2207f05-002ams SampType: MS TestCode: EPA Method 8021B: Volatiles

Client ID: BES22-19 6' Batch ID: 69167 RunNo: 89924

Prep Date: 7/29/2022	Analysis [Date: 8/	1/2022	S	SeqNo: 3	203784	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	0.9814	0	86.7	68.8	120			
Toluene	0.89	0.049	0.9814	0	91.2	73.6	124			
Ethylbenzene	0.90	0.049	0.9814	0	91.6	72.7	129			
Xylenes, Total	2.7	0.098	2.944	0	92.5	75.7	126			
Surr: 4-Bromofluorobenzene	0.98		0.9814		100	70	130			

TestCode: EPA Method 8021B: Volatiles Sample ID: 2207f05-002amsd SampType: MSD

Client ID: BES22-19 6' Batch ID: 69167 RunNo: 89924

Prep Date: 7/29/2022	Analysis D	oate: 8/	1/2022	S	SeqNo: 3	203785	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.024	0.9794	0	89.5	68.8	120	2.96	20	
Toluene	0.92	0.049	0.9794	0	94.0	73.6	124	2.88	20	
Ethylbenzene	0.93	0.049	0.9794	0	94.7	72.7	129	3.08	20	
Xylenes, Total	2.8	0.098	2.938	0	94.8	75.7	126	2.24	20	
Surr: 4-Bromofluorobenzene	0.98		0.9794		99.8	70	130	0	0	

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference

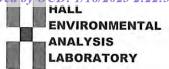
Analyte detected in the associated Method Blank

Estimated value

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Limit Page 20 of 20



Hall Environmental Analysis Laboratory 4901 Hawkins NE TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

Sample Log-In Check List Albuquerque, NM 87109

Client Name:	Vertex Resources Services, Inc.	Work Order Numb	er: 220	7F05		Rcpt	No: 1
Received By:	Juan Rojas	7/29/2022 7:20:00 A	M		Harring	3	
Completed By:	Cheyenne Cason	7/29/2022 7:44:44 A	M		Charle		
Reviewed By:	CMC	7/29/22			Come		
Chain of Cus	stody						
1. Is Chain of C	custody complete?		Yes	~	No [Not Present	
2. How was the	sample delivered?		Cou	rier			
Login							
Log In 3. Was an atten	npt made to cool the sam	ples?	Yes	V	No [NA [
4. Were all sam	ples received at a temper	ature of >0° C to 6.0°C	Yes	V	No 🗆	NA [
5. Sample(s) in	proper container(s)?		Yes	V	No [I	
6. Sufficient san	nple volume for indicated	test(s)?	Yes	V	No 🗆		
7. Are samples	(except VOA and ONG) p	roperly preserved?	Yes	V	No 🗆]	
8. Was preserva	ative added to bottles?		Yes		No 🗸	NA 🗆	
9. Received at le	east 1 vial with headspace	e <1/4" for AQ VOA?	Yes		No 🗆	NA ⊻	1
10. Were any sai	mple containers received	broken?	Yes		No 🔽	# of preserved	
	ork match bottle labels? ancies on chain of custod	w)	Yes	~	No 🗆		2 or >12 unless noted)
	correctly identified on Cha		Yes	~	No 🗆	A Albrede NO	2 di 712 dinesa noted)
	t analyses were requeste		Yes	V	No 🗆		
14. Were all holdi	ing times able to be met? ustomer for authorization.		Yes	•	No 🗆	Checked by	In 7/29/22
Special Handi	ling (if applicable)						
	otified of all discrepancies	with this order?	Yes		No [NA S	
Person	Notified:	Date:					
By Who	Transcription II	Via:	eM	ail 🖂	Phone F	ax In Person	
Regard	ling:					— (Line)	
Client I	nstructions:						
16. Additional re	marks:						
17. <u>Cooler Information</u> Cooler Notes	Property of the second	Seal Intact Seal No Not Present	Seal D	ate	Signed By		

Client:										Ū	A WAR		A THAIR	
	505	506/ Vertex	The state of the s	Z Standard	Rush Rush			U		1 1	N L		ANAL KINYIKONIMEN LAL	
				Project Name:						The long			JEA LOR	Date of the last
Mailing	Mailing Address:	an	File	ROUTH	th sub	0	46	101 Hay	4901 Hawkins NF	, 8		www.nailenvillonmental.com ns NF - Albuquerque NM 87109	37109): 1/1
		-		Project #:				el. 505	Tel. 505-345-3975		or xe	Eax 505-345-4107	201.00	8/20
Phone #:	#:			22E	Q-91200-322	2				Anal	sis Re	Analysis Request		23 2
email or Fax#:	r Fax#:			Project Manager:	ger:		_			⁺C	H	(11		22
QA/QC Packa	QA/QC Package: □ Standard		☐ Level 4 (Full Validation)	Moni	Monica pubbin	oic o	1508) e' SAM \ O		SMISC	PO₄, S(nəsdA\tı		:39 PM
Accreditation:	tation:	Az Col	☐ Az Compliance	Sampler: CD		2		Z808		' ^Z ON				
□ EDD (Type)	(Type)			# of Coolers:	£ _	ON		/səp	0 0	-	VOI			
				Cooler Temp(Including CF):	5	3+6.2=3.5 (°C)		ioitee	y 83°					
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.		9 r808	EDB (N	RCRA E	v) 0558	S) 0728 Total Co		
7127	04:01	17.02	85522-186		ICC	8	1	1		4				-
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	10:50		O			(6)								
	10:55		BESZZ-216"			8								
	14:00		BESTZ-22 6'			CES.	2 1							-
	11:05		BE522-23 6'			900								-
	11:10		85522-24 6"			100								
	11:15		BESZZ-ZS 6"			800								
	17:20		BES22-26 6'			600								
	11:25		BES22-27 6"			010								
	11:30		138522-28 6			011								
_	11:35					012	1				H			
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Date:	Time:	Relinquished by:	ed by:	Received by:	Via:	Date Time		21.12	Ct 8	Direct Bill EOG	5			ige 1
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Client:	Cilain-oi-Custody Record	I UIII-MOUND I IME: S-Day	HALL ENVIRONMENTAL
~	506/Vertex	Z Standard Rush	ANAL CITY I ADODATOR
		Project Name:	ANALISIS LABORATOR
Mailing Address:	S. On File	ROUTH SUD	
		Project #:	ζ.
Phone #:		225-00716-10	1el. 505-545-5975 Fax 505-345-4107 Analysis Reguest
email or Fax#:		Project Manager:	(0
QA/QC Package:	::	Monica Pappin	
Accreditation:	☐ Az Compliance	(CD)	0 Y DRG () () 8082 () 4.1 () () 6270 () 6270
□ EDD (Type)		# of Coolers:	SRC 1 50 10 or als 23,
	>	(Including CF): 3 3+6.2 = 3.5	asticio ethod y 831 sh, Neta hr, No OA)
Date Time	Matrix Sample Name	Container Preservative HEAL No.	PH:80 (N) EDB (M) EDB
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2:00	B E522-32	200	
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		W. MMULLI, Tables 1000	Rill E
The man Time:	Relinquished by:		
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

August 10, 2022

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

FAX:

RE: Routh SWD OrderNo.: 2207F70

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 21 sample(s) on 7/30/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 2207F70

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-34 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 9:30:00 AM

 Lab ID:
 2207F70-001
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: JME
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/2/2022 11:47:57 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/2/2022 11:47:57 PM
Surr: DNOP	59.6	21-129	%Rec	1	8/2/2022 11:47:57 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/1/2022 11:52:00 PM
Surr: BFB	91.6	37.7-212	%Rec	1	8/1/2022 11:52:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.025	mg/Kg	1	8/1/2022 11:52:00 PM
Toluene	ND	0.050	mg/Kg	1	8/1/2022 11:52:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/1/2022 11:52:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/1/2022 11:52:00 PM
Surr: 4-Bromofluorobenzene	86.1	70-130	%Rec	1	8/1/2022 11:52:00 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	ND	60	mg/Kg	20	8/3/2022 2:05:08 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 28

Lab Order **2207F70**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-38 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 9:35:00 AM

 Lab ID:
 2207F70-002
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: JME
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 12:01:55 AM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/3/2022 12:01:55 AM
Surr: DNOP	74.8	21-129	%Rec	1	8/3/2022 12:01:55 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/2/2022 12:11:00 AM
Surr: BFB	94.6	37.7-212	%Rec	1	8/2/2022 12:11:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.024	mg/Kg	1	8/2/2022 12:11:00 AM
Toluene	ND	0.049	mg/Kg	1	8/2/2022 12:11:00 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/2/2022 12:11:00 AM
Xylenes, Total	ND	0.098	mg/Kg	1	8/2/2022 12:11:00 AM
Surr: 4-Bromofluorobenzene	86.9	70-130	%Rec	1	8/2/2022 12:11:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	140	60	mg/Kg	20	8/3/2022 3:06:51 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 28

Lab Order 2207F70

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-40 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 9:40:00 AM

 Lab ID:
 2207F70-003
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE	Analyst: JME				
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	8/3/2022 12:15:43 AM
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	8/3/2022 12:15:43 AM
Surr: DNOP	57.4	21-129	%Rec	1	8/3/2022 12:15:43 AM
EPA METHOD 8015D: GASOLINE RANGE	<u> </u>				Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/2/2022 12:31:00 AM
Surr: BFB	95.2	37.7-212	%Rec	1	8/2/2022 12:31:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.025	mg/Kg	1	8/2/2022 12:31:00 AM
Toluene	ND	0.050	mg/Kg	1	8/2/2022 12:31:00 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/2/2022 12:31:00 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/2/2022 12:31:00 AM
Surr: 4-Bromofluorobenzene	88.4	70-130	%Rec	1	8/2/2022 12:31:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	540	60	mg/Kg	20	8/3/2022 3:19:13 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 28

Lab Order **2207F70**Date Reported: **8/10/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-41 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 9:45:00 AM

 Lab ID:
 2207F70-004
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE C		Analyst: JME			
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 12:29:39 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/3/2022 12:29:39 AM
Surr: DNOP	64.3	21-129	%Rec	1	8/3/2022 12:29:39 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/2/2022 1:10:00 AM
Surr: BFB	91.1	37.7-212	%Rec	1	8/2/2022 1:10:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.024	mg/Kg	1	8/2/2022 1:10:00 AM
Toluene	ND	0.048	mg/Kg	1	8/2/2022 1:10:00 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/2/2022 1:10:00 AM
Xylenes, Total	ND	0.097	mg/Kg	1	8/2/2022 1:10:00 AM
Surr: 4-Bromofluorobenzene	86.3	70-130	%Rec	1	8/2/2022 1:10:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	390	60	mg/Kg	20	8/3/2022 3:31:33 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 28

Lab Order **2207F70**

Date Reported: 8/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-42 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 9:50:00 AM

 Lab ID:
 2207F70-005
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE C	RGANICS				Analyst: JME
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 12:43:29 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/3/2022 12:43:29 AM
Surr: DNOP	74.8	21-129	%Rec	1	8/3/2022 12:43:29 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/2/2022 1:30:00 AM
Surr: BFB	89.8	37.7-212	%Rec	1	8/2/2022 1:30:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.025	mg/Kg	1	8/2/2022 1:30:00 AM
Toluene	ND	0.050	mg/Kg	1	8/2/2022 1:30:00 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/2/2022 1:30:00 AM
Xylenes, Total	ND	0.10	mg/Kg	1	8/2/2022 1:30:00 AM
Surr: 4-Bromofluorobenzene	86.1	70-130	%Rec	1	8/2/2022 1:30:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	160	60	mg/Kg	20	8/3/2022 3:43:55 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 28

Lab Order 2207F70

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-43 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 9:55:00 AM

 Lab ID:
 2207F70-006
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: JME
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 12:57:12 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/3/2022 12:57:12 AM
Surr: DNOP	61.6	21-129	%Rec	1	8/3/2022 12:57:12 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/2/2022 1:50:00 AM
Surr: BFB	96.3	37.7-212	%Rec	1	8/2/2022 1:50:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.024	mg/Kg	1	8/2/2022 1:50:00 AM
Toluene	ND	0.049	mg/Kg	1	8/2/2022 1:50:00 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/2/2022 1:50:00 AM
Xylenes, Total	ND	0.097	mg/Kg	1	8/2/2022 1:50:00 AM
Surr: 4-Bromofluorobenzene	88.4	70-130	%Rec	1	8/2/2022 1:50:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	170	60	mg/Kg	20	8/3/2022 5:47:24 PM

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order 2207F70

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-44 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:00:00 AM

 Lab ID:
 2207F70-007
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF		Analyst: JME			
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/3/2022 1:11:04 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/3/2022 1:11:04 AM
Surr: DNOP	76.2	21-129	%Rec	1	8/3/2022 1:11:04 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/2/2022 2:09:00 AM
Surr: BFB	91.8	37.7-212	%Rec	1	8/2/2022 2:09:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.024	mg/Kg	1	8/2/2022 2:09:00 AM
Toluene	ND	0.048	mg/Kg	1	8/2/2022 2:09:00 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/2/2022 2:09:00 AM
Xylenes, Total	ND	0.096	mg/Kg	1	8/2/2022 2:09:00 AM
Surr: 4-Bromofluorobenzene	86.5	70-130	%Rec	1	8/2/2022 2:09:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	280	60	mg/Kg	20	8/3/2022 5:59:44 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order 2207F70

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-45 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:05:00 AM

 Lab ID:
 2207F70-008
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: JME
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/3/2022 1:24:59 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/3/2022 1:24:59 AM
Surr: DNOP	55.9	21-129	%Rec	1	8/3/2022 1:24:59 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/2/2022 2:29:00 AM
Surr: BFB	93.4	37.7-212	%Rec	1	8/2/2022 2:29:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.025	mg/Kg	1	8/2/2022 2:29:00 AM
Toluene	ND	0.049	mg/Kg	1	8/2/2022 2:29:00 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/2/2022 2:29:00 AM
Xylenes, Total	ND	0.098	mg/Kg	1	8/2/2022 2:29:00 AM
Surr: 4-Bromofluorobenzene	86.6	70-130	%Rec	1	8/2/2022 2:29:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	570	60	mg/Kg	20	8/3/2022 6:12:05 PM

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

Qualifiers:

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

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Lab Order **2207F70**

Date Reported: 8/10/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-48 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:10:00 AM

 Lab ID:
 2207F70-009
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: JME
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 1:38:53 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/3/2022 1:38:53 AM
Surr: DNOP	75.4	21-129	%Rec	1	8/3/2022 1:38:53 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/2/2022 2:49:00 AM
Surr: BFB	91.9	37.7-212	%Rec	1	8/2/2022 2:49:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.025	mg/Kg	1	8/2/2022 2:49:00 AM
Toluene	ND	0.049	mg/Kg	1	8/2/2022 2:49:00 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/2/2022 2:49:00 AM
Xylenes, Total	ND	0.098	mg/Kg	1	8/2/2022 2:49:00 AM
Surr: 4-Bromofluorobenzene	86.7	70-130	%Rec	1	8/2/2022 2:49:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	420	60	mg/Kg	20	8/3/2022 6:24:25 PM

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

Qualifiers:

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

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Lab Order **2207F70**

Hall Environmental Analysis Laboratory, Inc. Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-49 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:15:00 AM

 Lab ID:
 2207F70-010
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR				Analyst: JME	
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/3/2022 1:52:47 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/3/2022 1:52:47 AM
Surr: DNOP	62.2	21-129	%Rec	1	8/3/2022 1:52:47 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/2/2022 3:08:00 AM
Surr: BFB	95.2	37.7-212	%Rec	1	8/2/2022 3:08:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.025	mg/Kg	1	8/2/2022 3:08:00 AM
Toluene	ND	0.049	mg/Kg	1	8/2/2022 3:08:00 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/2/2022 3:08:00 AM
Xylenes, Total	ND	0.098	mg/Kg	1	8/2/2022 3:08:00 AM
Surr: 4-Bromofluorobenzene	86.6	70-130	%Rec	1	8/2/2022 3:08:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	320	60	mg/Kg	20	8/3/2022 6:36:46 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order **2207F70**Date Reported: **8/10/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-50 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:20:00 AM

 Lab ID:
 2207F70-011
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: JME				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 2:06:36 AM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/3/2022 2:06:36 AM
Surr: DNOP	59.4	21-129	%Rec	1	8/3/2022 2:06:36 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/2/2022 3:28:00 AM
Surr: BFB	92.0	37.7-212	%Rec	1	8/2/2022 3:28:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.024	mg/Kg	1	8/2/2022 3:28:00 AM
Toluene	ND	0.049	mg/Kg	1	8/2/2022 3:28:00 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/2/2022 3:28:00 AM
Xylenes, Total	ND	0.098	mg/Kg	1	8/2/2022 3:28:00 AM
Surr: 4-Bromofluorobenzene	87.7	70-130	%Rec	1	8/2/2022 3:28:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	310	60	mg/Kg	20	8/3/2022 6:49:07 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order **2207F70**Date Reported: **8/10/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-51 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:25:00 AM

 Lab ID:
 2207F70-012
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: JME
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 2:20:36 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/3/2022 2:20:36 AM
Surr: DNOP	66.3	21-129	%Rec	1	8/3/2022 2:20:36 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/2/2022 3:48:00 AM
Surr: BFB	93.1	37.7-212	%Rec	1	8/2/2022 3:48:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.025	mg/Kg	1	8/2/2022 3:48:00 AM
Toluene	ND	0.050	mg/Kg	1	8/2/2022 3:48:00 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/2/2022 3:48:00 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/2/2022 3:48:00 AM
Surr: 4-Bromofluorobenzene	86.7	70-130	%Rec	1	8/2/2022 3:48:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	240	61	mg/Kg	20	8/3/2022 7:01:28 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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CLIENT: Vertex Resources Services, Inc.

Analytical Report

Lab Order **2207F70**Date Reported: **8/10/2022**

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BES22-52 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:30:00 AM

 Lab ID:
 2207F70-013
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: JME				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/3/2022 2:34:21 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/3/2022 2:34:21 AM
Surr: DNOP	58.2	21-129	%Rec	1	8/3/2022 2:34:21 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/2/2022 4:07:00 AM
Surr: BFB	96.2	37.7-212	%Rec	1	8/2/2022 4:07:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	0.025	mg/Kg	1	8/2/2022 4:07:00 AM
Toluene	ND	0.050	mg/Kg	1	8/2/2022 4:07:00 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/2/2022 4:07:00 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/2/2022 4:07:00 AM
Surr: 4-Bromofluorobenzene	87.8	70-130	%Rec	1	8/2/2022 4:07:00 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	260	60	mg/Kg	20	8/3/2022 7:38:31 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order 2207F70

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-53 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:35:00 AM

 Lab ID:
 2207F70-014
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/3/2022 11:14:23 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/3/2022 11:14:23 AM
Surr: DNOP	106	21-129	%Rec	1	8/3/2022 11:14:23 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/2/2022 11:38:01 AM
Surr: BFB	95.3	37.7-212	%Rec	1	8/2/2022 11:38:01 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/2/2022 11:38:01 AM
Toluene	ND	0.048	mg/Kg	1	8/2/2022 11:38:01 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/2/2022 11:38:01 AM
Xylenes, Total	ND	0.096	mg/Kg	1	8/2/2022 11:38:01 AM
Surr: 4-Bromofluorobenzene	95.1	70-130	%Rec	1	8/2/2022 11:38:01 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	370	60	mg/Kg	20	8/3/2022 7:50:52 PM

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

Qualifiers:

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

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Lab Order 2207F70

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-54 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:40:00 AM

 Lab ID:
 2207F70-015
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/3/2022 12:27:18 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/3/2022 12:27:18 PM
Surr: DNOP	109	21-129	%Rec	1	8/3/2022 12:27:18 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/2/2022 12:48:56 PM
Surr: BFB	109	37.7-212	%Rec	1	8/2/2022 12:48:56 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/2/2022 12:48:56 PM
Toluene	ND	0.048	mg/Kg	1	8/2/2022 12:48:56 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/2/2022 12:48:56 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/2/2022 12:48:56 PM
Surr: 4-Bromofluorobenzene	97.7	70-130	%Rec	1	8/2/2022 12:48:56 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	460	60	mg/Kg	20	8/3/2022 8:03:13 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order 2207F70

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-55 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:45:00 AM

 Lab ID:
 2207F70-016
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 12:51:49 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/3/2022 12:51:49 PM
Surr: DNOP	105	21-129	%Rec	1	8/3/2022 12:51:49 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/2/2022 2:00:09 PM
Surr: BFB	95.9	37.7-212	%Rec	1	8/2/2022 2:00:09 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/2/2022 2:00:09 PM
Toluene	ND	0.049	mg/Kg	1	8/2/2022 2:00:09 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/2/2022 2:00:09 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/2/2022 2:00:09 PM
Surr: 4-Bromofluorobenzene	96.6	70-130	%Rec	1	8/2/2022 2:00:09 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	660	60	mg/Kg	20	8/3/2022 8:15:33 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order **2207F70**Date Reported: **8/10/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-56 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:50:00 AM

 Lab ID:
 2207F70-017
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	53	13	mg/Kg	1	8/5/2022 2:17:13 PM
Motor Oil Range Organics (MRO)	93	43	mg/Kg	1	8/5/2022 2:17:13 PM
Surr: DNOP	90.3	21-129	%Rec	1	8/5/2022 2:17:13 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/2/2022 3:11:27 PM
Surr: BFB	97.1	37.7-212	%Rec	1	8/2/2022 3:11:27 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/2/2022 3:11:27 PM
Toluene	ND	0.050	mg/Kg	1	8/2/2022 3:11:27 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/2/2022 3:11:27 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/2/2022 3:11:27 PM
Surr: 4-Bromofluorobenzene	97.0	70-130	%Rec	1	8/2/2022 3:11:27 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	350	60	mg/Kg	20	8/3/2022 8:27:54 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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CLIENT: Vertex Resources Services, Inc.

Analytical Report

Lab Order **2207F70**Date Reported: **8/10/2022**

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: BES22-57 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 10:55:00 AM

 Lab ID:
 2207F70-018
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	26	15	mg/Kg	1	8/3/2022 1:40:46 PM
Motor Oil Range Organics (MRO)	68	49	mg/Kg	1	8/3/2022 1:40:46 PM
Surr: DNOP	99.7	21-129	%Rec	1	8/3/2022 1:40:46 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/2/2022 3:35:16 PM
Surr: BFB	100	37.7-212	%Rec	1	8/2/2022 3:35:16 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/2/2022 3:35:16 PM
Toluene	ND	0.047	mg/Kg	1	8/2/2022 3:35:16 PM
Ethylbenzene	ND	0.047	mg/Kg	1	8/2/2022 3:35:16 PM
Xylenes, Total	ND	0.095	mg/Kg	1	8/2/2022 3:35:16 PM
Surr: 4-Bromofluorobenzene	98.7	70-130	%Rec	1	8/2/2022 3:35:16 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	64	60	mg/Kg	20	8/3/2022 8:40:15 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order 2207F70

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-58 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 11:00:00 AM

 Lab ID:
 2207F70-019
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 2:05:09 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/3/2022 2:05:09 PM
Surr: DNOP	102	21-129	%Rec	1	8/3/2022 2:05:09 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/2/2022 3:59:08 PM
Surr: BFB	93.4	37.7-212	%Rec	1	8/2/2022 3:59:08 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/2/2022 3:59:08 PM
Toluene	ND	0.048	mg/Kg	1	8/2/2022 3:59:08 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/2/2022 3:59:08 PM
Xylenes, Total	ND	0.095	mg/Kg	1	8/2/2022 3:59:08 PM
Surr: 4-Bromofluorobenzene	98.1	70-130	%Rec	1	8/2/2022 3:59:08 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	160	60	mg/Kg	20	8/3/2022 8:52:37 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order **2207F70**

Hall Environmental Analysis Laboratory, Inc. Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-59 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 11:05:00 AM

 Lab ID:
 2207F70-020
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/3/2022 2:29:37 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/3/2022 2:29:37 PM
Surr: DNOP	78.1	21-129	%Rec	1	8/3/2022 2:29:37 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/2/2022 4:22:57 PM
Surr: BFB	107	37.7-212	%Rec	1	8/2/2022 4:22:57 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/2/2022 4:22:57 PM
Toluene	ND	0.050	mg/Kg	1	8/2/2022 4:22:57 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/2/2022 4:22:57 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/2/2022 4:22:57 PM
Surr: 4-Bromofluorobenzene	99.5	70-130	%Rec	1	8/2/2022 4:22:57 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	350	60	mg/Kg	20	8/3/2022 9:04:57 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Lab Order 2207F70

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/10/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-60 6'

 Project:
 Routh SWD
 Collection Date: 7/28/2022 11:10:00 AM

 Lab ID:
 2207F70-021
 Matrix: SOIL
 Received Date: 7/30/2022 9:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE C	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/3/2022 2:54:00 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/3/2022 2:54:00 PM
Surr: DNOP	86.7	21-129	%Rec	1	8/3/2022 2:54:00 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/2/2022 4:46:46 PM
Surr: BFB	98.8	37.7-212	%Rec	1	8/2/2022 4:46:46 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/2/2022 4:46:46 PM
Toluene	ND	0.048	mg/Kg	1	8/2/2022 4:46:46 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/2/2022 4:46:46 PM
Xylenes, Total	ND	0.096	mg/Kg	1	8/2/2022 4:46:46 PM
Surr: 4-Bromofluorobenzene	99.1	70-130	%Rec	1	8/2/2022 4:46:46 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	570	60	mg/Kg	20	8/3/2022 9:17:18 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2207F70**

10-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD

Sample ID: MB-69226 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69226 RunNo: 90012

Prep Date: 8/3/2022 Analysis Date: 8/3/2022 SeqNo: 3207667 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69226 SampType: Ics TestCode: EPA Method 300.0: Anions Client ID: LCSS Batch ID: 69226 RunNo: 90012 Prep Date: 8/3/2022 Analysis Date: 8/3/2022 SeqNo: 3207668 Units: mg/Kg %RPD **RPDLimit** Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit Qual

Chloride 15 1.5 15.00 0 98.1 90 110

Sample ID: MB-69243 SampType: mblk TestCode: EPA Method 300.0: Anions Client ID: PBS Batch ID: 69243 RunNo: 90012 Prep Date: Analysis Date: 8/3/2022 SeqNo: 3207703 Units: mg/Kg 8/3/2022 %REC Analyte Result PQL SPK value SPK Ref Val HighLimit %RPD **RPDLimit** Qual LowLimit

Chloride ND 1.5

Sample ID: LCS-69243 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: **LCSS** Batch ID: **69243** RunNo: **90012**

Prep Date: 8/3/2022 Analysis Date: 8/3/2022 SeqNo: 3207704 Units: mg/Kg

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

Chloride 15 1.5 15.00 0 97.8 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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2207F70** *10-Aug-22*

Client: Vertex Resources Services, Inc.

Project: Routh SWD

	1100011 2 11										
Sample ID:	MB-69181	SampTy	ре: МЕ	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID:	PBS	Batch I	D: 69	181	RunNo: 89947						
Prep Date:	8/1/2022	Analysis Da	te: 8/	2/2022	SeqNo:		205582	Units: mg/Kg			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	ganics (DRO)	ND	15								
Notor Oil Range	Organics (MRO)	ND	50								
Surr: DNOP		7.1		10.00		71.2	21	129			
Sample ID:	LCS-69181	SampTy	pe: LC	s	Tes	tCode: El	PA Method	8015M/D: Die	sel Range	Organics	
Client ID:	LCSS	Batch I	D: 69	181	F	RunNo: 8	9947				
Prep Date:	8/1/2022	Analysis Da	te: 8/	2/2022	;	SeqNo: 3	205583	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	ganics (DRO)	50	15	50.00	0	100	64.4	127			
Surr: DNOP		3.7		5.000		74.5	21	129			
Sample ID:	2207F70-014AMS	SampTy	ре: МS	3	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID:	BES22-53 6'	Batch I	D: 69 2	221	RunNo: 90023						
Prep Date:	8/2/2022	Analysis Da	te: 8/	3/2022	;	SeqNo: 3	207972	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	ganics (DRO)	51	15	49.16	0	104	36.1	154			
Surr: DNOP		4.4		4.916		90.0	21	129			
Sample ID:	2207F70-014AMSD	SampTy	ре: М	SD	Tes	tCode: El	PA Method	8015M/D: Die	sel Range	Organics	
Client ID:	BES22-53 6'	Batch I	D: 69 2	221	F	RunNo: 9	0023				
Prep Date:	8/2/2022	Analysis Da	te: 8/	3/2022	;	SeqNo: 3	207973	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	ganics (DRO)	46	15	49.02	0	94.6	36.1	154	10.2	33.9	
Surr: DNOP		3.7		4.902		74.8	21	129	0	0	
Sample ID:	LCS-69221	SampTy	pe: LC	s	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID:	LCSS	Batch ID: 69221			RunNo: 90023						

Qualifiers:

Prep Date:

Surr: DNOP

Diesel Range Organics (DRO)

Analyte

Value exceeds Maximum Contaminant Level.

8/2/2022

Analysis Date: 8/3/2022

Result

54

5.3

PQL

15

- 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
- B Analyte detected in the associated Method Blank

SeqNo: 3207986

LowLimit

64.4

21

%REC

109

106

Units: mg/Kg

127

129

%RPD

RPDLimit

Qual

HighLimit

E Estimated value

SPK value SPK Ref Val

50.00

5.000

- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2207F70** *10-Aug-22*

Client: Vertex Resources Services, Inc.

Project: Routh SWD

Sample ID: MB-69221 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 69221 RunNo: 90023

Prep Date: 8/2/2022 Analysis Date: 8/3/2022 SeqNo: 3207987 Units: mg/Kg

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

Diesel Range Organics (DRO) ND 15 Motor Oil Range Organics (MRO) ND 50

Surr: DNOP 12 10.00 119 21 129

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

1900

WO#: **2207F70**

10-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD

Sample ID: Ics-69172	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch	n ID: 69 1	172	F	RunNo: 8	9940				
Prep Date: 7/31/2022	Analysis D	ate: 8/	1/2022	SeqNo: 3204393			Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	72.3	137			
Surr: BFB	2100		1000		207	37.7	212			
Sample ID: mb-69172	SampType: MBLK			Tes	tCode: El	PA Method	8015D: Gaso	line Range		
Client ID: PBS	Batch ID: 69172			F	RunNo: 8	9940				
Prep Date: 7/31/2022	Analysis Date: 8/1/2022			5	SeqNo: 3	204394	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		92.5	37.7	212			
Sample ID: mb-69188	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Range	·	
Sample ID: mb-69188 Client ID: PBS	•	ype: ME			tCode: El		8015D: Gaso	line Range	,	
,	•	n ID: 69 1	188	F		9951	8015D: Gaso Units: mg/K	J	,	
Client ID: PBS	Batch	n ID: 69 1	188 2/2022	F	RunNo: 89	9951		J	RPDLimit	Qual
Client ID: PBS Prep Date: 8/1/2022	Batch Analysis D	n ID: 69 1 Pate: 8/ 2	188 2/2022	F	RunNo: 89	9951 205867	Units: mg/K	(g		Qual
Client ID: PBS Prep Date: 8/1/2022 Analyte	Batch Analysis D Result	n ID: 69 1 Pate: 8/ 2	188 2/2022	F	RunNo: 89	9951 205867	Units: mg/K	(g		Qual
Client ID: PBS Prep Date: 8/1/2022 Analyte Gasoline Range Organics (GRO)	Batch Analysis D Result ND 950	n ID: 69 1 Pate: 8/ 2	188 2/2022 SPK value 1000	F SPK Ref Val	RunNo: 89 SeqNo: 32 %REC 95.2	205867 LowLimit 37.7	Units: mg/K HighLimit	g %RPD	RPDLimit	Qual
Client ID: PBS Prep Date: 8/1/2022 Analyte Gasoline Range Organics (GRO) Surr: BFB	Batch Analysis D Result ND 950 SampT	PQL 5.0	188 2/2022 SPK value 1000	SPK Ref Val	RunNo: 89 SeqNo: 32 %REC 95.2	205867 LowLimit 37.7	Units: mg/K HighLimit 212	g %RPD	RPDLimit	Qual
Client ID: PBS Prep Date: 8/1/2022 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID: Ics-69188	Batch Analysis D Result ND 950 SampT	PQL 5.0 Sype: LC 1D: 691	188 2/2022 SPK value 1000 S 188	SPK Ref Val Tes	RunNo: 89 SeqNo: 36 %REC 95.2 stCode: El	205867 LowLimit 37.7 PA Method	Units: mg/K HighLimit 212	%RPD	RPDLimit	Qual
Client ID: PBS Prep Date: 8/1/2022 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID: Ics-69188 Client ID: LCSS	Batch Analysis D Result ND 950 SampT Batch	PQL 5.0 Sype: LC 1D: 691	188 2/2022 SPK value 1000 S 188 2/2022	SPK Ref Val Tes	RunNo: 89 SeqNo: 3; %REC 95.2 stCode: El	205867 LowLimit 37.7 PA Method	Units: mg/K HighLimit 212 8015D: Gaso	%RPD	RPDLimit	Qual

Sample ID: 2207f70-014an	ns Samp	SampType: MS Batch ID: 69188 Analysis Date: 8/2/2022			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BES22-53 6'	Bato				RunNo: 89	9951					
Prep Date: 8/1/2022	Analysis				SeqNo: 32	205871	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	29	5.0	24.75	0	116	70	130				
Surr: BFB	2100		990.1		209	37.7	212				

1000

Sample ID:	2207f70-014amsd	SampTy	pe: MS	SD .	Tes	tCode: E								
Client ID:	BES22-53 6'	Batch ID: 69188			F	RunNo: 89951								
Prep Date:	8/1/2022	Analysis Date: 8/2/2022			Analysis Date: 8/2/2022 SeqNo: 32				205872	Units: mg/Kg	9			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			

Qualifiers:

Surr: BFB

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

191

37.7

212

- E 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, Inc.

WO#: **2207F70**

10-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD

Sample ID: 2207f70-014amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: **BES22-53 6'** Batch ID: **69188** RunNo: **89951**

Prep Date: 8/1/2022 Analysis Date: 8/2/2022 SegNo: 3205872 Units: mg/Kg

Prep Date: 8/1/2022	Analysis D	ate: 8/2	2/2022		SeqNo: 32	205872	Units: mg/K	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	29	4.9	24.44	0	119	70	130	1.62	20		
Surr: BFB	2100		977.5		216	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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2207F70** *10-Aug-22*

Client: Vertex Resources Services, Inc.

Project: Routh SWD

Sample ID: Ics-69172	Samp1	SampType: LCS TestCode: EPA Method 80								
Client ID: LCSS	Batcl	h ID: 691	172	F	RunNo: 89	9940				
Prep Date: 7/31/2022	Analysis [Date: 8/ 1	1/2022	5	SeqNo: 32	204447	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	86.8	80	120			
Toluene	0.89	0.050	1.000	0	89.0	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.2	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.2	80	120			
Surr: 4-Bromofluorobenzene	0.87		1.000		87.0	70	130			
Sample ID: mb-69172	Samp	Гуре: МВ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: PBS	Batcl	h ID: 691	172	F	RunNo: 89	9940				
Prep Date: 7/31/2022	Analysis [Date: 8/ 1	1/2022	\$	SeqNo: 32	204448	Units: mg/K	g		

Prep Date: 7/31/2022	Analysis [Date: 8/ 1	1/2022	9	SeqNo: 32	204448	Units: mg/K	g		
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		85.0	70	130			
	•		•	•			•			

Sample ID: mb-69188	SampT	уре: МЕ	BLK	TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batcl	n ID: 69 1	188	F	RunNo: 89					
Prep Date: 8/1/2022	Analysis D	Analysis Date: 8/2/2022			SeqNo: 3205888			g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.1	70	130			

Sample ID: LCS-69188	SampType: LCS TestCode: EPA Method						8021B: Volati	les		
Client ID: LCSS	Batch ID: 69188 RunNo: 89951									
Prep Date: 8/1/2022	Analysis D	Date: 8/2	2/2022	205889	Units: mg/K	g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.0	80	120			
Toluene	0.95	0.050	1.000	0	95.0	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.3	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.4	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.5	70	130			

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2207F70** *10-Aug-22*

Client: Vertex Resources Services, Inc.

Project: Routh SWD

Sample ID: 2207f70-015ams	Samp ¹	Гуре: МЅ	;	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: BES22-54 6'	Batc	h ID: 691	188	F	RunNo: 89	9951				
Prep Date: 8/1/2022	Analysis [Date: 8/2	2/2022	5	SeqNo: 32	205893	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9881	0	103	68.8	120			
Toluene	1.1	0.049	0.9881	0.01261	108	73.6	124			
Ethylbenzene	1.1	0.049	0.9881	0	112	72.7	129			
Xylenes, Total	3.3	0.099	2.964	0	112	75.7	126			
Surr: 4-Bromofluorobenzene	0.97		0.9881		98.1	70	130			

Sample ID: 2207f70-015amso	S amp	Туре: МЅ	SD.	Tes	tCode: El	PA Method	8021B: Volati	les		
Client ID: BES22-54 6'	Batc	h ID: 69 1	188	F	RunNo: 8	9951				
Prep Date: 8/1/2022	Analysis I	Date: 8/ 2	2/2022	5	SeqNo: 3	205894	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.024	0.9747	0	102	68.8	120	2.55	20	
Toluene	1.1	0.049	0.9747	0.01261	108	73.6	124	2.09	20	
Ethylbenzene	1.1	0.049	0.9747	0	110	72.7	129	2.94	20	
Xylenes, Total	3.2	0.097	2.924	0	110	75.7	126	3.05	20	
Surr: 4-Bromofluorobenzene	0.97		0.9747		99.6	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

ANALYSIS LABORATORY

Client Name:	Vertex Res Services, I		Work	Order Num	ber: 220	7F70			RcptNo: 1	
Received By:	Tracy Cas	sarrubias	7/30/20	22 9:30:00	АМ					
Completed By:	Tracy Cas	sarrubias	7/30/20	22 10:29:5	5 AM					
Reviewed By:	G1 04/3	0/2022								
Chain of Cus	tody									
1. Is Chain of C	ustody comp	olete?			Yes	V	No		Not Present	
2. How was the	sample deliv	vered?			Cou	ırier				
Log In										
3. Was an attern	npt made to	cool the samp	oles?		Yes	V	No		NA 🗆	
4. Were all samp	oles received	l at a tempera	ature of >0° C	to 6.0°C	Yes	~	No		NA 🗆	
5. Sample(s) in p	proper conta	iner(s)?			Yes	V	No			
6. Sufficient sam	ple volume f	or indicated to	est(s)?		Yes	V	No			
7. Are samples (except VOA	and ONG) pr	operly preserve	ed?	Yes	V	No			
8. Was preserval	tive added to	bottles?			Yes		No	V	NA 🗆	
9. Received at le	ast 1 vial wit	h headspace	<1/4" for AQ V	OA?	Yes		No		NA 🗹	
10. Were any sam	nple containe	ers received b	roken?		Yes		No	~	No Perence and	
11. Does paperwo (Note discrepa)		Yes	V	No		# of preserved bottles checked for pH: (<2 or >12	unless noted)
12. Are matrices c	correctly iden	tified on Chai	n of Custody?		Yes	~	No		Adjusted?	
13. Is it clear what			?		Yes	~	No			-1-6
 Were all holding (If no, notify cut) 					Yes	~	No		Checked by: TMC	7/30/22
Special Handli	ing (if app	olicable)								
15. Was client no	tified of all d	iscrepancies v	with this order?	r)	Yes		No		NA 🗹	
Person	Notified:			Date				-		
By Who Regardi	ng:			Via:	☐ eM	ail 🗌	Phone] Fax	☐ In Person	
16. Additional ren	structions:									
17. Cooler Inform		0 00	Louis	(Accessor)		12.5	10.50		v.	
Cooler No	Temp °C 5.5	Condition Good	Seal Intact Yes	Seal No	Seal D	ate	Signed	Ву		
15	1000	12.34	1.50						1	

Client: EGG/VCrł/Y Mailing Address:		T		•							WILL II TO 10 Year		
Mailing Address:		Z Standard	Rush			V		ANAI YSTS	7	v	AR	ANAI YSTS I ABODATOD	
Mailing Addrass:		Project Name:						104					0C1
BN FILE		Pouth	OMS 42		4	901 H	awking	www.nall		niner	www.nailenvironmental.com ins NE - Albuquerque NM 87109	87109	D: 1/1
		Project #:				Tel 50	505-345-3975	3975		7 505 x	505-345-4107	22.70	8/20
Phone #:		-922	010-31600-322	0/				A	Analysis	s Rec	Request		023 2
email or Fax#:		Project Manager:	iger:		_	1-	-		[†] О	L	(11		2:22
QA/QC Package:	□ Level 4 (Full Validation)	Monica	vida Peppin	2,7	's (802' 9AM \ O		371130	CIALLOC	S '⁵Od		ıəsdA\tı		·39 PM
:uc		Sampler: C	00					V.70	10 ⁵ '				
□ NELAC □ Other		On Ice:	⊼ Yes	ON □	100				۱ ,	(A(-		
□ EDD (Type)		# of Coolers:	-	8/6 8/6	BE				_				
		Cooler Temp(including CF);	(including CF): 50-1	910- B-	ΤM					_			
Date Time Matrix Sample Name	Name	Container Type and #	Preservative Type	5.5-0-5.5° HEAL NO. 2207F70	(XЭТВ 108:НЧТ	8081 Pe	EDB (W	ка внач В АЯЭЯ	-	V) 0528 8250 (Se	oO lstoT		
7/25/9:30 50,1 85522-34	2-34 G		Ice	100	7				1				
1 9:35 1 35522-38				007	1				-				
4:40 8552-40	,9 04-			5003									
4: US BESZZ-41				400			-						
9:50 85522-42	9			٥٨									
9:55 BE522- 43	100			200									
70:00 BESZZ-114)	,9 1711-2			400				Œ					
10:05 BESZZ-US	100			200									
10:10 BESZZ-48	,384-			500									
10:35 BES22-	19 5%			010									
10:20 8 ESZE-50	, 905.			110									
15-225-81	-516'			617	-								
Date: Time: Relinquished by: 7/29 9:00 Chance Dixon	~	Received by:	Via:	Date Time	Remarks		Ü	CC: Sony Cartor	100	521	7		Pa
Date: Time: Relinquished by:	3	Received by:	Via: to	12			R	Direct		8,71 506	300		ge 183 oj

Foliance Project Name: P	5	J-IO-UI	Chain-or-Custody Record	olinoik-ilini	I dill'Alla I IIII S-DAG	49					ĺ	1			
Forest Name	Client: $\mathcal{E}_{\mathcal{L}}$	s/wert	4	Z Standar					Ε <		E K		NO.	IMENT/	
				Project Nam					1		n -		LAD.	O RAIO	_
Project #: Pro	Mailing Add	30	5775	700				1901	v V	ww.ha	llenvir	onme	ntal.con	97400	D: 1/1
Container Cont		_		Project #:				Tel	12 34	3076		hianh	ue, ivin	07.109	8/2
Sample: CD Color Manager: CD CD CD CD CD CD CD C	Phone #:			322	-91400-	00		5	to-00	1997	Analys		olvest	107	023 2
Continue Continue	email or Fax	#:		Project Mana	ager:		-	10		H	† (-	(1		2:22
Time Matrix Sample Name Sample: CD Other	QA/QC Pack∉	ige:	☐ Level 4 (Full Validation)	N.	0	pidd				SWIS	PO ₄ , SC		nəsdA\		:39 PM
Time Marix Sample Name Type and # Type	Accreditation		ompliance	Sampler: ${\cal C}$	D					0/78	10 ⁵ '				
Time Reinquished by: Received by: Vas. Cook Time Reinquished by: Received by: Vas. Cook Time Reinquished by: Received by: Vas. Cook Time Reinquished by: Cook Time Time Reinquished by: Cook Time Time Time Reinquished by: Cook Time	□ NELAC	- 1	Sr.	On Ice:	X Yes	oN □					۱ '	(A			
Time Matrix Sample Name Cooler Templessers of Cooler Templessers C	□ EDD (Typ	(ə.		# of Coolers:	1						_				
Time Matrix Sample Name Type and # Type T				Cooler Temp	1	(00) 10 p					_				_
100-35 8-5525-52 6' 4.02 100 101 100			Sample Name	Container Type and #	Preservative Type	5.5				A	_				
10:45 8 5522-53 &	7/28/10:	\$ 50%	B5522-52	402	Ice	013							3/		
10:45 85522-54 6' 010 010 010 015	10:	25				hio	-				, -	E			
10:55 28:522-55 6 0110 110	6	9				210									
10:55 3ESZZ-56 6'	10.	3/5	1.7			010									
12.55 26.522-57 6' 018	6	20	6			410				-					
	2:0/	5				910						-			
11:05 & E522-59 6	100	R	BE522-58 6"			019									
7.7.0	11:0	5	B ESZZ-59 6'			020									
Time: Relinquished by: Faceived by: Via: Date Time Remarks: Color Contains Color Contains Color Contains Color Color	11:7	0	85522-666			120	-								
Time: Relinquished by: Time: Relinquished by: Received by: Via: Date Time Remarks: C: Sq/1/9 Cartarr									i						
Time: Relinquished by: Via: Date Time Remarks: C:Sq1/4 CGrzGrrf Time: Relinquished by: Via: Date Time Remarks: C:Sq1/4 CGrzGrrf Time: Relinquished by: Via: Date Time Remarks: C:Sq1/4 CGrzGrrf Time: Relinquished by: Via: Date Time A:30			,					H							
Time: Relinquished by: Received by: Via: Date Time Remarks: C.: Sq.1/4 Carzarr Man Mo			/				-								
Time: Relinquished by: Nia: Via: Date Time Direct 8:11 COS	2		yed by:	_			Remar];; .	\ddot{i}	gub		524	\{		Pag
	22	Relinquist (UUL)	ed by:	Received by:	Via:c on.	Date Time 9:30		いつ	200	à	Ŭ =	0			e 184 of



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

August 30, 2022

Monica Peppin
EOG
105 South Fourth Street
Artesia, NM 88210
TEL:
FAX:

RE: 10 Routh SWD Tank Battery OrderNo.: 2208A99

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/18/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

and st

4901 Hawkins NE

Albuquerque, NM 87109

2208A99-001

Surr: 4-Bromofluorobenzene

Lab ID:

Analytical Report Lab Order 2208A99

Received Date: 8/18/2022 7:15:00 AM

Date Reported: 8/30/2022

8/20/2022 3:57:25 AM

69611

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: WES22-05 0-4'

Matrix: SOIL

Project: 10 Routh SWD Tank Battery **Collection Date:** 8/16/2022 8:50:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: CAS Chloride 690 59 mg/Kg 20 8/24/2022 6:11:11 PM 69724 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: JME Diesel Range Organics (DRO) 15 mg/Kg 8/26/2022 3:59:05 PM 69630 Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 8/26/2022 3:59:05 PM 69630 Surr: DNOP 103 21-129 %Rec 8/26/2022 3:59:05 PM 69630 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/20/2022 3:57:25 AM 69611 4.9 mg/Kg 1 Surr: BFB 103 37.7-212 %Rec 8/20/2022 3:57:25 AM 69611 **EPA METHOD 8021B: VOLATILES** Analyst: NSB ND 0.025 8/20/2022 3:57:25 AM 69611 Benzene mg/Kg Toluene ND 0.049 mg/Kg 8/20/2022 3:57:25 AM 69611 Ethylbenzene ND 0.049 mg/Kg 1 8/20/2022 3:57:25 AM 69611 Xylenes, Total ND 0.098 mg/Kg 8/20/2022 3:57:25 AM 69611

95.6

70-130

%Rec

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 5

Hall Environmental Analysis Laboratory, Inc.

2208A99 30-Aug-22

WO#:

Client: EOG

Project: 10 Routh SWD Tank Battery

Sample ID: MB-69724 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69724 RunNo: 90534

Prep Date: **8/24/2022** Analysis Date: **8/24/2022** SeqNo: **3234917** Units: **mg/Kg**

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

Chloride ND 1.5

Sample ID: LCS-69724 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69724 RunNo: 90534

Prep Date: 8/24/2022 Analysis Date: 8/24/2022 SeqNo: 3234918 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 5

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208A99** 30-Aug-22

Client: EOG

Project: 10 Routh SWD Tank Battery

Sample ID: MB-69630	SampT	уре: мв	LK	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: PBS	Batch	1D: 696	30	F	RunNo: 90	0468				
Prep Date: 8/19/2022	Analysis D	ate: 8/2	22/2022	9	SeqNo: 32	231105	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.8		10.00		77.8	21	129			

Sample ID: LCS-69630 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 69630 RunNo: 90468 Prep Date: 8/19/2022 Analysis Date: 8/22/2022 SeqNo: 3231106 Units: mg/Kg SPK value SPK Ref Val %REC %RPD Analyte PQL LowLimit HighLimit **RPDLimit** Qual

 Diesel Range Organics (DRO)
 48
 15
 50.00
 0
 96.2
 64.4
 127

 Surr: DNOP
 4.1
 5.000
 81.2
 21
 129

Qualifiers:

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

Page 3 of 5

Hall Environmental Analysis Laboratory, Inc.

2208A99 30-Aug-22

WO#:

Client: EOG

Surr: BFB

Project: 10 Routh SWD Tank Battery

Sample ID: mb-69611 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: **PBS** Batch ID: **69611** RunNo: **90417**

Prep Date: 8/18/2022 Analysis Date: 8/19/2022 SeqNo: 3227682 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

Sample ID: Ics-69611 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

1000

Client ID: LCSS Batch ID: 69611 RunNo: 90417

2100

Prep Date: 8/18/2022 Analysis Date: 8/19/2022 SeqNo: 3227683 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 27 5.0 25.00 0 107 72.3 137

209

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 5

Hall Environmental Analysis Laboratory, Inc.

2208A99 30-Aug-22

WO#:

Client: EOG

Project: 10 Routh SWD Tank Battery

 Sample ID:
 mb-69611
 SampType:
 MBLK
 TestCode:
 EPA Method 8021B:
 Volatiles

 Client ID:
 PBS
 Batch ID:
 69611
 RunNo:
 90417

 Prep Date:
 8/18/2022
 Analysis Date:
 8/19/2022
 SeqNo:
 3227728
 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

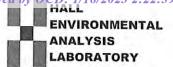
Surr: 4-Bromofluorobenzene 0.95 1.000 95.5 70 130

Sample ID: LCS-69611	Samp	Гуре: LC	S	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Batc	h ID: 69 6	611	F	RunNo: 90	0417				
Prep Date: 8/18/2022	Analysis [Date: 8/	19/2022		SeqNo: 32	227729	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.5	80	120			
Toluene	0.99	0.050	1.000	0	99.2	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.2	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.2	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.9	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 5



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 Numbe	r: 220	8A99		RcptNo:	1
Received By:	Tracy Casarrubias	8/18/2022 7:15:00 AM	1				
Completed By:	Tracy Casarrubias	8/18/2022 9:13:28 AM	Λ				
Reviewed By:	rslalde						
Chain of Cus	stody						
1. Is Chain of C	custody complete?		Yes	~	No [Not Present	
2. How was the	sample delivered?		Cou	rier			
Log In							
the state of the s	npt made to cool the sample	es?	Yes	V	No [NA □	
4. Were all sam	ples received at a temperatu	ure of >0° C to 6.0°C	Yes	V	No [] NA 🗆	
5. Sample(s) in	proper container(s)?		Yes	V	No [
6. Sufficient sam	nple volume for indicated tes	st(s)?	Yes	~	No 🗆		
7. Are samples ((except VOA and ONG) prop	perly preserved?	Yes		No 🗆		
8. Was preserva	ative added to bottles?		Yes		No 🔽	NA 🗆	
9. Received at le	east 1 vial with headspace <	1/4" for AQ VOA?	Yes		No 🗆	NA 🗹	
10. Were any sar	mple containers received bro	ken?	Yes		No 🗸		/
11.5	war and the said to				_	# of preserved bottles checked	
	ork match bottle labels? ancies on chain of custody)		Yes	~	No L		12 unless noted)
	correctly identified on Chain	of Custody?	Yes	V	No 🗌	Adjusted?	12 diliess floted)
	t analyses were requested?		Yes	V	No 🗌		
	ng times able to be met? ustomer for authorization.)		Yes	V	No 🗆	Checked by: W	48-18.
	ing (if applicable)						
	etified of all discrepancies wi	th this order?	Yes		No [NA 🔽	
Person	Notified:	Date:	_	_			
By Who	om:	Via:	eMa	ail [Phone Fa	x	
Regardi	ing:						
Client Ir	nstructions:						
16. Additional rer	marks:						
17. <u>Cooler Information</u> Cooler No	Temp °C Condition	Seal Intact Seal No S	Seal Da	ate	Signed By		

		TALL CATAMACATA
CO (Sources Inc (Vertex)	Standard Rush 5 Day	ANALYSIS LABORATORY
	10-Routh SLVD Tank Battery	www.hallenvironmental.com
	Project #:	
Phone #:	22E-00716	Inal
email or Fax#: QA/QC Package:	Project Manager:	NRO)
☐ Standard ☐ Level 4 (Full Validation)		PCE
on: 🗆 Az Compliance	J. Reb	280 (1 (ΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣΣ
□ Other	On Ice: Yes 🗆 No	8/26 504 504 3, 10 8
□ EDD (Type) #	# of Coolers: 1	(GF)
0]	Cooler Temp(including CF): 5.3 - 0.1; 5.2 (°C)	MTGD estication Method by 83 8 Method 8 Method 8 Method 90 8 Method 90 8 Method 90 90 90 90 90 90 90 90 90 90 90 90 90
Date Time Matrix Sample Name	Container Preservative HEAL No.	3081 P 3081 P 3081 P 3081 P 3081 P 3260 (V 3260 (V
15.0 SO-17.05 0-4	Ico	3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
elinquished by: 3, Reta	Received by: Via: Date Time	Remarks: Direct Bill to EUC Resources Inc
Date: Time: Relinquished by: Re	Seceived by: Via/ ce. Y Date Time	Time: Relinquished by: Received by: Via/ce V Date Time Cinase X#10



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

August 26, 2022

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

FAX:

RE: 10 Routh SWD Tank Battery OrderNo.: 2208B92

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 10 sample(s) on 8/19/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 8/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-17 4-9'

 Project:
 10 Routh SWD Tank Battery
 Collection Date: 8/17/2022 11:00:00 AM

 Lab ID:
 2208B92-001
 Matrix: SOIL
 Received Date: 8/19/2022 7:10:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/24/2022 12:36:18 AM Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 8/24/2022 12:36:18 AM Surr: DNOP 73.9 21-129 %Rec 1 8/24/2022 12:36:18 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/22/2022 7:02:52 PM 5.0 mg/Kg 1 Surr: BFB 111 37.7-212 %Rec 1 8/22/2022 7:02:52 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/22/2022 7:02:52 PM 0.025 mg/Kg 1 Toluene ND 0.050 mg/Kg 1 8/22/2022 7:02:52 PM Ethylbenzene ND 0.050 mg/Kg 1 8/22/2022 7:02:52 PM Xylenes, Total ND mg/Kg 8/22/2022 7:02:52 PM 0.10 1 Surr: 4-Bromofluorobenzene 95.9 70-130 %Rec 1 8/22/2022 7:02:52 PM **EPA METHOD 300.0: ANIONS** Analyst: CAS Chloride mg/Kg 8/24/2022 6:48:13 PM 1900 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/26/2022

8/24/2022 5:36:20 PM

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-10 4-9'

 Project:
 10 Routh SWD Tank Battery
 Collection Date: 8/17/2022 11:10:00 AM

 Lab ID:
 2208B92-002
 Matrix: SOIL
 Received Date: 8/19/2022 7:10:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/24/2022 1:09:37 AM Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 8/24/2022 1:09:37 AM Surr: DNOP 95.9 21-129 %Rec 1 8/24/2022 1:09:37 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/22/2022 8:13:48 PM 5.0 mg/Kg 1 Surr: BFB 109 37.7-212 %Rec 1 8/22/2022 8:13:48 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/22/2022 8:13:48 PM 0.025 mg/Kg 1 Toluene ND 0.050 mg/Kg 1 8/22/2022 8:13:48 PM Ethylbenzene ND 0.050 mg/Kg 1 8/22/2022 8:13:48 PM Xylenes, Total ND mg/Kg 1 8/22/2022 8:13:48 PM 0.10 Surr: 4-Bromofluorobenzene 92.6 70-130 %Rec 1 8/22/2022 8:13:48 PM **EPA METHOD 300.0: ANIONS** Analyst: NAI

740

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

Qualifiers:

Chloride

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits

mg/Kg

20

60

- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/26/2022

8/24/2022 5:48:45 PM

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-18 4-9'

 Project:
 10 Routh SWD Tank Battery
 Collection Date: 8/17/2022 11:05:00 AM

 Lab ID:
 2208B92-003
 Matrix: SOIL
 Received Date: 8/19/2022 7:10:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/24/2022 1:20:57 AM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 8/24/2022 1:20:57 AM Surr: DNOP 69.6 21-129 %Rec 1 8/24/2022 1:20:57 AM

EPA METHOD 8015D: GASOLINE RANGE Analyst: NSB Gasoline Range Organics (GRO) ND 8/22/2022 9:24:35 PM 4.9 mg/Kg 1 Surr: BFB 112 37.7-212 %Rec 1 8/22/2022 9:24:35 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/22/2022 9:24:35 PM 0.025 mg/Kg 1 Toluene ND 0.049 mg/Kg 1 8/22/2022 9:24:35 PM Ethylbenzene ND 0.049 mg/Kg 1 8/22/2022 9:24:35 PM Xylenes, Total ND 0.098 mg/Kg 1 8/22/2022 9:24:35 PM Surr: 4-Bromofluorobenzene 95.6 70-130 %Rec 1 8/22/2022 9:24:35 PM **EPA METHOD 300.0: ANIONS** Analyst: NAI

650

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

Qualifiers:

Chloride

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits

mg/Kg

20

60

- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-73 6'

 Project:
 10 Routh SWD Tank Battery
 Collection Date: 8/17/2022 1:00:00 PM

 Lab ID:
 2208B92-004
 Matrix: SOIL
 Received Date: 8/19/2022 7:10:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 13 mg/Kg 1 8/24/2022 1:32:11 AM Motor Oil Range Organics (MRO) ND 45 mg/Kg 1 8/24/2022 1:32:11 AM Surr: DNOP 71.1 21-129 %Rec 1 8/24/2022 1:32:11 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/22/2022 9:48:22 PM 4.9 mg/Kg 1 Surr: BFB 109 37.7-212 %Rec 1 8/22/2022 9:48:22 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/22/2022 9:48:22 PM 0.025 mg/Kg 1 Toluene ND 0.049 mg/Kg 1 8/22/2022 9:48:22 PM Ethylbenzene ND 0.049 mg/Kg 1 8/22/2022 9:48:22 PM Xylenes, Total ND 0.098 mg/Kg 1 8/22/2022 9:48:22 PM Surr: 4-Bromofluorobenzene 94.0 70-130 %Rec 1 8/22/2022 9:48:22 PM **EPA METHOD 300.0: ANIONS** Analyst: NAI Chloride mg/Kg 8/24/2022 6:01:10 PM 280 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-75 9'

 Project:
 10 Routh SWD Tank Battery
 Collection Date: 8/17/2022 1:05:00 PM

 Lab ID:
 2208B92-005
 Matrix: SOIL
 Received Date: 8/19/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/24/2022 1:43:27 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/24/2022 1:43:27 AM
Surr: DNOP	82.1	21-129	%Rec	1	8/24/2022 1:43:27 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/22/2022 10:12:00 PM
Surr: BFB	112	37.7-212	%Rec	1	8/22/2022 10:12:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/22/2022 10:12:00 PM
Toluene	ND	0.049	mg/Kg	1	8/22/2022 10:12:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/22/2022 10:12:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/22/2022 10:12:00 PM
Surr: 4-Bromofluorobenzene	95.0	70-130	%Rec	1	8/22/2022 10:12:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	180	60	mg/Kg	20	8/24/2022 6:13:35 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-76 9'

Project: 10 Routh SWD Tank Battery **Collection Date:** 8/17/2022 1:10:00 PM

Lab ID: 2208B92-006 **Matrix:** SOIL **Received Date:** 8/19/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE (ORGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/24/2022 1:54:37 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/24/2022 1:54:37 AM
Surr: DNOP	83.6	21-129	%Rec	1	8/24/2022 1:54:37 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/22/2022 10:35:32 PM
Surr: BFB	110	37.7-212	%Rec	1	8/22/2022 10:35:32 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/22/2022 10:35:32 PM
Toluene	ND	0.049	mg/Kg	1	8/22/2022 10:35:32 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/22/2022 10:35:32 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/22/2022 10:35:32 PM
Surr: 4-Bromofluorobenzene	94.0	70-130	%Rec	1	8/22/2022 10:35:32 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	320	60	mg/Kg	20	8/24/2022 6:26:00 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-77 9'

 Project:
 10 Routh SWD Tank Battery
 Collection Date: 8/17/2022 1:15:00 PM

 Lab ID:
 2208B92-007
 Matrix: SOIL
 Received Date: 8/19/2022 7:10:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 13 mg/Kg 1 8/24/2022 2:05:47 AM Motor Oil Range Organics (MRO) ND 45 mg/Kg 1 8/24/2022 2:05:47 AM Surr: DNOP 81.8 21-129 %Rec 1 8/24/2022 2:05:47 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/22/2022 10:59:07 PM 4.9 mg/Kg 1 Surr: BFB 109 37.7-212 %Rec 1 8/22/2022 10:59:07 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/22/2022 10:59:07 PM 0.024 mg/Kg 1 Toluene ND 0.049 mg/Kg 1 8/22/2022 10:59:07 PM Ethylbenzene ND 0.049 mg/Kg 1 8/22/2022 10:59:07 PM Xylenes, Total ND 0.097 mg/Kg 1 8/22/2022 10:59:07 PM Surr: 4-Bromofluorobenzene 95.1 70-130 %Rec 1 8/22/2022 10:59:07 PM **EPA METHOD 300.0: ANIONS** Analyst: CAS Chloride mg/Kg 8/24/2022 7:25:13 PM 560 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-78 9

 Project:
 10 Routh SWD Tank Battery
 Collection Date: 8/17/2022 1:20:00 PM

 Lab ID:
 2208B92-008
 Matrix: SOIL
 Received Date: 8/19/2022 7:10:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/24/2022 2:16:59 AM Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 8/24/2022 2:16:59 AM Surr: DNOP 80.6 21-129 %Rec 1 8/24/2022 2:16:59 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/22/2022 11:22:37 PM 4.9 mg/Kg 1 Surr: BFB 111 37.7-212 %Rec 1 8/22/2022 11:22:37 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/22/2022 11:22:37 PM 0.024 mg/Kg 1 Toluene ND 0.049 mg/Kg 1 8/22/2022 11:22:37 PM Ethylbenzene ND 0.049 mg/Kg 1 8/22/2022 11:22:37 PM Xylenes, Total ND 0.098 mg/Kg 8/22/2022 11:22:37 PM 1 Surr: 4-Bromofluorobenzene 94.9 70-130 %Rec 1 8/22/2022 11:22:37 PM **EPA METHOD 300.0: ANIONS** Analyst: CAS Chloride mg/Kg 8/24/2022 7:37:33 PM 440 60 20

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

 $ND \qquad Not \ Detected \ at \ the \ Reporting \ Limit$

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 8 of 14

Date Reported: 8/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-79 9'

 Project:
 10 Routh SWD Tank Battery
 Collection Date: 8/17/2022 1:25:00 PM

 Lab ID:
 2208B92-009
 Matrix: SOIL
 Received Date: 8/19/2022 7:10:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/24/2022 2:28:10 AM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 8/24/2022 2:28:10 AM Surr: DNOP 84.1 21-129 %Rec 1 8/24/2022 2:28:10 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/22/2022 11:46:13 PM 5.0 mg/Kg 1 Surr: BFB 111 37.7-212 %Rec 1 8/22/2022 11:46:13 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/22/2022 11:46:13 PM 0.025 mg/Kg 1 Toluene ND 0.050 mg/Kg 1 8/22/2022 11:46:13 PM Ethylbenzene ND 0.050 mg/Kg 1 8/22/2022 11:46:13 PM Xylenes, Total ND mg/Kg 1 8/22/2022 11:46:13 PM 0.10 Surr: 4-Bromofluorobenzene 94.3 70-130 %Rec 1 8/22/2022 11:46:13 PM **EPA METHOD 300.0: ANIONS** Analyst: CAS Chloride mg/Kg 8/24/2022 7:49:54 PM 400 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 9 of 14

Date Reported: 8/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-80 9'

 Project:
 10 Routh SWD Tank Battery
 Collection Date: 8/17/2022 1:30:00 PM

 Lab ID:
 2208B92-010
 Matrix: SOIL
 Received Date: 8/19/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/24/2022 2:39:22 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/24/2022 2:39:22 AM
Surr: DNOP	112	21-129	%Rec	1	8/24/2022 2:39:22 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/23/2022 12:09:48 AM
Surr: BFB	112	37.7-212	%Rec	1	8/23/2022 12:09:48 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/23/2022 12:09:48 AM
Toluene	ND	0.050	mg/Kg	1	8/23/2022 12:09:48 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/23/2022 12:09:48 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/23/2022 12:09:48 AM
Surr: 4-Bromofluorobenzene	94.7	70-130	%Rec	1	8/23/2022 12:09:48 AM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	410	60	mg/Kg	20	8/24/2022 8:02:14 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 10 of 14

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208B92

26-Aug-22

Client:	Vertex Resources Services, Inc.
Project:	10 Routh SWD Tank Battery

Project:	10 1	Routh SWD Tank Battery	
Sample ID:	MB-69724	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID:	PBS	Batch ID: 69724	RunNo: 90534
Prep Date:	8/24/2022	Analysis Date: 8/24/2022	SeqNo: 3234917 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		ND 1.5	
Sample ID:	LCS-69724	SampType: Ics	TestCode: EPA Method 300.0: Anions
Client ID:	LCSS	Batch ID: 69724	RunNo: 90534
Prep Date:	8/24/2022	Analysis Date: 8/24/2022	SeqNo: 3234918 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
Sample ID:	MB-69743	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID:	PBS	Batch ID: 69743	RunNo: 90534
Prep Date:	8/24/2022	Analysis Date: 8/24/2022	SeqNo: 3234949 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		ND 1.5	
Sample ID:	LCS-69743	SampType: Ics	TestCode: EPA Method 300.0: Anions
Client ID:	LCSS	Batch ID: 69743	RunNo: 90534
Prep Date:	8/24/2022	Analysis Date: 8/24/2022	SeqNo: 3234950 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		14 1.5 15.00	0 93.9 90 110
Sample ID:	MB-69727	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID:	PBS	Batch ID: 69727	RunNo: 90554
Prep Date:	8/24/2022	Analysis Date: 8/24/2022	SeqNo: 3234983 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		ND 1.5	
Sample ID:	LCS-69727	SampType: Ics	TestCode: EPA Method 300.0: Anions
Client ID:	LCSS	Batch ID: 69727	RunNo: 90554
Prep Date:	8/24/2022	Analysis Date: 8/24/2022	SeqNo: 3234984 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		14 1.5 15.00	0 92.9 90 110

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

2208B92 26-Aug-22

WO#:

Client: Vertex Resources Services, Inc.

Project: 10 Routh SWD Tank Battery

Project:	10 Routh	SWD Tan	k Batte	ry							
Sample ID:	LCS-69672	SampT	ype: LC	s	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID:	LCSS	Batch	n ID: 69 6	672	F	RunNo: 90	0486				
Prep Date:	8/22/2022	Analysis D	ate: 8/ 2	23/2022	9	SeqNo: 32	231725	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	42	15	50.00	0	83.4	64.4	127			
Surr: DNOF)	3.3		5.000		65.9	21	129			
Sample ID:	MB-69672	SampT	уре: МЕ	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID:	PBS	Batch	n ID: 69 6	672	F	RunNo: 90	0486				
Prep Date:	8/22/2022	Analysis D)ate: 8/ 2	23/2022	S	SeqNo: 32	231726	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	ND	15								
Motor Oil Rang	ge Organics (MRO)	ND	50								
Surr: DNOF	•	8.6		10.00		86.4	21	129			
Sample ID:	2208B92-001AMS	SampT	ype: MS	3	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID:	WES22-17 4-9'	Batch	n ID: 69 6	672	F	RunNo: 90	0486				
Prep Date:	8/22/2022	Analysis D	oate: 8/ 2	24/2022	9	SeqNo: 32	232463	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	31	14	45.29	0	68.5	36.1	154			
Surr: DNOP)	2.3		4.529		50.5	21	129			
Sample ID:	2208B92-001AMSE) SampT	уре: МS	SD	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID:	WES22-17 4-9'	Batch	n ID: 69 6	672	F	RunNo: 90	0486				
Prep Date:	8/22/2022	Analysis D)ate: 8/ 2	24/2022	S	SeqNo: 32	232464	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	36	14	46.90	0	77.2	36.1	154	15.5	33.9	_
Surr: DNOF)	2.5		4.690		52.7	21	129	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

2100

2208B92 26-Aug-22

S

WO#:

Client: Vertex Resources Services, Inc.
Project: 10 Routh SWD Tank Battery

Sample ID: mb-69640 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range PBS Client ID: Batch ID: 69640 RunNo: 90462 Prep Date: 8/19/2022 Analysis Date: 8/22/2022 SeqNo: 3229714 Units: mq/Kq SPK value SPK Ref Val HighLimit %RPD **RPDLimit** Analyte Result **PQL** %REC LowLimit Qual Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 1100 1000 110 37.7 212 Sample ID: Ics-69640 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range LCSS Client ID: Batch ID: 69640 RunNo: 90462 Prep Date: Analysis Date: 8/22/2022 SeqNo: 3229715 8/19/2022 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 27 25.00 0 106 72.3 137

Sample ID: 2208b92-001ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: WES22-17 4-9' Batch ID: 69640 RunNo: 90462 Prep Date: 8/19/2022 Analysis Date: 8/22/2022 SeqNo: 3229718 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQI LowLimit HighLimit Qual Gasoline Range Organics (GRO) 26 4.9 24.63 0 106 70 130 Surr: BFB S 2100 985.2 216 37.7 212

214

37.7

212

1000

Sample ID: 2208b92-001amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: WES22-17 4-9' Batch ID: 69640 RunNo: 90462 Prep Date: 8/19/2022 Analysis Date: 8/22/2022 SeqNo: 3229719 Units: mg/Kg Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 26 5.0 24.75 106 70 130 0.532 20 Surr: BFB 2200 990.1 218 37.7 212 0 0 S

Qualifiers:

Surr: BFB

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208B92**

26-Aug-22

Client: Vertex Resources Services, Inc.

Project: 10 Routh SWD Tank Battery

Sample ID: mb-69640 Client ID: PBS	• • • • • • • • • • • • • • • • • • • •				tCode: EF RunNo: 9 (8021B: Volati	les			
Prep Date: 8/19/2022	Analysis D	Date: 8/2	22/2022	SeqNo: 3229752			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	vlenes, Total ND 0.10										
Surr: 4-Bromofluorobenzene	0.94		1.000		94.1	70	130				

Sample ID: LCS-69640	Samp	Гуре: LC	S	Tes	tCode: EF	PA Method	8021B: Volati	les				
Client ID: LCSS	Batcl	h ID: 69 6	640	F	RunNo: 90	0462						
Prep Date: 8/19/2022	Analysis [Date: 8/2	22/2022	5	SeqNo: 32	229753	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	94.4	80	120					
Toluene	0.98	0.050	1.000	0	98.5	80	120					
Ethylbenzene	0.99	0.050	1.000	0	98.5	80	120					
Xylenes, Total	3.0	0.10	3.000	0	98.4	80	120					
Surr: 4-Bromofluorobenzene	0.96		1.000		96.4	70	130					

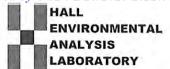
Sample ID: 2208b92-002ams	Samp	Гуре: МЅ	5	Tes	tCode: El	PA Method	8021B: Volati	les		
Client ID: WES22-10 4-9'	Batc	h ID: 69 6	640	RunNo: 90462						
Prep Date: 8/19/2022	Analysis I	Analysis Date: 8/22/2022			SeqNo: 3	229757	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	0.9823	0	93.7	68.8	120			
Toluene	0.97	0.049	0.9823	0	98.5	73.6	124			
Ethylbenzene	0.98	0.049	0.9823	0	99.5	72.7	129			
Xylenes, Total	2.9	0.098	2.947	0.01888	97.9	75.7	126			
Surr: 4-Bromofluorobenzene	0.96		0.9823		97.9	70	130			

Sample ID: 2208b92-002amsd	SampT	ype: MS	D	Tes	tCode: EF	8021B: Volatiles					
Client ID: WES22-10 4-9'	Batch	ID: 696	640	F	RunNo: 90)462					
Prep Date: 8/19/2022	Analysis D	ate: 8/2	22/2022	5	SeqNo: 3229758 Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.93	0.025	0.9901	0	93.7	68.8	120	0.768	20		
Toluene	0.97	0.050	0.9901	0	97.8	73.6	124	0.0857	20		
Ethylbenzene	0.98	0.050	0.9901	0	98.7	72.7	129	0.0221	20		
Xylenes, Total	2.9	0.099	2.970	0.01888	97.3	75.7	126	0.144	20		
Surr: 4-Bromofluorobenzene	0.97		0.9901		97.7	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 Num	ber: 2208B9	92	RcptN	o: 1
Received By: Juan Rojas	8/19/2022 7:10:00	АМ	Human	9	
Completed By: Tracy Casarrubias Reviewed By: 8-19-72	8/19/2022 7:45:27	AM			
Chain of Custody					
1. Is Chain of Custody complete?		Yes	No [□ Not Present □	
2. How was the sample delivered?					
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 ☑	
0. Were any sample containers received broker	1?	Yes -	No 🔽	# of preserved	
Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🔽	No □	bottles checked for pH:	or >12 unless noted)
2. Are matrices correctly identified on Chain of 0	Custody?	Yes 🗸	No 🗆		
3. Is it clear what analyses were requested?		Yes 🗸	No [1 - 1-
4. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗸	No 🗆	Checked by:	In8/19/2
Special Handling (if applicable)					
15. Was client notified of all discrepancies with the	nis order?	Yes [] No [NA 🗹	
Person Notified:	Date			-	
By Whom:	Via:	eMail	☐ Phone ☐ F	ax In Person	
Regarding:					
Client Instructions:					
16. Additional remarks:					
17. Cooler Information Cooler No Temp °C Condition Se 1 0.5 Good Yes	al Intact Seal No	Seal Date	Signed By		

5	ain-of-(Chain-of-Custody Record	Turn-Around Time:						
Client: F	Client: EoG Resources	porces Inc / Vertex	X Standard	KRush 5 Daw		ANAL	YSIS	HALL ENVIRONMENTAL ANALYSTS LABORATOR	A S
			Project Name:			מל אמאמאי	www.hallenvironmental.com	ental com	
Mailing Address:		on Gle	orth	SUD Tunk Battery	4901 Ha	4901 Hawkins NE -		Albuquerque, NM 87109	
			Project #:		Tel. 505	505-345-3975		505-345-4107	
Phone #:			228-00716			,	Analysis	equest	
email or Fax#:	:#x#:		Project Manager:				† O	(tr	
QA/QC Package:	kage:	(acitabila)/ [in] / [acitabila]	Marica Peppin	V.	NR(SMIS	S ԠO	ıəsq A ,	
Olainai		Level 4 (rull validation)	5	l	S P		∃ '²	Дue	
Accreditation:		☐ Az Compliance	\dot{b}		308 \ D				
□ NELAC	□ Other	Jer	On Ice: A-Yes	ss 🗆 No	OA S/se	or ('E(_	
□ EDD (1ype)	(bd)		# of Coolers:		e)(G bioi	158	√) NC		
			Cooler 1 emp(including CF);	10F): (0-57UZ-0-1(-0)	1510 Jest	3 Yo	Br,		
Date Time	ne Matrix	Sample Name	Container Prese	Preservative HEAL No.	X318 08(H9) 9 1808	PPHs (N ARDE	© E'	s) 07S8	
11 4/8	11:00 Soil	WESIL 17 4.9'		.)					
	11:10	WESUL-10 4-9'							
	11:05	VES22-18 4-6,		003					
13:	13300	06522-73 6		Poo					
13	13:05	06522-75 97		8					
13	13:10	BES22-76 91		2000					
[]	13:12	BESSS-77 91		100					
13	13:20	BES22-78 9'		300					
13	13:25	BES22-79 9		900					
51	13:30	BES 22-80 4'	_	010	1				
Date: Time:	8	Relinquished by:	Received by: Via:	Date Time	Remarks:				
4/17/2 N:37		J. Reta	3	20/18/22	Oral Bill to	et :	FOG 14	tob itesources Inc	
Date: Time:		Relinquished by:	× /	Date	Chade S	ctle			



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

August 31, 2022

Monica Peppin EOG 105 South Fourth Street Artesia, NM 88210 TEL: FAX:

RE: Routh SWD Tank Battery OrderNo.: 2208C66

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/20/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 8/31/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-152 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/18/2022 11:00:00 AM

 Lab ID:
 2208C66-001
 Matrix: SOIL
 Received Date: 8/20/2022 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: JTT
Chloride	61	59	mg/Kg	20	8/26/2022 11:35:54 AM	69783
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/25/2022 2:02:30 PM	69697
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/25/2022 2:02:30 PM	69697
Surr: DNOP	118	21-129	%Rec	1	8/25/2022 2:02:30 PM	69697
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/23/2022 9:42:13 PM	69669
Surr: BFB	108	37.7-212	%Rec	1	8/23/2022 9:42:13 PM	69669
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	8/23/2022 9:42:13 PM	69669
Toluene	ND	0.046	mg/Kg	1	8/23/2022 9:42:13 PM	69669
Ethylbenzene	ND	0.046	mg/Kg	1	8/23/2022 9:42:13 PM	69669
Xylenes, Total	ND	0.092	mg/Kg	1	8/23/2022 9:42:13 PM	69669
Surr: 4-Bromofluorobenzene	93.5	70-130	%Rec	1	8/23/2022 9:42:13 PM	69669

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 10

Date Reported: 8/31/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-153 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/18/2022 11:05:00 AM

 Lab ID:
 2208C66-002
 Matrix: SOIL
 Received Date: 8/20/2022 8:45:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride 100 60 mg/Kg 20 8/26/2022 11:48:18 AM 69783 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: DGH Diesel Range Organics (DRO) 14 mg/Kg 8/25/2022 2:13:09 PM 69697 Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 8/25/2022 2:13:09 PM 69697 Surr: DNOP 98.5 21-129 %Rec 8/25/2022 2:13:09 PM 69697

EPA METHOD 8015D: GASOLINE RANGE Analyst: NSB 8/23/2022 10:05:48 PM Gasoline Range Organics (GRO) ND 69669 4.7 mg/Kg Surr: BFB 107 37.7-212 %Rec 8/23/2022 10:05:48 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB ND 0.024 8/23/2022 10:05:48 PM Benzene mg/Kg 69669 Toluene ND 0.047 mg/Kg 8/23/2022 10:05:48 PM Ethylbenzene ND 0.047 mg/Kg 1 8/23/2022 10:05:48 PM 69669 Xylenes, Total ND 0.095 mg/Kg 8/23/2022 10:05:48 PM 69669 Surr: 4-Bromofluorobenzene 70-130 92.8 %Rec 8/23/2022 10:05:48 PM 69669

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/31/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-154 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/18/2022 11:10:00 AM

 Lab ID:
 2208C66-003
 Matrix: SOIL
 Received Date: 8/20/2022 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JTT
Chloride	ND	60	mg/Kg	20	8/26/2022 12:00:42 PM	69783
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/25/2022 2:23:46 PM	69697
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/25/2022 2:23:46 PM	69697
Surr: DNOP	125	21-129	%Rec	1	8/25/2022 2:23:46 PM	69697
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/23/2022 10:29:32 PM	69669
Surr: BFB	106	37.7-212	%Rec	1	8/23/2022 10:29:32 PM	69669
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	8/23/2022 10:29:32 PM	69669
Toluene	ND	0.048	mg/Kg	1	8/23/2022 10:29:32 PM	69669
Ethylbenzene	ND	0.048	mg/Kg	1	8/23/2022 10:29:32 PM	69669
Xylenes, Total	ND	0.095	mg/Kg	1	8/23/2022 10:29:32 PM	69669
Surr: 4-Bromofluorobenzene	94.2	70-130	%Rec	1	8/23/2022 10:29:32 PM	69669

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/31/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: WES22-20 0-4'

Project: Routh SWD Tank Battery **Collection Date:** 8/18/2022 1:45:00 PM

Lab ID: 2208C66-004 **Matrix:** SOIL **Received Date:** 8/20/2022 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: JTT
Chloride	390	60	mg/Kg	20	8/26/2022 12:13:06 PM	69783
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/25/2022 2:34:24 PM	69697
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/25/2022 2:34:24 PM	69697
Surr: DNOP	75.7	21-129	%Rec	1	8/25/2022 2:34:24 PM	69697
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/23/2022 10:53:09 PM	69669
Surr: BFB	109	37.7-212	%Rec	1	8/23/2022 10:53:09 PM	69669
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.025	mg/Kg	1	8/23/2022 10:53:09 PM	69669
Toluene	ND	0.050	mg/Kg	1	8/23/2022 10:53:09 PM	69669
Ethylbenzene	ND	0.050	mg/Kg	1	8/23/2022 10:53:09 PM	69669
Xylenes, Total	ND	0.099	mg/Kg	1	8/23/2022 10:53:09 PM	69669
Surr: 4-Bromofluorobenzene	94.2	70-130	%Rec	1	8/23/2022 10:53:09 PM	69669

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/31/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: WES22-21 0-4'

Project: Routh SWD Tank Battery **Collection Date:** 8/18/2022 1:50:00 PM

Lab ID: 2208C66-005 **Matrix:** SOIL **Received Date:** 8/20/2022 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Analys						
Chloride	610	60	mg/Kg	20	8/26/2022 12:25:30 PM	69783
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analy						: DGH
Diesel Range Organics (DRO)	37	15	mg/Kg	1	8/26/2022 4:53:56 PM	69697
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/26/2022 4:53:56 PM	69697
Surr: DNOP	62.2	21-129	%Rec	1	8/26/2022 4:53:56 PM	69697
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/24/2022 12:03:57 AM	69669
Surr: BFB	107	37.7-212	%Rec	1	8/24/2022 12:03:57 AM	69669
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	8/24/2022 12:03:57 AM	69669
Toluene	ND	0.050	mg/Kg	1	8/24/2022 12:03:57 AM	69669
Ethylbenzene	ND	0.050	mg/Kg	1	8/24/2022 12:03:57 AM	69669
Xylenes, Total	ND	0.099	mg/Kg	1	8/24/2022 12:03:57 AM	69669
Surr: 4-Bromofluorobenzene	94.8	70-130	%Rec	1	8/24/2022 12:03:57 AM	69669

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/31/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: WES22-22 0-4'

Project: Routh SWD Tank Battery **Collection Date:** 8/18/2022 1:55:00 PM

Lab ID: 2208C66-006 **Matrix:** SOIL **Received Date:** 8/20/2022 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: JTT
Chloride	280	60	mg/Kg	20	8/26/2022 12:37:54 PM	69783
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analys	t: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/25/2022 2:55:34 PM	69697
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/25/2022 2:55:34 PM	69697
Surr: DNOP	59.1	21-129	%Rec	1	8/25/2022 2:55:34 PM	69697
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/24/2022 12:27:35 AM	69669
Surr: BFB	106	37.7-212	%Rec	1	8/24/2022 12:27:35 AM	69669
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.023	mg/Kg	1	8/24/2022 12:27:35 AM	69669
Toluene	ND	0.047	mg/Kg	1	8/24/2022 12:27:35 AM	69669
Ethylbenzene	ND	0.047	mg/Kg	1	8/24/2022 12:27:35 AM	69669
Xylenes, Total	ND	0.094	mg/Kg	1	8/24/2022 12:27:35 AM	69669
Surr: 4-Bromofluorobenzene	93.4	70-130	%Rec	1	8/24/2022 12:27:35 AM	69669

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208C66 31-Aug-22**

Client: EOG

Project: Routh SWD Tank Battery

Sample ID: MB-69783 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69783 RunNo: 90630

Prep Date: **8/26/2022** Analysis Date: **8/26/2022** SeqNo: **3238422** Units: **mg/Kg**

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

Chloride ND 1.5

Sample ID: LCS-69783 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69783 RunNo: 90630

Prep Date: 8/26/2022 Analysis Date: 8/26/2022 SeqNo: 3238423 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 93.3 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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

2208C66 31-Aug-22

WO#:

Client: EOG

Project: Routh SWD Tank Battery

Sample ID: LCS-69697	SampType:	1.09	TestCo	ode: EPA Method	8015M/D: Diese	l Pange	Organics	
Client ID: LCSS	Batch ID:			No: 90543	OUTSIVI/D. DIESE	ii Kange	Organics	
Prep Date: 8/23/2022	Analysis Date:			No: 3234619	Units: mg/Kg			
Analyte	Result PO	QL SPK value	SPK Ref Val %	REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	34	15 50.00	0	68.5 64.4	127			
Surr: DNOP	3.5	5.000		70.7 21	129			
Sample ID: MB-69697	SampType:	MBLK	TestCo	ode: EPA Method	8015M/D: Diese	l Range	Organics	
Client ID: PBS	Batch ID:	69697	RunNo: 90543					
Prep Date: 8/23/2022	Analysis Date:	8/24/2022	Sec	No: 3234620	Units: mg/Kg			
Analyte	Result PO	QL SPK value	SPK Ref Val %	REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15						
Motor Oil Range Organics (MRO)	ND	50						
Surr: DNOP	10	10.00		103 21	129			
Sample ID: MB-69780	SampType:	MBLK	TestCo	ode: EPA Method	8015M/D: Diese	l Range	Organics	
Client ID: PBS	Batch ID:	69780	Run	No: 90637				
Prep Date: 8/25/2022	Analysis Date:	8/26/2022	Sec	No: 3238809	Units: %Rec			
Analyte	Result PO	QL SPK value	SPK Ref Val %	REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.0	10.00		90.0 21	129			
Sample ID: LCS-69780	SampType:	LCS	TestCo	ode: EPA Method	8015M/D: Diese	l Range	Organics	

SPK value SPK Ref Val %REC

5.000

Qualifiers:

Prep Date:

Surr: DNOP

Analyte

8/25/2022

Analysis Date: 8/26/2022

PQL

Result

4.5

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

SeqNo: 3238810

89.2

LowLimit

21

Units: %Rec

HighLimit

129

%RPD

RPDLimit

Qual

- E 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, Inc.

WO#: **2208C66**

31-Aug-22

Client: EOG

Project: Routh SWD Tank Battery

Sample ID: mb-69669 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 69669 RunNo: 90483

Prep Date: **8/22/2022** Analysis Date: **8/23/2022** SeqNo: **3231929** Units: **mg/Kg**

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 1100 1000 110 37.7 212

Sample ID: Ics-69669 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 69669 RunNo: 90483

Prep Date: **8/22/2022** Analysis Date: **8/23/2022** SeqNo: **3231930** Units: **mg/Kg**

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 25 25.00 100 72.3 S Surr: BFB 2100 1000 212 37.7 212

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

2208C66 31-Aug-22

WO#:

Client: EOG

Project: Routh SWD Tank Battery

Sample ID: mb-69669	Samp ⁻	Гуре: МЕ	BLK	Tes	TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batc	h ID: 69 6	669	RunNo: 90483						
Prep Date: 8/22/2022	Analysis [Date: 8/2	23/2022	5	SeqNo: 32	231977	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.94		1.000		94.4	70	130			

Sample ID: LCS-69669	Samp	Гуре: LC	S	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batcl	h ID: 69 6	669	RunNo: 90483						
Prep Date: 8/22/2022	Analysis [Date: 8/2	23/2022	9	SeqNo: 32	231980	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.025	1.000	0	82.0	80	120			
Toluene	0.85	0.050	1.000	0	85.4	80	120			
Ethylbenzene	0.86	0.050	1.000	0	86.1	80	120			
Xylenes, Total	2.6	0.10	3.000	0	86.0	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.8	70	130			

Qualifiers:

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

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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:	EOG	Work Order N	umber: 22	08C66			RcptNo: 1	
Received By:	Tracy Casarrubias	8/20/2022 8:45:0	00 AM					
Completed By:	Sean Livingston	8/20/2022 9:46:3	30 AM		<	/	not	
Reviewed By:	The	8120122			.ر	~	Jan	
Chain of Cus	tody							
1. Is Chain of C	ustody complete?		Yes	· •	No		Not Present	
. How was the	sample delivered?		Cor	urier				
Log In								
The second secon	pt made to cool the sample	s?	Yes	•	No		NA 🗆	
. Were all samp	oles received at a temperatu		Yes			V	NA 🗆	
Sample(s) in r	proper container(s)?	Samples	were coll				d chilled.	
· campio(s) in p	stoper container(s)?		Yes	V	No			
Sufficient sam	ple volume for indicated tes	t(s)?	Yes	V	No			
Are samples (e	except VOA and ONG) prop	erly preserved?	Yes	~	No			
. Was preservat	ive added to bottles?		Yes		No	V	NA 🗆	
Received at lea	ast 1 vial with headspace <	/4" for AQ VOA?	Yes		No		NA 🗹	
). Were any sam	ple containers received bro	ken?	Yes		No	V	47.4	
							# of preserved bottles checked	/
	rk match bottle labels? ncies on chain of custody)		Yes	V	No		for pH:	
	orrectly identified on Chain	of Custody?	Yes	V	No	П	(<2 or >12 unles	ss noted
	analyses were requested?		Yes	V	No	_	/	
. Were all holdin	g times able to be met? stomer for authorization.)		Yes		No		Checked by: Su & (whi
	ng (if applicable)							
	ified of all discrepancies wit	n this order?	Yes		No		NA 🗸	
Person N	Notified:	Dat	e:			=	207	
By Whor	n:	Via		ail 🗆 P	hone	Fax	In Person	
Regardin	ng:				(1-1-1-1		III CISON	
Client Ins	structions:					_		
. Additional rem	narks:							
. Cooler Inform	ation							
Cooler No	Face to a 2 of the contract of the	Seal Intact Seal No	Coal D	ata.	0:			
	7.9 Good	Jour Illact Sear NO	Seal Da	ile	Signed E	sy		

HALL ENVIRONMENTAL ANALYSIS LABORATORY ANALYSIS LABORATORY Www.hallenvironmental.com kins NE - Albuquerque, NM 87109 845-3975 Fax 505-345-4107 Analysis Request	270 (Semi-VOA) otal Coliform (Present/Absent)		Eog- Reserves Inc
HALL EN ANALYS; ANALYS; www.hallenvir 4901 Hawkins NE - Albu Tel. 505-345-3975 Fa	TEM MTBE / TMB's (8021) 1PH)8015D(GRO / DRO / MRO) 1081 Pesticides/8082 PCB's 1081 Pesticides/8082 PCB's 1081 Pesticides/8082 PCB's 1081 Pesticides/8082 PCB's 1082 PO4, SO4 1083 PO4, SO4		Remarks: Direct Bill to E06
1 urn-Around Time: Standard Rush SMA Project Name: Routh SWD Tank Battery Project #: 22E -00716	Project Manager: Nonice Peppin Sampler: S.Reta On Ice: AYes D No # of Coolers: I Cooler Temp(including cF): 8.0-0.1: 7-9 (°C) Container Preservative HEAL No. Type and # Type) 00 500 500 500 700	Time: Relinquished by: Received by: Via: Date Time Remarks: Received by: Via: Date Time Remarks: Received by: Via: Co. Date Time Remarks: Received by: V
Resources Inc (Vertex) Ses: On File	□ Level 4 (Full Validation) □ Az Compliance □ Other Matrix Sample Name	00 521 BES22-1572 4' 0 BES22-1573 4' 15 VES 22-154 4' 16 WES 22-21 0-4' 17 VES 22-21 0-4' 18 VES 22-21 0-4'	Sight 17:27 S. Refinduished by: Sight 17:27 S. Refa Date: Time: Relinquished by: Sight 19:0 Chuman



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

OrderNo.: 2208E18

September 02, 2022

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

FAX:

RE: Routh SWD Tank Battery

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 47 sample(s) on 8/24/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-155 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 9:30:00 AM

 Lab ID:
 2208E18-001
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 6:31:20 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/26/2022 6:31:20 PM
Surr: DNOP	83.7	21-129	%Rec	1	8/26/2022 6:31:20 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/25/2022 1:20:22 PM
Surr: BFB	100	37.7-212	%Rec	1	8/25/2022 1:20:22 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/25/2022 1:20:22 PM
Toluene	ND	0.047	mg/Kg	1	8/25/2022 1:20:22 PM
Ethylbenzene	ND	0.047	mg/Kg	1	8/25/2022 1:20:22 PM
Xylenes, Total	ND	0.094	mg/Kg	1	8/25/2022 1:20:22 PM
Surr: 4-Bromofluorobenzene	93.0	70-130	%Rec	1	8/25/2022 1:20:22 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	230	60	mg/Kg	20	8/27/2022 12:07:18 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-156 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 9:35:00 AM

 Lab ID:
 2208E18-002
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 6:41:58 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/26/2022 6:41:58 PM
Surr: DNOP	88.5	21-129	%Rec	1	8/26/2022 6:41:58 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/25/2022 1:44:06 PM
Surr: BFB	101	37.7-212	%Rec	1	8/25/2022 1:44:06 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/25/2022 1:44:06 PM
Toluene	ND	0.047	mg/Kg	1	8/25/2022 1:44:06 PM
Ethylbenzene	ND	0.047	mg/Kg	1	8/25/2022 1:44:06 PM
Xylenes, Total	ND	0.095	mg/Kg	1	8/25/2022 1:44:06 PM
Surr: 4-Bromofluorobenzene	92.4	70-130	%Rec	1	8/25/2022 1:44:06 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	340	60	mg/Kg	20	8/27/2022 1:09:00 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-157 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 9:40:00 AM

 Lab ID:
 2208E18-003
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Result **RL Qual Units** DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/26/2022 6:52:39 PM Motor Oil Range Organics (MRO) ND 46 mg/Kg 1 8/26/2022 6:52:39 PM Surr: DNOP 21-129 %Rec 1 8/26/2022 6:52:39 PM 111 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/25/2022 2:07:53 PM 4.9 mg/Kg 1 Surr: BFB 101 37.7-212 %Rec 1 8/25/2022 2:07:53 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.025 mg/Kg 8/25/2022 2:07:53 PM 1 Toluene ND 0.049 mg/Kg 1 8/25/2022 2:07:53 PM Ethylbenzene ND 0.049 mg/Kg 1 8/25/2022 2:07:53 PM Xylenes, Total ND 0.099 mg/Kg 1 8/25/2022 2:07:53 PM Surr: 4-Bromofluorobenzene 94.4 70-130 %Rec 1 8/25/2022 2:07:53 PM Analyst: JTT **EPA METHOD 300.0: ANIONS** Chloride 59 8/27/2022 1:21:21 AM 150 ma/Ka 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-158 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 9:45:00 AM

 Lab ID:
 2208E18-004
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 7:03:24 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/26/2022 7:03:24 PM
Surr: DNOP	93.1	21-129	%Rec	1	8/26/2022 7:03:24 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/25/2022 2:31:35 PM
Surr: BFB	101	37.7-212	%Rec	1	8/25/2022 2:31:35 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/25/2022 2:31:35 PM
Toluene	ND	0.049	mg/Kg	1	8/25/2022 2:31:35 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/25/2022 2:31:35 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/25/2022 2:31:35 PM
Surr: 4-Bromofluorobenzene	93.9	70-130	%Rec	1	8/25/2022 2:31:35 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	260	60	mg/Kg	20	8/27/2022 1:33:41 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-159 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 9:50:00 AM

 Lab ID:
 2208E18-005
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 7:14:10 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/26/2022 7:14:10 PM
Surr: DNOP	89.5	21-129	%Rec	1	8/26/2022 7:14:10 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/25/2022 3:42:49 PM
Surr: BFB	102	37.7-212	%Rec	1	8/25/2022 3:42:49 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/25/2022 3:42:49 PM
Toluene	ND	0.048	mg/Kg	1	8/25/2022 3:42:49 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2022 3:42:49 PM
Xylenes, Total	ND	0.096	mg/Kg	1	8/25/2022 3:42:49 PM
Surr: 4-Bromofluorobenzene	93.6	70-130	%Rec	1	8/25/2022 3:42:49 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	420	60	mg/Kg	20	8/27/2022 1:46:02 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-160 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 9:55:00 AM

 Lab ID:
 2208E18-006
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 7:24:59 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/26/2022 7:24:59 PM
Surr: DNOP	91.6	21-129	%Rec	1	8/26/2022 7:24:59 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/25/2022 4:06:32 PM
Surr: BFB	98.6	37.7-212	%Rec	1	8/25/2022 4:06:32 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/25/2022 4:06:32 PM
Toluene	ND	0.049	mg/Kg	1	8/25/2022 4:06:32 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/25/2022 4:06:32 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/25/2022 4:06:32 PM
Surr: 4-Bromofluorobenzene	93.0	70-130	%Rec	1	8/25/2022 4:06:32 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	580	60	mg/Kg	20	8/27/2022 1:58:22 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-161 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 10:00:00 AM

 Lab ID:
 2208E18-007
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 7:35:49 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/26/2022 7:35:49 PM
Surr: DNOP	121	21-129	%Rec	1	8/26/2022 7:35:49 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/25/2022 4:30:14 PM
Surr: BFB	101	37.7-212	%Rec	1	8/25/2022 4:30:14 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/25/2022 4:30:14 PM
Toluene	ND	0.049	mg/Kg	1	8/25/2022 4:30:14 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/25/2022 4:30:14 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/25/2022 4:30:14 PM
Surr: 4-Bromofluorobenzene	93.4	70-130	%Rec	1	8/25/2022 4:30:14 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	560	60	mg/Kg	20	8/27/2022 2:10:42 AM

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

Qualifiers:

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

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-162 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 10:05:00 AM

 Lab ID:
 2208E18-008
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 7:46:50 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/26/2022 7:46:50 PM
Surr: DNOP	95.9	21-129	%Rec	1	8/26/2022 7:46:50 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/25/2022 4:53:56 PM
Surr: BFB	103	37.7-212	%Rec	1	8/25/2022 4:53:56 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	8/25/2022 4:53:56 PM
Toluene	ND	0.046	mg/Kg	1	8/25/2022 4:53:56 PM
Ethylbenzene	ND	0.046	mg/Kg	1	8/25/2022 4:53:56 PM
Xylenes, Total	ND	0.093	mg/Kg	1	8/25/2022 4:53:56 PM
Surr: 4-Bromofluorobenzene	95.2	70-130	%Rec	1	8/25/2022 4:53:56 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	290	60	mg/Kg	20	8/28/2022 4:07:02 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-163 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 10:10:00 AM

 Lab ID:
 2208E18-009
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Result **RL Qual Units** DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/26/2022 7:57:51 PM Motor Oil Range Organics (MRO) ND 45 mg/Kg 1 8/26/2022 7:57:51 PM 21-129 Surr: DNOP 104 %Rec 1 8/26/2022 7:57:51 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/25/2022 5:17:34 PM 4.9 mg/Kg 1 Surr: BFB 102 37.7-212 %Rec 1 8/25/2022 5:17:34 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.024 mg/Kg 8/25/2022 5:17:34 PM 1 Toluene ND 0.049 mg/Kg 1 8/25/2022 5:17:34 PM Ethylbenzene ND 0.049 mg/Kg 1 8/25/2022 5:17:34 PM Xylenes, Total ND 0.098 mg/Kg 1 8/25/2022 5:17:34 PM Surr: 4-Bromofluorobenzene 95.1 70-130 %Rec 1 8/25/2022 5:17:34 PM Analyst: JTT **EPA METHOD 300.0: ANIONS** Chloride 710 60 8/28/2022 4:44:16 PM ma/Ka 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-164 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 10:15:00 AM

 Lab ID:
 2208E18-010
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 8:08:52 PM
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/26/2022 8:08:52 PM
Surr: DNOP	73.2	21-129	%Rec	1	8/26/2022 8:08:52 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/25/2022 5:41:19 PM
Surr: BFB	101	37.7-212	%Rec	1	8/25/2022 5:41:19 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/25/2022 5:41:19 PM
Toluene	ND	0.049	mg/Kg	1	8/25/2022 5:41:19 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/25/2022 5:41:19 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/25/2022 5:41:19 PM
Surr: 4-Bromofluorobenzene	93.7	70-130	%Rec	1	8/25/2022 5:41:19 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	660	60	mg/Kg	20	8/28/2022 5:21:30 PM

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

Qualifiers:

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

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-165 4'

Project: Routh SWD Tank Battery Collection Date: 8/19/2022 10:20:00 AM

Lab ID: 2208E18-011 **Matrix:** SOIL **Received Date:** 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE C	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 8:19:53 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/26/2022 8:19:53 PM
Surr: DNOP	77.1	21-129	%Rec	1	8/26/2022 8:19:53 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/25/2022 6:05:02 PM
Surr: BFB	100	37.7-212	%Rec	1	8/25/2022 6:05:02 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/25/2022 6:05:02 PM
Toluene	ND	0.049	mg/Kg	1	8/25/2022 6:05:02 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/25/2022 6:05:02 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/25/2022 6:05:02 PM
Surr: 4-Bromofluorobenzene	93.2	70-130	%Rec	1	8/25/2022 6:05:02 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	680	59	mg/Kg	20	8/28/2022 5:33:56 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-166 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 10:25:00 AM

 Lab ID:
 2208E18-012
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 8:30:54 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/26/2022 8:30:54 PM
Surr: DNOP	75.6	21-129	%Rec	1	8/26/2022 8:30:54 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/25/2022 6:28:41 PM
Surr: BFB	100	37.7-212	%Rec	1	8/25/2022 6:28:41 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/25/2022 6:28:41 PM
Toluene	ND	0.048	mg/Kg	1	8/25/2022 6:28:41 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2022 6:28:41 PM
Xylenes, Total	ND	0.095	mg/Kg	1	8/25/2022 6:28:41 PM
Surr: 4-Bromofluorobenzene	94.7	70-130	%Rec	1	8/25/2022 6:28:41 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	930	60	mg/Kg	20	8/28/2022 5:46:20 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-167

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 10:30:00 AM

 Lab ID:
 2208E18-013
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	25	14	mg/Kg	1	8/26/2022 8:41:55 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/26/2022 8:41:55 PM
Surr: DNOP	82.1	21-129	%Rec	1	8/26/2022 8:41:55 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/25/2022 6:52:17 PM
Surr: BFB	100	37.7-212	%Rec	1	8/25/2022 6:52:17 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/25/2022 6:52:17 PM
Toluene	ND	0.050	mg/Kg	1	8/25/2022 6:52:17 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/25/2022 6:52:17 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/25/2022 6:52:17 PM
Surr: 4-Bromofluorobenzene	95.4	70-130	%Rec	1	8/25/2022 6:52:17 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	530	60	mg/Kg	20	8/28/2022 5:58:44 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-168

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 10:35:00 AM

 Lab ID:
 2208E18-014
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O		Analyst: DGH			
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 8:52:56 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/26/2022 8:52:56 PM
Surr: DNOP	75.3	21-129	%Rec	1	8/26/2022 8:52:56 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/25/2022 7:15:56 PM
Surr: BFB	98.0	37.7-212	%Rec	1	8/25/2022 7:15:56 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/25/2022 7:15:56 PM
Toluene	ND	0.048	mg/Kg	1	8/25/2022 7:15:56 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2022 7:15:56 PM
Xylenes, Total	ND	0.096	mg/Kg	1	8/25/2022 7:15:56 PM
Surr: 4-Bromofluorobenzene	92.4	70-130	%Rec	1	8/25/2022 7:15:56 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	490	60	mg/Kg	20	8/28/2022 6:11:09 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-169

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 10:40:00 AM

 Lab ID:
 2208E18-015
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/25/2022 11:01:54 PM
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/25/2022 11:01:54 PM
Surr: DNOP	106	21-129	%Rec	1	8/25/2022 11:01:54 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	24	mg/Kg	5	8/25/2022 9:50:00 AM
Surr: BFB	104	37.7-212	%Rec	5	8/25/2022 9:50:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.12	mg/Kg	5	8/25/2022 9:50:00 AM
Toluene	ND	0.24	mg/Kg	5	8/25/2022 9:50:00 AM
Ethylbenzene	ND	0.24	mg/Kg	5	8/25/2022 9:50:00 AM
Xylenes, Total	ND	0.48	mg/Kg	5	8/25/2022 9:50:00 AM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	5	8/25/2022 9:50:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	770	60	mg/Kg	20	8/28/2022 6:23:34 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-170

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 10:45:00 AM

 Lab ID:
 2208E18-016
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/25/2022 11:45:38 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/25/2022 11:45:38 PM
Surr: DNOP	117	21-129	%Rec	1	8/25/2022 11:45:38 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/25/2022 10:49:00 AM
Surr: BFB	109	37.7-212	%Rec	1	8/25/2022 10:49:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/25/2022 10:49:00 AM
Toluene	ND	0.048	mg/Kg	1	8/25/2022 10:49:00 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2022 10:49:00 AM
Xylenes, Total	ND	0.097	mg/Kg	1	8/25/2022 10:49:00 AM
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	8/25/2022 10:49:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	680	60	mg/Kg	20	8/28/2022 6:35:59 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-171

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 10:50:00 AM

 Lab ID:
 2208E18-017
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/25/2022 11:56:37 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/25/2022 11:56:37 PM
Surr: DNOP	121	21-129	%Rec	1	8/25/2022 11:56:37 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/25/2022 11:48:00 AM
Surr: BFB	104	37.7-212	%Rec	1	8/25/2022 11:48:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/25/2022 11:48:00 AM
Toluene	ND	0.050	mg/Kg	1	8/25/2022 11:48:00 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/25/2022 11:48:00 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/25/2022 11:48:00 AM
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	8/25/2022 11:48:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	460	60	mg/Kg	20	8/28/2022 6:48:24 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-172

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 10:55:00 AM

 Lab ID:
 2208E18-018
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Result	RL Qua	al Units	DF	Date Analyzed	
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					
ND	14	mg/Kg	1	8/26/2022 10:23:45 AM	
ND	46	mg/Kg	1	8/26/2022 10:23:45 AM	
82.5	21-129	%Rec	1	8/26/2022 10:23:45 AM	
				Analyst: BRM	
ND	4.7	mg/Kg	1	8/25/2022 12:08:00 PM	
103	37.7-212	%Rec	1	8/25/2022 12:08:00 PM	
				Analyst: BRM	
ND	0.023	mg/Kg	1	8/25/2022 12:08:00 PM	
ND	0.047	mg/Kg	1	8/25/2022 12:08:00 PM	
ND	0.047	mg/Kg	1	8/25/2022 12:08:00 PM	
ND	0.094	mg/Kg	1	8/25/2022 12:08:00 PM	
98.7	70-130	%Rec	1	8/25/2022 12:08:00 PM	
				Analyst: JTT	
950	60	mg/Kg	20	8/28/2022 7:00:49 PM	
	ND ND 82.5 ND 103 ND ND ND ND ND ND ND ND 98.7	ND 14 ND 46 82.5 21-129 ND 4.7 103 37.7-212 ND 0.023 ND 0.047 ND 0.047 ND 0.094 98.7 70-130	ND 14 mg/Kg ND 46 mg/Kg 82.5 21-129 %Rec ND 4.7 mg/Kg 103 37.7-212 %Rec ND 0.023 mg/Kg ND 0.047 mg/Kg ND 0.047 mg/Kg ND 0.047 mg/Kg ND 0.094 mg/Kg 98.7 70-130 %Rec	ND 14 mg/Kg 1 ND 46 mg/Kg 1 82.5 21-129 %Rec 1 ND 4.7 mg/Kg 1 103 37.7-212 %Rec 1 ND 0.023 mg/Kg 1 ND 0.047 mg/Kg 1 ND 0.047 mg/Kg 1 ND 0.047 mg/Kg 1 ND 0.094 mg/Kg 1 98.7 70-130 %Rec 1	

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-173

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 11:00:00 AM

 Lab ID:
 2208E18-019
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 10:34:26 AM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/26/2022 10:34:26 AM
Surr: DNOP	68.3	21-129	%Rec	1	8/26/2022 10:34:26 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/25/2022 12:28:00 PM
Surr: BFB	105	37.7-212	%Rec	1	8/25/2022 12:28:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/25/2022 12:28:00 PM
Toluene	ND	0.049	mg/Kg	1	8/25/2022 12:28:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/25/2022 12:28:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/25/2022 12:28:00 PM
Surr: 4-Bromofluorobenzene	99.6	70-130	%Rec	1	8/25/2022 12:28:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	460	60	mg/Kg	20	8/28/2022 7:13:13 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-174

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 11:05:00 AM

 Lab ID:
 2208E18-020
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 10:45:16 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/26/2022 10:45:16 AM
Surr: DNOP	108	21-129	%Rec	1	8/26/2022 10:45:16 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/25/2022 12:48:00 PM
Surr: BFB	107	37.7-212	%Rec	1	8/25/2022 12:48:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/25/2022 12:48:00 PM
Toluene	ND	0.048	mg/Kg	1	8/25/2022 12:48:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2022 12:48:00 PM
Xylenes, Total	ND	0.095	mg/Kg	1	8/25/2022 12:48:00 PM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	8/25/2022 12:48:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	1100	60	mg/Kg	20	8/28/2022 7:50:27 PM

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

Qualifiers:

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

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-175

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 11:10:00 AM

 Lab ID:
 2208E18-021
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 10:56:08 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/26/2022 10:56:08 AM
Surr: DNOP	111	21-129	%Rec	1	8/26/2022 10:56:08 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/25/2022 1:07:00 PM
Surr: BFB	105	37.7-212	%Rec	1	8/25/2022 1:07:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/25/2022 1:07:00 PM
Toluene	ND	0.048	mg/Kg	1	8/25/2022 1:07:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2022 1:07:00 PM
Xylenes, Total	ND	0.096	mg/Kg	1	8/25/2022 1:07:00 PM
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	8/25/2022 1:07:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	860	60	mg/Kg	20	8/28/2022 8:02:52 PM

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

Qualifiers:

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

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EPA METHOD 8021B: VOLATILES

Analytical Report Lab Order 2208E18

Date Reported: 9/2/2022

Analyst: BRM

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-176

Project: Routh SWD Tank Battery Collection Date: 8/19/2022 11:15:00 AM Lab ID: 2208E18-022 Matrix: SOIL Received Date: 8/24/2022 7:15:00 AM

Result **RL Qual Units** DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/26/2022 11:06:57 AM Motor Oil Range Organics (MRO) ND 46 mg/Kg 1 8/26/2022 11:06:57 AM Surr: DNOP 69.2 21-129 %Rec 1 8/26/2022 11:06:57 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 8/25/2022 1:27:00 PM 4.8 mg/Kg 1 Surr: BFB 106 37.7-212 %Rec 1 8/25/2022 1:27:00 PM

Benzene	ND	0.024	mg/Kg	1	8/25/2022 1:27:00 PM
Toluene	ND	0.048	mg/Kg	1	8/25/2022 1:27:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2022 1:27:00 PM
Xylenes, Total	ND	0.095	mg/Kg	1	8/25/2022 1:27:00 PM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	8/25/2022 1:27:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	540	61	mg/Kg	20	8/29/2022 9:13:12 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- Sample pH Not In Range
- RLReporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-177

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 11:20:00 AM

 Lab ID:
 2208E18-023
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qua	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 11:17:45 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/26/2022 11:17:45 AM
Surr: DNOP	91.8	21-129	%Rec	1	8/26/2022 11:17:45 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/25/2022 1:47:00 PM
Surr: BFB	108	37.7-212	%Rec	1	8/25/2022 1:47:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/25/2022 1:47:00 PM
Toluene	ND	0.048	mg/Kg	1	8/25/2022 1:47:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2022 1:47:00 PM
Xylenes, Total	ND	0.096	mg/Kg	1	8/25/2022 1:47:00 PM
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	8/25/2022 1:47:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	1300	60	mg/Kg	20	8/29/2022 9:50:25 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-178

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 11:25:00 AM

 Lab ID:
 2208E18-024
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Result **RL Qual Units** DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/26/2022 11:28:32 AM Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 8/26/2022 11:28:32 AM Surr: DNOP 97.1 21-129 %Rec 1 8/26/2022 11:28:32 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 8/25/2022 2:07:00 PM 4.6 mg/Kg 1 Surr: BFB 107 37.7-212 %Rec 1 8/25/2022 2:07:00 PM **EPA METHOD 8021B: VOLATILES** Analyst: BRM Benzene ND 0.023 mg/Kg 8/25/2022 2:07:00 PM 1 Toluene ND 0.046 mg/Kg 1 8/25/2022 2:07:00 PM Ethylbenzene ND 0.046 mg/Kg 1 8/25/2022 2:07:00 PM Xylenes, Total ND 0.093 mg/Kg 1 8/25/2022 2:07:00 PM Surr: 4-Bromofluorobenzene 103 70-130 %Rec 1 8/25/2022 2:07:00 PM Analyst: JTT **EPA METHOD 300.0: ANIONS** Chloride 1200 60 8/29/2022 11:04:53 AM ma/Ka 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-179 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 11:30:00 AM

 Lab ID:
 2208E18-025
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Result	RL Qu	al Units	DF	Date Analyzed		
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						
ND	15	mg/Kg	1	8/26/2022 11:39:17 AM		
ND	50	mg/Kg	1	8/26/2022 11:39:17 AM		
89.6	21-129	%Rec	1	8/26/2022 11:39:17 AM		
				Analyst: BRM		
ND	4.8	mg/Kg	1	8/25/2022 2:46:00 PM		
103	37.7-212	%Rec	1	8/25/2022 2:46:00 PM		
				Analyst: BRM		
ND	0.024	mg/Kg	1	8/25/2022 2:46:00 PM		
ND	0.048	mg/Kg	1	8/25/2022 2:46:00 PM		
ND	0.048	mg/Kg	1	8/25/2022 2:46:00 PM		
ND	0.095	mg/Kg	1	8/25/2022 2:46:00 PM		
98.1	70-130	%Rec	1	8/25/2022 2:46:00 PM		
				Analyst: JTT		
540	60	mg/Kg	20	8/29/2022 11:17:17 AM		
	ND ND 89.6 ND 103 ND ND ND ND ND ND ND ND 98.1	ND 15 ND 50 89.6 21-129 ND 4.8 103 37.7-212 ND 0.024 ND 0.048 ND 0.048 ND 0.095 98.1 70-130	ND 15 mg/Kg ND 50 mg/Kg 89.6 21-129 %Rec ND 4.8 mg/Kg 103 37.7-212 %Rec ND 0.024 mg/Kg ND 0.048 mg/Kg ND 0.048 mg/Kg ND 0.048 mg/Kg ND 0.095 mg/Kg 98.1 70-130 %Rec	ANICS ND 15 mg/Kg 1 ND 50 mg/Kg 1 89.6 21-129 %Rec 1 ND 4.8 mg/Kg 1 103 37.7-212 %Rec 1 ND 0.024 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.095 mg/Kg 1 98.1 70-130 %Rec 1		

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-180 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 11:35:00 AM

 Lab ID:
 2208E18-026
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses Result **RL Qual Units** DF **Date Analyzed EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/26/2022 11:50:02 AM Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 8/26/2022 11:50:02 AM Surr: DNOP 87.3 21-129 %Rec 1 8/26/2022 11:50:02 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 4.9 8/25/2022 3:06:00 PM mg/Kg 1

Surr: BFB	102	37.7-212	%Rec	1	8/25/2022 3:06:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/25/2022 3:06:00 PM
Toluene	ND	0.049	mg/Kg	1	8/25/2022 3:06:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/25/2022 3:06:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/25/2022 3:06:00 PM
Surr: 4-Bromofluorobenzene	98.5	70-130	%Rec	1	8/25/2022 3:06:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	230	60	mg/Kg	20	8/29/2022 11:29:41 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-181 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 11:40:00 AM

 Lab ID:
 2208E18-027
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 12:00:46 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/26/2022 12:00:46 PM
Surr: DNOP	97.9	21-129	%Rec	1	8/26/2022 12:00:46 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/25/2022 3:26:00 PM
Surr: BFB	99.2	37.7-212	%Rec	1	8/25/2022 3:26:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.023	mg/Kg	1	8/25/2022 3:26:00 PM
Toluene	ND	0.046	mg/Kg	1	8/25/2022 3:26:00 PM
Ethylbenzene	ND	0.046	mg/Kg	1	8/25/2022 3:26:00 PM
Xylenes, Total	ND	0.093	mg/Kg	1	8/25/2022 3:26:00 PM
Surr: 4-Bromofluorobenzene	95.8	70-130	%Rec	1	8/25/2022 3:26:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	430	60	mg/Kg	20	8/29/2022 11:42:05 AM

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

Qualifiers:

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

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-182 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 11:45:00 AM

 Lab ID:
 2208E18-028
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 12:11:27 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/26/2022 12:11:27 PM
Surr: DNOP	89.7	21-129	%Rec	1	8/26/2022 12:11:27 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/25/2022 3:46:00 PM
Surr: BFB	104	37.7-212	%Rec	1	8/25/2022 3:46:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/25/2022 3:46:00 PM
Toluene	ND	0.048	mg/Kg	1	8/25/2022 3:46:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2022 3:46:00 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/25/2022 3:46:00 PM
Surr: 4-Bromofluorobenzene	99.4	70-130	%Rec	1	8/25/2022 3:46:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	600	60	mg/Kg	20	8/29/2022 11:54:30 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-183 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 11:50:00 AM

 Lab ID:
 2208E18-029
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 12:22:09 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/26/2022 12:22:09 PM
Surr: DNOP	90.0	21-129	%Rec	1	8/26/2022 12:22:09 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/25/2022 4:05:00 PM
Surr: BFB	106	37.7-212	%Rec	1	8/25/2022 4:05:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/25/2022 4:05:00 PM
Toluene	ND	0.048	mg/Kg	1	8/25/2022 4:05:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/25/2022 4:05:00 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/25/2022 4:05:00 PM
Surr: 4-Bromofluorobenzene	98.9	70-130	%Rec	1	8/25/2022 4:05:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	1100	60	mg/Kg	20	8/29/2022 12:06:54 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-184 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 11:55:00 AM

 Lab ID:
 2208E18-030
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 12:32:47 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/26/2022 12:32:47 PM
Surr: DNOP	99.2	21-129	%Rec	1	8/26/2022 12:32:47 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/25/2022 4:25:00 PM
Surr: BFB	102	37.7-212	%Rec	1	8/25/2022 4:25:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/25/2022 4:25:00 PM
Toluene	ND	0.049	mg/Kg	1	8/25/2022 4:25:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/25/2022 4:25:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/25/2022 4:25:00 PM
Surr: 4-Bromofluorobenzene	98.7	70-130	%Rec	1	8/25/2022 4:25:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	1400	60	mg/Kg	20	8/29/2022 12:19:18 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-185 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 12:00:00 PM

 Lab ID:
 2208E18-031
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Result	RL Qua	al Units	DF	Date Analyzed	
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					
ND	15	mg/Kg	1	8/26/2022 12:43:24 PM	
ND	49	mg/Kg	1	8/26/2022 12:43:24 PM	
73.5	21-129	%Rec	1	8/26/2022 12:43:24 PM	
				Analyst: BRM	
ND	4.8	mg/Kg	1	8/25/2022 4:45:00 PM	
106	37.7-212	%Rec	1	8/25/2022 4:45:00 PM	
				Analyst: BRM	
ND	0.024	mg/Kg	1	8/25/2022 4:45:00 PM	
ND	0.048	mg/Kg	1	8/25/2022 4:45:00 PM	
ND	0.048	mg/Kg	1	8/25/2022 4:45:00 PM	
ND	0.095	mg/Kg	1	8/25/2022 4:45:00 PM	
99.3	70-130	%Rec	1	8/25/2022 4:45:00 PM	
				Analyst: JTT	
1300	60	mg/Kg	20	8/29/2022 12:31:43 PM	
	ND ND 73.5 ND 106 ND ND ND ND ND ND ND ND 99.3	ND 15 ND 49 73.5 21-129 ND 4.8 106 37.7-212 ND 0.024 ND 0.048 ND 0.048 ND 0.095 99.3 70-130	ND 15 mg/Kg ND 49 mg/Kg 73.5 21-129 %Rec ND 4.8 mg/Kg 106 37.7-212 %Rec ND 0.024 mg/Kg ND 0.048 mg/Kg ND 0.048 mg/Kg ND 0.048 mg/Kg ND 0.095 mg/Kg 99.3 70-130 %Rec	ND 15 mg/Kg 1 ND 49 mg/Kg 1 73.5 21-129 %Rec 1 ND 4.8 mg/Kg 1 106 37.7-212 %Rec 1 ND 0.024 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.095 mg/Kg 1 99.3 70-130 %Rec 1	

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-186 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 12:05:00 PM

 Lab ID:
 2208E18-032
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 2:36:10 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/26/2022 2:36:10 PM
Surr: DNOP	114	21-129	%Rec	1	8/26/2022 2:36:10 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/25/2022 5:05:00 PM
Surr: BFB	101	37.7-212	%Rec	1	8/25/2022 5:05:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/25/2022 5:05:00 PM
Toluene	ND	0.047	mg/Kg	1	8/25/2022 5:05:00 PM
Ethylbenzene	ND	0.047	mg/Kg	1	8/25/2022 5:05:00 PM
Xylenes, Total	ND	0.095	mg/Kg	1	8/25/2022 5:05:00 PM
Surr: 4-Bromofluorobenzene	99.6	70-130	%Rec	1	8/25/2022 5:05:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	850	60	mg/Kg	20	8/29/2022 12:44:08 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-187 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 12:15:00 PM

 Lab ID:
 2208E18-033
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 2:46:43 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/26/2022 2:46:43 PM
Surr: DNOP	96.5	21-129	%Rec	1	8/26/2022 2:46:43 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/25/2022 5:25:00 PM
Surr: BFB	101	37.7-212	%Rec	1	8/25/2022 5:25:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/25/2022 5:25:00 PM
Toluene	ND	0.050	mg/Kg	1	8/25/2022 5:25:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/25/2022 5:25:00 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/25/2022 5:25:00 PM
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	8/25/2022 5:25:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	930	60	mg/Kg	20	8/29/2022 1:21:23 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-188 4'

Project: Routh SWD Tank Battery

Collection Date: 8/19/2022 12:20:00 PM

Lab ID: 2208E18-034 **Matrix:** SOIL **Received Date:** 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 2:57:16 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/26/2022 2:57:16 PM
Surr: DNOP	75.0	21-129	%Rec	1	8/26/2022 2:57:16 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/25/2022 5:44:00 PM
Surr: BFB	102	37.7-212	%Rec	1	8/25/2022 5:44:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.023	mg/Kg	1	8/25/2022 5:44:00 PM
Toluene	ND	0.047	mg/Kg	1	8/25/2022 5:44:00 PM
Ethylbenzene	ND	0.047	mg/Kg	1	8/25/2022 5:44:00 PM
Xylenes, Total	ND	0.093	mg/Kg	1	8/25/2022 5:44:00 PM
Surr: 4-Bromofluorobenzene	96.6	70-130	%Rec	1	8/25/2022 5:44:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	780	60	mg/Kg	20	8/29/2022 1:33:48 PM

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

Qualifiers:

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

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-189 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 12:25:00 PM

 Lab ID:
 2208E18-035
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: DGH				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 9:36:18 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/26/2022 9:36:18 PM
Surr: DNOP	79.9	21-129	%Rec	1	8/26/2022 9:36:18 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/25/2022 9:37:39 PM
Surr: BFB	99.2	37.7-212	%Rec	1	8/25/2022 9:37:39 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/25/2022 9:37:39 PM
Toluene	ND	0.049	mg/Kg	1	8/25/2022 9:37:39 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/25/2022 9:37:39 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/25/2022 9:37:39 PM
Surr: 4-Bromofluorobenzene	95.2	70-130	%Rec	1	8/25/2022 9:37:39 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	340	60	mg/Kg	20	8/29/2022 1:46:12 PM

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

Qualifiers:

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

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-190 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 12:30:00 PM

 Lab ID:
 2208E18-036
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Result **RL Qual Units** DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/26/2022 10:08:51 PM Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 8/26/2022 10:08:51 PM Surr: DNOP 65.0 21-129 %Rec 1 8/26/2022 10:08:51 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/25/2022 10:48:21 PM 4.6 mg/Kg 1 Surr: BFB 97.3 37.7-212 %Rec 1 8/25/2022 10:48:21 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.023 mg/Kg 8/25/2022 10:48:21 PM 1 Toluene ND 0.046 mg/Kg 1 8/25/2022 10:48:21 PM Ethylbenzene ND 0.046 mg/Kg 1 8/25/2022 10:48:21 PM Xylenes, Total ND 0.093 mg/Kg 1 8/25/2022 10:48:21 PM Surr: 4-Bromofluorobenzene 93.8 70-130 %Rec 1 8/25/2022 10:48:21 PM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride 1400 60 8/29/2022 1:58:38 PM ma/Ka 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-07 0-4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 12:10:00 PM

 Lab ID:
 2208E18-037
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qua	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 10:19:38 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/26/2022 10:19:38 PM
Surr: DNOP	95.4	21-129	%Rec	1	8/26/2022 10:19:38 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/25/2022 11:58:59 PM
Surr: BFB	101	37.7-212	%Rec	1	8/25/2022 11:58:59 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/25/2022 11:58:59 PM
Toluene	ND	0.049	mg/Kg	1	8/25/2022 11:58:59 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/25/2022 11:58:59 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/25/2022 11:58:59 PM
Surr: 4-Bromofluorobenzene	94.5	70-130	%Rec	1	8/25/2022 11:58:59 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	190	60	mg/Kg	20	8/29/2022 2:11:03 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-19 0-4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 9:00:00 AM

 Lab ID:
 2208E18-038
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Result	RL Qu	al Units	DF	Date Analyzed			
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							
ND	15	mg/Kg	1	8/26/2022 10:30:26 PM			
ND	49	mg/Kg	1	8/26/2022 10:30:26 PM			
56.9	21-129	%Rec	1	8/26/2022 10:30:26 PM			
				Analyst: NSB			
ND	4.7	mg/Kg	1	8/26/2022 12:22:29 AM			
97.0	37.7-212	%Rec	1	8/26/2022 12:22:29 AM			
				Analyst: NSB			
ND	0.023	mg/Kg	1	8/26/2022 12:22:29 AM			
ND	0.047	mg/Kg	1	8/26/2022 12:22:29 AM			
ND	0.047	mg/Kg	1	8/26/2022 12:22:29 AM			
ND	0.094	mg/Kg	1	8/26/2022 12:22:29 AM			
92.6	70-130	%Rec	1	8/26/2022 12:22:29 AM			
				Analyst: JTT			
200	60	mg/Kg	20	8/29/2022 2:23:27 PM			
	ND ND 56.9 ND 97.0 ND ND ND 97.0	ND 15 ND 49 56.9 21-129 ND 4.7 97.0 37.7-212 ND 0.023 ND 0.047 ND 0.047 ND 0.094 92.6 70-130	ANICS ND 15 mg/Kg ND 49 mg/Kg 56.9 21-129 %Rec ND 4.7 mg/Kg 97.0 37.7-212 %Rec ND 0.023 mg/Kg ND 0.047 mg/Kg ND 0.047 mg/Kg ND 0.047 mg/Kg ND 0.094 mg/Kg 92.6 70-130 %Rec	ANICS ND 15 mg/Kg 1 ND 49 mg/Kg 1 56.9 21-129 %Rec 1 ND 4.7 mg/Kg 1 97.0 37.7-212 %Rec 1 ND 0.023 mg/Kg 1 ND 0.047 mg/Kg 1 ND 0.047 mg/Kg 1 ND 0.047 mg/Kg 1 ND 0.047 mg/Kg 1 ND 0.094 mg/Kg 1 92.6 70-130 %Rec 1			

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-23 0-4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 9:05:00 AM

 Lab ID:
 2208E18-039
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Result **RL Qual Units** DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/26/2022 10:41:17 PM Motor Oil Range Organics (MRO) ND 46 mg/Kg 1 8/26/2022 10:41:17 PM Surr: DNOP 60.2 21-129 %Rec 1 8/26/2022 10:41:17 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/26/2022 12:46:00 AM 4.6 mg/Kg 1 Surr: BFB 98.2 37.7-212 %Rec 1 8/26/2022 12:46:00 AM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.023 mg/Kg 8/26/2022 12:46:00 AM 1 Toluene ND 0.046 mg/Kg 1 8/26/2022 12:46:00 AM Ethylbenzene ND 0.046 mg/Kg 1 8/26/2022 12:46:00 AM Xylenes, Total ND 0.092 mg/Kg 1 8/26/2022 12:46:00 AM Surr: 4-Bromofluorobenzene 93.7 70-130 %Rec 1 8/26/2022 12:46:00 AM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride 280 61 8/29/2022 2:35:51 PM ma/Ka 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-11 4-6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/22/2022 12:45:00 PM

 Lab ID:
 2208E18-040
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/27/2022 12:07:59 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/27/2022 12:07:59 AM
Surr: DNOP	82.2	21-129	%Rec	1	8/27/2022 12:07:59 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/26/2022 1:09:37 AM
Surr: BFB	94.8	37.7-212	%Rec	1	8/26/2022 1:09:37 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/26/2022 1:09:37 AM
Toluene	ND	0.048	mg/Kg	1	8/26/2022 1:09:37 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/26/2022 1:09:37 AM
Xylenes, Total	ND	0.096	mg/Kg	1	8/26/2022 1:09:37 AM
Surr: 4-Bromofluorobenzene	92.0	70-130	%Rec	1	8/26/2022 1:09:37 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	ND	60	mg/Kg	20	8/29/2022 2:48:15 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-12 4-6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/22/2022 12:50:00 PM

 Lab ID:
 2208E18-041
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 11:02:59 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/26/2022 11:02:59 PM
Surr: DNOP	74.1	21-129	%Rec	1	8/26/2022 11:02:59 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/26/2022 1:33:14 AM
Surr: BFB	96.6	37.7-212	%Rec	1	8/26/2022 1:33:14 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/26/2022 1:33:14 AM
Toluene	ND	0.048	mg/Kg	1	8/26/2022 1:33:14 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/26/2022 1:33:14 AM
Xylenes, Total	ND	0.095	mg/Kg	1	8/26/2022 1:33:14 AM
Surr: 4-Bromofluorobenzene	92.2	70-130	%Rec	1	8/26/2022 1:33:14 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	60	mg/Kg	20	8/30/2022 10:58:48 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-13 4-6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/22/2022 12:55:00 PM

 Lab ID:
 2208E18-042
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 11:13:49 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/26/2022 11:13:49 PM
Surr: DNOP	85.0	21-129	%Rec	1	8/26/2022 11:13:49 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2022 1:56:58 AM
Surr: BFB	94.3	37.7-212	%Rec	1	8/26/2022 1:56:58 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/26/2022 1:56:58 AM
Toluene	ND	0.049	mg/Kg	1	8/26/2022 1:56:58 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2022 1:56:58 AM
Xylenes, Total	ND	0.098	mg/Kg	1	8/26/2022 1:56:58 AM
Surr: 4-Bromofluorobenzene	90.8	70-130	%Rec	1	8/26/2022 1:56:58 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	60	mg/Kg	20	8/30/2022 11:11:13 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-24 4-10'

Project:Routh SWD Tank BatteryCollection Date: 8/22/2022 1:00:00 PMLab ID:2208E18-043Matrix: SOILReceived Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: DGH				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 11:24:38 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/26/2022 11:24:38 PM
Surr: DNOP	88.4	21-129	%Rec	1	8/26/2022 11:24:38 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2022 2:20:36 AM
Surr: BFB	95.7	37.7-212	%Rec	1	8/26/2022 2:20:36 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/26/2022 2:20:36 AM
Toluene	ND	0.049	mg/Kg	1	8/26/2022 2:20:36 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2022 2:20:36 AM
Xylenes, Total	ND	0.098	mg/Kg	1	8/26/2022 2:20:36 AM
Surr: 4-Bromofluorobenzene	91.0	70-130	%Rec	1	8/26/2022 2:20:36 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	60	mg/Kg	20	8/30/2022 11:23:37 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-25 6-10'

Project: Routh SWD Tank Battery
 Collection Date: 8/22/2022 1:05:00 PM

 Lab ID: 2208E18-044
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 11:35:27 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/26/2022 11:35:27 PM
Surr: DNOP	89.1	21-129	%Rec	1	8/26/2022 11:35:27 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/26/2022 2:44:10 AM
Surr: BFB	96.4	37.7-212	%Rec	1	8/26/2022 2:44:10 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	8/26/2022 2:44:10 AM
Toluene	ND	0.046	mg/Kg	1	8/26/2022 2:44:10 AM
Ethylbenzene	ND	0.046	mg/Kg	1	8/26/2022 2:44:10 AM
Xylenes, Total	ND	0.093	mg/Kg	1	8/26/2022 2:44:10 AM
Surr: 4-Bromofluorobenzene	92.5	70-130	%Rec	1	8/26/2022 2:44:10 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	60	mg/Kg	20	8/30/2022 11:36:02 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-26 4-9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/22/2022 1:10:00 PM

 Lab ID:
 2208E18-045
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/26/2022 11:46:17 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/26/2022 11:46:17 PM
Surr: DNOP	85.3	21-129	%Rec	1	8/26/2022 11:46:17 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/26/2022 3:31:17 AM
Surr: BFB	100	37.7-212	%Rec	1	8/26/2022 3:31:17 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/26/2022 3:31:17 AM
Toluene	ND	0.050	mg/Kg	1	8/26/2022 3:31:17 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/26/2022 3:31:17 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/26/2022 3:31:17 AM
Surr: 4-Bromofluorobenzene	94.6	70-130	%Rec	1	8/26/2022 3:31:17 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	80	60	mg/Kg	20	8/30/2022 12:13:16 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-27 4-7'

Project: Routh SWD Tank Battery **Collection Date:** 8/22/2022 1:15:00 PM

Lab ID: 2208E18-046 **Matrix:** SOIL **Received Date:** 8/24/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/26/2022 11:57:07 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/26/2022 11:57:07 PM
Surr: DNOP	100	21-129	%Rec	1	8/26/2022 11:57:07 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/26/2022 3:54:49 AM
Surr: BFB	97.9	37.7-212	%Rec	1	8/26/2022 3:54:49 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/26/2022 3:54:49 AM
Toluene	ND	0.048	mg/Kg	1	8/26/2022 3:54:49 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/26/2022 3:54:49 AM
Xylenes, Total	ND	0.095	mg/Kg	1	8/26/2022 3:54:49 AM
Surr: 4-Bromofluorobenzene	92.8	70-130	%Rec	1	8/26/2022 3:54:49 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	60	mg/Kg	20	8/30/2022 12:25:41 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BS22-191 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/19/2022 12:35:00 PM

 Lab ID:
 2208E18-047
 Matrix: SOIL
 Received Date: 8/24/2022 7:15:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/30/2022 3:44:51 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/30/2022 3:44:51 PM
Surr: DNOP	97.2	21-129	%Rec	1	8/30/2022 3:44:51 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2022 4:18:20 AM
Surr: BFB	95.9	37.7-212	%Rec	1	8/26/2022 4:18:20 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/26/2022 4:18:20 AM
Toluene	ND	0.049	mg/Kg	1	8/26/2022 4:18:20 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2022 4:18:20 AM
Xylenes, Total	ND	0.097	mg/Kg	1	8/26/2022 4:18:20 AM
Surr: 4-Bromofluorobenzene	91.6	70-130	%Rec	1	8/26/2022 4:18:20 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	1100	60	mg/Kg	20	8/30/2022 12:38:06 PM

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

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208E18

02-Sep-22

Client: Vertex Resources Services, Inc. **Project:** Routh SWD Tank Battery

Sample ID: MB-69809 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69809 RunNo: 90607

Prep Date: Analysis Date: 8/26/2022 SeqNo: 3238612 8/26/2022 Units: mq/Kq

SPK value SPK Ref Val %REC **RPDLimit** Analyte Result PQL LowLimit HighLimit %RPD Qual

Chloride ND 1.5

Sample ID: LCS-69809 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69809 RunNo: 90607

Prep Date: 8/26/2022 Analysis Date: 8/26/2022 SeqNo: 3238613 Units: mg/Kg

SPK value SPK Ref Val %RPD **RPDLimit** Analyte Result PQL %REC LowLimit HighLimit Qual

Chloride 14 1.5 15.00 95.5 110

Sample ID: MB-69810 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69810 RunNo: 90633

Prep Date: 8/28/2022 Analysis Date: 8/28/2022 SeqNo: 3238679 Units: mg/Kg

Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte

Chloride ND 1.5

Sample ID: LCS-69810 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69810 RunNo: 90633

Analysis Date: 8/28/2022 Prep Date: 8/28/2022 SeqNo: 3238680 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Chloride 14 1.5 15.00 93.2 90

Sample ID: MB-69816 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69816 RunNo: 90648

Prep Date: 8/29/2022 Analysis Date: 8/29/2022 SeqNo: 3239381 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Chloride ND 1.5

Sample ID: LCS-69816 TestCode: EPA Method 300.0: Anions SampType: Ics

Client ID: LCSS Batch ID: 69816 RunNo: 90648

Prep Date: 8/29/2022 Analysis Date: 8/29/2022 SeqNo: 3239382 Units: mg/Kg

%RPD **RPDLimit** Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit Qual

14 1.5 Chloride 15.00 95.6 110

Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded Н

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank

Estimated value

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Limit Page 48 of 57

Hall Environmental Analysis Laboratory, Inc.

2208E18 02-Sep-22

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-69846 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69846 RunNo: 90664

Prep Date: 8/30/2022 Analysis Date: 8/30/2022 SeqNo: 3241292 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69846 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69846 RunNo: 90664

Prep Date: 8/30/2022 Analysis Date: 8/30/2022 SeqNo: 3241294 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 93.1 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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

2208E18

WO#:

02-Sep-22

Client:	Vertex Resources Services, Inc.
Project:	Routh SWD Tank Battery

Project: Routh SV	WD Tank Battery								
Sample ID: LCS-69750	SampType: LC	s	Tes	tCode: EP	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch ID: 69	750	F	RunNo: 90576					
Prep Date: 8/24/2022	Analysis Date: 8	/25/2022	SeqNo: 3237027			Units: mg/Kg			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38 15	50.00	0	75.6	64.4	127			
Surr: DNOP	4.0	5.000		80.1	21	129			
Sample ID: MB-69750	SampType: M I	BLK	Tes	tCode: EP	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch ID: 69	F	RunNo: 90	576					
Prep Date: 8/24/2022	Analysis Date: 8	9	SeqNo: 32	37029	Units: mg/K	(g			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 15								
Motor Oil Range Organics (MRO)	ND 50								
Surr: DNOP	10	10.00		102	21	129			
Sample ID: 2208E18-015AMS	SampType: M	S	Tes	tCode: EP	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: BES22-169	Batch ID: 69	750	RunNo: 90576						
Prep Date: 8/24/2022	Analysis Date: 8	/25/2022	SeqNo: 3237278 Units: mg/Kg						
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	150 13	43.67	0	343	36.1	154			S
Surr: DNOP	5.1	4.367		118	21	129			
Sample ID: 2208E18-015AMS	D SampType: M	SD	Tes	tCode: EP	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: BES22-169	Batch ID: 69	750	F	RunNo: 90	576				
Prep Date: 8/24/2022	Analysis Date: 8	/25/2022	\$	SeqNo: 32	37279	Units: mg/K	ζg		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	61 15	50.05	0	122	36.1	154	84.4	33.9	R
Surr: DNOP	5.1	5.005		102	21	129	0	0	
Sample ID: LCS-69741	SampType: L0	s	Tes	tCode: EP	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch ID: 69	741	F	RunNo: 90	606				
Prep Date: 8/24/2022	Analysis Date: 8	/26/2022	S	SeqNo: 32	37339	Units: mg/K	ζg		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40 15	50.00	0	79.1	64.4	127			

Qualifiers:

Surr: DNOP

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

3.5

Analyte detected in the associated Method Blank

71.0

21

129

Estimated value

5.000

- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#:

2208E18 02-Sep-22

Client: Vertex Resources Services, Inc. Project. Routh SWD Tank Battery

Project: Routh S	WD Tank Ba	ittery								
Sample ID: MB-69741	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: PBS	Batch I	ID: 69 7	741	RunNo: 90606						
Prep Date: 8/24/2022	Analysis Da	te: 8/ 2	26/2022	\$	SeqNo: 32	238732	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	6.5		10.00		64.7	21	129			
Sample ID: LCS-69775	SampTy	pe: LC	s	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch I	ID: 69 7	775	F	RunNo: 90	0606				
Prep Date: 8/25/2022	Analysis Da	te: 8/	26/2022	9	SeqNo: 32	238776	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	15	50.00	0	92.8	64.4	127			
Surr: DNOP	4.3		5.000		85.2	21	129			
Sample ID: MB-69775	SampTy	ре: МЕ	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organ						
Client ID: PBS	Batch I	ID: 69 7	775	F	RunNo: 90	0606				
Prep Date: 8/25/2022	Analysis Da	te: 8/	26/2022	SeqNo: 3238777 Units: mg/Kg				(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.4		10.00		84.1	21	129			
Sample ID: 2208E18-035AMS	SampTy _l	pe: MS	3	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: BES22-189 4'	Batch I	ID: 69 7	775	F	RunNo: 90	0606				
Prep Date: 8/25/2022	Analysis Da	te: 8/	26/2022	8	SeqNo: 32	238778	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	14	46.86	0	88.5	36.1	154			
Surr: DNOP	3.3		4.686		71.3	21	129			
Sample ID: 2208E18-035AMS	SD SampTy	pe: MS	SD	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: BES22-189 4'	Batch I	ID: 69 7	775	F	RunNo: 90	0606				
Prep Date: 8/25/2022	Analysis Da	te: 8/	26/2022	\$	SeqNo: 32	238779	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	15	50.10	0	90.5	36.1	154	8.95	33.9	
Surr: DNOP	3.5		5.010		69.5	21	129	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208E18**

02-Sep-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: LCS-69837 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 69837 RunNo: 90655

Prep Date: 8/29/2022 Analysis Date: 8/30/2022 SeqNo: 3239736 Units: %Rec

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

Surr: DNOP 4.6 5.000 91.9 21 129

Sample ID: MB-69837 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **PBS** Batch ID: **69837** RunNo: **90655**

Prep Date: 8/29/2022 Analysis Date: 8/30/2022 SeqNo: 3239737 Units: %Rec

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

Surr: DNOP 10 10.00 101 21 129

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208E18

02-Sep-22

Client:	Vertex Resources Services, Inc.
Project:	Routh SWD Tank Battery

Project: Routh SV	VD Tank Battery								
Sample ID: mb-69732	SampType: MBI	LK	Test	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch ID: 697	32	R	lunNo: 9	0581				
Prep Date: 8/24/2022	Analysis Date: 8/2	5/2022	SeqNo: 3235732			Units: mg/Kg			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND 5.0	1000		400	07.7	040			
Surr: BFB	1000	1000		103	37.7	212			
Sample ID: Ics-69732	SampType: LCS	3	Test	TestCode: EPA Method 8015D: Gasoline Range					
Client ID: LCSS	Batch ID: 697	R	lunNo: 9	0581					
Prep Date: 8/24/2022	Analysis Date: 8/2	5/2022	S	SeqNo: 3	235733	Units: mg/K	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23 5.0	25.00	0	93.8	72.3	137			
Surr: BFB	1900	1000		195	37.7	212			
Sample ID: mb-69740	SampType: MBI	SampType: MBLK TestCode: EPA Method 8						е	
Client ID: PBS	Batch ID: 697	40	R	lunNo: 9	0581				
Prep Date: 8/24/2022	Analysis Date: 8/2	5/2022	S	SeqNo: 3	235756	Units: mg/K	(g		
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		99.6	37.7	212			
Sample ID: Ics-69740	SampType: LCS	3	Test	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: LCSS	Batch ID: 697	40	R	lunNo: 9	0581				
Prep Date: 8/24/2022	Analysis Date: 8/2	5/2022	S	SeqNo: 3	235757	Units: mg/K	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25 5.0	25.00	0	99.4	72.3	137			
Surr: BFB	2000	1000		196	37.7	212			
Sample ID: 2208e18-035ams	SampType: MS		Test	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: BES22-189 4'	Batch ID: 697	40	R	lunNo: 9	0581				
Prep Date: 8/24/2022	Analysis Date: 8/2	5/2022	S	SeqNo: 3	235759	Units: mg/K	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27 5.0	24.78	0	109	70	130			
Surr: BFB	2000	991.1		205	37.7	212			
Sample ID: 2208e18-035amsc	SampType: MSI	D	Test	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: BES22-189 4'	Batch ID: 697	40	RunNo: 90581						
Prep Date: 8/24/2022	Analysis Date: 8/2	5/2022	S	SeqNo: 3	235760	Units: mg/K	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Analysis Date: 8/25/2022

PQL

24

Result

30

6600

2208E18

WO#:

02-Sep-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

SampType: MSD TestCode: EPA Method 8015D: Gasoline Range									
Batch	atch ID: 69740 RunNo: 90581								
Analysis D	ate: 8/	25/2022	8	SeqNo: 3	235760	Units: mg/k	(g		
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
27	5.0	24.75	0	110	70	130	0.339	20	
2100		990.1		208	37.7	212	0	0	
SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Batch	n ID: 69 '	739	F	lunNo: 9	0582				
Analysis D	ate: 8/	25/2022	S	SeqNo: 3	235854	Units: mg/Kg			
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
28	5.0	25.00	0	112	72.3	137			
2300		1000		229	37.7	212			S
SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Batch	n ID: 69 '	739	F	unNo: 9	0582				
Analysis D	ate: 8/	25/2022	S	SeqNo: 3	235855	Units: mg/k	(g		
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ND	5.0								
ND 1000	5.0	1000		104	37.7	212			
1000	5.0 Type: M \$		Tes			212 8015D: Gasc	oline Rang	e	
	Batch Analysis D Result 27 2100 SampT Batch Analysis D Result 28 2300 SampT Batch Analysis D	Batch ID: 69 Analysis Date: 8/ Result PQL 27 5.0 2100 SampType: LC Batch ID: 69 Analysis Date: 8/ Result PQL 28 5.0 2300 SampType: ME Batch ID: 69 Analysis Date: 8/	27 5.0 24.75 2100 990.1 SampType: LCS Batch ID: 69739 Analysis Date: 8/25/2022 Result PQL SPK value 28 5.0 25.00 2300 1000 SampType: MBLK Batch ID: 69739 Analysis Date: 8/25/2022	Batch ID: 69740 R Analysis Date: 8/25/2022 S Result PQL SPK value SPK Ref Val 27 5.0 24.75 0 2100 990.1 990.1 SampType: LCS Test Batch ID: 69739 R Analysis Date: 8/25/2022 S Result PQL SPK value SPK Ref Val 28 5.0 25.00 0 2300 1000 1000 SampType: MBLK Test Batch ID: 69739 R Analysis Date: 8/25/2022 S	Batch ID: 69740 RunNo: 99 Analysis Date: 8/25/2022 SeqNo: 33 Result PQL SPK value SPK Ref Val %REC 27 5.0 24.75 0 110 2100 990.1 208 SampType: LCS TestCode: El Batch ID: 69739 RunNo: 9 Analysis Date: 8/25/2022 SeqNo: 3 Result PQL SPK value SPK Ref Val %REC 28 5.0 25.00 0 112 2300 1000 229 SampType: MBLK TestCode: El Batch ID: 69739 RunNo: 9 Analysis Date: 8/25/2022 SeqNo: 3	RunNo: 90581 Analysis Date: 8/25/2022 SeqNo: 3235760 Result PQL SPK value SPK Ref Val %REC LowLimit 27 5.0 24.75 0 110 70 2100 990.1 208 37.7 SampType: LCS TestCode: EPA Method Batch ID: 69739 RunNo: 90582 Analysis Date: 8/25/2022 SeqNo: 3235854 Result PQL SPK value SPK Ref Val %REC LowLimit 28 5.0 25.00 0 112 72.3 2300 1000 229 37.7 SampType: MBLK TestCode: EPA Method Batch ID: 69739 RunNo: 90582 Analysis Date: 8/25/2022 SeqNo: 3235855	Batch ID: 69740 RunNo: 90581 Analysis Date: 8/25/2022 SeqNo: 3235760 Units: mg/M Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 27 5.0 24.75 0 110 70 130 2100 990.1 208 37.7 212 SampType: LCS TestCode: EPA Method 8015D: Gaso Batch ID: 69739 RunNo: 90582 Analysis Date: 8/25/2022 SeqNo: 3235854 Units: mg/M SeqNo: 3235855 Units: mg/M SampType: MBLK TestCode: EPA Method 8015D: Gaso Batch ID: 69739 RunNo: 90582 Analysis Date: 8/25/2022 SeqNo: 3235855 Units: mg/M	Batch ID: 69740 RunNo: 90581 Analysis Date: 8/25/2022 SeqNo: 3235760 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD 27 5.0 24.75 0 110 70 130 0.339 2100 990.1 TestCode: EPA Method 8015D: Gasoline Rang Batch ID: 69739 RunNo: 90582 Analysis Date: 8/25/2022 SeqNo: 3235854 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD 28 5.0 25.00 0 112 72.3 137 2300 1000 229 37.7 212 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Rang Batch ID: 69739 RunNo: 90582 Analysis Date: 8/25/2022 SeqNo: 3235855 Units: mg/Kg	Batch ID: 69740 RunNo: 90581 Analysis Date: 8/25/2022 SeqNo: 3235760 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit 27 5.0 24.75 0 110 70 130 0.339 20 2100 990.1 TestCode: EPA Method 8015D: Gasoline Range Batch ID: 69739 RunNo: 90582 Analysis Date: 8/25/2022 SeqNo: 3235854 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit MRPD RPDLimit 28 5.0 25.00 0 112 72.3 137 212 72 </td

Sample ID: 2208e18-015amsd	SampTy	/pe: MS	SD	Tes	TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-169	Batch	ID: 69 7	739	F	0582							
Prep Date: 8/24/2022	Analysis Da	ate: 8/	25/2022	SeqNo: 3235858 Units: m				ng/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	35	24	23.63	0	150	70	130	15.3	20	S		
Surr: BFB	6500		4726		138	37.7	212	0	0			

SPK value SPK Ref Val %REC

23.88

4776

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Prep Date: 8/24/2022

Gasoline Range Organics (GRO)

Analyte

Surr: BFB

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

SeqNo: 3235857

127

138

LowLimit

70

37.7

Units: mg/Kg

130

212

%RPD

RPDLimit

Qual

HighLimit

- E 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, Inc.

WO#: **2208E18** *02-Sep-22*

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: mb-69732	Samp	SampType: MBLK			tCode: El					
Client ID: PBS	Batc	h ID: 69	732	F	0581					
Prep Date: 8/24/2022	Analysis D	Date: 8/	25/2022	S	SeqNo: 3	235779	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.5	70	130			
Commis ID: 1 00 00700		I 0					0004B V-1-4			

Sample ID: LCS-69732	Samp1	Гуре: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batc	h ID: 69	732	F	RunNo: 9	0581				
Prep Date: 8/24/2022	Analysis [Date: 8/	25/2022	8	SeqNo: 3	235780	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	85.1	80	120			
Toluene	0.90	0.050	1.000	0	90.5	80	120			
Ethylbenzene	0.91	0.050	1.000	0	91.0	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.8	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	70	130			

Sample ID: mb-69740	SampT	ype: ME	BLK	Test	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batcl	n ID: 69 7	740	R	tunNo: 90	0581				
Prep Date: 8/24/2022	Analysis D	Date: 8/	25/2022	S	SeqNo: 3	235803	Units: mg/K	g		
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	0.95		1.000		94.7	70	130			

Sample ID: LCS-69740	SampT	Гуре: LC	s	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batcl	h ID: 69 7	740	F	RunNo: 9	0581				
Prep Date: 8/24/2022	Analysis D	Date: 8/ 2	25/2022	9	SeqNo: 3	235804	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.4	80	120			
Toluene	0.96	0.050	1.000	0	96.0	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.1	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.8	70	130			

Qualifiers:

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

Page 55 of 57

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208E18**

02-Sep-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: 2208e18-036ams		Type: MS					8021B: Volat	iles		
Client ID: BES22-190 4'		h ID: 69 7			RunNo: 9					
Prep Date: 8/24/2022	Analysis D	Date: 8/ 3	25/2022	S	SeqNo: 3	235807	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.023	0.9285	0	108	68.8	120			
Toluene	1.0	0.046	0.9285	0	112	73.6	124			
Ethylbenzene	1.1	0.046	0.9285	0	114	72.7	129			
Xylenes, Total	3.2	0.093	2.786	0.01766	113	75.7	126			
Surr: 4-Bromofluorobenzene	0.87		0.9285		93.5	70	130			

Sample ID: 2208e18-036amsd	SampT	ype: MS	SD .	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: BES22-190 4'	Batch	1D: 69 7	740	F	RunNo: 90	0581				
Prep Date: 8/24/2022	Analysis D	ate: 8/ 2	25/2022	S	SeqNo: 3	235808	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.023	0.9268	0	107	68.8	120	1.35	20	
Toluene	1.0	0.046	0.9268	0	112	73.6	124	0.472	20	
Ethylbenzene	1.1	0.046	0.9268	0	114	72.7	129	0.122	20	
Xylenes, Total	3.2	0.093	2.780	0.01766	113	75.7	126	0.301	20	
Surr: 4-Bromofluorobenzene	0.87		0.9268		93.8	70	130	0	0	

Sample ID: Ics-69739	SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batcl	n ID: 69 7	739	F	RunNo: 9	0582				
Prep Date: 8/24/2022	Analysis D	Date: 8/ 2	25/2022	S	SeqNo: 3	235884	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.0	80	120			
Toluene	0.92	0.050	1.000	0	92.5	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.2	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.9	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130			

Sample ID: mb-69739	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	iles		
Client ID: PBS	Batch	n ID: 69	739	F	RunNo: 9	0582				
Prep Date: 8/24/2022	Analysis D	oate: 8/	25/2022	8	SeqNo: 3	235885	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.4	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 56 of 57

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208E18**

 $02 ext{-}Sep ext{-}22$

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

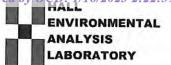
Sample ID: 2208e18-016ams	SampT	Гуре: М S	3	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: BES22-170	Batcl	h ID: 69 7	739	F	RunNo: 9	0582				
Prep Date: 8/24/2022	Analysis D	Date: 8/ 2	25/2022	9	SeqNo: 3	235888	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9785	0	102	68.8	120			
Toluene	1.0	0.049	0.9785	0	106	73.6	124			
Ethylbenzene	1.1	0.049	0.9785	0	110	72.7	129			
Xylenes, Total	3.2	0.098	2.935	0	109	75.7	126			
Surr: 4-Bromofluorobenzene	0.97		0.9785		98.9	70	130			

Sample ID: 2208e18-016amsd	SampT	уре: МS	SD	Tes	tCode: El	PA Method	8021B: Volat	iles	•	•
Client ID: BES22-170	Batch	n ID: 69 7	739	R	lunNo: 90	0582				
Prep Date: 8/24/2022	Analysis D	Date: 8/ 2	25/2022	S	SeqNo: 3	235889	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	0.9881	0	101	68.8	120	0.339	20	
Toluene	1.0	0.049	0.9881	0	105	73.6	124	0.461	20	
Ethylbenzene	1.1	0.049	0.9881	0	108	72.7	129	0.388	20	
Xylenes, Total	3.2	0.099	2.964	0	108	75.7	126	0.490	20	
Surr: 4-Bromofluorobenzene	0.99		0.9881		101	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 57 of 57



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 Nur	nber: 2208E	18	RcptN	lo: 1
Received By: Juan Rojas	8/24/2022 7:15:00	AM	Glana	3	
Completed By: Juan Rojas	8/24/2022 7:24:36	AM	Harris Harris	\$	
Reviewed By: \$ - 24-22			8		
Chain of Custody					
1. Is Chain of Custody complete?		Yes N	/ No	Not Present	
2. How was the sample delivered?		Courie			
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 [Ī	
Sufficient sample volume for indicated test()	s)?	Yes 🗸	No [
7. Are samples (except VOA and ONG) prope	ly preserved?	Yes 🗸	No 🗆	1	
8. Was preservative added to bottles?		Yes 🗌	No 🔽	NA 🗆	
9. Received at least 1 vial with headspace <1/	I" for AQ VOA?	Yes _	No □	NA 🗹	
10. Were any sample containers received broke	en?	Yes	No V		
				# of preserved bottles checked	1.0
Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗸	No 🗆	for pH:	10 1
Are matrices correctly identified on Chain of	Custody?	Yes 🗸	No 🗆		or >12 unless noted)
3. Is it clear what analyses were requested?	ouslody:	Yes 🗸			
4. Were all holding times able to be met?		Yes 🗸		Checked by:	IN8/24/2
(If no, notify customer for authorization.)		100 💷	, , , , , , , , , , , , , , , , , , ,		12.114
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 F	ax In Person	
Regarding:					
Client Instructions:					
16. Additional remarks:					
7. Cooler Information					
The state of the s	eal Intact Seal No	Seal Date	Signed By		

	פוסוו	ا-o-ر	Chain-or-Custody Record	I urn-Around Time:	nd Time:				1			
Client:	Ó		Vertor (EOCI)	☑ Standard	rd K Rush	, Saw			HALL	YST	IRONN	HALL ENVIRONMENTAL
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Mailin	Mailing Address:	SS: EM	1 tile	Rough Sw	SWD Tank	2 Battery	490	1 Hawki	www.nalik	Albiron	www.riaiie11/11/01/11/11/01/11/01/11/01/11/01/01/0	100
			0	Project #:		5	<u>a</u>	505-34	505-345-3975	Para H	505 345 4407	60- 4
Phone #:	#:			22E-	1 80716				A	nalysis	Analysis Request	
email	email or Fax#:			Project Manager:	nager:		_			₽ C	(1	
QA/QC Packa	QA/QC Package:	**	evel 4 (Enll Validation)			Peopin	/ MBC	CB,2	SMIS	OS ԠO	nəsdA	
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Accre.	Accreditation:		☐ Az Compliance ☐ Other	Sampler:	3.PC		a /(- 85	ZON		
	□ EDD (Type)	100		# of Coolers:	S: - IES	001	эвс			,£C		
				Cooler Ten	Cooler Temp(including CF): 10	(00) 97=0-9	5D(30.0	
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	9:45		BES11-158 U			たのび						
	9:50		BES12-159 4			100-						
	9:55		BES22-140 4"			700-						
	10:00		BES12-161 4			-007						
	50:01	-1	BES12-162 4			-COC						
	10:10		BES12-163 4'			-00%						
	10:15		BES22-164 4			-010						
	10:20		BES22-105 4			1/0-						
-	10:25		BESU-166 4			212	-					
9/21	8/22 17:28		Sally Cartar	Received by:	via:	Black Time	Remarks:	2	page	14		
Dafe: Time: F	Time:	Se l	ed by:	Received by:	Via:	Date Time		8	uct	Bill	200	282
N KAL	750		Children L	1	A lowerto	Adralm Sin)					

Matrix Sample Name Type and # Type BES22-174 BES22-175 BES22-175 BES22-176 BES22-176 BES22-176 BES22-177 BES221-177 BES22	O		2-5-	Chain-or-Custody Record	pilpoit iiin					3	1				
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Ch					Project Nam		,			•	led was) ide			-
Project #: Tel. 505-345-3975	Mailing	Address		tile	Routh	SWD Tam	2 Botton.		1901 H	awkin's	WW.IIdl	Albud		al.com	: 1/1
December Project Manager: SPC Octyle Project Manager: SPC Octyle Melitin Validation Melitical Reservative Sample Name Melitical Reservative Second Sample Name Melitical Reservative Second Melitical Reservative Second Melitical Reservative Second Melitical Reservative Second Melitical Reservative Melitical Reservati				0	Project #:		0		Tel 50	5-345	-3975	Fay	404 .	345_4107	8/20
Devolution Molvica Peppin Molvica	Phone #	#:			22E	00-41P					A	nalysis	s Requ	rest	23 6
Devel 4 (Full Validation) Motrica Peppin. Second Motrica Peppin.	email or	Fax#:			Project Mana	iger:		_	(0			^р О		(11)	
Contains	QA/QC F	Package:			MANA	17	.2			3/11	CIAII	S '*C		/pseu	39 P.N
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Outce:	Accredit	tation:	□ Az Cc	ompliance	Sampler:	25					170	^{'7} Ol		ıəse	
# of Coolers: Cooler	□ NEL/	4C	□ Othe		On Ice:	□-Yes	□ No					۷ '	(A	Pre	
Sample Name		(Type)			# of Coolers:)		1.7) w.	
BES12-107 1405 JW 102 -0.13 V V BES12-108 BES12-134 Bate Time Remarks:					Cooler Temp	(including CF):) 9 1 =							olifor	
BES12-167 140% 10.6			Matrix	Sample Name		Preservative Type	C		Section 14 February	4.11				oO letoT	
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BES12-1 167	_	10:35	-	BES22-168	3 ~	-	6/0-	-			4				
BES22-170	_	10:40					100								
BES22-171		10:45		RES 22-170			7/0-								
11:05 BES 22-174 -019 -019		10:50		BES22-171			£10-								
BES12-173		10:55					-CIX								
BES 22 - 174		11:00		BES12-173			610-								
BES22-736		(1:05					020								
BES22-176		01:10					-021								
BES12-179		11:15		BES22-170			-025								
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ランプ イングラング	San	ME		3	ful	Merre	8/24/12 7.W)		di	LCT	16	15	96	83 of S

Matrix Sam Cother Other Soil Barrished by:	ANALYSIS ANALYSIS www.hallenviron Hawkins NE - Albuqu	1年: 505-545-5975 Fax 505-345-4107 Analysis Request	Project Manager: Monica Peppin SIMS SIMS CB's CB's SIMS	Sampler: \$PC No On Ice: A On Ice:	D (GR) hod 50 3310 C 3310 C NO3, Notals	Container Preservative HEAL No. Type and # Type	4' 1403 jar ice -625 VV	4,		'	4'	4'		522 186 4° -032	184	188 41	189	0 4' -03	Received by: Via: Date Time Remarks: page 3/4
	Vertex (EOG) Project Address: On Jill Project Project	2	Project □ Level 4 (Full Validation)	mpliance		Matrix Sample Name Type ar		E	BES12-181 4'	BES12-181 4'		BES22-184 4'	BES12-185 4'	74		188	189	1/2 0	Sally Cartar (MM)

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					Project Name:	le:	0				714	OTO.	LAB	ANALTSIS LABORATOR	O RY
Mailing Address:	ddress		on kill		Routh	SWD Tan	Routh SND Tank Battory	46	www.h 4901 Hawkins NE	www kins N	<u>a</u>	vironme	www.hallenvironmental.com	07100	
			>		Project #:		0	· F	A 505	345 36		anhne.	מתפי ואואו	601.00	
Phone #:					22E-	9H00-3	2		1 el. 303-343-3973	36-040	Anal	rax 50	Fax 505-345-4107	/0/	ı
email or Fax#:	-ax#:				Project Manager:	ager:					†(t	(;		-
QA/QC Package: ☐ Standard	ackage: ard		☐ Level 4 (Full Validation)	Validation)	Mov	Morrica Peppin	pin	18021 S / MRC		SWIS	OS '⁵Oc		wesq∀		
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					Cooler Temp(including CF);	(including CF);	(c) 9:150-9		ioitee	y 83.		(AO			
Date	Time	Matrix	Sample Name	Φ	Container Type and #	Preservative Type	HEAL NO.		9081 P6 M) BQ3	d sHA	3 ASS 3 F., B	V) 09Z	S) 07S otal Co		
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

September 02, 2022

Monica Peppin
EOG
105 South Fourth Street
Artesia, NM 88210
TEL:
FAX

RE: Routh SWD Tank Battery OrderNo.: 2208F02

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 26 sample(s) on 8/25/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: WES22-03 4-7'

Project: Routh SWD Tank Battery **Collection Date:** 8/23/2022 9:25:00 AM

Lab ID: 2208F02-001 **Matrix:** SOIL **Received Date:** 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	CAS
Chloride	ND	60	mg/Kg	20	8/30/2022 10:04:39 PM	69866
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/29/2022 7:13:19 PM	69807
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/29/2022 7:13:19 PM	69807
Surr: DNOP	98.0	21-129	%Rec	1	8/29/2022 7:13:19 PM	69807
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/26/2022 3:07:00 PM	69768
Surr: BFB	105	37.7-212	%Rec	1	8/26/2022 3:07:00 PM	69768
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.024	mg/Kg	1	8/26/2022 3:07:00 PM	69768
Toluene	ND	0.048	mg/Kg	1	8/26/2022 3:07:00 PM	69768
Ethylbenzene	ND	0.048	mg/Kg	1	8/26/2022 3:07:00 PM	69768
Xylenes, Total	ND	0.097	mg/Kg	1	8/26/2022 3:07:00 PM	69768
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	8/26/2022 3:07:00 PM	69768

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: WES22-20 0-4'

Project: Routh SWD Tank Battery **Collection Date:** 8/23/2022 9:30:00 AM

Lab ID: 2208F02-002 **Matrix:** SOIL **Received Date:** 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	CAS
Chloride	89	60	mg/Kg	20	8/30/2022 10:41:41 PM	69866
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/29/2022 7:24:10 PM	69807
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/29/2022 7:24:10 PM	69807
Surr: DNOP	117	21-129	%Rec	1	8/29/2022 7:24:10 PM	69807
EPA METHOD 8015D: GASOLINE RANGE					Analyst	CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/26/2022 3:27:00 PM	69768
Surr: BFB	104	37.7-212	%Rec	1	8/26/2022 3:27:00 PM	69768
EPA METHOD 8021B: VOLATILES					Analyst	CCM
Benzene	ND	0.025	mg/Kg	1	8/26/2022 3:27:00 PM	69768
Toluene	ND	0.050	mg/Kg	1	8/26/2022 3:27:00 PM	69768
Ethylbenzene	ND	0.050	mg/Kg	1	8/26/2022 3:27:00 PM	69768
Xylenes, Total	ND	0.099	mg/Kg	1	8/26/2022 3:27:00 PM	69768
Surr: 4-Bromofluorobenzene	99.7	70-130	%Rec	1	8/26/2022 3:27:00 PM	69768

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Xylenes, Total

Surr: 4-Bromofluorobenzene

Analytical Report Lab Order 2208F02

Date Reported: 9/2/2022

8/26/2022 3:46:00 PM

8/26/2022 3:46:00 PM

69768

69768

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: WES22-22 0-4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 9:35:00 AM

 Lab ID:
 2208F02-003
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: CAS Chloride 350 60 mg/Kg 20 8/30/2022 10:54:01 PM 69866 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 8/29/2022 7:35:00 PM Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 8/29/2022 7:35:00 PM 69807 Surr: DNOP 115 21-129 %Rec 8/29/2022 7:35:00 PM 69807 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM 8/26/2022 3:46:00 PM Gasoline Range Organics (GRO) ND 69768 4.7 mg/Kg 1 Surr: BFB 106 37.7-212 %Rec 8/26/2022 3:46:00 PM 69768 Analyst: CCM **EPA METHOD 8021B: VOLATILES** ND 8/26/2022 3:46:00 PM 69768 Benzene 0.023 mg/Kg Toluene ND 0.047 mg/Kg 8/26/2022 3:46:00 PM 69768 Ethylbenzene ND 0.047 mg/Kg 1 8/26/2022 3:46:00 PM 69768

ND

103

0.094

70-130

mg/Kg

%Rec

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-152 4'

Project: Routh SWD Tank Battery **Collection Date:** 8/23/2022 9:40:00 AM

Lab ID: 2208F02-004 **Matrix:** SOIL **Received Date:** 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	CAS
Chloride	140	59	mg/Kg	20	8/30/2022 11:31:03 PM	69866
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/29/2022 7:45:56 PM	69807
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/29/2022 7:45:56 PM	69807
Surr: DNOP	100	21-129	%Rec	1	8/29/2022 7:45:56 PM	69807
EPA METHOD 8015D: GASOLINE RANGE					Analyst	CCM
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/26/2022 4:06:00 PM	69768
Surr: BFB	106	37.7-212	%Rec	1	8/26/2022 4:06:00 PM	69768
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.024	mg/Kg	1	8/26/2022 4:06:00 PM	69768
Toluene	ND	0.047	mg/Kg	1	8/26/2022 4:06:00 PM	69768
Ethylbenzene	ND	0.047	mg/Kg	1	8/26/2022 4:06:00 PM	69768
Xylenes, Total	ND	0.095	mg/Kg	1	8/26/2022 4:06:00 PM	69768
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	8/26/2022 4:06:00 PM	69768

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-153 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 9:45:00 AM

 Lab ID:
 2208F02-005
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: CAS Chloride ND 61 mg/Kg 20 8/30/2022 11:43:24 PM 69866 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 8/29/2022 7:56:46 PM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 8/29/2022 7:56:46 PM 69807 Surr: DNOP 98.9 21-129 %Rec 8/29/2022 7:56:46 PM 69807 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM 8/26/2022 4:26:00 PM Gasoline Range Organics (GRO) ND 69768 4.7 mg/Kg 1 Surr: BFB 105 37.7-212 %Rec 8/26/2022 4:26:00 PM 69768 Analyst: CCM **EPA METHOD 8021B: VOLATILES** ND 8/26/2022 4:26:00 PM 69768 Benzene 0.024 mg/Kg Toluene ND 0.047 mg/Kg 8/26/2022 4:26:00 PM 69768 Ethylbenzene ND 0.047 mg/Kg 1 8/26/2022 4:26:00 PM 69768 Xylenes, Total ND 0.095 mg/Kg 8/26/2022 4:26:00 PM 69768 Surr: 4-Bromofluorobenzene 70-130 8/26/2022 4:26:00 PM 101 %Rec 69768

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-154 4'

Project: Routh SWD Tank Battery **Collection Date:** 8/23/2022 9:50:00 AM

Lab ID: 2208F02-006 **Matrix:** SOIL **Received Date:** 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: ЈМТ
Chloride	ND	60	mg/Kg	20	8/31/2022 1:54:46 PM	69881
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/29/2022 8:07:35 PM	69807
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/29/2022 8:07:35 PM	69807
Surr: DNOP	96.7	21-129	%Rec	1	8/29/2022 8:07:35 PM	69807
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2022 4:46:00 PM	69768
Surr: BFB	104	37.7-212	%Rec	1	8/26/2022 4:46:00 PM	69768
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.025	mg/Kg	1	8/26/2022 4:46:00 PM	69768
Toluene	ND	0.049	mg/Kg	1	8/26/2022 4:46:00 PM	69768
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2022 4:46:00 PM	69768
Xylenes, Total	ND	0.099	mg/Kg	1	8/26/2022 4:46:00 PM	69768
Surr: 4-Bromofluorobenzene	98.8	70-130	%Rec	1	8/26/2022 4:46:00 PM	69768

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: WES22-28 4-7'

Project: Routh SWD Tank Battery **Collection Date:** 8/23/2022 9:55:00 AM

Lab ID: 2208F02-007 **Matrix:** SOIL **Received Date:** 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	: JMT
Chloride	ND	60	mg/Kg	20	8/31/2022 2:32:00 PM	69881
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/29/2022 8:50:26 PM	69801
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/29/2022 8:50:26 PM	69801
Surr: DNOP	92.5	21-129	%Rec	1	8/29/2022 8:50:26 PM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2022 6:44:00 PM	69774
Surr: BFB	102	37.7-212	%Rec	1	8/26/2022 6:44:00 PM	69774
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.025	mg/Kg	1	8/26/2022 6:44:00 PM	69774
Toluene	ND	0.049	mg/Kg	1	8/26/2022 6:44:00 PM	69774
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2022 6:44:00 PM	69774
Xylenes, Total	ND	0.098	mg/Kg	1	8/26/2022 6:44:00 PM	69774
Surr: 4-Bromofluorobenzene	98.3	70-130	%Rec	1	8/26/2022 6:44:00 PM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: WES22-29 4-7

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 10:00:00 AM

 Lab ID:
 2208F02-008
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride ND 60 mg/Kg 20 8/31/2022 3:34:01 PM 69881 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 15 mg/Kg 8/29/2022 9:22:33 PM Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 8/29/2022 9:22:33 PM 69801 Surr: DNOP 93.5 21-129 %Rec 8/29/2022 9:22:33 PM 69801 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM 8/26/2022 7:43:00 PM Gasoline Range Organics (GRO) ND 69774 4.9 mg/Kg 1 Surr: BFB 37.7-212 %Rec 8/26/2022 7:43:00 PM 69774 111 Analyst: CCM **EPA METHOD 8021B: VOLATILES** ND 8/26/2022 7:43:00 PM 69774 Benzene 0.025 mg/Kg Toluene ND 0.049 mg/Kg 8/26/2022 7:43:00 PM 69774 Ethylbenzene ND 0.049 mg/Kg 1 8/26/2022 7:43:00 PM 69774 Xylenes, Total ND 0.099 mg/Kg 8/26/2022 7:43:00 PM 69774 Surr: 4-Bromofluorobenzene 70-130 100 %Rec 8/26/2022 7:43:00 PM 69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: WES22-30 4-10'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 10:05:00 AM

 Lab ID:
 2208F02-009
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	200	61	mg/Kg	20	8/31/2022 3:46:26 PM	69881
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/29/2022 9:33:14 PM	69801
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/29/2022 9:33:14 PM	69801
Surr: DNOP	101	21-129	%Rec	1	8/29/2022 9:33:14 PM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2022 8:42:00 PM	69774
Surr: BFB	105	37.7-212	%Rec	1	8/26/2022 8:42:00 PM	69774
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.024	mg/Kg	1	8/26/2022 8:42:00 PM	69774
Toluene	ND	0.049	mg/Kg	1	8/26/2022 8:42:00 PM	69774
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2022 8:42:00 PM	69774
Xylenes, Total	ND	0.098	mg/Kg	1	8/26/2022 8:42:00 PM	69774
Surr: 4-Bromofluorobenzene	96.6	70-130	%Rec	1	8/26/2022 8:42:00 PM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-192 4'

Project: Routh SWD Tank Battery **Collection Date:** 8/23/2022 10:10:00 AM

Lab ID: 2208F02-010 **Matrix:** SOIL **Received Date:** 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: ЈМТ
Chloride	ND	60	mg/Kg	20	8/31/2022 3:58:50 PM	69881
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	8/29/2022 9:43:55 PM	69801
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	8/29/2022 9:43:55 PM	69801
Surr: DNOP	91.0	21-129	%Rec	1	8/29/2022 9:43:55 PM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2022 9:01:00 PM	69774
Surr: BFB	103	37.7-212	%Rec	1	8/26/2022 9:01:00 PM	69774
EPA METHOD 8021B: VOLATILES					Analyst	:: CCM
Benzene	ND	0.024	mg/Kg	1	8/26/2022 9:01:00 PM	69774
Toluene	ND	0.049	mg/Kg	1	8/26/2022 9:01:00 PM	69774
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2022 9:01:00 PM	69774
Xylenes, Total	ND	0.098	mg/Kg	1	8/26/2022 9:01:00 PM	69774
Surr: 4-Bromofluorobenzene	97.4	70-130	%Rec	1	8/26/2022 9:01:00 PM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-193 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 10:15:00 AM

 Lab ID:
 2208F02-011
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	ND	60	mg/Kg	20	8/31/2022 4:11:15 PM	69881
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/29/2022 9:54:33 PM	69801
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/29/2022 9:54:33 PM	69801
Surr: DNOP	94.4	21-129	%Rec	1	8/29/2022 9:54:33 PM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/26/2022 9:21:00 PM	69774
Surr: BFB	101	37.7-212	%Rec	1	8/26/2022 9:21:00 PM	69774
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.025	mg/Kg	1	8/26/2022 9:21:00 PM	69774
Toluene	ND	0.050	mg/Kg	1	8/26/2022 9:21:00 PM	69774
Ethylbenzene	ND	0.050	mg/Kg	1	8/26/2022 9:21:00 PM	69774
Xylenes, Total	ND	0.099	mg/Kg	1	8/26/2022 9:21:00 PM	69774
Surr: 4-Bromofluorobenzene	97.9	70-130	%Rec	1	8/26/2022 9:21:00 PM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-194 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 10:20:00 AM

 Lab ID:
 2208F02-012
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	ND	60	mg/Kg	20	8/31/2022 4:23:39 PM	69881
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/29/2022 10:05:11 PM	69801
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/29/2022 10:05:11 PM	69801
Surr: DNOP	91.5	21-129	%Rec	1	8/29/2022 10:05:11 PM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/26/2022 9:41:00 PM	69774
Surr: BFB	96.3	37.7-212	%Rec	1	8/26/2022 9:41:00 PM	69774
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.025	mg/Kg	1	8/26/2022 9:41:00 PM	69774
Toluene	ND	0.050	mg/Kg	1	8/26/2022 9:41:00 PM	69774
Ethylbenzene	ND	0.050	mg/Kg	1	8/26/2022 9:41:00 PM	69774
Xylenes, Total	ND	0.099	mg/Kg	1	8/26/2022 9:41:00 PM	69774
Surr: 4-Bromofluorobenzene	94.7	70-130	%Rec	1	8/26/2022 9:41:00 PM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-195 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 10:25:00 AM

 Lab ID:
 2208F02-013
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	ND	60	mg/Kg	20	8/31/2022 4:36:04 PM	69881
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/29/2022 10:15:49 PM	69801
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/29/2022 10:15:49 PM	69801
Surr: DNOP	93.8	21-129	%Rec	1	8/29/2022 10:15:49 PM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/26/2022 10:00:00 PM	69774
Surr: BFB	104	37.7-212	%Rec	1	8/26/2022 10:00:00 PM	69774
EPA METHOD 8021B: VOLATILES					Analyst	CCM
Benzene	ND	0.025	mg/Kg	1	8/26/2022 10:00:00 PM	69774
Toluene	ND	0.050	mg/Kg	1	8/26/2022 10:00:00 PM	69774
Ethylbenzene	ND	0.050	mg/Kg	1	8/26/2022 10:00:00 PM	69774
Xylenes, Total	ND	0.10	mg/Kg	1	8/26/2022 10:00:00 PM	69774
Surr: 4-Bromofluorobenzene	97.3	70-130	%Rec	1	8/26/2022 10:00:00 PM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-196 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 10:30:00 AM

 Lab ID:
 2208F02-014
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	ND	60	mg/Kg	20	8/31/2022 4:48:28 PM	69881
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/29/2022 10:26:26 PM	69801
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/29/2022 10:26:26 PM	69801
Surr: DNOP	92.3	21-129	%Rec	1	8/29/2022 10:26:26 PM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2022 10:20:00 PM	69774
Surr: BFB	104	37.7-212	%Rec	1	8/26/2022 10:20:00 PM	69774
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.025	mg/Kg	1	8/26/2022 10:20:00 PM	69774
Toluene	ND	0.049	mg/Kg	1	8/26/2022 10:20:00 PM	69774
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2022 10:20:00 PM	69774
Xylenes, Total	ND	0.098	mg/Kg	1	8/26/2022 10:20:00 PM	69774
Surr: 4-Bromofluorobenzene	99.4	70-130	%Rec	1	8/26/2022 10:20:00 PM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-197 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 10:35:00 AM

 Lab ID:
 2208F02-015
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride ND 60 mg/Kg 20 8/31/2022 5:50:30 PM 69877 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 8/29/2022 10:48:00 PM 69801 Motor Oil Range Organics (MRO) ND 8/29/2022 10:48:00 PM 69801 46 mg/Kg 1 Surr: DNOP 95.9 %Rec 8/29/2022 10:48:00 PM 69801 21-129 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM 8/26/2022 10:40:00 PM 69774 Gasoline Range Organics (GRO) ND 4.9 mg/Kg Surr: BFB 103 37.7-212 %Rec 8/26/2022 10:40:00 PM 69774 **EPA METHOD 8021B: VOLATILES** Analyst: CCM ND 8/26/2022 10:40:00 PM 69774 Benzene 0.025 mg/Kg Toluene ND 0.049 mg/Kg 8/26/2022 10:40:00 PM 69774 Ethylbenzene ND 0.049 mg/Kg 1 8/26/2022 10:40:00 PM 69774 Xylenes, Total ND 0.098 mg/Kg 8/26/2022 10:40:00 PM 69774 Surr: 4-Bromofluorobenzene 70-130 8/26/2022 10:40:00 PM 69774 97.3 %Rec

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-198 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 10:40:00 AM

 Lab ID:
 2208F02-016
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	ND	60	mg/Kg	20	8/31/2022 6:27:42 PM	69877
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/29/2022 10:58:58 PM	69801
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/29/2022 10:58:58 PM	69801
Surr: DNOP	96.5	21-129	%Rec	1	8/29/2022 10:58:58 PM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/26/2022 10:59:00 PM	69774
Surr: BFB	105	37.7-212	%Rec	1	8/26/2022 10:59:00 PM	69774
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.025	mg/Kg	1	8/26/2022 10:59:00 PM	69774
Toluene	ND	0.049	mg/Kg	1	8/26/2022 10:59:00 PM	69774
Ethylbenzene	ND	0.049	mg/Kg	1	8/26/2022 10:59:00 PM	69774
Xylenes, Total	ND	0.098	mg/Kg	1	8/26/2022 10:59:00 PM	69774
Surr: 4-Bromofluorobenzene	97.4	70-130	%Rec	1	8/26/2022 10:59:00 PM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-199 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 10:45:00 AM

 Lab ID:
 2208F02-017
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	ND	60	mg/Kg	20	8/31/2022 7:04:56 PM	69877
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/29/2022 11:09:56 PM	69801
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/29/2022 11:09:56 PM	69801
Surr: DNOP	96.4	21-129	%Rec	1	8/29/2022 11:09:56 PM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/26/2022 11:39:00 PM	69774
Surr: BFB	103	37.7-212	%Rec	1	8/26/2022 11:39:00 PM	69774
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.025	mg/Kg	1	8/26/2022 11:39:00 PM	69774
Toluene	ND	0.050	mg/Kg	1	8/26/2022 11:39:00 PM	69774
Ethylbenzene	ND	0.050	mg/Kg	1	8/26/2022 11:39:00 PM	69774
Xylenes, Total	ND	0.10	mg/Kg	1	8/26/2022 11:39:00 PM	69774
Surr: 4-Bromofluorobenzene	96.8	70-130	%Rec	1	8/26/2022 11:39:00 PM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-200 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 10:50:00 AM

 Lab ID:
 2208F02-018
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: ЈМТ
Chloride	ND	60	mg/Kg	20	8/31/2022 7:17:20 PM	69877
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	: DGH
Diesel Range Organics (DRO)	80	14	mg/Kg	1	8/30/2022 12:31:26 PM	69801
Motor Oil Range Organics (MRO)	52	47	mg/Kg	1	8/30/2022 12:31:26 PM	69801
Surr: DNOP	95.9	21-129	%Rec	1	8/30/2022 12:31:26 PM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/26/2022 11:58:00 PM	69774
Surr: BFB	103	37.7-212	%Rec	1	8/26/2022 11:58:00 PM	69774
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.025	mg/Kg	1	8/26/2022 11:58:00 PM	69774
Toluene	ND	0.050	mg/Kg	1	8/26/2022 11:58:00 PM	69774
Ethylbenzene	ND	0.050	mg/Kg	1	8/26/2022 11:58:00 PM	69774
Xylenes, Total	ND	0.10	mg/Kg	1	8/26/2022 11:58:00 PM	69774
Surr: 4-Bromofluorobenzene	98.2	70-130	%Rec	1	8/26/2022 11:58:00 PM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-201 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 11:00:00 AM

 Lab ID:
 2208F02-019
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride 210 60 mg/Kg 20 8/31/2022 7:54:34 PM 69877 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 8/29/2022 11:42:55 PM 69801 Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 8/29/2022 11:42:55 PM 69801 Surr: DNOP 101 %Rec 21-129 8/29/2022 11:42:55 PM 69801 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM 8/27/2022 12:18:00 AM 69774 Gasoline Range Organics (GRO) ND 4.8 mg/Kg Surr: BFB 98.5 37.7-212 %Rec 8/27/2022 12:18:00 AM 69774 **EPA METHOD 8021B: VOLATILES** Analyst: CCM ND 0.024 8/27/2022 12:18:00 AM 69774 Benzene mg/Kg Toluene ND 0.048 mg/Kg 8/27/2022 12:18:00 AM 69774 Ethylbenzene ND 0.048 mg/Kg 1 8/27/2022 12:18:00 AM 69774 Xylenes, Total ND 0.096 mg/Kg 8/27/2022 12:18:00 AM 69774 Surr: 4-Bromofluorobenzene 70-130 8/27/2022 12:18:00 AM 69774 97.0 %Rec

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-202 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 11:05:00 AM

 Lab ID:
 2208F02-020
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	140	60	mg/Kg	20	8/31/2022 8:06:59 PM	69877
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/29/2022 11:53:52 PM	69801
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/29/2022 11:53:52 PM	69801
Surr: DNOP	102	21-129	%Rec	1	8/29/2022 11:53:52 PM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/27/2022 12:38:00 AM	69774
Surr: BFB	105	37.7-212	%Rec	1	8/27/2022 12:38:00 AM	69774
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.025	mg/Kg	1	8/27/2022 12:38:00 AM	69774
Toluene	ND	0.049	mg/Kg	1	8/27/2022 12:38:00 AM	69774
Ethylbenzene	ND	0.049	mg/Kg	1	8/27/2022 12:38:00 AM	69774
Xylenes, Total	ND	0.099	mg/Kg	1	8/27/2022 12:38:00 AM	69774
Surr: 4-Bromofluorobenzene	98.5	70-130	%Rec	1	8/27/2022 12:38:00 AM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-203 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 11:10:00 AM

 Lab ID:
 2208F02-021
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride ND 60 mg/Kg 20 8/31/2022 8:19:23 PM 69877 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 15 mg/Kg 8/30/2022 12:04:51 AM 69801 Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 8/30/2022 12:04:51 AM 69801 Surr: DNOP 97.6 %Rec 8/30/2022 12:04:51 AM 69801 21-129 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM 8/27/2022 12:57:00 AM 69774 Gasoline Range Organics (GRO) ND 4.9 mg/Kg Surr: BFB 101 37.7-212 %Rec 8/27/2022 12:57:00 AM 69774 **EPA METHOD 8021B: VOLATILES** Analyst: CCM ND 8/27/2022 12:57:00 AM 69774 Benzene 0.025 mg/Kg Toluene ND 0.049 mg/Kg 8/27/2022 12:57:00 AM 69774 Ethylbenzene ND 0.049 mg/Kg 1 8/27/2022 12:57:00 AM 69774 Xylenes, Total ND 0.099 mg/Kg 8/27/2022 12:57:00 AM 69774 Surr: 4-Bromofluorobenzene 70-130 8/27/2022 12:57:00 AM 69774 97.9 %Rec

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-204 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 11:15:00 AM

 Lab ID:
 2208F02-022
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: ЈМТ
Chloride	120	60	mg/Kg	20	8/31/2022 8:31:48 PM	69877
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/30/2022 12:15:50 AM	69801
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/30/2022 12:15:50 AM	69801
Surr: DNOP	93.7	21-129	%Rec	1	8/30/2022 12:15:50 AM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/27/2022 1:17:00 AM	69774
Surr: BFB	102	37.7-212	%Rec	1	8/27/2022 1:17:00 AM	69774
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.025	mg/Kg	1	8/27/2022 1:17:00 AM	69774
Toluene	ND	0.049	mg/Kg	1	8/27/2022 1:17:00 AM	69774
Ethylbenzene	ND	0.049	mg/Kg	1	8/27/2022 1:17:00 AM	69774
Xylenes, Total	ND	0.099	mg/Kg	1	8/27/2022 1:17:00 AM	69774
Surr: 4-Bromofluorobenzene	95.3	70-130	%Rec	1	8/27/2022 1:17:00 AM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-205 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 11:20:00 AM

 Lab ID:
 2208F02-023
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride 63 60 mg/Kg 20 8/31/2022 8:44:12 PM 69877 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 13 mg/Kg 8/30/2022 12:26:50 AM 69801 Motor Oil Range Organics (MRO) ND 44 mg/Kg 1 8/30/2022 12:26:50 AM 69801 Surr: DNOP 90.1 %Rec 21-129 8/30/2022 12:26:50 AM 69801 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM 8/27/2022 1:36:00 AM Gasoline Range Organics (GRO) ND 69774 4.9 mg/Kg Surr: BFB 104 37.7-212 %Rec 8/27/2022 1:36:00 AM 69774 **EPA METHOD 8021B: VOLATILES** Analyst: CCM ND 8/27/2022 1:36:00 AM 69774 Benzene 0.024 mg/Kg Toluene ND 0.049 mg/Kg 8/27/2022 1:36:00 AM 69774 Ethylbenzene ND 0.049 mg/Kg 1 8/27/2022 1:36:00 AM 69774 Xylenes, Total ND 0.098 mg/Kg 8/27/2022 1:36:00 AM 69774 Surr: 4-Bromofluorobenzene 70-130 96.8 %Rec 8/27/2022 1:36:00 AM 69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-206 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 11:25:00 AM

 Lab ID:
 2208F02-024
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JMT
Chloride	ND	60	mg/Kg	20	8/31/2022 8:56:36 PM	69877
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst	: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/30/2022 12:37:52 AM	69801
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/30/2022 12:37:52 AM	69801
Surr: DNOP	101	21-129	%Rec	1	8/30/2022 12:37:52 AM	69801
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/27/2022 1:56:00 AM	69774
Surr: BFB	105	37.7-212	%Rec	1	8/27/2022 1:56:00 AM	69774
EPA METHOD 8021B: VOLATILES					Analyst	: CCM
Benzene	ND	0.025	mg/Kg	1	8/27/2022 1:56:00 AM	69774
Toluene	ND	0.049	mg/Kg	1	8/27/2022 1:56:00 AM	69774
Ethylbenzene	ND	0.049	mg/Kg	1	8/27/2022 1:56:00 AM	69774
Xylenes, Total	ND	0.099	mg/Kg	1	8/27/2022 1:56:00 AM	69774
Surr: 4-Bromofluorobenzene	96.8	70-130	%Rec	1	8/27/2022 1:56:00 AM	69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-207 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 11:30:00 AM

 Lab ID:
 2208F02-025
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride 390 60 mg/Kg 20 8/31/2022 9:09:01 PM 69877 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 8/30/2022 12:48:59 AM 69801 Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 8/30/2022 12:48:59 AM 69801 Surr: DNOP 89.9 %Rec 8/30/2022 12:48:59 AM 69801 21-129 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM 8/27/2022 2:16:00 AM Gasoline Range Organics (GRO) ND 69774 4.9 mg/Kg Surr: BFB 102 37.7-212 %Rec 8/27/2022 2:16:00 AM 69774 **EPA METHOD 8021B: VOLATILES** Analyst: CCM ND 8/27/2022 2:16:00 AM 69774 Benzene 0.024 mg/Kg Toluene ND 0.049 mg/Kg 8/27/2022 2:16:00 AM 69774 Ethylbenzene ND 0.049 mg/Kg 1 8/27/2022 2:16:00 AM 69774 Xylenes, Total ND 0.097 mg/Kg 8/27/2022 2:16:00 AM 69774 Surr: 4-Bromofluorobenzene 70-130 97.7 %Rec 8/27/2022 2:16:00 AM 69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/2/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Client Sample ID: BES22-208 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/23/2022 11:35:00 AM

 Lab ID:
 2208F02-026
 Matrix: SOIL
 Received Date: 8/25/2022 7:55:00 AM

Result **RL Oual Units DF** Date Analyzed **Batch** Analyses **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride 420 60 mg/Kg 20 8/31/2022 9:21:25 PM 69877 **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 8/30/2022 1:00:07 AM Motor Oil Range Organics (MRO) ND 45 mg/Kg 1 8/30/2022 1:00:07 AM 69801 Surr: DNOP 97.6 %Rec 8/30/2022 1:00:07 AM 21-129 69801 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM Gasoline Range Organics (GRO) ND 8/27/2022 2:35:00 AM 69774 5.0 mg/Kg Surr: BFB 103 37.7-212 %Rec 8/27/2022 2:35:00 AM 69774 Analyst: CCM **EPA METHOD 8021B: VOLATILES** ND 8/27/2022 2:35:00 AM 69774 Benzene 0.025 mg/Kg Toluene ND 0.050 mg/Kg 8/27/2022 2:35:00 AM 69774 Ethylbenzene ND 0.050 mg/Kg 1 8/27/2022 2:35:00 AM 69774 Xylenes, Total ND 0.10 mg/Kg 8/27/2022 2:35:00 AM 69774 Surr: 4-Bromofluorobenzene 70-130 98.1 %Rec 8/27/2022 2:35:00 AM 69774

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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OC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208F02**

02-Sep-22

Client: EOG

Project: Routh SWD Tank Battery

Sample ID: MB-69866 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69866 RunNo: 90679

Prep Date: 8/30/2022 Analysis Date: 8/30/2022 SeqNo: 3240624 Units: mq/Kq

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

Chloride ND 1.5

Sample ID: LCS-69866 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69866 RunNo: 90679

Prep Date: 8/30/2022 Analysis Date: 8/30/2022 SeqNo: 3240626 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 95.2 90 110

Sample ID: MB-69881 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69881 RunNo: 90702

Prep Date: **8/31/2022** Analysis Date: **8/31/2022** SeqNo: **3243311** Units: **mg/Kg**

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

Chloride ND 1.5

Sample ID: LCS-69881 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69881 RunNo: 90702

Prep Date: 8/31/2022 Analysis Date: 8/31/2022 SeqNo: 3243312 Units: mg/Kg

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

Chloride 15 1.5 15.00 0 96.7 90 110

Sample ID: MB-69877 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69877 RunNo: 90702

Prep Date: 8/31/2022 Analysis Date: 8/31/2022 SeqNo: 3243343 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69877 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69877 RunNo: 90702

Prep Date: 8/31/2022 Analysis Date: 8/31/2022 SeqNo: 3243344 Units: mg/Kg

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

Chloride 15 1.5 15.00 0 101 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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

2208F02 02-Sep-22

WO#:

Client: EOG

Project: Routh SWD Tank Battery

Sample ID: LCS-69807	SampType	: LCS	Test	Code: EPA Method	l 8015M/D: Diesel Ra	nge Organics	
Client ID: LCSS	Batch ID:	69807	R	unNo: 90634			
Prep Date: 8/26/2022	Analysis Date:	8/29/2022	S	eqNo: 3238841	Units: mg/Kg		
Analyte	Result Po	QL SPK value	SPK Ref Val	%REC LowLimit	HighLimit %RP	D RPDLimit	Qual
Diesel Range Organics (DRO)	40	15 50.00	0	80.1 64.4	127		
Surr: DNOP	4.0	5.000		79.2 21	129		
Sample ID: MB-69807	SampType	: MBLK	Test	Code: EPA Method	l 8015M/D: Diesel Ra	nge Organics	
Client ID: PBS	Batch ID:	69807	R	unNo: 90634			
Prep Date: 8/26/2022	Analysis Date:	8/29/2022	S	eqNo: 3238842	Units: mg/Kg		
Analyte	Result Po	QL SPK value	SPK Ref Val	%REC LowLimit	HighLimit %RP	D RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15					
Motor Oil Range Organics (MRO)	ND	50					
Surr: DNOP	8.8	10.00		88.3 21	129		
Sample ID: LCS-69801	SampType	: LCS	Test	Code: EPA Method	l 8015M/D: Diesel Ra	nge Organics	
Client ID: LCSS	Batch ID:	69801	R	unNo: 90634			
Prep Date: 8/26/2022	Analysis Date:	8/29/2022	S	eqNo: 3239245	Units: mg/Kg		
Analyte	Result Po	QL SPK value	SPK Ref Val	%REC LowLimit	HighLimit %RP	D RPDLimit	Qual
Diesel Range Organics (DRO)	39	15 50.00	0	78.3 64.4	127		
Surr: DNOP	4.0	5.000		80.7 21	129		
Sample ID: MB-69801	SampType	MBLK	Test	Code: EPA Method	l 8015M/D: Diesel Ra	nge Organics	
<u>_</u>			_				

Client ID: PBS	Batch	n ID: 69	801	F	RunNo: 9	0634				
Prep Date: 8/26/2022	Analysis D	ate: 8/	29/2022	9	SeqNo: 3	239247	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.4		10.00		84.4	21	129			
Comple ID: I CC 60927		ima. I C					9045M/D: Di			

Sample ID: LCS-69837	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 69837	RunNo: 90655	
Prep Date: 8/29/2022	Analysis Date: 8/30/2022	SeqNo: 3239736	Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual

Surr: DNOP 4.6 5.000 91.9 21 129

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

10

WO#: **2208F02 02-Sep-22**

Client: EOG

Project: Routh SWD Tank Battery

Sample ID: MB-69837 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 69837 RunNo: 90655

Prep Date: 8/29/2022 Analysis Date: 8/30/2022 SeqNo: 3239737 Units: %Rec

10.00

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

101

21

129

Surr: DNOP

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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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OC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

2208F02 02-Sep-22

WO#:

Client: EOG

Project: Routh SWD Tank Battery

Sample ID: Ics-69768 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 69768 RunNo: 90614

Prep Date: 8/25/2022 Analysis Date: 8/26/2022 SeqNo: 3237469 Units: mq/Kq

PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual Gasoline Range Organics (GRO) 27 5.0 25.00 Λ 109 72.3 137 Surr: BFB 2300 1000 227 37.7 212 S

Sample ID: mb-69768 TestCode: EPA Method 8015D: Gasoline Range SampType: MBLK

Client ID: PBS Batch ID: 69768 RunNo: 90614

Prep Date: 8/25/2022 Analysis Date: 8/26/2022 SeqNo: 3237470 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 970 1000 97.0 37.7 212

Sample ID: mb-69774 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 69774 RunNo: 90614

Prep Date: 8/25/2022 Analysis Date: 8/26/2022 SeqNo: 3237493 Units: mg/Kg

Result SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Analyte PQL HighLimit Qual Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 1100 1000 107 37.7 212

Sample ID: Ics-69774 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 69774 RunNo: 90618

Prep Date: 8/25/2022 Analysis Date: 8/28/2022 SeqNo: 3237715

Units: mg/Kg SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Result PQL LowLimit Qual Gasoline Range Organics (GRO) 57 50.00 114 72.3 137 5.0 Surr: BFB 3800 1000 380 37.7 212 S

Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208F02** *02-Sep-22*

Client: EOG

Project: Routh SWD Tank Battery

Sample ID: Ics-69768	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batch	n ID: 697	768	F	RunNo: 9	0614				
Prep Date: 8/25/2022	Analysis D	oate: 8/2	26/2022	8	SeqNo: 3	237522	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	1.000	0	80.9	80	120			
Toluene	0.83	0.050	1.000	0	83.1	80	120			
Ethylbenzene	0.85	0.050	1.000	0	84.5	80	120			
Xylenes, Total	2.5	0.10	3.000	0	84.5	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.7	70	130			

Sample ID: mb-69768	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	1D: 69	768	F	tunNo: 9	0614				
Prep Date: 8/25/2022	Analysis D	ate: 8/	26/2022	S	SeqNo: 3	237523	Units: mg/K	(g		
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	0.95		1.000		95.3	70	130			

Sample ID: Ics-69774	Sampl	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batcl	h ID: 69 7	774	F	RunNo: 9	0614				
Prep Date: 8/25/2022	Analysis D	Date: 8/ 2	26/2022	S	SeqNo: 3	237545	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.4	80	120			
Toluene	0.88	0.050	1.000	0	88.3	80	120			
Ethylbenzene	0.90	0.050	1.000	0	89.8	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.5	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	70	130			

Sample ID: mb-69774	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	iles		
Client ID: PBS	Batch	n ID: 69	774	F	RunNo: 9	0614				
Prep Date: 8/25/2022	Analysis D	ate: 8/	26/2022	8	SeqNo: 3	237546	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		98.8	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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:	EOG	Work Order Nur	nber: 220	8F02		RcptNo: 1
Received By:	Cheyenne Cason	8/25/2022 7:55:00	АМ		Chul	
Completed By: Reviewed By:	Cheyenne Cason	8/25/2022 8:01:55	AM		Chul	
Chain of Custo	ody					
1. Is Chain of Cus	tody complete?		Yes	~	No 🗔	Not Present
2. How was the sa	ample delivered?		Cou	rier		
Log In						
Was an attempt	t made to cool the sample	es?	Yes	~	No 🗌	NA 🗌
4. Were all sample	es received at a temperat	ure of >0° C to 6.0°C	Yes	V	No 🗌	NA 🗆
5. Sample(s) in pro	oper container(s)?		Yes	V	No 🗌	
6. Sufficient sample	e volume for indicated te	st(s)?	Yes	~	No 🗌	
7. Are samples (ex	cept VOA and ONG) pro	perly preserved?	Yes	~	No 🗆	
8. Was preservative	e added to bottles?		Yes		No 🗸	NA 🗆
9. Received at leas	t 1 vial with headspace <	1/4" for AQ VOA?	Yes		No 🗌	NA 🗹
10. Were any samp	le containers received br	oken?	Yes		No 🗸	
	match bottle labels? cies on chain of custody)		Yes	~	No 🗆	# of preserved bottles checked for pH: (<2 or >12 unless noted)
	rectly identified on Chain	of Custody?	Yes	~	No 🗆	Adjusted?
	nalyses were requested?		Yes	V	No 🗆	
	times able to be met? omer for authorization.)		Yes	~	No 🗆	Checked by: Cmc 8/25/
Special Handling						C
	ed of all discrepancies wi	th this order?	Yes		No 🗌	NA 🔽
Person No		Date			.,,	
By Whom:		Via:	eMa	ail 🗔	Phone Fax	In Person
Regarding		3,447		4"	T HOLE T ax	III Felsoil
Client Instr	ructions:					
16. Additional rema	rks:					
	Temp °C Condition	Seal Intact Seal No	Seal Da	ate	Signed By	

Page 319 of 556 Received by OCD: 1/18/2023 2:22:39 PM **ANALYSIS LABORATORY** HALL ENVIRONMENTAL Bill to Eac Resources Inc 4901 Hawkins NE - Albuquerque, NM 87109 Fax 505-345-4107 www.hallenvironmental.com **Analysis Request** Total Coliform (Present/Absent) (AOV-ima2) 07S8 (AOV) 09S8 NO2, PO4, SO4 CI) E' NO3' Br, Tel. 505-345-3975 RCRA 8 Metals PAHs by 8310 or 8270SIMS EDB (Method 504.1) Direct Direct 8081 Pesticides/8082 PCB's Remarks: (ORO / DRO / MRO) BTEX) TMB's (8021) 00 1030 COWIN BILBICE 0755 Time 1208F02 Routh SWD Tank Battery Cooler Temp(including cF): 2 . 1 1012 2.2 elpe/8 KRUSH 5 Day Date 003 200 400 002 SSS 900 800 B 010 80 210 000 0 Preservative \$ 22E-00716 Sampler: S. Carttar X Yes Meceived by: Via: Menica Pepin Type Turn-Around Time: Via: Project Manager: Project Name: Standard # of Coolers: Type and # Smc Container Received by: Project #: 402.50 On Ice: ☐ Level 4 (Full Validation) 1-t-h 4-10 4-4 (h-0 1-h 3 h-0 7 7 7 7 7 Chain-of-Custody Record Sample Name BES25- 153 BES22- 152 DES 22- 15-4 Quemos BESUL- 192 VE2-30 BES 22- 193 VEZ-22 BESSS- 194 VESIL-03 JEST-20 VES 22-28 WESEL- 29 Client: EOG Nesources Inc □ Az Compliance 5. Reta Relinquished by: Relinquished by: Chain-of-Cust
Olient: EOG Resource □ Other Matrix 50;1 loabl teller 02:01 QA/QC Package: 10:00 58/2/2/17:10 9:55 16:05 10:10 10:15 3/23/2 9:25 9.50 9:45 ☐ EDD (Type) 9:35 Time 9:30 9:40 email or Fax#: Accreditation: Time: Time: □ Standard □ NELAC Phone #: Date

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

Received by OCD: 1/18/2023 2:22:39 PM Page 320 of 556 **ANALYSIS LABORATORY** HALL ENVIRONMENTAL 4901 Hawkins NE - Albuquerque, NM 87109 Fax 505-345-4107 Direct Bill to EOG Resures www.hallenvironmental.com **Analysis Request** Total Coliform (Present/Absent) (AOV-ima2) 07S8 (AOV) 09S8 NO2, PO4, SO4 18ON Br, Tel. 505-345-3975 RCRA 8 Metals 2MI20728 to 0188 vd aHA9 EDB (Method 504.1) 8081 Pesticides/8082 PCB's Remarks: (PR):8015D(GRO / DRO / MRO) (X3T) (1508) s'8MT MTBE / Cooler Temp(including CF): 4 2.1 10,1 52,7 (°C) OEa1 pethels 8/16/10 0755 HEAL No. 1208502 Roth SWD Tank Butter W Rush 5 Day Date 420 270 023 020 120 % □ 610 013 510 015 318 017 210 Preservative 226-00716 Sampler: 5. Carthar Monita Peppin Received by: Via: 75 M Yes CIMC CONE Type Turn-Around Time: Via: Project Manager: Project Name: Standard Standard # of Coolers: Type and # Received by: Container Project #: On Ice: 70% 5 7 ב 7 Z 7 1 5 7 □ Level 4 (Full Validation) 7 7 Chain-of-Custody Record Sample Name BES22- 195 BES22-200 BESZL- 202 BES22-206 BES22-201 BES22-205 BESIZ-204 DES 22- 196 BES22- 199 BEB22-203 BES22- 197 RES 22- 198 alumino Client: EOG Resources Inc □ Az Compliance 5/6 3. Reta Relinquished by: Relinquished by: □ Other 0 Matrix S Chain-Chain-G 05:01 10:35 017:01 80 SE 11:05 Sh:01 11:00 51:11 QA/QC Package: 6,3 11:25 2:11 8/2/2 10:25 01:11 01:41 28/20 ☐ EDD (Type) Time email or Fax#: Accreditation: Time: Time: □ Standard □ NELAC Phone #: Date

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	Turn-Around Time:	
Client: EOG Besources Inc	Standard Rush 5 Day	ANALYSTS I ABODATODA
		-
Mailing Address: On File	Routh SWO Tank Battery	www.nailenvironmentai.com 4901 Hawkins NF - Albirgiergie NM 87109
	Project #:	Fax 505-345-4107
2020 2020	226-00716	Analysis Request
email or Fax#:	Project Manager:	(C)
QA/QC Package:	Munica Peppin	oO [¢] ' 20 SIW2 oCB, ²
□ Az Con	Sampler: S. Car Phar	DRC (1) 2703 1, 504
		00 / O 004;480 004 004 004
(bd/	olers: (GR dessides desside dessides dessides dessides dessides dessides dessides dessides dessides dessides dessides dessides dessides dessides dessides dessides dessides des dessides des dessides dessides des deside
	uding CF); 2,1+0,122.2	etho etho y 83 Me r, N (AO)
Date Time Matrix Sample Name	Container Preservative HEAL No.	TEX) 1908:1 Pe 1008:1 Pe
2 11:30 50:11	74	8 8 8
11:35 1 BES22-208		
Date: Time: Relinguished by:	Received hv: Via: Date Time	
a 17:10 3. Reta	reliefa Orm	Nethaliks.
Date: Time: Relinquished by:	: Vid: Date Tir	
5	J'Y CENTO 014/4 0753	



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

September 08, 2022

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

FAX:

RE: Routh SWD Tank Battery OrderNo.: 2208I06

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 21 sample(s) on 8/31/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-21 0-4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 10:25:00 AM

 Lab ID:
 2208I06-001
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS				Analyst: mb	
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/3/2022 1:44:43 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/3/2022 1:44:43 PM
Surr: DNOP	79.4	21-129	%Rec	1	9/3/2022 1:44:43 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	9/1/2022 11:23:12 PM
Surr: BFB	97.9	37.7-212	%Rec	1	9/1/2022 11:23:12 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	9/1/2022 11:23:12 PM
Toluene	ND	0.050	mg/Kg	1	9/1/2022 11:23:12 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/1/2022 11:23:12 PM
Xylenes, Total	ND	0.099	mg/Kg	1	9/1/2022 11:23:12 PM
Surr: 4-Bromofluorobenzene	91.9	70-130	%Rec	1	9/1/2022 11:23:12 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	470	60	mg/Kg	20	9/5/2022 1:17:59 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 28

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-31 4-6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 9:40:00 AM

 Lab ID:
 2208I06-002
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Result **RL Qual Units** DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: mb Diesel Range Organics (DRO) ND 15 mg/Kg 1 9/3/2022 1:55:26 PM Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 9/3/2022 1:55:26 PM Surr: DNOP 83.7 21-129 %Rec 1 9/3/2022 1:55:26 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 9/1/2022 11:46:38 PM 4.7 mg/Kg 1 Surr: BFB 99.7 37.7-212 %Rec 1 9/1/2022 11:46:38 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.023 mg/Kg 9/1/2022 11:46:38 PM 1 Toluene ND 0.047 mg/Kg 1 9/1/2022 11:46:38 PM Ethylbenzene ND 0.047 mg/Kg 1 9/1/2022 11:46:38 PM Xylenes, Total ND 0.093 mg/Kg 1 9/1/2022 11:46:38 PM 9/1/2022 11:46:38 PM Surr: 4-Bromofluorobenzene 94.8 70-130 %Rec 1 Analyst: NAI **EPA METHOD 300.0: ANIONS** Chloride 200 60 9/5/2022 1:55:13 AM ma/Ka 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-32 6-7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 9:45:00 AM

 Lab ID:
 2208I06-003
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: mb
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/3/2022 2:06:08 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/3/2022 2:06:08 PM
Surr: DNOP	80.7	21-129	%Rec	1	9/3/2022 2:06:08 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/2/2022 12:10:05 AM
Surr: BFB	96.3	37.7-212	%Rec	1	9/2/2022 12:10:05 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	9/2/2022 12:10:05 AM
Toluene	ND	0.048	mg/Kg	1	9/2/2022 12:10:05 AM
Ethylbenzene	ND	0.048	mg/Kg	1	9/2/2022 12:10:05 AM
Xylenes, Total	ND	0.096	mg/Kg	1	9/2/2022 12:10:05 AM
Surr: 4-Bromofluorobenzene	91.5	70-130	%Rec	1	9/2/2022 12:10:05 AM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	180	60	mg/Kg	20	9/5/2022 2:07:37 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-33 6-7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 9:50:00 AM

 Lab ID:
 2208I06-004
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/1/2022 7:47:57 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/1/2022 7:47:57 PM
Surr: DNOP	86.5	21-129	%Rec	1	9/1/2022 7:47:57 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	9/2/2022 12:33:32 AM
Surr: BFB	95.1	37.7-212	%Rec	1	9/2/2022 12:33:32 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	9/2/2022 12:33:32 AM
Toluene	ND	0.046	mg/Kg	1	9/2/2022 12:33:32 AM
Ethylbenzene	ND	0.046	mg/Kg	1	9/2/2022 12:33:32 AM
Xylenes, Total	ND	0.093	mg/Kg	1	9/2/2022 12:33:32 AM
Surr: 4-Bromofluorobenzene	90.2	70-130	%Rec	1	9/2/2022 12:33:32 AM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	250	60	mg/Kg	20	9/5/2022 2:20:02 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-34 6-7'

Project: Routh SWD Tank Battery Collection Date: 8/29/2022 9:55:00 AM

Lab ID: 2208I06-005 **Matrix:** SOIL **Received Date:** 8/31/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR		Analyst: SB			
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/1/2022 8:01:40 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/1/2022 8:01:40 PM
Surr: DNOP	94.7	21-129	%Rec	1	9/1/2022 8:01:40 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/2/2022 12:57:05 AM
Surr: BFB	95.6	37.7-212	%Rec	1	9/2/2022 12:57:05 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	9/2/2022 12:57:05 AM
Toluene	ND	0.049	mg/Kg	1	9/2/2022 12:57:05 AM
Ethylbenzene	ND	0.049	mg/Kg	1	9/2/2022 12:57:05 AM
Xylenes, Total	ND	0.098	mg/Kg	1	9/2/2022 12:57:05 AM
Surr: 4-Bromofluorobenzene	90.2	70-130	%Rec	1	9/2/2022 12:57:05 AM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	120	60	mg/Kg	20	9/5/2022 2:57:15 AM

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

Qualifiers:

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

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-35 6-9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 10:00:00 AM

 Lab ID:
 2208I06-006
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	9/1/2022 8:15:24 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	9/1/2022 8:15:24 PM
Surr: DNOP	104	21-129	%Rec	1	9/1/2022 8:15:24 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/2/2022 1:20:36 AM
Surr: BFB	96.9	37.7-212	%Rec	1	9/2/2022 1:20:36 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	9/2/2022 1:20:36 AM
Toluene	ND	0.049	mg/Kg	1	9/2/2022 1:20:36 AM
Ethylbenzene	ND	0.049	mg/Kg	1	9/2/2022 1:20:36 AM
Xylenes, Total	ND	0.098	mg/Kg	1	9/2/2022 1:20:36 AM
Surr: 4-Bromofluorobenzene	91.2	70-130	%Rec	1	9/2/2022 1:20:36 AM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	80	60	mg/Kg	20	9/5/2022 3:09:40 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-36 4-6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 10:05:00 AM

 Lab ID:
 2208I06-007
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: SB				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/1/2022 8:29:12 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/1/2022 8:29:12 PM
Surr: DNOP	94.9	21-129	%Rec	1	9/1/2022 8:29:12 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/2/2022 1:44:01 AM
Surr: BFB	99.6	37.7-212	%Rec	1	9/2/2022 1:44:01 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	9/2/2022 1:44:01 AM
Toluene	ND	0.048	mg/Kg	1	9/2/2022 1:44:01 AM
Ethylbenzene	ND	0.048	mg/Kg	1	9/2/2022 1:44:01 AM
Xylenes, Total	ND	0.096	mg/Kg	1	9/2/2022 1:44:01 AM
Surr: 4-Bromofluorobenzene	93.6	70-130	%Rec	1	9/2/2022 1:44:01 AM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	120	60	mg/Kg	20	9/5/2022 3:22:05 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-37 6-7'

Routh SWD Tank Battery Project: Collection Date: 8/29/2022 10:10:00 AM 2208I06-008 Lab ID: Matrix: SOIL **Received Date: 8/31/2022 7:40:00 AM**

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: mb				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	9/3/2022 5:23:04 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	9/3/2022 5:23:04 PM
Surr: DNOP	99.1	21-129	%Rec	1	9/3/2022 5:23:04 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/2/2022 3:24:00 PM
Surr: BFB	94.8	37.7-212	%Rec	1	9/2/2022 3:24:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	9/2/2022 3:24:00 PM
Toluene	ND	0.049	mg/Kg	1	9/2/2022 3:24:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	9/2/2022 3:24:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	9/2/2022 3:24:00 PM
Surr: 4-Bromofluorobenzene	91.3	70-130	%Rec	1	9/2/2022 3:24:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	870	60	mg/Kg	20	9/6/2022 12:23:46 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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

Sample pH Not In Range

Page 8 of 28 RL Reporting Limit

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-38 6-7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 10:15:00 AM

 Lab ID:
 2208I06-009
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	Analyst: mb				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	9/3/2022 6:06:45 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	9/3/2022 6:06:45 PM
Surr: DNOP	99.5	21-129	%Rec	1	9/3/2022 6:06:45 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/2/2022 4:23:00 PM
Surr: BFB	98.7	37.7-212	%Rec	1	9/2/2022 4:23:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	9/2/2022 4:23:00 PM
Toluene	ND	0.047	mg/Kg	1	9/2/2022 4:23:00 PM
Ethylbenzene	ND	0.047	mg/Kg	1	9/2/2022 4:23:00 PM
Xylenes, Total	ND	0.095	mg/Kg	1	9/2/2022 4:23:00 PM
Surr: 4-Bromofluorobenzene	90.5	70-130	%Rec	1	9/2/2022 4:23:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	390	60	mg/Kg	20	9/6/2022 1:25:49 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: WES22-39 6-7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 10:20:00 AM

 Lab ID:
 2208I06-010
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: mb				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/3/2022 6:21:07 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	9/3/2022 6:21:07 PM
Surr: DNOP	99.2	21-129	%Rec	1	9/3/2022 6:21:07 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/2/2022 5:23:00 PM
Surr: BFB	94.6	37.7-212	%Rec	1	9/2/2022 5:23:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.023	mg/Kg	1	9/2/2022 5:23:00 PM
Toluene	ND	0.047	mg/Kg	1	9/2/2022 5:23:00 PM
Ethylbenzene	ND	0.047	mg/Kg	1	9/2/2022 5:23:00 PM
Xylenes, Total	ND	0.093	mg/Kg	1	9/2/2022 5:23:00 PM
Surr: 4-Bromofluorobenzene	88.2	70-130	%Rec	1	9/2/2022 5:23:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	130	59	mg/Kg	20	9/6/2022 1:38:13 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-209 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 8:45:00 AM

 Lab ID:
 2208I06-011
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: mb				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/3/2022 6:35:45 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/3/2022 6:35:45 PM
Surr: DNOP	96.5	21-129	%Rec	1	9/3/2022 6:35:45 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/2/2022 5:43:00 PM
Surr: BFB	94.6	37.7-212	%Rec	1	9/2/2022 5:43:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	9/2/2022 5:43:00 PM
Toluene	ND	0.048	mg/Kg	1	9/2/2022 5:43:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	9/2/2022 5:43:00 PM
Xylenes, Total	ND	0.096	mg/Kg	1	9/2/2022 5:43:00 PM
Surr: 4-Bromofluorobenzene	89.1	70-130	%Rec	1	9/2/2022 5:43:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	460	60	mg/Kg	20	9/6/2022 1:50:37 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-210 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 8:50:00 AM

 Lab ID:
 2208I06-012
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: mb
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/3/2022 6:50:04 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/3/2022 6:50:04 PM
Surr: DNOP	103	21-129	%Rec	1	9/3/2022 6:50:04 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	9/2/2022 6:03:00 PM
Surr: BFB	93.4	37.7-212	%Rec	1	9/2/2022 6:03:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	9/2/2022 6:03:00 PM
Toluene	ND	0.050	mg/Kg	1	9/2/2022 6:03:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/2/2022 6:03:00 PM
Xylenes, Total	ND	0.10	mg/Kg	1	9/2/2022 6:03:00 PM
Surr: 4-Bromofluorobenzene	88.2	70-130	%Rec	1	9/2/2022 6:03:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	450	60	mg/Kg	20	9/6/2022 2:03:02 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-211 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 8:55:00 AM

 Lab ID:
 2208I06-013
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: mb
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	9/3/2022 7:04:52 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	9/3/2022 7:04:52 PM
Surr: DNOP	96.6	21-129	%Rec	1	9/3/2022 7:04:52 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/2/2022 6:22:00 PM
Surr: BFB	92.3	37.7-212	%Rec	1	9/2/2022 6:22:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	9/2/2022 6:22:00 PM
Toluene	ND	0.047	mg/Kg	1	9/2/2022 6:22:00 PM
Ethylbenzene	ND	0.047	mg/Kg	1	9/2/2022 6:22:00 PM
Xylenes, Total	ND	0.094	mg/Kg	1	9/2/2022 6:22:00 PM
Surr: 4-Bromofluorobenzene	87.4	70-130	%Rec	1	9/2/2022 6:22:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	500	60	mg/Kg	20	9/6/2022 2:15:26 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-212 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 9:00:00 AM

 Lab ID:
 2208I06-014
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	9/6/2022 11:32:25 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	9/6/2022 11:32:25 AM
Surr: DNOP	101	21-129	%Rec	1	9/6/2022 11:32:25 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	9/2/2022 6:42:00 PM
Surr: BFB	95.4	37.7-212	%Rec	1	9/2/2022 6:42:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	9/2/2022 6:42:00 PM
Toluene	ND	0.050	mg/Kg	1	9/2/2022 6:42:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/2/2022 6:42:00 PM
Xylenes, Total	ND	0.10	mg/Kg	1	9/2/2022 6:42:00 PM
Surr: 4-Bromofluorobenzene	88.5	70-130	%Rec	1	9/2/2022 6:42:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	710	60	mg/Kg	20	9/6/2022 2:27:50 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-213 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 9:05:00 AM

 Lab ID:
 2208I06-015
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/6/2022 11:43:01 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/6/2022 11:43:01 AM
Surr: DNOP	99.8	21-129	%Rec	1	9/6/2022 11:43:01 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/2/2022 7:02:00 PM
Surr: BFB	94.0	37.7-212	%Rec	1	9/2/2022 7:02:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	9/2/2022 7:02:00 PM
Toluene	ND	0.049	mg/Kg	1	9/2/2022 7:02:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	9/2/2022 7:02:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	9/2/2022 7:02:00 PM
Surr: 4-Bromofluorobenzene	87.6	70-130	%Rec	1	9/2/2022 7:02:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	500	60	mg/Kg	20	9/6/2022 2:40:15 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Toluene

Chloride

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

EPA METHOD 300.0: ANIONS

Analytical Report Lab Order 2208I06

Date Reported: 9/8/2022

9/2/2022 7:22:00 PM

9/2/2022 7:22:00 PM

9/2/2022 7:22:00 PM

9/2/2022 7:22:00 PM

9/6/2022 2:52:39 PM

Analyst: NAI

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-214 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 9:10:00 AM

 Lab ID:
 2208I06-016
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Result **RL Qual Units** DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: mb Diesel Range Organics (DRO) ND 14 mg/Kg 1 9/3/2022 7:48:31 PM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 9/3/2022 7:48:31 PM Surr: DNOP 102 21-129 %Rec 1 9/3/2022 7:48:31 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 9/2/2022 7:22:00 PM 4.7 mg/Kg 1 Surr: BFB 91.5 37.7-212 %Rec 1 9/2/2022 7:22:00 PM **EPA METHOD 8021B: VOLATILES** Analyst: BRM 9/2/2022 7:22:00 PM Benzene ND 0.024 mg/Kg 1

ND

ND

ND

87.0

470

0.047

0.047

0.094

70-130

60

mg/Kg

mg/Kg

mg/Kg

%Rec

ma/Ka

1

1

1

1

20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-215 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 9:15:00 AM

 Lab ID:
 2208I06-017
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: mb
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/3/2022 8:02:58 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/3/2022 8:02:58 PM
Surr: DNOP	99.0	21-129	%Rec	1	9/3/2022 8:02:58 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/2/2022 7:41:00 PM
Surr: BFB	99.6	37.7-212	%Rec	1	9/2/2022 7:41:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	9/2/2022 7:41:00 PM
Toluene	ND	0.048	mg/Kg	1	9/2/2022 7:41:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	9/2/2022 7:41:00 PM
Xylenes, Total	ND	0.095	mg/Kg	1	9/2/2022 7:41:00 PM
Surr: 4-Bromofluorobenzene	90.1	70-130	%Rec	1	9/2/2022 7:41:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	760	60	mg/Kg	20	9/6/2022 3:29:53 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-13 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 9:20:00 AM

 Lab ID:
 2208I06-018
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: mb
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/3/2022 8:17:20 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/3/2022 8:17:20 PM
Surr: DNOP	96.8	21-129	%Rec	1	9/3/2022 8:17:20 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/2/2022 8:21:00 PM
Surr: BFB	93.4	37.7-212	%Rec	1	9/2/2022 8:21:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	9/2/2022 8:21:00 PM
Toluene	ND	0.049	mg/Kg	1	9/2/2022 8:21:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	9/2/2022 8:21:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	9/2/2022 8:21:00 PM
Surr: 4-Bromofluorobenzene	89.6	70-130	%Rec	1	9/2/2022 8:21:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	230	60	mg/Kg	20	9/6/2022 3:42:17 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-14 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 9:25:00 AM

 Lab ID:
 2208I06-019
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Result **RL Qual Units** DF **Date Analyzed** Analyses **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: mb Diesel Range Organics (DRO) ND 14 mg/Kg 1 9/3/2022 8:32:01 PM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 9/3/2022 8:32:01 PM Surr: DNOP 96.1 21-129 %Rec 1 9/3/2022 8:32:01 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 9/2/2022 8:41:00 PM 5.0 mg/Kg 1 Surr: BFB 93.2 37.7-212 %Rec 1 9/2/2022 8:41:00 PM **EPA METHOD 8021B: VOLATILES** Analyst: BRM Benzene ND 0.025 mg/Kg 9/2/2022 8:41:00 PM 1 Toluene ND 0.050 mg/Kg 1 9/2/2022 8:41:00 PM Ethylbenzene ND 0.050 mg/Kg 1 9/2/2022 8:41:00 PM Xylenes, Total ND 0.10 mg/Kg 1 9/2/2022 8:41:00 PM 9/2/2022 8:41:00 PM Surr: 4-Bromofluorobenzene 88.9 70-130 %Rec 1 **EPA METHOD 300.0: ANIONS** Analyst: NAI Chloride 360 60 9/6/2022 3:54:42 PM ma/Ka 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-15 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 9:30:00 AM

 Lab ID:
 2208I06-020
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: mb
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	9/3/2022 8:46:28 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	9/3/2022 8:46:28 PM
Surr: DNOP	110	21-129	%Rec	1	9/3/2022 8:46:28 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/2/2022 9:00:00 PM
Surr: BFB	97.8	37.7-212	%Rec	1	9/2/2022 9:00:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	9/2/2022 9:00:00 PM
Toluene	ND	0.049	mg/Kg	1	9/2/2022 9:00:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	9/2/2022 9:00:00 PM
Xylenes, Total	ND	0.097	mg/Kg	1	9/2/2022 9:00:00 PM
Surr: 4-Bromofluorobenzene	88.5	70-130	%Rec	1	9/2/2022 9:00:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	470	60	mg/Kg	20	9/6/2022 4:07:07 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-37 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/29/2022 9:35:00 AM

 Lab ID:
 2208I06-021
 Matrix: SOIL
 Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: mb
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	9/3/2022 9:00:53 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	9/3/2022 9:00:53 PM
Surr: DNOP	108	21-129	%Rec	1	9/3/2022 9:00:53 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	9/2/2022 9:20:00 PM
Surr: BFB	94.7	37.7-212	%Rec	1	9/2/2022 9:20:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.023	mg/Kg	1	9/2/2022 9:20:00 PM
Toluene	ND	0.046	mg/Kg	1	9/2/2022 9:20:00 PM
Ethylbenzene	ND	0.046	mg/Kg	1	9/2/2022 9:20:00 PM
Xylenes, Total	ND	0.093	mg/Kg	1	9/2/2022 9:20:00 PM
Surr: 4-Bromofluorobenzene	88.0	70-130	%Rec	1	9/2/2022 9:20:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	220	60	mg/Kg	20	9/6/2022 4:19:32 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

0#: 2208I06 08-Sep-22

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-69971 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69971 RunNo: 90821

Prep Date: 9/6/2022 Analysis Date: 9/6/2022 SeqNo: 3247546 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69971 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69971 RunNo: 90821

Prep Date: 9/6/2022 Analysis Date: 9/6/2022 SeqNo: 3247547 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 93.5 90 110

Sample ID: MB-69962 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69962 RunNo: 90825

Prep Date: 9/4/2022 Analysis Date: 9/4/2022 SeqNo: 3247659 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69962 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69962 RunNo: 90825

Prep Date: 9/4/2022 Analysis Date: 9/4/2022 SeqNo: 3247660 Units: mg/Kg

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

Chloride 15 1.5 15.00 0 97.2 90 110

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208I06** *08-Sep-22*

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Project: Routh SV	WD Tank E	Battery								
Sample ID: MB-69901	SampT	ype: ME	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch	n ID: 69 9	901	F	RunNo: 90	0793				
Prep Date: 8/31/2022	Analysis D	Date: 9/	3/2022	S	SeqNo: 32	245546	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.9		10.00		79.0	21	129			
Sample ID: LCS-69901	SampT	ype: LC	s	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch	n ID: 69	901	RunNo: 90793						
Prep Date: 8/31/2022	Analysis D	Date: 9/	3/2022	8	SeqNo: 32	245547	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	15	50.00	0	72.2	64.4	127			
Surr: DNOP	3.6		5.000		72.8	21	129			
Sample ID: MB-69939	SampT	ype: ME	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch	n ID: 69 9	939	F	RunNo: 90	0803				
Prep Date: 9/2/2022	Analysis D	Date: 9/	3/2022	S	SeqNo: 32	246059	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.3		10.00		92.6	21	129			
Sample ID: LCS-69939	SampT	ype: LC	s	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	n ID: 69 9	939	F	RunNo: 90	0803				
Prep Date: 9/2/2022	Analysis D	Date: 9/	3/2022	S	SeqNo: 32	246060	Units: mg/K	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	15	50.00	0	93.7	64.4	127			
Surr: DNOP	5.0		5.000		99.2	21	129			
Sample ID: 2208I06-008AMS	SampT	уре: МS	6	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: WES22-37 6-7'	Batch	n ID: 69 9	939	F	RunNo: 90	0803				
Prep Date: 9/2/2022	Analysis D	Date: 9/	3/2022	S	SeqNo: 32	246062	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

Surr: DNOP

- 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

4.7

B Analyte detected in the associated Method Blank

103

21

129

E Estimated value

4.591

- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208I06**

08-Sep-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: 2208I06-008AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 90803 Client ID: WES22-37 6-7' Batch ID: 69939 Prep Date: 9/2/2022 Analysis Date: 9/3/2022 SeqNo: 3246063 Units: mg/Kg PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual Diesel Range Organics (DRO) 39 13 44.40 Λ 88.6 36.1 154 1.48 33.9 Surr: DNOP 4.5 4.440 101 21 129 0

Sample ID: LCS-69963 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 69963 RunNo: 90816 Prep Date: 9/6/2022 Analysis Date: 9/6/2022 SeqNo: 3246556 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: DNOP 3.1 5.000 62.4 129

Sample ID: MB-69963 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 69963 RunNo: 90816 Analysis Date: 9/6/2022 Prep Date: 9/6/2022 SeqNo: 3246558 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual LowLimit 7.7 10.00 77.0 21 129 Surr: DNOP

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208I06**

08-Sep-22

Client: Vertex Resources Services, Inc.
Project: Routh SWD Tank Battery

Sample ID: mb-69895 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: **PBS** Batch ID: **69895** RunNo: **90750**

Prep Date: 8/31/2022 Analysis Date: 9/1/2022 SeqNo: 3243910 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 1000 1000 99.6 37.7 212

Sample ID: Ics-69895 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 69895 RunNo: 90750

Prep Date: 8/31/2022 Analysis Date: 9/1/2022 SeqNo: 3243911 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 5.0 25.00 O 106 72.3 137 Surr: BFB 2100 1000 207 37.7 212

Sample ID: Ics-69920 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 69920 RunNo: 90773 Prep Date: 9/1/2022 Analysis Date: 9/2/2022 SeqNo: 3245746 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual

 Gasoline Range Organics (GRO)
 24
 5.0
 25.00
 0
 96.4
 72.3
 137

 Surr: BFB
 2100
 1000
 210
 37.7
 212

Sample ID: mb-69920 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 69920 RunNo: 90773 Prep Date: 9/1/2022 Analysis Date: 9/2/2022 SeqNo: 3245747 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Result PQL LowLimit HighLimit Qual

 Gasoline Range Organics (GRO)
 ND
 5.0

 Surr: BFB
 950
 1000
 94.8
 37.7
 212

Sample ID: 2208i06-008ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: WES22-37 6-7 Batch ID: 69920 RunNo: 90773 Prep Date: 9/1/2022 Analysis Date: 9/2/2022 SeqNo: 3245749 Units: mq/Kq Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0

 Analyte
 Result
 PQL
 SPK Value
 SPK Ref Val
 %REC
 LowLimit
 HighLimit
 %RPD
 RPDLimit
 Qual

 Gasoline Range Organics (GRO)
 26
 4.9
 24.44
 0
 106
 70
 130

 Surr: BFB
 2200
 977.5
 223
 37.7
 212
 S

Sample ID: 2208i06-008amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: WES22-37 6-7' Batch ID: 69920 RunNo: 90773

Prep Date: 9/1/2022 Analysis Date: 9/2/2022 SeqNo: 3245750 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208106

08-Sep-22

Client: Vertex Resources Services, Inc. **Project:** Routh SWD Tank Battery

Sample ID: 2208i06-008amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: WES22-37 6-7' Batch ID: 69920 RunNo: 90773

Prep Date: 9/1/2022 Analysis Date: 9/2/2022 SeqNo: 3245750 Units: mg/Kg

PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Analyte Result LowLimit 0 Gasoline Range Organics (GRO) 25 4.9 24.34 104 70 130 2.41 20 Surr: BFB 2200 973.7 222 37.7 212 0 S

Sample ID: mb-69961 TestCode: EPA Method 8015D: Gasoline Range SampType: MBLK Client ID: PBS Batch ID: 69961 RunNo: 90809 Prep Date: Analysis Date: 9/6/2022 SeqNo: 3246744 9/4/2022 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 960 1000 Surr: BFB 95.8 37.7 212

Sample ID: Ics-69961 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 69961 RunNo: 90809

SeqNo: 3246836 Prep Date: Analysis Date: 9/6/2022 9/4/2022 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 2000 1000 197 37.7 212 Surr: BFB

Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208I06** *08-Sep-22*

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: mb-69895	SampT	ype: ME	BLK	Tes	TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batch	ID: 69	895	F	tunNo: 90	0750				
Prep Date: 8/31/2022	Analysis D	ate: 9/	1/2022	S	SeqNo: 3	243951	Units: mg/K	g		
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		92.6	70	130			

Sample ID: LCS-69895	SampT	SampType: LCS TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batcl	h ID: 698	395	F	RunNo: 90	0750				
Prep Date: 8/31/2022	/31/2022 Analysis Date: 9/1/2022 SeqNo: 3243952 Units: mg/Kg									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	83.2	80	120			
Toluene	0.86	0.050	1.000	0	85.8	80	120			
Ethylbenzene	0.86	0.050	1.000	0	85.8	80	120			
Xylenes, Total	2.6	0.10	3.000	0	85.7	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.2	70	130			

Sample ID: mb-69920	SampT	npType: MBLK TestCode: EPA Method 8021B: Volatiles										
Client ID: PBS	Batcl	n ID: 69 9	920	F	RunNo: 90773							
Prep Date: 9/1/2022	Analysis D	oate: 9/	2/2022	8	SeqNo: 3	245776	Units: mg/K	g				
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		90.5	70	130					

Sample ID: 2208i06-009ams	SampT	ype: MS	3	Tes	tCode: EF	od 8021B: Volatiles				
Client ID: WES22-38 6-7'	Batch	ID: 69 9	920	F	RunNo: 90					
Prep Date: 9/1/2022	Analysis D	Analysis Date: 9/2/2022 SeqNo: 3245779 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.024	0.9785	0	84.9	68.8	120			
Toluene	0.86	0.049	0.9785	0	88.4	73.6	124			
Ethylbenzene	0.89	0.049	0.9785	0	90.8	72.7	129			
Xylenes, Total	2.6	0.098	2.935	0	90.2	75.7	126			
Surr: 4-Bromofluorobenzene	0.91		0.9785		92.8	70	130			

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208I06**

08-Sep-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: 2208i06-009amsd	SampT	SampType: MSD TestCode: EPA Method 8021B: Volatiles								
Client ID: WES22-38 6-7'	Batch	Batch ID: 69920			RunNo: 90	0773				
Prep Date: 9/1/2022	Analysis Date: 9/2/2022			8	SeqNo: 3245780 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.024	0.9690	0	81.6	68.8	120	4.99	20	
Toluene	0.82	0.048	0.9690	0	84.7	73.6	124	5.23	20	
Ethylbenzene	0.85	0.048	0.9690	0	87.5	72.7	129	4.63	20	
Xylenes, Total	2.5	0.097	2.907	0	87.2	75.7	126	4.39	20	
Surr: 4-Bromofluorobenzene	0.88		0.9690		90.7	70	130	0	0	
Sample ID: Ics-69920	SampT	Type: LC		TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 69920 RunNo: 90809									

Sample ID: Ics-69920	SampT	ype: LC	e: LCS TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch	n ID: 69 9	920	F	RunNo: 90	0809				
Prep Date: 9/1/2022	22 Analysis Date: 9/6/2022 SeqNo: 3246792 Units: mg/Kg									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	1.000	0	80.9	80	120			
Toluene	0.84	0.050	1.000	0	84.3	80	120			
Ethylbenzene	0.84	0.050	1.000	0	84.4	80	120			
Xylenes, Total	2.5	0.10	3.000	0	83.2	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.1	70	130			

Sample ID: mb-69961	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	ID: 69	961	F	RunNo: 9	0809				
Prep Date: 9/4/2022	Analysis D	ate: 9/	6/2022	8	SeqNo: 3	246793	Units: %Red	;		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.90		1.000		90.5	70	130			

Sample ID: LCS-69961	SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch	n ID: 69	961	F	RunNo: 9	0809				
Prep Date: 9/4/2022	Analysis D	ate: 9/	6/2022	S	SeqNo: 3	246794	Units: %Red	;		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		90.5	70	130			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 Numl	per: 2208I06		RcptNo: 1	
Received By:	Juan Rojas	8/31/2022 7:40:00 /	AM	Guarans Sal		
Completed By:	Sean Livingston	8/31/2022 8:54:57	AM	< /.	n -L	
Reviewed By:	KPG 8.3	31-22		5,-0,	751—	
Chain of Cus	stody					
1. Is Chain of C	ustody complete?		Yes 🗸	No 🗆	Not Present	
2. How was the	sample delivered?		Courier			
Log In						
	npt made to cool the samp	les?	Yes 🗸	No 🗆	NA 🗆	
4. Were all samp	ples received at a tempera	ture of >0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗆	
5. Sample(s) in	proper container(s)?		Yes 🗹	No 🗌		
6 Sufficient sam	nple volume for indicated to	est(s)?	Yes 🗸	No 🗌		
	except VOA and ONG) pro		Yes 🗸	No 🗆		
	tive added to bottles?		Yes	No 🔽	NA 🗆	
9. Received at le	east 1 vial with headspace	<1/4" for AQ VOA?	Yes 🗌	No 🗆	NA 🗹	
10. Were any sar	mple containers received b	roken?	Yes	No 🗸		
					# of preserved bottles checked	
	ork match bottle labels? ancies on chain of custody)	Yes 🗸	No 🗆	for pH:	2 unless noted)
	correctly identified on Chai		Yes 🗸	No 🗆	Adjusted?	
13. Is it clear wha	t analyses were requested	?	Yes 🗸	No 🗌		1 1
	ng times able to be met? ustomer for authorization.)		Yes 🗸	No 🗆	Checked by:	n8/31/2
	ing (if applicable)			1		
	otified of all discrepancies	with this order?	Yes	No 🗌	NA 🗹	
Person	Notified:	Date:				
By Who	om:	Via:		Phone Fax	☐ In Person	
Regard	ing:					
Client In	nstructions:					
16. Additional re	marks:					
17. Cooler Infor	mation					
Cooler No	processor to a final policy of the	Seal Intact Seal No	Seal Date	Signed By		
1	0.9 Good	Journaut Jear NO	ocal Date	orgined by		

	hain	-ot-C	Chain-of-Custody Record	Turn-Around Time:	Time:								
Client:		NACY	Vertex (EDG)	U Standard	Rush W	, 5 Day			HALL	L E	I V	RONM	HALL ENVIRONMENTAL ANALYSTS LABORATORY
				Project Name:	SIMIS	to a Kate			www	hallenv	ironme	www.hallenvironmental.com	
Mailing	Mailing Address:	s: On	ilille	KUKUN			7	4901 Hawkins NE	kins NI	,	uanera	Albuqueraue, NM 87109	60
				Project #:	(ĭ	Tel. 505-345-3975	345-39		ax 50	Fax 505-345-4107	
Phone #:	#:			-322	00-46	27				Anal	Analysis Request	quest	
email o	email or Fax#:			Project Manager:	iger:					† O		(11	
QA/QC Packa □ Standard	QA/QC Package:		☐ Level 4 (Full Validation)	Morrica	3	Seppin			SWIS	S ' [†] Od		nəsdA\\	
Accred	Accreditation:	□ Az Cc	☐ Az Compliance	Sampler:	SPC			1 280		O ⁵ ' I		uəs	
□ NELAC	AC	□ Other		On Ice:	□ Yes	- No)8/9	3 10	_	(A		
	EDD (Type)			# of Coolers:				əbi	01				
				Cooler Temp(including CF):	(including CF):	(00) 6.0=0-6.4		oitse	y 83			- 67	
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 22.28 ±00.	\ <u>X∃TB</u> 08:H9T	8081 P. EDB (M	d sHA9	RCRA E	V) 0928 8) 0728	Total Co	
8/29	10:32	Sign	WES22-21 0-4"	1 405 Jar		000	>						
-	9:40		WES 22-31.4-6"	,	1	200	_			-			
	9:45		WES22-32 (0-7)			500							
	9.50		WES22-33 6-7'			60							
	9:55		WES22-34 6-7'			300							
	10:00		WES22-35 6-9'			200							
	10:05	10	WES 22-36 4-6"			400							
	10:10		WES22-37 6-7"		Y	200							
	(0:/5		WES 22-38 6-7'			900							
	10:20		WES22-39 6-7'			000							
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	Time:	Relinquished by:	ed by:	Received by:	Vía:		Remarks:	3:	nose	111			
8/29	17:05		ly Contrar	(Www	MAN	8/30/12 9/45		-	0)			
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12 X	18	Chin	Cox ALLII	M	mile Stor	01/2 2/16/2							

Matrix Sample Name BES22-210 4' BES22-210 4' BES22-210 4' BES22-213 4' BES22-13 4' BES22-15 4' BES2	M. Rush 5020y	D Tauk Battery 4901 Hawkins NE - Albuquerque. NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Kequest	Deent) WS WS WS WS WS WS WS WS	A/\r	8MT S80 (1.	No No No No No No No No	Service (GR)	0.9-0-0-0 (°C) MT MT MT MET MET MET MET MET MET MET MET ME	Container Preservative HEAL No. X X X X X X X X X X	jar ice Oct V		00.3		015	t)o	2)(\$	98	0,25(Via: Date Time Remarks:	Min 0/20/22	Via: \ Date Time \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
CW (E0G) Choch	Rush	D Tank	Project #: 22 E− 003 (10−10		Project Manager:	4	Sampler: 8PC	□¥es	olers:	Cooler Temp(including CF): 6.9-	Container Preservative Type and # Type	100	-								y: Via:	dun		1
1-1 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ox (E06)		N			☐ Level 4 (Full Validation)	☐ Az Compliance	□ Other			Sample Name	Sil BES22-209	j BES 22-210	BES22-211	BES22-212 4	213	y.				Relinquished by:	Solly Carthan	Relinquished/by:	7.4.

Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-06 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/29/2022 11:35:00 AM

 Lab ID:
 2208151-001
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/6/2022 1:45:56 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/6/2022 1:45:56 AM
Surr: DNOP	57.9	21-129	%Rec	1	8/6/2022 1:45:56 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 4:17:52 PM
Surr: BFB	103	37.7-212	%Rec	1	8/5/2022 4:17:52 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/5/2022 4:17:52 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 4:17:52 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 4:17:52 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/5/2022 4:17:52 PM
Surr: 4-Bromofluorobenzene	99.4	70-130	%Rec	1	8/5/2022 4:17:52 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	450	60	mg/Kg	20	8/5/2022 3:20:43 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-07 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/29/2022 11:40:00 AM

 Lab ID:
 2208151-002
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/6/2022 1:59:31 AM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/6/2022 1:59:31 AM
Surr: DNOP	47.9	21-129	%Rec	1	8/6/2022 1:59:31 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 10:08:00 AM
Surr: BFB	89.9	37.7-212	%Rec	1	8/5/2022 10:08:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 10:08:00 AM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 10:08:00 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 10:08:00 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/5/2022 10:08:00 AM
Surr: 4-Bromofluorobenzene	84.8	70-130	%Rec	1	8/5/2022 10:08:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	420	60	mg/Kg	20	8/5/2022 12:42:20 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-08 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/29/2022 11:45:00 AM

 Lab ID:
 2208151-003
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/6/2022 2:53:51 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/6/2022 2:53:51 AM
Surr: DNOP	57.8	21-129	%Rec	1	8/6/2022 2:53:51 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 11:08:00 AM
Surr: BFB	89.2	37.7-212	%Rec	1	8/5/2022 11:08:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 11:08:00 AM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 11:08:00 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 11:08:00 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/5/2022 11:08:00 AM
Surr: 4-Bromofluorobenzene	85.3	70-130	%Rec	1	8/5/2022 11:08:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	85	60	mg/Kg	20	8/5/2022 12:54:45 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-10 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/29/2022 8:45:00 AM

 Lab ID:
 2208151-004
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/6/2022 3:07:23 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/6/2022 3:07:23 AM
Surr: DNOP	60.1	21-129	%Rec	1	8/6/2022 3:07:23 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 12:07:00 PM
Surr: BFB	88.6	37.7-212	%Rec	1	8/5/2022 12:07:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 12:07:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 12:07:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 12:07:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/5/2022 12:07:00 PM
Surr: 4-Bromofluorobenzene	84.9	70-130	%Rec	1	8/5/2022 12:07:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	130	60	mg/Kg	20	8/5/2022 1:31:58 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-12 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/29/2022 8:50:00 AM

 Lab ID:
 2208151-005
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/6/2022 3:21:00 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/6/2022 3:21:00 AM
Surr: DNOP	50.4	21-129	%Rec	1	8/6/2022 3:21:00 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/5/2022 12:27:00 PM
Surr: BFB	90.1	37.7-212	%Rec	1	8/5/2022 12:27:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 12:27:00 PM
Toluene	ND	0.050	mg/Kg	1	8/5/2022 12:27:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/5/2022 12:27:00 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/5/2022 12:27:00 PM
Surr: 4-Bromofluorobenzene	84.9	70-130	%Rec	1	8/5/2022 12:27:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	720	60	mg/Kg	20	8/5/2022 1:44:22 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

 $ND \qquad Not \ Detected \ at \ the \ Reporting \ Limit$

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-16 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/29/2022 9:15:00 AM

 Lab ID:
 2208151-006
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/6/2022 3:34:36 AM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/6/2022 3:34:36 AM
Surr: DNOP	48.9	21-129	%Rec	1	8/6/2022 3:34:36 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 12:46:00 PM
Surr: BFB	90.6	37.7-212	%Rec	1	8/5/2022 12:46:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.024	mg/Kg	1	8/5/2022 12:46:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 12:46:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 12:46:00 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/5/2022 12:46:00 PM
Surr: 4-Bromofluorobenzene	84.7	70-130	%Rec	1	8/5/2022 12:46:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	160	60	mg/Kg	20	8/5/2022 1:56:47 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-17 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/29/2022 9:20:00 AM

 Lab ID:
 2208151-007
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/6/2022 3:48:10 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/6/2022 3:48:10 AM
Surr: DNOP	55.5	21-129	%Rec	1	8/6/2022 3:48:10 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 1:06:00 PM
Surr: BFB	96.0	37.7-212	%Rec	1	8/5/2022 1:06:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 1:06:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 1:06:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 1:06:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/5/2022 1:06:00 PM
Surr: 4-Bromofluorobenzene	87.3	70-130	%Rec	1	8/5/2022 1:06:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	160	61	mg/Kg	20	8/5/2022 2:09:11 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-35 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/29/2022 9:25:00 AM

 Lab ID:
 2208151-008
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF		Analyst: DGH			
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/6/2022 4:01:44 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/6/2022 4:01:44 AM
Surr: DNOP	52.0	21-129	%Rec	1	8/6/2022 4:01:44 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 1:26:00 PM
Surr: BFB	93.8	37.7-212	%Rec	1	8/5/2022 1:26:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.024	mg/Kg	1	8/5/2022 1:26:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 1:26:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 1:26:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/5/2022 1:26:00 PM
Surr: 4-Bromofluorobenzene	86.6	70-130	%Rec	1	8/5/2022 1:26:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	170	60	mg/Kg	20	8/5/2022 3:11:14 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-36 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/29/2022 9:30:00 AM

 Lab ID:
 2208151-009
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	Analyst: DGH				
Diesel Range Organics (DRO)	35	15	mg/Kg	1	8/6/2022 4:15:15 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/6/2022 4:15:15 AM
Surr: DNOP	65.9	21-129	%Rec	1	8/6/2022 4:15:15 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/5/2022 1:46:00 PM
Surr: BFB	89.0	37.7-212	%Rec	1	8/5/2022 1:46:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 1:46:00 PM
Toluene	ND	0.050	mg/Kg	1	8/5/2022 1:46:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/5/2022 1:46:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/5/2022 1:46:00 PM
Surr: 4-Bromofluorobenzene	84.5	70-130	%Rec	1	8/5/2022 1:46:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	330	60	mg/Kg	20	8/5/2022 3:23:39 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-39 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 7/29/2022 9:35:00 AM

 Lab ID:
 2208151-010
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/6/2022 4:28:48 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/6/2022 4:28:48 AM
Surr: DNOP	48.5	21-129	%Rec	1	8/6/2022 4:28:48 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/5/2022 2:06:00 PM
Surr: BFB	89.6	37.7-212	%Rec	1	8/5/2022 2:06:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.024	mg/Kg	1	8/5/2022 2:06:00 PM
Toluene	ND	0.048	mg/Kg	1	8/5/2022 2:06:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/5/2022 2:06:00 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/5/2022 2:06:00 PM
Surr: 4-Bromofluorobenzene	84.0	70-130	%Rec	1	8/5/2022 2:06:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	320	59	mg/Kg	20	8/5/2022 3:36:03 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-46 7'

Project: Routh SWD Tank Battery
 Collection Date: 7/29/2022 11:30:00 AM

 Lab ID: 2208151-011
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/6/2022 4:42:18 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/6/2022 4:42:18 AM
Surr: DNOP	58.2	21-129	%Rec	1	8/6/2022 4:42:18 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/5/2022 2:26:00 PM
Surr: BFB	87.9	37.7-212	%Rec	1	8/5/2022 2:26:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 2:26:00 PM
Toluene	ND	0.050	mg/Kg	1	8/5/2022 2:26:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/5/2022 2:26:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/5/2022 2:26:00 PM
Surr: 4-Bromofluorobenzene	82.3	70-130	%Rec	1	8/5/2022 2:26:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	210	60	mg/Kg	20	8/5/2022 3:48:27 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-47 7'

Project: Routh SWD Tank Battery
 Collection Date: 7/29/2022 9:40:00 AM

 Lab ID: 2208151-012
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: DGH				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/6/2022 4:55:51 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/6/2022 4:55:51 AM
Surr: DNOP	60.8	21-129	%Rec	1	8/6/2022 4:55:51 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/5/2022 3:05:00 PM
Surr: BFB	85.8	37.7-212	%Rec	1	8/5/2022 3:05:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 3:05:00 PM
Toluene	ND	0.050	mg/Kg	1	8/5/2022 3:05:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/5/2022 3:05:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/5/2022 3:05:00 PM
Surr: 4-Bromofluorobenzene	82.5	70-130	%Rec	1	8/5/2022 3:05:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	390	59	mg/Kg	20	8/5/2022 4:00:51 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

 $ND \qquad Not \ Detected \ at \ the \ Reporting \ Limit$

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-01 6-10'

Project: Routh SWD Tank Battery
 Collection Date: 8/1/2022 11:30:00 AM

 Lab ID: 2208151-013
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/6/2022 5:09:25 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/6/2022 5:09:25 AM
Surr: DNOP	61.5	21-129	%Rec	1	8/6/2022 5:09:25 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 3:25:00 PM
Surr: BFB	83.8	37.7-212	%Rec	1	8/5/2022 3:25:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.024	mg/Kg	1	8/5/2022 3:25:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 3:25:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 3:25:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/5/2022 3:25:00 PM
Surr: 4-Bromofluorobenzene	79.3	70-130	%Rec	1	8/5/2022 3:25:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	150	60	mg/Kg	20	8/5/2022 4:13:15 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-61 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/1/2022 11:40:00 AM

 Lab ID:
 2208151-014
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/6/2022 5:22:55 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/6/2022 5:22:55 AM
Surr: DNOP	47.9	21-129	%Rec	1	8/6/2022 5:22:55 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 3:45:00 PM
Surr: BFB	87.8	37.7-212	%Rec	1	8/5/2022 3:45:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 3:45:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 3:45:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 3:45:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/5/2022 3:45:00 PM
Surr: 4-Bromofluorobenzene	82.3	70-130	%Rec	1	8/5/2022 3:45:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	480	60	mg/Kg	20	8/5/2022 4:25:39 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-62 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/1/2022 11:50:00 AM

 Lab ID:
 2208151-015
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/6/2022 5:36:22 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/6/2022 5:36:22 AM
Surr: DNOP	43.1	21-129	%Rec	1	8/6/2022 5:36:22 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 4:05:00 PM
Surr: BFB	85.9	37.7-212	%Rec	1	8/5/2022 4:05:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 4:05:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 4:05:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 4:05:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/5/2022 4:05:00 PM
Surr: 4-Bromofluorobenzene	81.0	70-130	%Rec	1	8/5/2022 4:05:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	420	60	mg/Kg	20	8/5/2022 4:38:04 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-63 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/1/2022 12:00:00 PM

 Lab ID:
 2208151-016
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: DGH				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/6/2022 5:49:57 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/6/2022 5:49:57 AM
Surr: DNOP	67.3	21-129	%Rec	1	8/6/2022 5:49:57 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 4:24:00 PM
Surr: BFB	88.5	37.7-212	%Rec	1	8/5/2022 4:24:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.024	mg/Kg	1	8/5/2022 4:24:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 4:24:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 4:24:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/5/2022 4:24:00 PM
Surr: 4-Bromofluorobenzene	81.9	70-130	%Rec	1	8/5/2022 4:24:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	110	60	mg/Kg	20	8/5/2022 5:15:18 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-66 7'

Project: Routh SWD Tank Battery
 Collection Date: 8/1/2022 12:45:00 PM

 Lab ID: 2208151-017
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/6/2022 6:03:30 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/6/2022 6:03:30 AM
Surr: DNOP	49.6	21-129	%Rec	1	8/6/2022 6:03:30 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 4:44:00 PM
Surr: BFB	85.4	37.7-212	%Rec	1	8/5/2022 4:44:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 4:44:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 4:44:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 4:44:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/5/2022 4:44:00 PM
Surr: 4-Bromofluorobenzene	80.2	70-130	%Rec	1	8/5/2022 4:44:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	340	60	mg/Kg	20	8/5/2022 5:27:42 PM

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

Qualifiers:

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

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-67 5'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/1/2022 12:50:00 PM

 Lab ID:
 2208151-018
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE (Analyst: DGH			
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/6/2022 6:17:01 AM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/6/2022 6:17:01 AM
Surr: DNOP	63.7	21-129	%Rec	1	8/6/2022 6:17:01 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 5:04:00 PM
Surr: BFB	85.8	37.7-212	%Rec	1	8/5/2022 5:04:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 5:04:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 5:04:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 5:04:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/5/2022 5:04:00 PM
Surr: 4-Bromofluorobenzene	80.8	70-130	%Rec	1	8/5/2022 5:04:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	250	60	mg/Kg	20	8/5/2022 5:40:07 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-68 5'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/1/2022 12:55:00 PM

 Lab ID:
 2208151-019
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/6/2022 6:30:33 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/6/2022 6:30:33 AM
Surr: DNOP	34.9	21-129	%Rec	1	8/6/2022 6:30:33 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 5:24:00 PM
Surr: BFB	135	37.7-212	%Rec	1	8/5/2022 5:24:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 5:24:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 5:24:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 5:24:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/5/2022 5:24:00 PM
Surr: 4-Bromofluorobenzene	126	70-130	%Rec	1	8/5/2022 5:24:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	140	60	mg/Kg	20	8/5/2022 5:52:31 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-69 5'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/1/2022 1:00:00 PM

 Lab ID:
 2208151-020
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/6/2022 6:44:18 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/6/2022 6:44:18 AM
Surr: DNOP	50.8	21-129	%Rec	1	8/6/2022 6:44:18 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/5/2022 5:44:00 PM
Surr: BFB	89.1	37.7-212	%Rec	1	8/5/2022 5:44:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 5:44:00 PM
Toluene	ND	0.049	mg/Kg	1	8/5/2022 5:44:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/5/2022 5:44:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/5/2022 5:44:00 PM
Surr: 4-Bromofluorobenzene	80.9	70-130	%Rec	1	8/5/2022 5:44:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	96	60	mg/Kg	20	8/5/2022 6:04:55 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-70 5'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/1/2022 1:05:00 PM

 Lab ID:
 2208151-021
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/6/2022 6:57:54 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/6/2022 6:57:54 AM
Surr: DNOP	50.1	21-129	%Rec	1	8/6/2022 6:57:54 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/5/2022 6:04:00 PM
Surr: BFB	83.3	37.7-212	%Rec	1	8/5/2022 6:04:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 6:04:00 PM
Toluene	ND	0.050	mg/Kg	1	8/5/2022 6:04:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/5/2022 6:04:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/5/2022 6:04:00 PM
Surr: 4-Bromofluorobenzene	78.1	70-130	%Rec	1	8/5/2022 6:04:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	380	60	mg/Kg	20	8/5/2022 6:17:19 PM

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

Qualifiers:

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

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Date Reported: 8/11/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-71 5'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/1/2022 1:10:00 PM

 Lab ID:
 2208151-022
 Matrix: SOIL
 Received Date: 8/3/2022 7:15:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/5/2022 3:53:18 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/5/2022 3:53:18 PM
Surr: DNOP	51.7	21-129	%Rec	1	8/5/2022 3:53:18 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/5/2022 8:03:00 PM
Surr: BFB	89.2	37.7-212	%Rec	1	8/5/2022 8:03:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/5/2022 8:03:00 PM
Toluene	ND	0.050	mg/Kg	1	8/5/2022 8:03:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/5/2022 8:03:00 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/5/2022 8:03:00 PM
Surr: 4-Bromofluorobenzene	82.0	70-130	%Rec	1	8/5/2022 8:03:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	410	60	mg/Kg	20	8/5/2022 6:54:31 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208151

11-Aug-22

Client:	Vertex Resources Services, Inc.
Project:	Routh SWD Tank Battery

Project:	Rou	th SWD Tank Battery	
Sample ID:	MB-69284	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID:	PBS	Batch ID: 69284	RunNo: 90078
Prep Date:	8/5/2022	Analysis Date: 8/5/2022	SeqNo: 3211136 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		ND 1.5	
Sample ID:	LCS-69284	SampType: Ics	TestCode: EPA Method 300.0: Anions
Client ID:	LCSS	Batch ID: 69284	RunNo: 90078
Prep Date:	8/5/2022	Analysis Date: 8/5/2022	SeqNo: 3211137 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		14 1.5 15.00	0 91.1 90 110
Sample ID:	MB-69302	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID:	PBS	Batch ID: 69302	RunNo: 90078
Prep Date:	8/5/2022	Analysis Date: 8/5/2022	SeqNo: 3211166 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		ND 1.5	
Sample ID:	LCS-69302	SampType: Ics	TestCode: EPA Method 300.0: Anions
Client ID:	LCSS	Batch ID: 69302	RunNo: 90078
Prep Date:	8/5/2022	Analysis Date: 8/5/2022	SeqNo: 3211167 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-69275	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID:	PBS	Batch ID: 69275	RunNo: 90079
Prep Date:	8/4/2022	Analysis Date: 8/5/2022	SeqNo: 3211203 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		ND 1.5	
Sample ID:	LCS-69275	SampType: Ics	TestCode: EPA Method 300.0: Anions
Client ID:	LCSS	Batch ID: 69275	RunNo: 90079
Prep Date:	8/4/2022	Analysis Date: 8/5/2022	SeqNo: 3211204 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		15 1.5 15.00	0 97.6 90 110

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208151

11-Aug-22

Client:	Vertex Resources Services, Inc.
Project:	Routh SWD Tank Battery

Project: Routh S	WD Tank Battery	•							
Sample ID: MB-69267	SampType: M	BLK	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: PBS	Batch ID: 69	9267	F	RunNo: 90	0075				
Prep Date: 8/4/2022	Analysis Date: 8	3/5/2022	5	SeqNo: 32	210945	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 15								
Motor Oil Range Organics (MRO)	ND 50			74.0	04	400			
Surr: DNOP	7.2	10.00		71.9	21	129			
Sample ID: LCS-69267	SampType: L	cs	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: LCSS	Batch ID: 69	9267	F	RunNo: 90	0075				
Prep Date: 8/4/2022	Analysis Date: 8	3/5/2022	5	SeqNo: 32	210946	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42 15	50.00	0	84.8	64.4	127			
Surr: DNOP	3.0	5.000		59.9	21	129			
Sample ID: 2208151-022AMS	SampType: M	s	Tes	PA Method	8015M/D: Diesel Range Organics				
Client ID: BES22-71 5'	Batch ID: 69	9267	RunNo: 90075						
Prep Date: 8/4/2022	Analysis Date: 8	3/5/2022	SeqNo: 3210948 Units: mg/Kg						
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	34 15		0	67.5	36.1	154			
Surr: DNOP	2.0	4.975		39.9	21	129			
Sample ID: 2208151-022AMS	D SampType: M	SD	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: BES22-71 5'	Batch ID: 69	9267	F	RunNo: 90	0075				
Prep Date: 8/4/2022	Analysis Date: 8	3/5/2022	5	SeqNo: 32	210949	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	33 15	48.97	0	68.3	36.1	154	0.504	33.9	
Surr: DNOP	1.6	4.897		33.6	21	129	0	0	
Sample ID: MB-69253	SampType: M	BLK	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: PBS	Batch ID: 69	9253	F	RunNo: 90	0075				
Prep Date: 8/4/2022	Analysis Date: 8	3/5/2022	5	SeqNo: 32	210967	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 15	i							
Motor Oil Range Organics (MRO)	ND 50								
Surr: DNOP	2.9	10.00		29.2	21	129			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208151** *11-Aug-22*

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: LCS-69253	Samp ⁻	Туре: LC	s	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	Organics			
Client ID: LCSS	Batc	h ID: 69 2	253	F	RunNo: 90075							
Prep Date: 8/4/2022	Analysis [Date: 8/	5/2022	5	SeqNo: 32	210968	Units: mg/k	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	39	15	50.00	0	77.2	64.4	127					
Surr: DNOP	1.2		5.000		23.7	21	129					
Sample ID: MB-69261	Samp ⁻	Туре: МЕ	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	Organics			
Client ID: PBS	Batc	h ID: 69 2	261	F	RunNo: 90	0075						
Prep Date: 8/4/2022	Analysis [Analysis Date: 8/6/2022			SeqNo: 32	210988	Units: mg/k	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	ND	15										
Motor Oil Range Organics (MRO)	ND	50										
Surr: DNOP	5.9		10.00		59.0	21	129					
Sample ID: LCS-69261	Samp ⁻	Туре: LC	s	Tes	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batc	h ID: 692	261	RunNo: 90075								
Prep Date: 8/4/2022	Analysis I	nalysis Date: 8/6/2022 SeqNo					3210989 Units: mg/Kg					
1 10p Bato. 0,4,2022	Analysis L	Jate: 8/ 0	6/2022	\$	SeqNo: 32	210989	Units: mg/k	(g				
Analyte	Result	PQL		SPK Ref Val	SeqNo: 32 %REC	210989 LowLimit	Units: mg/k	(g %RPD	RPDLimit	Qual		
	•				·		J	•	RPDLimit	Qual		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	•	RPDLimit	Qual		
Analyte Diesel Range Organics (DRO)	Result 41 2.4	PQL	SPK value 50.00 5.000	SPK Ref Val	%REC 82.2 47.3	LowLimit 64.4 21	HighLimit 127	%RPD		Qual		
Analyte Diesel Range Organics (DRO) Surr: DNOP	Result 41 2.4 Samp	PQL 15	SPK value 50.00 5.000	SPK Ref Val 0	%REC 82.2 47.3	LowLimit 64.4 21 PA Method	HighLimit 127 129	%RPD		Qual		
Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMS	Result 41 2.4 Samp	PQL 15 Type: MS h ID: 692	SPK value 50.00 5.000	SPK Ref Val 0	%REC 82.2 47.3 tCode: EF	LowLimit 64.4 21 PA Method 0075	HighLimit 127 129	%RPD		Qual		
Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMS Client ID: BES22-07 7'	Result 41 2.4 Samp	PQL 15 Type: MS h ID: 692	SPK value 50.00 5.000 5 6 261 6 / 2022	SPK Ref Val 0	%REC 82.2 47.3 tCode: EF RunNo: 9 6	LowLimit 64.4 21 PA Method 0075	HighLimit 127 129 8015M/D: Die	%RPD		Qual		
Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMS Client ID: BES22-07 7' Prep Date: 8/4/2022	Result 41 2.4 Samp Batc Analysis I	PQL 15 Type: MS h ID: 69 2 Date: 8 /6	SPK value 50.00 5.000 5 6 261 6 / 2022	SPK Ref Val 0	%REC 82.2 47.3 tCode: EF RunNo: 90 SeqNo: 32	LowLimit 64.4 21 PA Method 0075 210993	HighLimit 127 129 8015M/D: Die	%RPD	Organics			
Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMS Client ID: BES22-07 7' Prep Date: 8/4/2022 Analyte	Result 41 2.4 Samp Batc Analysis I	PQL 15 Type: MS h ID: 692 Date: 8/6	SPK value 50.00 5.000 6 261 6/2022 SPK value	SPK Ref Val 0 Tes F SPK Ref Val	%REC 82.2 47.3 ttCode: EF RunNo: 96 SeqNo: 32 %REC	21 PA Method 2075 210993 LowLimit	HighLimit 127 129 8015M/D: Die Units: mg/k	%RPD	Organics			
Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMS Client ID: BES22-07 7' Prep Date: 8/4/2022 Analyte Diesel Range Organics (DRO)	Result 41 2.4 Samp Batc Analysis I Result 31 2.0	PQL 15 Type: MS h ID: 692 Date: 8/6	SPK value 50.00 5.000 6 261 6/2022 SPK value 47.98 4.798	SPK Ref Val 0 Tes F S SPK Ref Val 0	%REC 82.2 47.3 tCode: EF RunNo: 90 SeqNo: 32 %REC 64.5 41.1	LowLimit 64.4 21 PA Method 0075 210993 LowLimit 36.1 21	HighLimit 127 129 8015M/D: Die Units: mg/k HighLimit 154	%RPD esel Range (g %RPD	Organics RPDLimit			
Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMS Client ID: BES22-07 7' Prep Date: 8/4/2022 Analyte Diesel Range Organics (DRO) Surr: DNOP	Result 41 2.4 Samp Batc Analysis [Result 31 2.0 Samp	PQL 15 Type: MS h ID: 692 Date: 8/0 PQL 14	SPK value 50.00 5.000 6 261 6/2022 SPK value 47.98 4.798	SPK Ref Val 0 Tes SPK Ref Val 0	%REC 82.2 47.3 tCode: EF RunNo: 90 SeqNo: 32 %REC 64.5 41.1	LowLimit 64.4 21 PA Method 0075 210993 LowLimit 36.1 21 PA Method	HighLimit 127 129 8015M/D: Die Units: mg/k HighLimit 154 129	%RPD esel Range (g %RPD	Organics RPDLimit			
Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMS Client ID: BES22-07 7' Prep Date: 8/4/2022 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMSI	Result 41 2.4 Samp Batc Analysis [Result 31 2.0 Samp	PQL 15 Type: MS h ID: 692 Date: 8/0 14 Type: MS	SPK value 50.00 5.000 6 261 6/2022 SPK value 47.98 4.798 6D 261	SPK Ref Val 0 Tes SPK Ref Val 0 Tes	%REC 82.2 47.3 tCode: EF RunNo: 96 SeqNo: 32 %REC 64.5 41.1	LowLimit 64.4 21 PA Method 0075 210993 LowLimit 36.1 21 PA Method 0075	HighLimit 127 129 8015M/D: Die Units: mg/k HighLimit 154 129	%RPD esel Range %RPD esel Range	Organics RPDLimit			
Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMS Client ID: BES22-07 7' Prep Date: 8/4/2022 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMSI Client ID: BES22-07 7'	Result 41 2.4 Samp Batc Analysis I Result 31 2.0 Samp Batc	PQL 15 Type: MS h ID: 692 Date: 8/0 14 Type: MS	SPK value 50.00 5.000 6 261 6/2022 SPK value 47.98 4.798 6D 261 6/2022	SPK Ref Val 0 Tes SPK Ref Val 0 Tes	%REC 82.2 47.3 tCode: EF RunNo: 96 SeqNo: 32 %REC 64.5 41.1 tCode: EF	LowLimit 64.4 21 PA Method 0075 210993 LowLimit 36.1 21 PA Method 0075	HighLimit 127 129 8015M/D: Die Units: mg/k HighLimit 154 129 8015M/D: Die	%RPD esel Range %RPD esel Range	Organics RPDLimit			
Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMS Client ID: BES22-07 7' Prep Date: 8/4/2022 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 2208151-002AMSI Client ID: BES22-07 7' Prep Date: 8/4/2022	Result 41 2.4 Samp Batc Analysis I Result 31 2.0 Samp Batc Analysis I	PQL 15 Type: MS h ID: 692 Date: 8/0 14 Type: MS h ID: 692 Date: 8/0	SPK value 50.00 5.000 6 261 6/2022 SPK value 47.98 4.798 6D 261 6/2022	SPK Ref Val 0 Tes SPK Ref Val 0 Tes	%REC 82.2 47.3 ttCode: EF RunNo: 90 SeqNo: 33 %REC 64.5 41.1 ttCode: EF RunNo: 90 SeqNo: 33	LowLimit 64.4 21 PA Method 0075 210993 LowLimit 36.1 21 PA Method 0075 210994	HighLimit 127 129 8015M/D: Die Units: mg/k HighLimit 154 129 8015M/D: Die Units: mg/k	%RPD esel Range %RPD esel Range	Organics RPDLimit Organics	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
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208151** *11-Aug-22*

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Project: Routh SW	D Tank Battery										
Sample ID: mb-69239	SampType: MBLK		Tes	tCode: EP	A Method	8015D: Gasol	ine Range				
Client ID: PBS	Batch ID: 69239		F	RunNo: 90	015						
Prep Date: 8/3/2022	Analysis Date: 8/4/202	22	9	SeqNo: 32	208389	Units: mg/K	g				
Analyte	Result PQL SP	K value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 1000	1000		103	37.7	212					
Sample ID: Ics-69239	SampType: LCS		Tes	tCode: EP	A Method	8015D: Gasol	ine Range				
Client ID: LCSS	Batch ID: 69239		F	RunNo: 90	015						
Prep Date: 8/3/2022	Analysis Date: 8/4/202	22	8	SeqNo: 32	208390	Units: mg/K	g				
Analyte	Result PQL SP	K value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	26 5.0	25.00	0	102	72.3	137					
Surr: BFB	2100	1000		207	37.7	212					
Sample ID: Ics-69242	SampType: LCS		Tes	TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 69242		F	RunNo: 90064							
Prep Date: 8/3/2022	Analysis Date: 8/5/202	22	SeqNo: 3209975			Units: mg/Kg					
Analyte	Result PQL SP	K value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	26 5.0	25.00	0	104	72.3	137					
Surr: BFB	2000	1000		200	37.7	212					
Sample ID: mb-69242	SampType: MBLK		Tes	tCode: EP	A Method	8015D: Gasol	line Range				
Client ID: PBS	Batch ID: 69242		RunNo: 90064								
Prep Date: 8/3/2022	Analysis Date: 8/5/202	22	9	SeqNo: 32	209976	Units: mg/K	g				
Analyte	Result PQL SP	K value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	ND 5.0										
Surr: BFB	920	1000		92.3	37.7	212					
Sample ID: 2208151-002ams	SampType: MS		Tes	tCode: EP	PA Method	8015D: Gasol	ine Range				
Client ID: BES22-07 7'	Batch ID: 69242		F	RunNo: 90	0064						
Prep Date: 8/3/2022	Analysis Date: 8/5/202	22	\$	SeqNo: 32	209978	Units: mg/K	g				
Analyte	Result PQL SP	K value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	25 5.0	24.95	0	100	70	130					
Surr: BFB	2000	998.0		200	37.7	212					
Sample ID: 2208151-002amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BES22-07 7'	Batch ID: 69242		RunNo: 90064								
D D / 0/0/0000	A 1 1 D 4 6		_								

Qualifiers:

Analyte

Prep Date:

Value exceeds Maximum Contaminant Level.

8/3/2022

- 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 range due to dilution or matrix interference

Analysis Date: 8/5/2022

PQL

Result

B Analyte detected in the associated Method Blank

SeqNo: 3209979

LowLimit

%REC

Units: mg/Kg

HighLimit

%RPD

E Estimated value

SPK value SPK Ref Val

- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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RPDLimit

Qual

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208151**

11-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Project:	Routh SW	'D Tank I	Battery										
Sample ID:	2208151-002amsd	SampT	Гуре: М	SD	Tes	tCode: EF	EPA Method 8015D: Gasoline Range						
Client ID:	BES22-07 7'	Batcl	h ID: 692	242	F	RunNo: 90	0064						
Prep Date:	8/3/2022	Analysis D	Date: 8/	5/2022	5	SeqNo: 32	209979	Units: mg/K	(g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Rang	e Organics (GRO)	26	4.9	24.30	0	106	70	130	3.58	20			
Surr: BFB		2000		971.8		204	37.7	212	0	0			
Sample ID:	lcs-69246	Samp1	Гуре: LC	S	Tes	tCode: EF	PA Method	8015D: Gaso	line Range	,			
Client ID:	LCSS	Batcl	h ID: 692	246	F	RunNo: 90	0064						
Prep Date:	8/3/2022	Analysis D	Analysis Date: 8/5/2022			SeqNo: 32	209999	Units: mg/K	(g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Rang	e Organics (GRO)	24	5.0	25.00	0	96.4	72.3	137					
Surr: BFB		1900		1000		191	37.7	212					
Sample ID:	mb-69246	Samp1	Гуре: МЕ	BLK	Tes	TestCode: EPA Method 8015D: Gasoline Range							
Client ID:	PBS	Batcl	h ID: 692	246	RunNo: 90064								
Prep Date:	8/3/2022	Analysis D	Date: 8/	5/2022	SeqNo: 3210000 Units: mg/Kg				(g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Rang	e Organics (GRO)	ND	5.0										
Surr: BFB		810		1000		80.5	37.7	212					
Sample ID:	2208151-022ams	Samp1	Гуре: М.	3	Tes	tCode: EF	PA Method	8015D: Gaso	line Range	,			
Client ID:	BES22-71 5'	Batcl	h ID: 692	246	F	RunNo: 90	0064						
Prep Date:	8/3/2022	Analysis D	Date: 8/	5/2022	S	SeqNo: 32	210002	Units: mg/K	(g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Rang	e Organics (GRO)	23	4.9	24.61	0	95.4	70	130					
Surr: BFB		1900		984.3		196	37.7	212					
Sample ID:	2208151-022amsd	SampT	Гуре: М.	SD	Tes	tCode: EF	PA Method	8015D: Gaso	line Range	•			
Client ID:	BES22-71 5'	Batcl	h ID: 692	246	F	RunNo: 90	0064						
Prep Date:	8/3/2022	Analysis D	Date: 8/	5/2022	S	SeqNo: 32	210003	Units: mg/K	(g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Rang	e Organics (GRO)	26	4.9	24.61	0	104	70	130	8.74	20			
Surr: BFB		2000		984.3		208	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
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208151

11-Aug-22

Client: Vertex Resources Services, Inc. **Project:** Routh SWD Tank Battery

Sample ID: mb-69239	SampType: MBLK			Tes						
Client ID: PBS	Batch ID: 69239			F	RunNo: 90					
Prep Date: 8/3/2022	Analysis D	Date: 8/4	1/2022	9	SeqNo: 32	208419	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Sample ID: LCS-69239	SampT	ype: LC	s	Tes	tCode: EF	PA Method	8021B: Volati	les			
Client ID: LCSS	Batcl	n ID: 692	239	F	RunNo: 90	0015					
Prep Date: 8/3/2022	Analysis D	Date: 8/4	4/2022	5	SeqNo: 32	208420	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.96	0.025	1.000	0	96.3	80	120				
Toluene	0.99	0.050	1.000	0	99.3	80	120				
Ethylbenzene	0.99	0.050	1.000	0	98.6	80	120				
Xylenes, Total	3.0	0.10	3.000	0	98.7	80	120				
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130				

Sample ID: Ics-69242	Samp1	ype: LC	S	Tes	tCode: EF	PA Method	8021B: Volati	les				
Client ID: LCSS	Batcl	n ID: 692	242	F	RunNo: 90064							
Prep Date: 8/3/2022	Analysis [Date: 8/	5/2022	5	SeqNo: 32							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	0.90	0.025	1.000	0	89.9	80	120					
Toluene	0.91	0.050	1.000	0	90.5	80	120					
Ethylbenzene	0.90	0.050	1.000	0	90.1	80	120					
Xylenes, Total	2.7	0.10	3.000	0	89.6	80	120					
Surr: 4-Bromofluorobenzene	0.85		1.000		84.8	70	130					

Sample ID: mb-69242	SampT	уре: МЕ	BLK	Tes	les					
Client ID: PBS	Batch	n ID: 692	242	F	RunNo: 90					
Prep Date: 8/3/2022	Analysis D)ate: 8/	5/2022	5	SeqNo: 32	210029	g			
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	0.87		1.000		86.7	70	130			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208151** *11-Aug-22*

Client: Vertex Resources Services, Inc.
Project: Routh SWD Tank Battery

Sample ID: 2208151-003ams	Samp	Гуре: МЅ		Tes								
Client ID: BES22-08 4'	Batcl	h ID: 692	242	F	RunNo: 90	0064						
Prep Date: 8/3/2022	Analysis [Date: 8/	5/2022	9	SeqNo: 32	210032	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	0.85	0.025	0.9852	0	86.1	68.8	120					
Toluene	0.86	0.049	0.9852	0	87.4	73.6	124					
Ethylbenzene	0.86	0.049	0.9852	0	87.5	72.7	129					
Xylenes, Total	2.5	0.099	2.956	0	86.2	75.7	126					
Surr: 4-Bromofluorobenzene	0.82		0.9852		83.3	70	130					

Sample ID: 2208151-003amsd	SampT	SampType: MSD TestCode: EPA Method 8021B: Volatiles												
Client ID: BES22-08 4'	Batch	n ID: 692	242	F	RunNo: 90									
Prep Date: 8/3/2022	Analysis D	Date: 8/5	5/2022	5	SeqNo: 32	210033	Units: mg/K	nits: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene	0.88	0.025	0.9881	0	89.0	68.8	120	3.65	20					
Toluene	0.90	0.049	0.9881	0	90.8	73.6	124	4.10	20					
Ethylbenzene	0.90	0.049	0.9881	0	91.6	72.7	129	4.82	20					
Xylenes, Total	2.7	0.099	2.964	0	91.0	75.7	126	5.72	20					
Surr: 4-Bromofluorobenzene	0.85		0.9881		86.1	70	130	0	0					

Sample ID: Ics-69246	SampT	Type: LC:	S	Tes	tCode: EF	PA Method	8021B: Volati	les			
Client ID: LCSS	Batcl	h ID: 692	246	F	RunNo: 90						
Prep Date: 8/3/2022	Analysis D	Date: 8/5	5/2022	5	SeqNo: 32	g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.87	0.025	1.000	0	87.1	80	120				
Toluene	0.88	0.050	1.000	0	88.0	80	120				
Ethylbenzene	0.87	0.050	1.000	0	87.3	80	120				
Xylenes, Total	2.6	0.10	3.000	0	86.8	80	120				
Surr: 4-Bromofluorobenzene	0.79		1.000		78.6	70	130				

Sample ID: mb-69246	Samp1	уре: МЕ	BLK	Tes	tCode: EF	les							
Client ID: PBS	Batcl	n ID: 692	246	F	RunNo: 90	0064							
Prep Date: 8/3/2022	Analysis D	Date: 8/	5/2022	5	SeqNo: 32	210053	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	0.77		1.000		77.2	70	130						

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 Reso Services, Inc		Work	Order Num	ber: 220	8151			RcptNo:	1
Received By:	Juan Rojas		8/3/202	2 7:15:00 A	M		Glean	39		
Completed By:	Sean Living	gston	8/3/202	2 8:27:37 A	M		<	1	, , , , , , , , , , , , , , , , , , ,	
Reviewed By:	cmc		8/3/2				مرك	-6	John	
Chain of Cus	stody									
1. Is Chain of C	ustody comple	te?			Yes	~	No		Not Present	
2. How was the	sample delive	red?			Cou	rier				
Log In										
3. Was an atten	npt made to co	ol the samp	les?		Yes	V	No		NA 🗌	
4. Were all samp	ples received a	at a tempera	ture of >0° C	to 6.0°C	Yes	V	No		NA 🗆	
5. Sample(s) in	proper contain	er(s)?			Yes	V	No			
6. Sufficient sam	ple volume for	indicated to	est(s)?		Yes	~	No			
7. Are samples (except VOA ar	nd ONG) pro	operly preserve	ed?	Yes	V	No			
8. Was preserva	tive added to b	oottles?			Yes		No	V	NA 🗆	
9. Received at le	east 1 vial with	headspace	<1/4" for AQ V	OA?	Yes		No		NA 🗹	
10. Were any sar	mple containers	s received b	roken?		Yes		No	V	# of preserved	/
11. Does paperwo	ork match bottle ancies on chair)		Yes	V	No		bottles checked for pH:	12 unless noted)
12. Are matrices of					Yes	~	No		Adjusted?	
13. Is it clear what	t analyses were	e requested	?		Yes	~	No			0.
14. Were all holding (If no, notify co					Yes	V	No		Checked by: 1	M 8.03
Special Handl	ing (if appl	icable)								
15. Was client no	tified of all disc	crepancies v	with this order?		Yes		No		NA 🗹	
Person	Notified:			Date:				_		
By Who	om:			Via:	☐ eM	ail 🔲	Phone [Fax	☐ In Person	
Regardi								_		
Client Ir	nstructions:									
16. Additional rea	marks:									
17. Cooler Infor	mation									
Cooler No		Condition	Seal Intact	Seal No	Seal D	ate	Signed	Ву	I	
1		Good								
2	2.1	Good		70 17						

HALL FNVTRONMENTAL	LABORATORY		2400				:39 PM																			Page	
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,	□ Standard	Project Name:	Rowth	Project #:	THE.	Project Manager:	Mon	Sampler:	On Ice:	# of Coolers:	Cooler Temp(including CF):	Container Type and #	1403 jar	?-											Received by:	Beceived by:	Necelved by.
5							□ Level 4 (Full Validation)			l			ė,	1	١, ١	, ,	10	ī	-+	- +	it.	1+1	140	1+ +		1	
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5	entex (□ Az	□ Other			Matrix	Soil		100				Ш						Relinquished by:	Relinquished by:	לפוווילי
Oliain-Ol-Castoay Inecola	200		Sui Mailing Address:			:#x#	kage:			ype)			1:35	11:40	11:45	8:45	8.50	9:15	9:20	:25	9:30	9:35	11:30	9:40		0	1
5	اَي		ng Ad		e #:	email or Fax#:	Standard Standard	Accreditation:	ELAC	□ EDD (Type)	-	Time	1	=	=	o)	8	6	6	9.	9	9	į	0			100
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Page 385 of 556 Received by OCD: 1/18/2023 2:22:39 PM **ANALYSIS LABORATORY** HALL ENVIRONMENTAL 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. 4901 Hawkins NE - Albuquerque, NM 87109 Fax 505-345-4107 www.hallenvironmental.com **Analysis Request** Total Coliform (Present/Absent) (AOV-im92) 07S8 (AOV) 09S8 Br, NO3, NO2, PO4, SO4 CDE' Tel. 505-345-3975 RCRA 8 Metals PAHs by 8310 or 8270SIMS EDB (Method 504.1) 8081 Pesticides/8082 PCB's Remarks: TPH:8015D(GRO / DRO / MRO) NETEX! MTBE / TMB's (8021) (S) 8 100, Er 0/3/2 7.11 Routh SWD Tank Batter Time HEAL No. 020 510 A Rush O Orn 210 10 000 120 Cooler Temp(including CF): 5-7-0-5-9 40 510 200 510 Bhlu Date 225-00716-10 **%**□ Monia Perpir Preservative Sally A-Yes 16 Turn-Around Time: Type Via: Project Manager: # of Coolers: 6 Project Name: Standard
 Standard Type and # 40gar Container Received by: Project #: Sampler: Received by On Ice: □ Level 4 (Full Validation) 01-0 -0 R Chain-of-Custody Record 5 2 3 10 Sample Name RES 27 - 67 RESIL- 63 BES 22- 66 PES12- 60 RES 22-67 WES22-DI RES11-70 BES22-101 BES 22-69 BES12-71 □ Az Compliance Child Relinquished by: Sally Relinquished by: 20 □ Other Matrix Spi Vertex build Address: कि यि पिक 12:55 3.B 4:5 1:30 2:00 2:45 13:00 QA/QC Package: 1250 3:10 1:40 350 □ EDD (Type) Time email or Fax#: Accreditation: Time: Time: □ Standard □ NELAC Phone #: Collent: Date Date:



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

August 15, 2022

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

FAX:

RE: Routh SWD Tank Battery OrderNo.: 2208249

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 8 sample(s) on 8/4/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-64 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/2/2022 8:45:00 AM

 Lab ID:
 2208249-001
 Matrix: SOIL
 Received Date: 8/4/2022 7:04:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/8/2022 4:25:37 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/8/2022 4:25:37 PM
Surr: DNOP	108	21-129	%Rec	1	8/8/2022 4:25:37 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/6/2022 12:26:46 PM
Surr: BFB	103	37.7-212	%Rec	1	8/6/2022 12:26:46 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/6/2022 12:26:46 PM
Toluene	ND	0.048	mg/Kg	1	8/6/2022 12:26:46 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/6/2022 12:26:46 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/6/2022 12:26:46 PM
Surr: 4-Bromofluorobenzene	99.6	70-130	%Rec	1	8/6/2022 12:26:46 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	240	60	mg/Kg	20	8/8/2022 3:49:49 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 12

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-65 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/2/2022 8:50:00 AM

 Lab ID:
 2208249-002
 Matrix: SOIL
 Received Date: 8/4/2022 7:04:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/8/2022 4:39:15 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/8/2022 4:39:15 PM
Surr: DNOP	103	21-129	%Rec	1	8/8/2022 4:39:15 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/6/2022 12:50:23 PM
Surr: BFB	103	37.7-212	%Rec	1	8/6/2022 12:50:23 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.023	mg/Kg	1	8/6/2022 12:50:23 PM
Toluene	ND	0.046	mg/Kg	1	8/6/2022 12:50:23 PM
Ethylbenzene	ND	0.046	mg/Kg	1	8/6/2022 12:50:23 PM
Xylenes, Total	ND	0.093	mg/Kg	1	8/6/2022 12:50:23 PM
Surr: 4-Bromofluorobenzene	99.7	70-130	%Rec	1	8/6/2022 12:50:23 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	230	60	mg/Kg	20	8/8/2022 8:34:13 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 12

Date Reported: 8/15/2022

8/8/2022 8:46:35 PM

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-72 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/2/2022 9:00:00 AM

 Lab ID:
 2208249-003
 Matrix: SOIL
 Received Date: 8/4/2022 7:04:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/8/2022 4:53:20 PM Motor Oil Range Organics (MRO) 8/8/2022 4:53:20 PM ND 49 mg/Kg 1 Surr: DNOP 98.3 21-129 %Rec 1 8/8/2022 4:53:20 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 8/6/2022 1:13:58 PM 4.9 mg/Kg 1 Surr: BFB 103 37.7-212 %Rec 1 8/6/2022 1:13:58 PM **EPA METHOD 8021B: VOLATILES** Analyst: BRM Benzene ND 8/6/2022 1:13:58 PM 0.024 mg/Kg 1 Toluene ND 0.049 mg/Kg 1 8/6/2022 1:13:58 PM Ethylbenzene ND 0.049 mg/Kg 1 8/6/2022 1:13:58 PM Xylenes, Total ND 0.097 mg/Kg 1 8/6/2022 1:13:58 PM Surr: 4-Bromofluorobenzene 99.4 70-130 %Rec 1 8/6/2022 1:13:58 PM **EPA METHOD 300.0: ANIONS** Analyst: JMT

ND

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

Qualifiers:

Chloride

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits

mg/Kg

20

60

- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-81 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/2/2022 9:45:00 AM

 Lab ID:
 2208249-004
 Matrix: SOIL
 Received Date: 8/4/2022 7:04:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	57	14	mg/Kg	1	8/8/2022 5:07:12 PM
Motor Oil Range Organics (MRO)	83	48	mg/Kg	1	8/8/2022 5:07:12 PM
Surr: DNOP	94.8	21-129	%Rec	1	8/8/2022 5:07:12 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/6/2022 1:37:33 PM
Surr: BFB	101	37.7-212	%Rec	1	8/6/2022 1:37:33 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.023	mg/Kg	1	8/6/2022 1:37:33 PM
Toluene	ND	0.046	mg/Kg	1	8/6/2022 1:37:33 PM
Ethylbenzene	ND	0.046	mg/Kg	1	8/6/2022 1:37:33 PM
Xylenes, Total	ND	0.092	mg/Kg	1	8/6/2022 1:37:33 PM
Surr: 4-Bromofluorobenzene	97.7	70-130	%Rec	1	8/6/2022 1:37:33 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	520	60	mg/Kg	20	8/8/2022 8:58:56 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-82 7'

Project: Routh SWD Tank Battery
 Collection Date: 8/2/2022 9:50:00 AM

 Lab ID: 2208249-005
 Matrix: SOIL
 Received Date: 8/4/2022 7:04:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst: DGH
Diesel Range Organics (DRO)	31	14	mg/Kg	1	8/8/2022 5:20:58 PM
Motor Oil Range Organics (MRO)	69	46	mg/Kg	1	8/8/2022 5:20:58 PM
Surr: DNOP	90.4	21-129	%Rec	1	8/8/2022 5:20:58 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/6/2022 2:01:11 PM
Surr: BFB	100	37.7-212	%Rec	1	8/6/2022 2:01:11 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/6/2022 2:01:11 PM
Toluene	ND	0.047	mg/Kg	1	8/6/2022 2:01:11 PM
Ethylbenzene	ND	0.047	mg/Kg	1	8/6/2022 2:01:11 PM
Xylenes, Total	ND	0.095	mg/Kg	1	8/6/2022 2:01:11 PM
Surr: 4-Bromofluorobenzene	96.7	70-130	%Rec	1	8/6/2022 2:01:11 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	530	60	mg/Kg	20	8/8/2022 9:11:17 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-86 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/2/2022 1:30:00 PM

 Lab ID:
 2208249-006
 Matrix: SOIL
 Received Date: 8/4/2022 7:04:00 AM

Analyses	Result RL Qual		l Units	DF	Date Analyzed		
EPA METHOD 8015M/D: DIESEL RANGE ORGA				Analyst: DGH			
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/8/2022 5:34:45 PM		
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/8/2022 5:34:45 PM		
Surr: DNOP	100	21-129	%Rec	1	8/8/2022 5:34:45 PM		
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM		
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/6/2022 2:24:43 PM		
Surr: BFB	100	37.7-212	%Rec	1	8/6/2022 2:24:43 PM		
EPA METHOD 8021B: VOLATILES					Analyst: BRM		
Benzene	ND	0.025	mg/Kg	1	8/6/2022 2:24:43 PM		
Toluene	ND	0.049	mg/Kg	1	8/6/2022 2:24:43 PM		
Ethylbenzene	ND	0.049	mg/Kg	1	8/6/2022 2:24:43 PM		
Xylenes, Total	ND	0.098	mg/Kg	1	8/6/2022 2:24:43 PM		
Surr: 4-Bromofluorobenzene	97.4	70-130	%Rec	1	8/6/2022 2:24:43 PM		
EPA METHOD 300.0: ANIONS					Analyst: JMT		
Chloride	150	60	mg/Kg	20	8/8/2022 10:37:42 PM		

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

Qualifiers:

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

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Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-87 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/2/2022 1:35:00 PM

 Lab ID:
 2208249-007
 Matrix: SOIL
 Received Date: 8/4/2022 7:04:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/8/2022 5:48:50 PM Motor Oil Range Organics (MRO) 8/8/2022 5:48:50 PM ND 50 mg/Kg 1 21-129 Surr: DNOP 103 %Rec 1 8/8/2022 5:48:50 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 8/6/2022 2:48:18 PM 5.0 mg/Kg 1 Surr: BFB 103 37.7-212 %Rec 1 8/6/2022 2:48:18 PM **EPA METHOD 8021B: VOLATILES** Analyst: BRM Benzene ND 8/6/2022 2:48:18 PM 0.025 mg/Kg 1 Toluene ND 0.050 mg/Kg 1 8/6/2022 2:48:18 PM Ethylbenzene ND 0.050 mg/Kg 1 8/6/2022 2:48:18 PM Xylenes, Total ND mg/Kg 1 8/6/2022 2:48:18 PM 0.10 Surr: 4-Bromofluorobenzene 99.5 70-130 %Rec 1 8/6/2022 2:48:18 PM **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride mg/Kg 8/8/2022 11:14:44 PM 350 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-88 4'

Project: Routh SWD Tank Battery
 Collection Date: 8/2/2022 1:40:00 PM

 Lab ID: 2208249-008
 Matrix: SOIL
 Received Date: 8/4/2022 7:04:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/8/2022 6:02:47 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/8/2022 6:02:47 PM
Surr: DNOP	81.3	21-129	%Rec	1	8/8/2022 6:02:47 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/6/2022 3:11:55 PM
Surr: BFB	103	37.7-212	%Rec	1	8/6/2022 3:11:55 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.023	mg/Kg	1	8/6/2022 3:11:55 PM
Toluene	ND	0.047	mg/Kg	1	8/6/2022 3:11:55 PM
Ethylbenzene	ND	0.047	mg/Kg	1	8/6/2022 3:11:55 PM
Xylenes, Total	ND	0.093	mg/Kg	1	8/6/2022 3:11:55 PM
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	8/6/2022 3:11:55 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	300	60	mg/Kg	20	8/8/2022 11:27:06 PM

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

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208249**

15-Aug-22

Client: Project:		ex Resources Services, Inc. th SWD Tank Battery							
Sample ID:	MB-69320	SampType: mblk	TestCode: EPA Method 300.0: Anions						
Client ID:	PBS	Batch ID: 69320	RunNo: 90106						
Prep Date:	8/8/2022	Analysis Date: 8/8/2022	SeqNo: 3212279 Units: mg/Kg						
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual						
Chloride		ND 1.5							
Sample ID:	LCS-69320	SampType: Ics	TestCode: EPA Method 300.0: Anions						
Client ID:	LCSS	Batch ID: 69320	RunNo: 90106						
Prep Date:	8/8/2022	Analysis Date: 8/8/2022	SeqNo: 3212280 Units: mg/Kg						
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual						
Chloride		15 1.5 15.00	0 97.0 90 110						
Sample ID:	MB-69336	SampType: mblk	TestCode: EPA Method 300.0: Anions						
Client ID:	PBS	Batch ID: 69336	RunNo: 90106						
Prep Date:	8/8/2022	Analysis Date: 8/8/2022	SeqNo: 3212323 Units: mg/Kg						
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual						
Chloride		ND 1.5							
Sample ID:	LCS-69336	SampType: Ics	TestCode: EPA Method 300.0: Anions						
Client ID:	LCSS	Batch ID: 69336	RunNo: 90106						
Prep Date:	8/8/2022	Analysis Date: 8/8/2022	SeqNo: 3212324 Units: mg/Kg						
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual						
Chloride		15 1.5 15.00	0 98.7 90 110						
Sample ID:	MB-69313	SampType: mblk	TestCode: EPA Method 300.0: Anions						
Client ID:	PBS	Batch ID: 69313	RunNo: 90109						
Prep Date:	8/8/2022	Analysis Date: 8/8/2022	SeqNo: 3212358 Units: mg/Kg						
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual						
Chloride		ND 1.5							

Qualifiers:

Client ID:

Prep Date:

Analyte

Chloride

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Sample ID: LCS-69313

LCSS

8/8/2022

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference

SampType: Ics

Result

14

Batch ID: 69313

Analysis Date: 8/8/2022

PQL

1.5

B Analyte detected in the associated Method Blank

RunNo: 90109

SeqNo: 3212359

TestCode: EPA Method 300.0: Anions

LowLimit

Units: mg/Kg

HighLimit

%RPD

E Estimated value

SPK value SPK Ref Val %REC

- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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RPDLimit

Qual

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208249** *15-Aug-22*

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-69285	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batc	h ID: 692	285	RunNo: 90121							
Prep Date: 8/5/2022	Analysis [Date: 8/ 8	8/2022	SeqNo: 3212781			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	15									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	9.4		10.00		94.1	21	129				
Sample ID: LCS-69285	SampType: LCS TestCode:					PA Method	8015M/D: Die	sel Range	Organics		
Client ID: LCSS	Batc	h ID: 692	285	F	RunNo: 90	0121					

Client ID: LCSS	Batch ID: 69285 Analysis Date: 8/8/2022			F	RunNo: 90	0121				
Prep Date: 8/5/2022				SeqNo: 3212782 Units: mg/k				g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	15	50.00	0	82.2	64.4	127			
Surr: DNOP	4.7		5.000		93.1	21	129			

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208249 15-Aug-22

Client: Vertex Resources Services, Inc. **Project:** Routh SWD Tank Battery

Sample ID: Ics-69269 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 69269 RunNo: 90070 Units: mg/Kg Prep Date: 8/4/2022 Analysis Date: 8/6/2022 SeqNo: 3210415 PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Analyte Result Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 101 72.3 137 Surr: BFB 2000 1000 200 37.7 212

Sample ID: mb-69269 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 69269 RunNo: 90070

Prep Date: 8/4/2022 Analysis Date: 8/6/2022 SeqNo: 3210417 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

Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208249**

15-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: LCS-69269	Samp	Гуре: LC	s	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Batcl	h ID: 692	269	F	RunNo: 90	0070				
Prep Date: 8/4/2022	Analysis [Date: 8/6	6/2022	5	SeqNo: 32	210465	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.0	80	120			
Toluene	0.99	0.050	1.000	0	99.1	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.6	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.6	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Sample ID: mb-69269	SampT	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: PBS	Batcl	h ID: 692	269	F	RunNo: 90	0070				
Prep Date: 8/4/2022	Analysis D	Date: 8/ 0	6/2022	5	SeqNo: 32	210467	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.1	70	130			

Qualifiers:

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

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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 Na	ame: Vertex Res Services, I		Work	Order Numbe	er: 220	8249			RcptNo: 1
Received	l By: Juan Roj	as	8/4/202	2 7:04:00 AM			Glean	30	
Complete	ed By: Sean Livi	ingston	8/4/202	2 8:26:14 AM			<	/	n d
Reviewed	d By: WW	8.09	22				٠,٠	-0,	J35-
Chain o	f Custody								
1. Is Cha	in of Custody comp	olete?			Yes	V	No		Not Present
2. How w	as the sample deliv	vered?			Cou	rier			
Log In									
	n attempt made to	cool the samp	les?		Yes	~	No		NA 🗆
4. Were a	all samples received	d at a tempera	ature of >0° C	o 6.0°C	Yes	V	No		NA 🗆
5. Sample	e(s) in proper conta	iner(s)?			Yes	V	No		
6. Sufficie	ent sample volume	for indicated to	est(s)?		Yes	V	No		
7. Are sar	mples (except VOA	and ONG) pr	operly preserve	ed?	Yes	~	No		
8. Was pr	reservative added to	bottles?			Yes		No l	V	NA 🗆
9. Receive	ed at least 1 vial wi	th headspace	<1/4" for AQ V	OA?	Yes		No [NA 🗹
10. Were a	any sample contain	ers received b	oroken?		Yes		No	V	# of preserved
	aperwork match bo liscrepancies on ch)		Yes	V	No !		bottles checked for pH: (<2 or >12 unless noted)
12. Are ma	trices correctly ider	ntified on Chai	n of Custody?		Yes	V	No [Adjusted?
	ar what analyses w		?		Yes		No		declub a
	all holding times able notify customer for a				Yes	V	No l		effecked by: 918/4/22
Special F	Handling (if ap)	olicable)							
15. Was cl	lient notified of all d	iscrepancies	with this order?		Yes		No		NA 🗹
F	Person Notified:			Date:				-	
E	By Whom:			Via:	□ еМ	ail 🗌	Phone [Fax	☐ In Person
	Regarding:								
(Client Instructions:								
16. Addition	onal remarks:								
	er Information								
Cod	oler No Temp °C		Seal Intact	Seal No	Seal D	ate	Signed B	Ву	
1 2	1.1 0.5	Good							
4	0.5	Good							

Page 1 of 1

Solution Project Pro	Client:	Ver	ertex	" Vertex (FOC)	3	© Standard p	d Kush	n 5 Mey				AN	HALL ENVI ANALYSIS	EN		HALL ENVIRONMENTAL ANALYSIS LABORATOR	MEN RA	TOT	ved by O
Or Peakage: Project #: Tel. 506-345-3978 In or Faak#: Project Manager: Project Manager: Project Manager: Or Peakage: Or Peakage: Or Peakage: Or Peakage: Or	Mailing	Addres	S:	n tile		- Route		ank Buten		490′	Hay	ww	, ≝	enviro	nmer	environmental.com	7109		C D: 1/1 8
Time Reinquished by RES 12 - 82 4 100	9	#		>		Project #:	11400-		D	Tel.	505-	345-3	10	Fax	505	505-345-4107	70		8/2023
MONICA PERPONDED MONICA PERP	email o	r Fax#:				Project Man	ader:		(((-		Ā —	Analysis		Request		1	2:22
Figure Part Preservative Pre	QA/QC	Package.		□ Level 4 (Full Valid	ation)	MOV	K	nidd	1208) s		S.B.O.	SWIS		OS ԠOc		nəsdA\			:39 PM
ELAC Other Other Other Other Other	Accredi	tation:	□ Az C			Sampler:	Sarry	Contrar	.WB.					O ⁵ ' I		uəse			
# of Coolers: 2 # of Coolers: 2 # of Coolers: 2 # of Coolers: 2 # of Cooler Temporeusing cp; C	□ NEL	AC	□ Othe	er_		On Ice:	-TYes	ON □	L /				_	N '	(A(
Time Matrix Sample Name Cooler Temponauding CF) Cooler Tem		(Type)				# of Coolers	2		38.				_						
Time Matrix Sample Name Type and # Type Type and # Type Type and # Type Type and # Type Time Type Time Type T						Cooler Tem	O(including CF): 6	1.1.	TM /		100	4 2	_						
2 8:45 Súl 1 BES12-64 7 1 1403 úr 100 001 V V 1 8:50 1 BES12-65 7 1 003 1 003 1 1 003 1 1 1 003 1 1 1 1 1	Date	Time	Matrix	Sample Name		Container Type and #	Preservative Type		(STE		3.46		_	راراح 3260 (۲	3) 0728	7			
8:50 BES12-65 7 002 9:00 BES12-91 7 003 9:50 BES12-81 7 004 9:50 BES12-82 4 005 13:30 BES12-84 4 003 13:30 BES12-84 4 003 13:30 BES12-84 4 003 13:40 BES12-86 4 003 13:40 003 13:40 003 13:40 003 14:40 003 15:40 003 16:40 003 16:40	8/2	8:45	Soil	BES12-64	it	1403 jan	" ice		>				1			11.00			
9:00 BES12-92 7: 0 004 9:50 BES12-81 7: 004 13:30 BES12-82 4: 005 13:40 BES12-88 4: 007	-	8:52	-	BES21-65	it	?-		200	-										
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9:50 BES12-91 7: 13:30 BES12-92 4: 0.05 13:35 BES12-87 4: 0.07 13:40 BES12-88 4: 0.03 13:40 BES12-88 4: 0.03 17:40 BES12-88 4: 0.03 15:40 BES12-88 4: 0.03 16:51 BES12-88 4: 0.03 17:40 BES12-88 4: 0.03 16:51 BES12-88 4: 0.03 17:40 BES12-88 4: 0.03 18:10 BES12-88 4: 0.03 18:10 BES12-88 4: <		9:45		BES 22-81	7:			700											
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

OrderNo.: 2208347

August 16, 2022

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

FAX:

RE: Routh SWD Tank Battery

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 10 sample(s) on 8/5/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 8/16/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-89 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/3/2022 8:00:00 AM

 Lab ID:
 2208347-001
 Matrix: SOIL
 Received Date: 8/5/2022 6:55:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/10/2022 4:22:11 AM Motor Oil Range Organics (MRO) 8/10/2022 4:22:11 AM ND 50 mg/Kg 1 Surr: DNOP 59.7 21-129 %Rec 1 8/10/2022 4:22:11 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 8/9/2022 1:33:00 AM 4.9 mg/Kg 1 Surr: BFB 92.1 37.7-212 %Rec 1 8/9/2022 1:33:00 AM **EPA METHOD 8021B: VOLATILES** Analyst: BRM Benzene ND 8/9/2022 1:33:00 AM 0.025 mg/Kg 1 Toluene ND 0.049 mg/Kg 1 8/9/2022 1:33:00 AM Ethylbenzene ND 0.049 mg/Kg 1 8/9/2022 1:33:00 AM Xylenes, Total ND 0.098 mg/Kg 1 8/9/2022 1:33:00 AM Surr: 4-Bromofluorobenzene 81.7 70-130 %Rec 1 8/9/2022 1:33:00 AM **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride mg/Kg 8/10/2022 10:04:59 PM 280 61 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/16/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-90 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/3/2022 8:05:00 AM

 Lab ID:
 2208347-002
 Matrix: SOIL
 Received Date: 8/5/2022 6:55:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	8/10/2022 4:37:27 AM
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	8/10/2022 4:37:27 AM
Surr: DNOP	47.7	21-129	%Rec	1	8/10/2022 4:37:27 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/9/2022 1:53:00 AM
Surr: BFB	86.2	37.7-212	%Rec	1	8/9/2022 1:53:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/9/2022 1:53:00 AM
Toluene	ND	0.050	mg/Kg	1	8/9/2022 1:53:00 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/9/2022 1:53:00 AM
Xylenes, Total	ND	0.10	mg/Kg	1	8/9/2022 1:53:00 AM
Surr: 4-Bromofluorobenzene	78.9	70-130	%Rec	1	8/9/2022 1:53:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	280	60	mg/Kg	20	8/10/2022 11:06:42 PM

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

Qualifiers:

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

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Date Reported: 8/16/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-91 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/3/2022 8:10:00 AM

 Lab ID:
 2208347-003
 Matrix: SOIL
 Received Date: 8/5/2022 6:55:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/10/2022 4:52:22 AM Motor Oil Range Organics (MRO) 8/10/2022 4:52:22 AM ND 49 mg/Kg 1 Surr: DNOP 50.9 21-129 %Rec 1 8/10/2022 4:52:22 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 8/9/2022 2:12:00 AM 4.9 mg/Kg 1 Surr: BFB 83.6 37.7-212 %Rec 1 8/9/2022 2:12:00 AM **EPA METHOD 8021B: VOLATILES** Analyst: BRM Benzene ND 8/9/2022 2:12:00 AM 0.024 mg/Kg 1 Toluene ND 0.049 mg/Kg 1 8/9/2022 2:12:00 AM Ethylbenzene ND 0.049 mg/Kg 1 8/9/2022 2:12:00 AM Xylenes, Total ND 0.097 mg/Kg 1 8/9/2022 2:12:00 AM Surr: 4-Bromofluorobenzene 77.1 70-130 %Rec 1 8/9/2022 2:12:00 AM **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride mg/Kg 8/10/2022 11:19:03 PM 390 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/16/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-92 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/3/2022 8:15:00 AM

 Lab ID:
 2208347-004
 Matrix: SOIL
 Received Date: 8/5/2022 6:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/10/2022 5:07:02 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/10/2022 5:07:02 AM
Surr: DNOP	64.6	21-129	%Rec	1	8/10/2022 5:07:02 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/9/2022 2:32:00 AM
Surr: BFB	84.1	37.7-212	%Rec	1	8/9/2022 2:32:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/9/2022 2:32:00 AM
Toluene	ND	0.049	mg/Kg	1	8/9/2022 2:32:00 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/9/2022 2:32:00 AM
Xylenes, Total	ND	0.097	mg/Kg	1	8/9/2022 2:32:00 AM
Surr: 4-Bromofluorobenzene	76.8	70-130	%Rec	1	8/9/2022 2:32:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	330	60	mg/Kg	20	8/10/2022 11:31:23 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/16/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-93 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/3/2022 8:20:00 AM

 Lab ID:
 2208347-005
 Matrix: SOIL
 Received Date: 8/5/2022 6:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/10/2022 5:21:45 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/10/2022 5:21:45 AM
Surr: DNOP	56.7	21-129	%Rec	1	8/10/2022 5:21:45 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/9/2022 2:52:00 AM
Surr: BFB	88.7	37.7-212	%Rec	1	8/9/2022 2:52:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.023	mg/Kg	1	8/9/2022 2:52:00 AM
Toluene	ND	0.047	mg/Kg	1	8/9/2022 2:52:00 AM
Ethylbenzene	ND	0.047	mg/Kg	1	8/9/2022 2:52:00 AM
Xylenes, Total	ND	0.093	mg/Kg	1	8/9/2022 2:52:00 AM
Surr: 4-Bromofluorobenzene	81.4	70-130	%Rec	1	8/9/2022 2:52:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	75	60	mg/Kg	20	8/11/2022 11:50:20 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/16/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-94 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/3/2022 8:25:00 AM

 Lab ID:
 2208347-006
 Matrix: SOIL
 Received Date: 8/5/2022 6:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	25	14	mg/Kg	1	8/10/2022 5:36:19 AM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/10/2022 5:36:19 AM
Surr: DNOP	51.2	21-129	%Rec	1	8/10/2022 5:36:19 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/9/2022 3:11:00 AM
Surr: BFB	88.0	37.7-212	%Rec	1	8/9/2022 3:11:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/9/2022 3:11:00 AM
Toluene	ND	0.048	mg/Kg	1	8/9/2022 3:11:00 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/9/2022 3:11:00 AM
Xylenes, Total	ND	0.096	mg/Kg	1	8/9/2022 3:11:00 AM
Surr: 4-Bromofluorobenzene	81.5	70-130	%Rec	1	8/9/2022 3:11:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	92	60	mg/Kg	20	8/11/2022 12:52:04 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/16/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-95 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/3/2022 8:30:00 AM

 Lab ID:
 2208347-007
 Matrix: SOIL
 Received Date: 8/5/2022 6:55:00 AM

Analyses	Result	RL Qua	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/10/2022 5:51:07 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/10/2022 5:51:07 AM
Surr: DNOP	55.1	21-129	%Rec	1	8/10/2022 5:51:07 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/9/2022 3:31:00 AM
Surr: BFB	91.4	37.7-212	%Rec	1	8/9/2022 3:31:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/9/2022 3:31:00 AM
Toluene	ND	0.049	mg/Kg	1	8/9/2022 3:31:00 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/9/2022 3:31:00 AM
Xylenes, Total	ND	0.098	mg/Kg	1	8/9/2022 3:31:00 AM
Surr: 4-Bromofluorobenzene	82.5	70-130	%Rec	1	8/9/2022 3:31:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	70	60	mg/Kg	20	8/11/2022 1:04:26 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/16/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-96 4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/3/2022 8:35:00 AM

 Lab ID:
 2208347-008
 Matrix: SOIL
 Received Date: 8/5/2022 6:55:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/10/2022 6:05:39 AM Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 8/10/2022 6:05:39 AM Surr: DNOP 57.4 21-129 %Rec 1 8/10/2022 6:05:39 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 8/9/2022 3:51:00 AM 4.8 mg/Kg 1 Surr: BFB 88.0 37.7-212 %Rec 1 8/9/2022 3:51:00 AM **EPA METHOD 8021B: VOLATILES** Analyst: BRM Benzene ND 0.024 8/9/2022 3:51:00 AM mg/Kg 1 Toluene ND 0.048 mg/Kg 1 8/9/2022 3:51:00 AM Ethylbenzene ND 0.048 mg/Kg 1 8/9/2022 3:51:00 AM Xylenes, Total ND 0.096 mg/Kg 1 8/9/2022 3:51:00 AM Surr: 4-Bromofluorobenzene 81.2 70-130 %Rec 1 8/9/2022 3:51:00 AM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride mg/Kg 8/11/2022 1:16:47 PM 110 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/16/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-97 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/3/2022 8:40:00 AM

 Lab ID:
 2208347-009
 Matrix: SOIL
 Received Date: 8/5/2022 6:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/10/2022 6:20:36 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/10/2022 6:20:36 AM
Surr: DNOP	59.7	21-129	%Rec	1	8/10/2022 6:20:36 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/9/2022 4:11:00 AM
Surr: BFB	86.7	37.7-212	%Rec	1	8/9/2022 4:11:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.023	mg/Kg	1	8/9/2022 4:11:00 AM
Toluene	ND	0.046	mg/Kg	1	8/9/2022 4:11:00 AM
Ethylbenzene	ND	0.046	mg/Kg	1	8/9/2022 4:11:00 AM
Xylenes, Total	ND	0.092	mg/Kg	1	8/9/2022 4:11:00 AM
Surr: 4-Bromofluorobenzene	78.7	70-130	%Rec	1	8/9/2022 4:11:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	68	60	mg/Kg	20	8/11/2022 1:29:07 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/16/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-74 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/3/2022 11:00:00 AM

 Lab ID:
 2208347-010
 Matrix: SOIL
 Received Date: 8/5/2022 6:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/10/2022 6:34:57 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/10/2022 6:34:57 AM
Surr: DNOP	56.1	21-129	%Rec	1	8/10/2022 6:34:57 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/9/2022 4:30:00 AM
Surr: BFB	85.1	37.7-212	%Rec	1	8/9/2022 4:30:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/9/2022 4:30:00 AM
Toluene	ND	0.047	mg/Kg	1	8/9/2022 4:30:00 AM
Ethylbenzene	ND	0.047	mg/Kg	1	8/9/2022 4:30:00 AM
Xylenes, Total	ND	0.095	mg/Kg	1	8/9/2022 4:30:00 AM
Surr: 4-Bromofluorobenzene	79.3	70-130	%Rec	1	8/9/2022 4:30:00 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	370	60	mg/Kg	20	8/11/2022 1:41:29 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208347

16-Aug-22

Client:	Vertex Resources Services, Inc.
Project:	Routh SWD Tank Battery

Project:	Routh SW	D Tank Ba	ttery								
Sample ID:	MB-69385	SampTy	oe: mb	lk	Tes	tCode: EF	PA Method	300.0: Anions			
Client ID:	PBS	Batch I	D: 693	885	F	RunNo: 90	0148				
Prep Date:	8/10/2022	Analysis Da	te: 8/ ′	10/2022	;	SeqNo: 32	215869	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID:	LCS-69385	SampTy	oe: Ics		Tes	tCode: EF	PA Method	300.0: Anions	i		
Client ID:	LCSS	Batch I	D: 693	885	F	RunNo: 90	0148				
Prep Date:	8/10/2022	Analysis Da	te: 8/ 1	10/2022	;	SeqNo: 32	215870	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		15	1.5	15.00	0	98.1	90	110			
Sample ID:	MB-69417	SampTy	oe: mb	lk	Tes	tCode: EF	PA Method	300.0: Anions	i		
Client ID:	PBS	Batch I	D: 69 4	117	F	RunNo: 90	0187				
Prep Date:	8/11/2022	Analysis Da	te: 8/ 1	11/2022	;	SeqNo: 32	217806	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID:	LCS-69417	SampTy	oe: Ics		Tes	tCode: EF	PA Method	300.0: Anions	;		
Client ID:	LCSS	Batch I	D: 69 4	117	F	RunNo: 90	0187				
Prep Date:	8/11/2022	Analysis Da	te: 8/ 1	11/2022	;	SeqNo: 32	217807	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		15	1.5	15.00	0	100	90	110			
Sample ID:	2208347-005AMS	SampTy	oe: ms		Tes	tCode: EF	PA Method	300.0: Anions			
Client ID:	BES22-93 4'	Batch I	D: 69 4	117	F	RunNo: 90	0187				
Prep Date:	8/11/2022	Analysis Da	te: 8/ 1	11/2022	;	SeqNo: 32	217818	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		97	61	30.00	74.77	75.2	57.5	166			
Sample ID:	2208347-005AMSD	SampTy	oe: ms	d	Tes	tCode: EF	PA Method	300.0: Anions			
Client ID:	BES22-93 4'	Batch I	D: 69 4	117	F	RunNo: 90	0187				
Prep Date:	8/11/2022	Analysis Da	te: 8/ 1	11/2022	;	SeqNo: 32	217819	Units: mg/K	g		
1											. .

Qualifiers:

Analyte

Chloride

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

Result

PQL

60

Analyte detected in the associated Method Blank

LowLimit

57.5

HighLimit

Estimated value

SPK value SPK Ref Val %REC

74.77

30.00

- Analyte detected below quantitation limits
- Sample pH Not In Range
- RLReporting Limit

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RPDLimit

Qual

%RPD

Hall Environmental Analysis Laboratory, Inc.

16-Aug-22

2208347

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-69330 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 69330 RunNo: 90146 Prep Date: 8/8/2022 Analysis Date: 8/10/2022 SeqNo: 3214248 Units: mg/Kg Analyte PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Result Diesel Range Organics (DRO) ND 15 Motor Oil Range Organics (MRO) ND 50 Surr: DNOP 79.0 21 7.9 10.00 129

Sample ID: LCS-69330	S	TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: LCSS Batch ID: 69330					RunNo: 90	0146					
Prep Date: 8/8/2022	Analysis D	oate: 8/	10/2022	9	SeqNo: 32	214249	Units: mg/K	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	46	15	50.00	0	92.1	64.4	127				
Surr: DNOP	3.7		5.000		74.3	21	129				

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208347 16-Aug-22

Client: Vertex Resources Services, Inc. **Project:** Routh SWD Tank Battery

Sample ID: Ics-69294 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 69294 RunNo: 90091 Units: mg/Kg Prep Date: 8/5/2022 Analysis Date: 8/8/2022 SeqNo: 3211757 PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 101 72.3 137 Surr: BFB 2000 1000 198 37.7 212

Sample ID: mb-69294 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 69294 RunNo: 90091 Prep Date: 8/5/2022 Analysis Date: 8/8/2022 SeqNo: 3211758 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) ND 5.0

Surr: BFB

870

1000

86.9

37.7

212

Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank

Estimated value

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Limit Page 13 of 14

Hall Environmental Analysis Laboratory, Inc.

2208347 16-Aug-22

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: Ics-69294	Samp ¹	Гуре: LC	S	TestCode: EPA Method 8021B: Volatiles										
Client ID: LCSS	Batc	h ID: 692	294	F	RunNo: 90	0091								
Prep Date: 8/5/2022	Analysis [Date: 8/8	8/2022	5	SeqNo: 32	211805	Units: mg/K	g						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene	0.86	0.025	1.000	0	86.2	80	120							
Toluene	0.87	0.050	1.000	0	86.9	80	120							
Ethylbenzene	0.86	0.050	1.000	0	85.9	80	120							
Xylenes, Total	2.6	0.10	3.000	0	85.1	80	120							
Surr: 4-Bromofluorobenzene	0.78		1.000		77.8	70	130							

Sample ID: mb-69294	Sample ID: mb-69294 SampType: MBLK					TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch	n ID: 692	294	F	RunNo: 90	0091							
Prep Date: 8/5/2022	Analysis D	Date: 8/8	3/2022	5	SeqNo: 32	211806	Units: mg/K	g					
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	0.79		1.000		79.4	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 Num	ber: 220	8347			RcptNo: 1
Received By:	Juan Rojas	8/5/2022 6:55:00 A	M		Henra	9	
Completed By:	Sean Livingston	8/5/2022 8:06:06 A	M		Juana	1	
Reviewed By:	JR8/5/22				2~	-01	701-
Chain of Cus	stody						
1. Is Chain of C	ustody complete?		Yes	V	No [Not Present
2. How was the	sample delivered?		Cou	rier			
Log In							
3. Was an atten	npt made to cool the samp	les?	Yes	~	No [NA 🗌
4. Were all samp	ples received at a tempera	ture of >0° C to 6.0°C	Yes	V	No [NA 🗆
5. Sample(s) in	proper container(s)?		Yes	V	No [
6. Sufficient sam	ple volume for indicated te	est(s)?	Yes	V	No []	
7. Are samples (except VOA and ONG) pro	pperly preserved?	Yes	~	No [
8. Was preserva	tive added to bottles?		Yes		No 💆		NA 🗆
9. Received at le	east 1 vial with headspace	<1/4" for AQ VOA?	Yes		No [NA 🗸
10. Were any san	nple containers received b	roken?	Yes		No S		# of preserved
	ork match bottle labels? ancies on chain of custody,)	Yes	V	No []	bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices of	correctly identified on Chair	n of Custody?	Yes	V	No [1	Adjusted?
	t analyses were requested	7	Yes	V	No []	
	ng times able to be met? ustomer for authorization.)		Yes	V	No 🗆	1	Checked by: TIML &ISIN
Special Handli	ing (if applicable)						
15. Was client no	tified of all discrepancies w	vith this order?	Yes		No []	NA 🗹
Person	Notified:	Date:				-	
By Who		Via:	☐ eMa	iil 📋	Phone 🔲 F	ax	In Person
Regardi	The state of the s						
Client In	nstructions:						
Additional ren	marks:						
17. Cooler Inform	mation_						
Cooler No	Temp °C Condition	Seal Intact Seal No	Seal Da	ite	Signed By		
1	2.3 Good						

= -	Wall of the second of the seco	1 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		/18/	202.	11:00 BES27-74	8:40 BES22 97	8:35 8532 9			BES 2	8:15 BES27-92	6:10 BES77-91 4	6:05 BES22-90 4	8/3 8:00 Sbil BES22-89 4"	Date Time Matrix Sample Name	□ EDD (Type)	□ NELAC □ Other]	age:	email or Fax#:	Phone #:	U	Mailing Address: On bill	Pag	\$1ient: Vertex (EOG)	6 Chain-of-Custody Record
e subcontracted to other accredited lab	Received by: Via: Via: Via: Via: Via: Via: Via: Via	5	Received by: Via:			9, 1	4"	1	41	4'	4'	4'	7,	1,	1. 1 Abyjar ice	Cooler Temp(including CF): 2 Container Preservative Type and # Type	olers:	On Ice:)		Project Manager:	228-00716-10	Project #:	KOUTHOND		☑ Standard ☑	Turn-Around Time:
oratories. This serves as notice of the	Date Time	2	Date Time			010	9009	ω9	400	00%	200	004	003	202	2	ative HEAL No. 2208347		□ No		Peppin		0-10	0	Tank Buttery)	Rush 5 MM	,
his possibility. Any sub-c	8	2	Remarks:												2	BTEX / MT TPH;8015D 8081 Pestion	(GR	O / E)RO 2 P(/ MR	-		Tel. 505	4901 Ha			
contracted data will be	CARCI WILL EVEL	1001			7									-		PAHs by 83 RCRA 8 Me Cl ₃ F, Br, I	310 etals	or 82	70S		O ₄	٩nal	31	4901 Hawkins NE - All	www hallon	ANAL E	
clearly notated on the analytical re	All Eccl	ニとの														8260 (VOA 8270 (Sem Total Colifo	-VO		ent/	Abser		ysis Request	Fax 505-345-4107	ins NE - Albuquerque NM 87109	ironmontal com	ENVIRONMENTA	

HALL ENVIRONMENTAL



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

August 18, 2022

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

FAX:

RE: Routh SWD Tank Battery OrderNo.: 2208418

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 13 sample(s) on 8/6/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-113 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 8:45:00 AM

 Lab ID:
 2208418-001
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/10/2022 2:39:55 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/10/2022 2:39:55 PM
Surr: DNOP	157	21-129	S	%Rec	1	8/10/2022 2:39:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/10/2022 11:42:23 PM
Surr: BFB	110	37.7-212		%Rec	1	8/10/2022 11:42:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	8/10/2022 11:42:23 PM
Toluene	ND	0.050		mg/Kg	1	8/10/2022 11:42:23 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/10/2022 11:42:23 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/10/2022 11:42:23 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/10/2022 11:42:23 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	8/12/2022 4:36:05 PM

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

Qualifiers:

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

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-114 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 8:50:00 AM

 Lab ID:
 2208418-002
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/10/2022 2:53:31 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/10/2022 2:53:31 PM
Surr: DNOP	151	21-129	S	%Rec	1	8/10/2022 2:53:31 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/11/2022 12:05:58 AM
Surr: BFB	108	37.7-212		%Rec	1	8/11/2022 12:05:58 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/11/2022 12:05:58 AM
Toluene	ND	0.049		mg/Kg	1	8/11/2022 12:05:58 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/11/2022 12:05:58 AM
Xylenes, Total	ND	0.098		mg/Kg	1	8/11/2022 12:05:58 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/11/2022 12:05:58 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	68	60		mg/Kg	20	8/12/2022 4:48:27 PM

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

Qualifiers:

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

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Date Reported: 8/18/2022

8/12/2022 5:00:47 PM

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-115 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 8:55:00 AM

 Lab ID:
 2208418-003
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Received Date: 8/6/2022 10:30:00 AM Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: SB **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/12/2022 10:32:46 AM Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 8/12/2022 10:32:46 AM Surr: DNOP 99.3 21-129 %Rec 1 8/12/2022 10:32:46 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 8/11/2022 12:29:38 AM 4.9 mg/Kg 1 Surr: BFB 108 37.7-212 %Rec 1 8/11/2022 12:29:38 AM **EPA METHOD 8021B: VOLATILES** Analyst: BRM Benzene ND 8/11/2022 12:29:38 AM 0.025 mg/Kg 1 Toluene ND 0.049 mg/Kg 1 8/11/2022 12:29:38 AM Ethylbenzene ND 0.049 mg/Kg 1 8/11/2022 12:29:38 AM Xylenes, Total ND 0.099 mg/Kg 8/11/2022 12:29:38 AM 1 Surr: 4-Bromofluorobenzene 101 70-130 %Rec 1 8/11/2022 12:29:38 AM **EPA METHOD 300.0: ANIONS** Analyst: JMT

99

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

Qualifiers:

Chloride

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits

mg/Kg

20

59

- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-116 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 9:00:00 AM

 Lab ID:
 2208418-004
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	RGANICS				Analyst: SB
Diesel Range Organics (DRO)	31	14	mg/Kg	1	8/12/2022 10:56:31 AM
Motor Oil Range Organics (MRO)	50	48	mg/Kg	1	8/12/2022 10:56:31 AM
Surr: DNOP	101	21-129	%Rec	1	8/12/2022 10:56:31 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/11/2022 12:53:12 AM
Surr: BFB	108	37.7-212	%Rec	1	8/11/2022 12:53:12 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/11/2022 12:53:12 AM
Toluene	ND	0.050	mg/Kg	1	8/11/2022 12:53:12 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/11/2022 12:53:12 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/11/2022 12:53:12 AM
Surr: 4-Bromofluorobenzene	99.8	70-130	%Rec	1	8/11/2022 12:53:12 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	60	mg/Kg	20	8/12/2022 7:41:19 PM

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

Qualifiers:

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

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-117 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 9:05:00 AM

 Lab ID:
 2208418-005
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: SB Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/16/2022 2:51:08 PM Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 8/16/2022 2:51:08 PM Surr: DNOP 120 21-129 %Rec 1 8/16/2022 2:51:08 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 8/11/2022 9:41:57 AM 5.0 mg/Kg 1 Surr: BFB 110 37.7-212 %Rec 1 8/11/2022 9:41:57 AM **EPA METHOD 8021B: VOLATILES** Analyst: BRM Benzene ND 8/11/2022 9:41:57 AM 0.025 mg/Kg 1 Toluene ND 0.050 mg/Kg 1 8/11/2022 9:41:57 AM Ethylbenzene ND 0.050 mg/Kg 1 8/11/2022 9:41:57 AM Xylenes, Total ND mg/Kg 1 8/11/2022 9:41:57 AM 0.099 Surr: 4-Bromofluorobenzene 99.7 70-130 %Rec 1 8/11/2022 9:41:57 AM **EPA METHOD 300.0: ANIONS** Analyst: JMT Chloride mg/Kg 8/12/2022 8:18:19 PM 150 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-118 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 9:10:00 AM

 Lab ID:
 2208418-006
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: SB
Diesel Range Organics (DRO)	27	15	mg/Kg	1	8/12/2022 1:20:28 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/12/2022 1:20:28 AM
Surr: DNOP	104	21-129	%Rec	1	8/12/2022 1:20:28 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/11/2022 10:52:53 AM
Surr: BFB	109	37.7-212	%Rec	1	8/11/2022 10:52:53 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/11/2022 10:52:53 AM
Toluene	ND	0.049	mg/Kg	1	8/11/2022 10:52:53 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/11/2022 10:52:53 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/11/2022 10:52:53 AM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	8/11/2022 10:52:53 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	63	60	mg/Kg	20	8/12/2022 9:20:03 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-119 8'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 12:00:00 PM

 Lab ID:
 2208418-007
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/12/2022 2:09:28 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/12/2022 2:09:28 AM
Surr: DNOP	100	21-129	%Rec	1	8/12/2022 2:09:28 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/11/2022 12:03:55 PM
Surr: BFB	109	37.7-212	%Rec	1	8/11/2022 12:03:55 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/11/2022 12:03:55 PM
Toluene	ND	0.049	mg/Kg	1	8/11/2022 12:03:55 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/11/2022 12:03:55 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/11/2022 12:03:55 PM
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	8/11/2022 12:03:55 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	100	60	mg/Kg	20	8/12/2022 9:32:23 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-120 8'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 12:05:00 PM

 Lab ID:
 2208418-008
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/12/2022 3:22:40 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/12/2022 3:22:40 AM
Surr: DNOP	94.4	21-129	%Rec	1	8/12/2022 3:22:40 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/11/2022 12:27:42 PM
Surr: BFB	113	37.7-212	%Rec	1	8/11/2022 12:27:42 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/11/2022 12:27:42 PM
Toluene	ND	0.049	mg/Kg	1	8/11/2022 12:27:42 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/11/2022 12:27:42 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/11/2022 12:27:42 PM
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	8/11/2022 12:27:42 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	150	60	mg/Kg	20	8/12/2022 9:44:44 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-121 8'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 12:10:00 PM

 Lab ID:
 2208418-009
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: SB				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/12/2022 3:46:54 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/12/2022 3:46:54 AM
Surr: DNOP	99.7	21-129	%Rec	1	8/12/2022 3:46:54 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/11/2022 12:51:23 PM
Surr: BFB	108	37.7-212	%Rec	1	8/11/2022 12:51:23 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/11/2022 12:51:23 PM
Toluene	ND	0.050	mg/Kg	1	8/11/2022 12:51:23 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/11/2022 12:51:23 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/11/2022 12:51:23 PM
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	8/11/2022 12:51:23 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	190	60	mg/Kg	20	8/12/2022 9:57:05 PM

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

Qualifiers:

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

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-122 8'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 12:15:00 PM

 Lab ID:
 2208418-010
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	Analyst: SB				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/12/2022 4:11:06 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/12/2022 4:11:06 AM
Surr: DNOP	104	21-129	%Rec	1	8/12/2022 4:11:06 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/11/2022 1:15:08 PM
Surr: BFB	112	37.7-212	%Rec	1	8/11/2022 1:15:08 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/11/2022 1:15:08 PM
Toluene	ND	0.049	mg/Kg	1	8/11/2022 1:15:08 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/11/2022 1:15:08 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/11/2022 1:15:08 PM
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	8/11/2022 1:15:08 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	120	60	mg/Kg	20	8/12/2022 10:09:26 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-123 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 10:00:00 AM

 Lab ID:
 2208418-011
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: SB				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/12/2022 4:35:16 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/12/2022 4:35:16 AM
Surr: DNOP	90.9	21-129	%Rec	1	8/12/2022 4:35:16 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/11/2022 1:38:52 PM
Surr: BFB	111	37.7-212	%Rec	1	8/11/2022 1:38:52 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/11/2022 1:38:52 PM
Toluene	ND	0.050	mg/Kg	1	8/11/2022 1:38:52 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/11/2022 1:38:52 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/11/2022 1:38:52 PM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	8/11/2022 1:38:52 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	60	mg/Kg	20	8/12/2022 10:21:47 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-83 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 1:00:00 PM

 Lab ID:
 2208418-012
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: SB				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/12/2022 4:59:09 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/12/2022 4:59:09 AM
Surr: DNOP	98.6	21-129	%Rec	1	8/12/2022 4:59:09 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/11/2022 2:02:37 PM
Surr: BFB	110	37.7-212	%Rec	1	8/11/2022 2:02:37 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/11/2022 2:02:37 PM
Toluene	ND	0.050	mg/Kg	1	8/11/2022 2:02:37 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/11/2022 2:02:37 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/11/2022 2:02:37 PM
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	8/11/2022 2:02:37 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	98	60	mg/Kg	20	8/12/2022 10:34:07 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-84 7'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/4/2022 1:05:00 PM

 Lab ID:
 2208418-013
 Matrix: SOIL
 Received Date: 8/6/2022 10:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: SB				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/12/2022 5:23:10 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/12/2022 5:23:10 AM
Surr: DNOP	115	21-129	%Rec	1	8/12/2022 5:23:10 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/11/2022 2:26:28 PM
Surr: BFB	111	37.7-212	%Rec	1	8/11/2022 2:26:28 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/11/2022 2:26:28 PM
Toluene	ND	0.050	mg/Kg	1	8/11/2022 2:26:28 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/11/2022 2:26:28 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/11/2022 2:26:28 PM
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	8/11/2022 2:26:28 PM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	100	61	mg/Kg	20	8/12/2022 10:46:28 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

18-Aug-22

2208418

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-69461 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69461 RunNo: 90236

Prep Date: 8/12/2022 Analysis Date: 8/12/2022 SeqNo: 3219286 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69461 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69461 RunNo: 90236

Prep Date: 8/12/2022 Analysis Date: 8/12/2022 SegNo: 3219287 Units: mg/Kg

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

Chloride 15 1.5 15.00 0 97.3 90 110

Sample ID: MB-69475 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69475 RunNo: 90236

Prep Date: 8/12/2022 Analysis Date: 8/12/2022 SeqNo: 3219316 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69475 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69475 RunNo: 90236

Prep Date: 8/12/2022 Analysis Date: 8/12/2022 SeqNo: 3219317 Units: mg/Kg

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

Chloride 15 1.5 15.00 0 98.7 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208418

18-Aug-22

Client:	Vertex Resources Services, Inc.
Project:	Routh SWD Tank Battery

Sample ID: LCS-69340	SampType: LCS	TestCode: EPA Meth	od 8015M/D: Diesel Range Organics					
Client ID: LCSS	Batch ID: 69340	RunNo: 90104						
Prep Date: 8/8/2022	Analysis Date: 8/9/2022	SeqNo: 3212922	Units: %Rec					
Analyte	Result PQL SPK va	lue SPK Ref Val %REC LowLii	mit HighLimit %RPD RPDLimit Qual					
Surr: DNOP	4.6 5.0	91.3	21 129					
Sample ID: LCS-69347	SampType: LCS	TestCode: EPA Meth	TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID: LCSS	Batch ID: 69347	RunNo: 90104						
Prep Date: 8/9/2022	Analysis Date: 8/9/2022	SeqNo: 3212923	Units: mg/Kg					
Analyte	Result PQL SPK va	lue SPK Ref Val %REC LowLin	mit HighLimit %RPD RPDLimit Qual					
Diesel Range Organics (DRO)	45 15 50	.00 0 90.5 64	1.4 127					
Surr: DNOP	4.5 5.0	89.6	21 129					
Sample ID: MB-69340	SampType: MBLK	TestCode: EPA Meth	od 8015M/D: Diesel Range Organics					
Client ID: PBS	Batch ID: 69340	RunNo: 90104						
Prep Date: 8/8/2022	Analysis Date: 8/9/2022	SeqNo: 3212924	Units: %Rec					
Analyte								
Analyte	Result PQL SPK va	lue SPK Ref Val %REC LowLii	mit HighLimit %RPD RPDLimit Qual					
Surr: DNOP	Result PQL SPK va 9.8 10.		mit HighLimit %RPD RPDLimit Qual 21 129					
		00 98.4	3					
Surr: DNOP	9.8 10.	00 98.4	21 129					
Surr: DNOP Sample ID: MB-69347	9.8 10. SampType: MBLK	00 98.4 TestCode: EPA Meth	21 129					
Surr: DNOP Sample ID: MB-69347 Client ID: PBS	9.8 10. SampType: MBLK Batch ID: 69347 Analysis Date: 8/9/2022	00 98.4 TestCode: EPA Meth RunNo: 90104	21 129 od 8015M/D: Diesel Range Organics Units: mg/Kg					
Surr: DNOP Sample ID: MB-69347 Client ID: PBS Prep Date: 8/9/2022	9.8 10. SampType: MBLK Batch ID: 69347 Analysis Date: 8/9/2022	TestCode: EPA Meth RunNo: 90104 SeqNo: 3212925	21 129 od 8015M/D: Diesel Range Organics Units: mg/Kg					
Surr: DNOP Sample ID: MB-69347 Client ID: PBS Prep Date: 8/9/2022 Analyte	9.8 10. SampType: MBLK Batch ID: 69347 Analysis Date: 8/9/2022 Result PQL SPK va	TestCode: EPA Meth RunNo: 90104 SeqNo: 3212925	21 129 od 8015M/D: Diesel Range Organics Units: mg/Kg					

Sample ID: 2208418-007AMS	SampT	ype: MS	;	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: BES22-119 8'	Batch	n ID: 69 4	104	F	RunNo: 9	0218				
Prep Date: 8/10/2022	Analysis D	Date: 8/	12/2022	5	SeqNo: 3	217759	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	15	50.00	0	90.0	36.1	154			
Surr: DNOP	4.7		5.000		94.8	21	129			

Sample ID:	2208418-007AMSD	SampTy	/pe: MS	D	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID:	BES22-119 8'	Batch	ID: 69 4	104	F	RunNo: 90	218				
Prep Date:	8/10/2022	Analysis Da	ate: 8/	12/2022	SeqNo: 3217760 Units: mg/Kg						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range C	Organics (DRO)	45	14	48.08	0	92.9	36.1	154	0.734	33.9	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Limit

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Project:

Sample ID: MB-69404

Hall Environmental Analysis Laboratory, Inc.

Routh SWD Tank Battery

WO#: **2208418 18-Aug-22**

Client: Vertex Resources Services, Inc.

Sample ID: 2208418-007AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **BES22-119 8'** Batch ID: **69404** RunNo: **90218**

SampType: MBLK

Prep Date: 8/10/2022 Analysis Date: 8/12/2022 SeqNo: 3217760 Units: mg/Kg

SPK Ref Val %RPD **RPDLimit** Analyte Result SPK value %REC LowLimit HighLimit Qual Surr: DNOP 4.7 4.808 96.9 21 129 n n

Sample ID: LCS-69404 TestCode: EPA Method 8015M/D: Diesel Range Organics SampType: LCS Client ID: LCSS Batch ID: 69404 RunNo: 90218 Prep Date: 8/10/2022 Analysis Date: 8/11/2022 SeqNo: 3217777 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 43 15 50.00 86.6 64.4 127 Surr: DNOP 89.7 4.5 5.000 129

Client ID: PBS Batch ID: 69404 RunNo: 90218 Prep Date: 8/10/2022 Analysis Date: 8/11/2022 SeqNo: 3217781 Units: mg/Kg **PQL** SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** LowLimit ND Diesel Range Organics (DRO) 15 Motor Oil Range Organics (MRO) ND 50 Surr: DNOP 9.3 10.00 93.4 21 129

TestCode: EPA Method 8015M/D: Diesel Range Organics

Sample ID: MB-69457 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics PBS Batch ID: 69457 Client ID: RunNo: 90218 Prep Date: 8/12/2022 Analysis Date: 8/12/2022 SeqNo: 3218061 Units: %Rec **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: DNOP 9.7 10.00 129 97.3 21

Sample ID: LCS-69457 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 69457 RunNo: 90218 Prep Date: 8/12/2022 Analysis Date: 8/12/2022 SeqNo: 3218062 Units: %Rec SPK value SPK Ref Val %RPD **RPDLimit** Analyte Result PQL %REC LowLimit HighLimit Qual Surr: DNOP 4.7 5.000 94.3 21 129

Sample ID: LCS-69425 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics LCSS Client ID: Batch ID: 69425 RunNo: 90218 Prep Date: 8/11/2022 Analysis Date: 8/12/2022 SeqNo: 3218134 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 44 64.4 15 50.00 0 88.4 127 Surr: DNOP 4.4 5.000 87.7 21 129

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

9.3

WO#: **2208418 18-Aug-22**

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-69425 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 69425 RunNo: 90218 Prep Date: 8/11/2022 Analysis Date: 8/12/2022 SeqNo: 3218135 Units: mg/Kg Analyte PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Result Diesel Range Organics (DRO) ND 15 Motor Oil Range Organics (MRO) ND 50

10.00

92.8

21

129

Surr: DNOP

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208418**

18-Aug-22

Client: Vertex Resources Services, Inc.
Project: Routh SWD Tank Battery

Sample ID: Ics-69357	Samp	SampType: LCS TestCode: EPA Metho					8015D: Gaso	line Range		
Client ID: LCSS	Batc	h ID: 69	357	F	RunNo: 90	0135				
Prep Date: 8/9/2022	Analysis [Date: 8/	10/2022	;	SeqNo: 32	214169	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	27 2100	5.0	25.00 1000	0	109 210	72.3 37.7	137 212			
Sample ID: mb-69357	Samp	Туре: М	BLK	Tes	tCode: EF	PA Method	8015D: Gaso	line Range	•	
Client ID: PBS	Batc	h ID: 69	357	F	RunNo: 90135					
Prep Date: 8/9/2022	Analysis [Date: 8/	10/2022	;	SeqNo: 32	214170	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 1000	5.0	1000		104	37.7	212			
Sample ID: 2208418-005ams	SampType: MS TestCode: EPA Method 8015D: Gasoline Range									
Client ID: BES22-117 9'	Batc	h ID: 69	360	F	RunNo: 90	0211				
Prep Date: 8/9/2022	Analysis [Date: 8/	11/2022	;	SeqNo: 32	217166	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	27 2100	4.9	24.56 982.3	0	111 215	70 37.7	130 212			S
Sample ID: 2208418-005ams c	I Samp	Туре: М	SD	Tes	tCode: EF	PA Method	8015D: Gaso	line Range	,	
Client ID: BES22-117 9'	Batc	h ID: 69	360	F	RunNo: 90	0211				
Prep Date: 8/9/2022	Analysis [Date: 8/	11/2022	;	SeqNo: 32	217167	Units: mg/K	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	24 2100	5.0	24.83 993.0	0	98.2 213	70 37.7	130 212	11.2 0	20 0	S
Sample ID: Ics-69360	Samp	Туре: LC	<u></u>	SampType: LCS TestCode: EPA Method 8015D: Gasoline Range						
		Batch ID: 69360 RunNo: 90211								

Surr: BFB	2100 100	213 37.7	212	S			
Sample ID: mb-69360	SampType: MBLK	TestCode: EPA Method 8	3015D: Gasoline Range				
Client ID: PBS	Batch ID: 69360	RunNo: 90211	RunNo: 90211				
Prep Date: 8/9/2022	Analysis Date: 8/11/2022	SeqNo: 3217211	Units: mg/Kg				
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			

0

SPK Ref Val

Qualifiers:

Prep Date:

Analyte

Value exceeds Maximum Contaminant Level.

8/9/2022

Gasoline Range Organics (GRO)

Analysis Date: 8/11/2022

5.0

SPK value

25.00

Result

26

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

SeqNo: 3217209

LowLimit

72.3

%REC

106

Units: mg/Kg

137

%RPD

RPDLimit

Qual

HighLimit

- E 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, Inc.

WO#: **2208418**

18-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: mb-69360 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 69360 RunNo: 90211

Prep Date: 8/9/2022 Analysis Date: 8/11/2022 SeqNo: 3217211 Units: mg/Kg

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

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 1100 1000 112 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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208418**

18-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: LCS-69357	Samp	Гуре: LC	s	Tes	tCode: EF	les				
Client ID: LCSS	Batcl	h ID: 693	357	RunNo: 90135						
Prep Date: 8/9/2022	Analysis [Date: 8/1	10/2022	9	SeqNo: 32	214183	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	93.0	80	120			
Toluene	0.97	0.050	1.000	0	96.8	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.0	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.5	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	70	130			

Sample ID: mb-69357	SampType: MBLK			Tes	TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batch ID: 69357			RunNo: 90135						
Prep Date: 8/9/2022	Analysis D	Date: 8/	10/2022	SeqNo: 3214184			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Sample ID: 2208418-006ams	Samp ⁻	Туре: М S	3	TestCode: EPA Method 8021B: Volatiles						
Client ID: BES22-118 9'	Batc	h ID: 69 3	360	RunNo: 90211						
Prep Date: 8/9/2022	Analysis [Date: 8/	11/2022	SeqNo: 3217215 Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.024	0.9785	0	85.8	68.8	120			
Toluene	0.88	0.049	0.9785	0	90.3	73.6	124			
Ethylbenzene	0.89	0.049	0.9785	0	90.8	72.7	129			
Xylenes, Total	2.7	0.098	2.935	0	90.4	75.7	126			
Surr: 4-Bromofluorobenzene	1.0		0.9785		104	70	130			

Sample ID: 2208418-006amsd	SampT	ype: MS	D	TestCode: EPA Method 8021B: Volatiles						
Client ID: BES22-118 9'	Client ID: BES22-118 9' Batch ID: 69360									
Prep Date: 8/9/2022	5	SeqNo: 3217216 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	0.9940	0	84.5	68.8	120	0.0630	20	
Toluene	0.89	0.050	0.9940	0	89.2	73.6	124	0.386	20	
Ethylbenzene	0.90	0.050	0.9940	0	90.3	72.7	129	1.08	20	
Xylenes, Total	2.7	0.099	2.982	0	89.2	75.7	126	0.220	20	
Surr: 4-Bromofluorobenzene	1.0		0.9940		105	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
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208418**

18-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: LCS-69360	Samp ¹	Гуре: LC	S	Tes	tCode: EF	les				
Client ID: LCSS	Batch ID: 69360			RunNo: 90211						
Prep Date: 8/9/2022	Analysis [Date: 8/	11/2022	5	SeqNo: 32	217257	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.2	80	120			
Toluene	1.0	0.050	1.000	0	99.5	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0 0.10 3.000			0	99.1	80	120			
Surr: 4-Bromofluorobenzene	1.0				104	70	130			

Sample ID: mb-69360	BLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	RunNo: 90211									
Prep Date: 8/9/2022 Analysis Date: 8/11/2022				SeqNo: 3217259 Units: mg/Kg				g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 Num	ber: 2208418		RcptNo: 1	
Received By:	Tracy Casarrubias	8/6/2022 10:30:00	АМ			
Completed By:	Tracy Casarrubias	8/6/2022 12:51:08	PM			
Reviewed By:	M8/8/22					
Chain of Cus	stod <u>y</u>					
1. Is Chain of C	custody complete?		Yes 🗹	No 🗌	Not Present	
2. How was the	sample delivered?		Courier			
<u>Log In</u>				\Box	NA 🗆	
o. vvas an aπer	npt made to cool the samp	les?	Yes 🗹	No 📙	NA 🗌	
4. Were all sam	ples received at a tempera	ture of >0° C to 6.0°C	Yes 🗹	No 🗆	NA 🗆	
5. Sample(s) in	proper container(s)?		Yes 🗹	No 🗆		
6. Sufficient sar	nple volume for indicated to	est(s)?	Yes 🗹	No 🗆		
7. Are samples	(except VOA and ONG) pro	perly preserved?	Yes 🗹	No 🗌		
8. Was preserva	ative added to bottles?		Yes 🗌	No 🗹	NA 🗆	
9. Received at I	east 1 vial with headspace	<1/4" for AQ VOA?	Yes 🗌	No 🗆	NA 🗹	
10. Were any sa	mple containers received b	roken?	Yes 🗆	No 🗹	# of preserved	
	ork match bottle labels? ancies on chain of custody)	Yes 🗹	No 🗆	bottles checked for pH;	2 unless noted)
12. Are matrices	correctly identified on Chai	n of Custody?	Yes 🗹	No 🗆	Adjusted2	
13. Is it clear wha	at analyses were requested	?	Yes 🗸	No □	1.0	AD
	ing times able to be met? customer for authorization.)		Yes 🗸	No 🗆	Checked by	(8.08.p
Special Hand	ling (if applicable)					
15. Was client n	otified of all discrepancies v	vith this order?	Yes 🗌	No 🗆	NA 🗹	
Persor	Notified:	Date				
By Wh	om:	Via:	eMail	Phone 🗌 Fax	☐ In Person	
Regard	ding:		THE PERSON NAMED AND POST OF THE PERSON NAMED AND PARTY.			
Client	Instructions:				and the second s	
16. Additional re	emarks:					
17. Cooler Info	 .					
Cooler No		Seal Intact Seal No	Seal Date	Signed By		
1 2	3.7 Good 4.5 Good	Yes Yes	v			
	7.5	163	<u> </u>	fra ta facilita cirilos de la comunicación a comunicación a comunicación de la comunicación de la comunicación	1	

Received by OCD: 1/18/2023	2:22:39 PM	Page 441 of 556
HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request	8081 Pesticides/8082 PCB's EDB (Method 504.1) PAHs by 8310 or 8270SIMS RCRA 8 Metals CLF, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄ 8250 (VOA) Total Coliform (Present/Absent)	Page 1/2 Xi rect bill E06 y sub-contracted data will be clearly notate
490 Tel	TPH:8015D(GRO / DRO / MRO)	Remarks:
n S Mu J K Battany	Peppin My Cartlar Kes. (8021) Mach. 3.5 Fo.2. 3.7. (85) Misch. 3.5 Fo.2. 3.7. (85) Misch. 3.5 Fo.2. 3.7. (85) HEALINO Servative HEALINO B. (8021)	000 002 003 004 006 006 006 007 007 007 007 007
Turn-Around Time: Standard Rush 5 My Project Name: Routh SWD Tawk Battory Project #:	Berne Solution Series	Via: Via:
Turn-Around Time: 区 Standard Project Name: RW村h SWD Project #:	Project Manager: \(\int \int \int \int \int \int \int \int	Received by:
		1 + 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Chain-of-Custody Record The first (Evel) Address: ON (IL) e#:	□ Level 4 (Full Validation) □ Az Compliance □ Other ■ Matrix Sample Name	BES12-113 BES12-113 BES12-116 BES12-116 BES12-116 BES12-116 BES12-121
ain-of-Custod	ii	8.55 BB B
Chain-Chaine Address: Vorth	Gemail or Fax#: GAYQC Package: Accreditation: INELAC IDEDD (Type) Date Time	

The second second second second



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

August 18, 2022

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

FAX:

RE: Routh SWD Tank Battery OrderNo.: 2208490

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/9/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-03 0-4'

Project: Routh SWD Tank Battery Collection Date: 8/5/2022 8:50:00 AM

Lab ID: 2208490-001 **Matrix:** SOIL **Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/16/2022 6:27:46 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/16/2022 6:27:46 AM
Surr: DNOP	73.2	21-129	%Rec	1	8/16/2022 6:27:46 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/13/2022 2:01:29 AM
Surr: BFB	106	37.7-212	%Rec	1	8/13/2022 2:01:29 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/13/2022 2:01:29 AM
Toluene	ND	0.048	mg/Kg	1	8/13/2022 2:01:29 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/13/2022 2:01:29 AM
Xylenes, Total	ND	0.097	mg/Kg	1	8/13/2022 2:01:29 AM
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	8/13/2022 2:01:29 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	350	60	mg/Kg	20	8/15/2022 7:19:50 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-09 0-4'

Project: Routh SWD Tank Battery Collection Date: 8/5/2022 8:35:00 AM

Lab ID: 2208490-002 **Matrix:** SOIL **Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE (ORGANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/16/2022 6:51:46 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/16/2022 6:51:46 AM
Surr: DNOP	82.9	21-129	%Rec	1	8/16/2022 6:51:46 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/13/2022 2:25:07 AM
Surr: BFB	107	37.7-212	%Rec	1	8/13/2022 2:25:07 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/13/2022 2:25:07 AM
Toluene	ND	0.048	mg/Kg	1	8/13/2022 2:25:07 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/13/2022 2:25:07 AM
Xylenes, Total	ND	0.096	mg/Kg	1	8/13/2022 2:25:07 AM
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	8/13/2022 2:25:07 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	360	60	mg/Kg	20	8/15/2022 7:56:54 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

opering Limit Page 2 of 9

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-08 0-4'

Project: Routh SWD Tank Battery Collection Date: 8/5/2022 8:30:00 AM

Lab ID: 2208490-003 **Matrix:** SOIL **Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analyst: SB
Diesel Range Organics (DRO)	75	14	mg/Kg	1	8/16/2022 7:15:45 AM
Motor Oil Range Organics (MRO)	110	47	mg/Kg	1	8/16/2022 7:15:45 AM
Surr: DNOP	101	21-129	%Rec	1	8/16/2022 7:15:45 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/13/2022 2:48:43 AM
Surr: BFB	105	37.7-212	%Rec	1	8/13/2022 2:48:43 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/13/2022 2:48:43 AM
Toluene	ND	0.048	mg/Kg	1	8/13/2022 2:48:43 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/13/2022 2:48:43 AM
Xylenes, Total	ND	0.096	mg/Kg	1	8/13/2022 2:48:43 AM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	8/13/2022 2:48:43 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	ND	59	mg/Kg	20	8/15/2022 8:09:15 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-10 0-4'

Project: Routh SWD Tank Battery Collection Date: 8/5/2022 8:40:00 AM

Lab ID: 2208490-004 **Matrix:** SOIL **Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE (ORGANICS				Analyst: SB
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/16/2022 7:39:35 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/16/2022 7:39:35 AM
Surr: DNOP	82.2	21-129	%Rec	1	8/16/2022 7:39:35 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/13/2022 3:12:20 AM
Surr: BFB	103	37.7-212	%Rec	1	8/13/2022 3:12:20 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/13/2022 3:12:20 AM
Toluene	ND	0.050	mg/Kg	1	8/13/2022 3:12:20 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/13/2022 3:12:20 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/13/2022 3:12:20 AM
Surr: 4-Bromofluorobenzene	97.0	70-130	%Rec	1	8/13/2022 3:12:20 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	400	60	mg/Kg	20	8/15/2022 8:21:36 PM

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

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208490**

18-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-69500 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69500 RunNo: 90282

Prep Date: 8/15/2022 Analysis Date: 8/15/2022 SeqNo: 3220689 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69500 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69500 RunNo: 90282

Prep Date: 8/15/2022 Analysis Date: 8/15/2022 SeqNo: 3220690 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

4.5

2208490 18-Aug-22

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-69474 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 69474 RunNo: 90269 Prep Date: 8/12/2022 Analysis Date: 8/15/2022 SeqNo: 3220862 Units: mg/Kg Analyte PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Result LowLimit Diesel Range Organics (DRO) ND 15 Motor Oil Range Organics (MRO) ND 50 Surr: DNOP 9.3 10.00 93.0 21 129

Sample ID: LCS-69474 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 69474 RunNo: 90269 Prep Date: 8/12/2022 Analysis Date: 8/15/2022 SeqNo: 3220863 Units: mg/Kg Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 48 15 50.00 0 95.2 64.4 127

89.7

21

129

5.000

Qualifiers:

Surr: DNOP

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Client:

Hall Environmental Analysis Laboratory, Inc.

Vertex Resources Services, Inc.

ND

1100

WO#: **2208490** 18-Aug-22

Project: Routh SWD Tank Battery Sample ID: mb SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: **G90220** RunNo: 90220 Prep Date: Analysis Date: 8/12/2022 SeqNo: 3218937 Units: %Rec Analyte SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Result LowLimit Qual Surr: BFB 1100 1000 112 37.7 212 Sample ID: 2.5ug gro Ics SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: **G90220** RunNo: 90220 Prep Date: Analysis Date: 8/12/2022 SeqNo: 3218938 Units: %Rec %REC %RPD **RPDLimit** Analyte Result PQL SPK value SPK Ref Val LowLimit HighLimit Qual Surr: BFB 2200 1000 224 37.7 212 S Sample ID: mb-69402 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 69402 RunNo: 90220 Prep Date: Analysis Date: 8/12/2022 SeqNo: 3218944 Units: mg/Kg 8/10/2022 Analyte Result PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual LowLimit

Sample ID: LCS-69402	SampT	ype: LC	S	Tes	tCode: EF	PA Method	8015D: Gaso	ine Range		
Client ID: LCSS	Batch	n ID: 69 4	102	F	RunNo: 90	0220				
Prep Date: 8/10/2022	Analysis D	oate: 8/1	12/2022	5	SeqNo: 32	218945	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	72.3	137			
Surr: BFB	2100		1000		210	37.7	212			

111

37.7

212

1000

Sample ID: mb-69407	SampType: MBLK	TestCode: EPA Method	d 8015D: Gasoline Range	;
Client ID: PBS	Batch ID: 69407	RunNo: 90220		
Prep Date: 8/10/2022	Analysis Date: 8/13/2022	SeqNo: 3218968	Units: %Rec	
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimi	t HighLimit %RPD	RPDLimit Qual
Surr: BFB	1000 100	0 104 37.7	212	

Sample ID: LCS	5-69407 SampT	/pe: LCS	TestC	ode: EPA Method	8015D: Gasoli	ne Range		
Client ID: LCS	SS Batch	ID: 69407	Rur	nNo: 90220				
Prep Date: 8/1	0/2022 Analysis D	ate: 8/13/2022	Sec	qNo: 3218969	Units: %Rec			
Analyte	Result	PQL SPK value	SPK Ref Val %	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
C DED	1000	1000		101 27.7	242			

Surr: BFB 1900 1000 191 37.7 212

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Gasoline Range Organics (GRO)

Surr: BFB

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208490

18-Aug-22

Client:	Vertex Resources Services, Inc.
Project:	Routh SWD Tank Battery

Project:	Routh SWD Tank	ŕ	Inc.							
Sample ID: mb	Samp	Туре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: PBS	Bat	ch ID: B9	0220	F	RunNo: 90220					
Prep Date:	Analysis	Date: 8/	12/2022	S	SeqNo: 32	218998	Units: %Red	;		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobe	nzene 1.0		1.000		102	70	130			
Sample ID: 100ng I	otex Ics Samp	Туре: LC	S	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Bat	ch ID: B9	0220	F	RunNo: 90	0220				
Prep Date:	Analysis	Date: 8/	12/2022	S	SeqNo: 32	218999	Units: %Red	;		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobe	nzene 1.0		1.000		104	70	130			
Sample ID: mb-694	02 Samp	Туре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: PBS	Bat	Batch ID: 69402		RunNo: 90220						
Prep Date: 8/10/2	022 Analysis	Date: 8/	12/2022	5	SeqNo: 32	219002	Units: mg/K	g		
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-Bromofluorobe	nzene 1.1		1.000		105	70	130			
Sample ID: Ics-694	02 Samp	Туре: LC	S	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Bat	ch ID: 694	402	F	RunNo: 90	0220				
Prep Date: 8/10/2	022 Analysis	Date: 8/	12/2022	5	SeqNo: 32	219003	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.6	80	120			
Toluene	0.95	0.050	1.000	0	94.8	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.0	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.9	80	120			
Surr: 4-Bromofluorobe	nzene 1.1		1.000		106	70	130			
Sample ID: mb-694	07 Samp	Туре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: PBS	Bat	ch ID: 694	407	F	RunNo: 90	0220				
Prep Date: 8/10/2	022 Analysis	Date: 8/	13/2022	5	SeqNo: 32	219026	Units: %Rec	:		

Qualifiers:

Analyte

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Surr: 4-Bromofluorobenzene

- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference

Result

Analyte detected in the associated Method Blank

101

LowLimit

HighLimit

Estimated value

SPK value SPK Ref Val %REC

1.000

- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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RPDLimit

Qual

%RPD

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208490**

18-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: Ics-69407 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 69407 RunNo: 90220

Prep Date: 8/10/2022 Analysis Date: 8/13/2022 SeqNo: 3219027 Units: %Rec

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

Surr: 4-Bromofluorobenzene 1.0 1.000 105 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 Resour Services, Inc.	ces	Work Order N	umber: 2208490		RcptNo: 1
Received By:	Juan Rojas		8/9/2022 7:15:00) AM	Guaran &	
Completed By:	Sean Livings		8/9/2022 9:14:13		Guarage Sal	
Reviewed By:	1Ph 8.1	09.22			Sal.	not-
Chain of Cus	stody					
1. Is Chain of C	ustody complete	?		Yes 🗸	No 🗌	Not Present
2. How was the	sample delivered	1?		Courier		
Log In						
3. Was an attern	pt made to cool t	the samples?		Yes 🗸	No 🗌	NA 🗆
4. Were all samp	oles received at a	temperature of	>0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗆
5. Sample(s) in p	proper container(s	s)?		Yes 🔽	No 🗌	
6. Sufficient sam	ple volume for inc	dicated test(s)?		Yes 🗸	No 🗆	
7. Are samples (e			eserved?	Yes 🔽	No 🗆	
Was preservat	ive added to bottl	es?		Yes	No 🗸	NA 🗌
9. Received at lea	ast 1 vial with hea	idspace <1/4" fo	AQ VQA2	Yes 🗌	No 🖂	[7]
10. Were any sam			THE LOUI	Yes	No ☐ No ☑ ☐	NA 🗹
				ies 🗀	NO V	# of preserved
	ncies on chain of	custody)		Yes 🔽	No 🗆	bottles checked for pH: (<2 or >12 unless noted)
2. Are matrices co			tody?	Yes 🗸	No 🗌	Adjusted?
3. Is it clear what a				Yes 🗸	No 🗆	01-1
 Were all holding (If no, notify cust) 	g times able to be stomer for authori	e met? zation.)		Yes 🗸	No 🗆	Checked by: JN H9 2
pecial Handlir	ng (if applica	ble)				
5. Was client notif			order?	Yes 🗌	No 🗆	NA 🗹
Person N	otified:		Date			
By Whom Regarding	g:		Via:	V	one 🗌 Fax [In Person
Client Ins	The state of the s					
Additional remains	arks:					
7. <u>Cooler Informa</u> Cooler No	Carlotte Market Landson	ndition Seal In	tact Seal No	Soal Data		
The state of the s	0.3 Good	The same of the sa	lact Seal No	Seal Date S	igned By	

Page 1 of 1

Chain-of-Custody Record	Turn-Around Time:		Receiv
Client: Vertex (EOG)	D-Standard Rush S Daw	HALL ENVI	
		ANALYSIS	ANALYSIS LABORATORY
Mailing Address: On Lill	Routh SWD Tank Batton,	a	
	Project #:		601
Phone #:	22E-00716	National National Applies Press	4107
email or Fax#:	Project Manager:	(
QA/QC Package: □ Standard □ Level 4 (Full Validation)	Monica Peppin		(tnəsdA)
☐ Az Compliance	: Saly Ca) DRC 8082 H 82703 82703	
ype)	# of Coolers: 1	3RO 3, sor 3 or 3 or 3 or	
	Cooler Temp(including CF): O. VO. 1 = 0.3 (°C)	asticio lethod y 831 3 Met ir, No	
Time Matrix Sample Name	Container Preservative HEAL No.		
Soil		3	
WK\$22-0°	700		
_	COO	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
15-0 01-275am 1 01:0 1	1000		
Time: Relinquished by:	i.		
Jally Certas	uning 8/8/12 1050	Kemarks:	
88m ga all	Received by: Via: Nate Time Strong S	direct Bill EOG	454 of 5
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.	racted to other accredited laboratories. This serves as notice of this po	ossibility. Any sub-contracted data will be clearly notate	



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

August 18, 2022

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

FAX:

RE: Routh SWD Tank Battery OrderNo.: 2208578

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/10/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2208578**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/18/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-11 0-4

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/8/2022 1:30:00 PM

 Lab ID:
 2208578-001
 Matrix: SOIL
 Received Date: 8/10/2022 7:05:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/16/2022 11:02:00 AM Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 8/16/2022 11:02:00 AM Surr: DNOP 89.2 21-129 %Rec 1 8/16/2022 11:02:00 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/13/2022 3:59:38 AM 4.9 mg/Kg 1 Surr: BFB 105 37.7-212 %Rec 1 8/13/2022 3:59:38 AM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.024 8/13/2022 3:59:38 AM mg/Kg 1 Toluene ND 0.049 mg/Kg 1 8/13/2022 3:59:38 AM Ethylbenzene ND 0.049 mg/Kg 1 8/13/2022 3:59:38 AM Xylenes, Total ND 0.098 mg/Kg 1 8/13/2022 3:59:38 AM Surr: 4-Bromofluorobenzene 100 70-130 %Rec 1 8/13/2022 3:59:38 AM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride mg/Kg 8/16/2022 2:35:10 AM ND 61 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical Report

Lab Order 2208578

Hall Environmental Analysis Laboratory, Inc. Date Reported: 8/18/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-12 0-4'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/8/2022 1:35:00 PM

 Lab ID:
 2208578-002
 Matrix: SOIL
 Received Date: 8/10/2022 7:05:00 AM

Amalyana	Result	DI O	al IInita	DE	Data Analyzad
Analyses	Result	KL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/12/2022 7:31:33 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/12/2022 7:31:33 PM
Surr: DNOP	70.5	21-129	%Rec	1	8/12/2022 7:31:33 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/13/2022 6:21:39 AM
Surr: BFB	104	37.7-212	%Rec	1	8/13/2022 6:21:39 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/13/2022 6:21:39 AM
Toluene	ND	0.048	mg/Kg	1	8/13/2022 6:21:39 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/13/2022 6:21:39 AM
Xylenes, Total	ND	0.096	mg/Kg	1	8/13/2022 6:21:39 AM
Surr: 4-Bromofluorobenzene	99.2	70-130	%Rec	1	8/13/2022 6:21:39 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	ND	60	mg/Kg	20	8/16/2022 3:37:14 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 12

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-13 0-4'

Project: Routh SWD Tank Battery **Collection Date:** 8/8/2022 1:40:00 PM

Lab ID: 2208578-003 **Matrix:** SOIL **Received Date:** 8/10/2022 7:05:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/12/2022 8:18:28 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/12/2022 8:18:28 PM
Surr: DNOP	70.0	21-129	%Rec	1	8/12/2022 8:18:28 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/13/2022 7:32:42 AM
Surr: BFB	101	37.7-212	%Rec	1	8/13/2022 7:32:42 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/13/2022 7:32:42 AM
Toluene	ND	0.049	mg/Kg	1	8/13/2022 7:32:42 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/13/2022 7:32:42 AM
Xylenes, Total	ND	0.098	mg/Kg	1	8/13/2022 7:32:42 AM
Surr: 4-Bromofluorobenzene	99.2	70-130	%Rec	1	8/13/2022 7:32:42 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	340	60	mg/Kg	20	8/16/2022 3:49:39 AM

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

Qualifiers:

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

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Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-14 0-4'

Project: Routh SWD Tank Battery **Collection Date:** 8/8/2022 1:45:00 PM

Lab ID: 2208578-004 **Matrix:** SOIL **Received Date:** 8/10/2022 7:05:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/12/2022 8:33:41 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/12/2022 8:33:41 PM
Surr: DNOP	58.8	21-129	%Rec	1	8/12/2022 8:33:41 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/13/2022 8:43:37 AM
Surr: BFB	103	37.7-212	%Rec	1	8/13/2022 8:43:37 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/13/2022 8:43:37 AM
Toluene	ND	0.049	mg/Kg	1	8/13/2022 8:43:37 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/13/2022 8:43:37 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/13/2022 8:43:37 AM
Surr: 4-Bromofluorobenzene	99.2	70-130	%Rec	1	8/13/2022 8:43:37 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	ND	60	mg/Kg	20	8/16/2022 4:02:04 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208578**

18-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-69517 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69517 RunNo: 90295

Prep Date: 8/15/2022 Analysis Date: 8/15/2022 SeqNo: 3220797 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69517 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69517 RunNo: 90295

Prep Date: 8/15/2022 Analysis Date: 8/15/2022 SeqNo: 3220798 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 93.4 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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208578

18-Aug-22

Client: Vertex Resources Services, Inc. **Project:** Routh SWD Tank Battery

Sample ID: MB-69436 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Org Client ID: PBS Batch ID: 69436 RunNo: 90272 Prep Date: 8/11/2022 Analysis Date: 8/12/2022 SeqNo: 3219906 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Diesel Range Organics (DRO) ND 15 Motor Oil Range Organics (MRO) Surr: DNOP 8.8 10.00 88.2 21 129	panics PDLimit Qual
Prep Date: 8/11/2022 Analysis Date: 8/12/2022 SeqNo: 3219906 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RED Diesel Range Organics (DRO) ND 15 Motor Oil Range Organics (MRO) ND 50	² DLimit Qual
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD REDiesel Range Organics (DRO) ND 15 Motor Oil Range Organics (MRO) ND 50	PDLimit Qual
Diesel Range Organics (DRO) ND 15 Motor Oil Range Organics (MRO) ND 50	PDLimit Qual
Motor Oil Range Organics (MRO) ND 50	
Surr: DNOP 8.8 10.00 88.2 21 129	
Sample ID: LCS-69436 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Org	anics
Client ID: LCSS Batch ID: 69436 RunNo: 90272	
Prep Date: 8/11/2022 Analysis Date: 8/12/2022 SeqNo: 3219907 Units: mg/Kg	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF	PDLimit Qual
Diesel Range Organics (DRO) 48 15 50.00 0 95.4 64.4 127	
Surr: DNOP 4.3 5.000 86.8 21 129	
Sample ID: 2208578-002AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Org	anics
Client ID: WES22-12 0-4' Batch ID: 69436 RunNo: 90272	
Prep Date: 8/11/2022 Analysis Date: 8/12/2022 SeqNo: 3219913 Units: mg/Kg	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF	PDLimit Qual
Diesel Range Organics (DRO) 46 15 49.26 0 92.5 36.1 154	
Surr: DNOP 3.0 4.926 61.1 21 129	
Sample ID: 2208578-002AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Org	anics
Client ID: WES22-12 0-4' Batch ID: 69436 RunNo: 90272	
D. D. Courses A. L. D. Courses Co.	
Prep Date: 8/11/2022 Analysis Date: 8/12/2022 SeqNo: 3219914 Units: mg/Kg	
	PDLimit Qual
	PDLimit Qual 33.9
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Diesel Range Organics (DRO) 44 14 48.31 0 91.6 36.1 154 2.97	33.9 0
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Diesel Range Organics (DRO) 44 14 48.31 0 91.6 36.1 154 2.97 Surr: DNOP 3.0 4.831 61.8 21 129 0	33.9 0
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Diesel Range Organics (DRO) 44 14 48.31 0 91.6 36.1 154 2.97 Surr: DNOP 3.0 4.831 61.8 21 129 0 Sample ID: MB-69521 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics (DRO)	33.9 0
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Diesel Range Organics (DRO) 44 14 48.31 0 91.6 36.1 154 2.97 Surr: DNOP 3.0 4.831 61.8 21 129 0 Sample ID: MB-69521 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Org Client ID: PBS Batch ID: 69521 RunNo: 90276 Prep Date: 8/16/2022 Analysis Date: 8/16/2022 SeqNo: 3221703 Units: mg/Kg	33.9 0
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RF Diesel Range Organics (DRO) 44 14 48.31 0 91.6 36.1 154 2.97 Surr: DNOP 3.0 4.831 61.8 21 129 0 Sample ID: MB-69521 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Org Client ID: PBS Batch ID: 69521 RunNo: 90276 Prep Date: 8/16/2022 Analysis Date: 8/16/2022 SeqNo: 3221703 Units: mg/Kg	33.9 0 nanics

Qualifiers:

Surr: DNOP

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

8.8

Analyte detected in the associated Method Blank

87.7

21

129

Estimated value

10.00

- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208578 18-Aug-22**

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: LCS-69521 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 69521 RunNo: 90276 SeqNo: 3221704 Prep Date: 8/16/2022 Analysis Date: 8/16/2022 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 64.4 Diesel Range Organics (DRO) 43 15 50.00 86.6 127 Surr: DNOP 3.6 5.000 72.9 21 129

Qualifiers:

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

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Client:

Hall Environmental Analysis Laboratory, Inc.

Vertex Resources Services, Inc.

WO#: **2208578**

18-Aug-22

Project:	Routh S	SWD Tank Battery								
Sample ID:	mb	SampType: ME	BLK	Tes	tCode: EP	A Method	8015D: Gasol	ine Range	,	
Client ID:	PBS	Batch ID: G9	0220	F	RunNo: 90 2	220				
Prep Date:		Analysis Date: 8/	12/2022	5	SeqNo: 32	18937	Units: %Rec	:		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		1100	1000		112	37.7	212			
Sample ID:	2.5ug gro lcs	SampType: LC	s	Tes	tCode: EP	A Method	8015D: Gasol	ine Range	,	
Client ID:	LCSS	Batch ID: G9	0220	F	RunNo: 90 2	220				
Prep Date:		Analysis Date: 8/	12/2022	5	SeqNo: 32	18938	Units: %Rec	:		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		2200	1000		224	37.7	212			S
Sample ID:	mb-69402	SampType: ME	BLK	Tes	tCode: EP	A Method	8015D: Gasol	ine Range	1	
Client ID:	PBS	Batch ID: 694	102	RunNo: 90220						
Prep Date:	8/10/2022	Analysis Date: 8/	12/2022	5	SeqNo: 32	18944	Units: mg/K	g		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	ge Organics (GRO)	ND 5.0								
Surr: BFB		1100	1000		111	37.7	212			
Sample ID:	LCS-69402	SampType: LC	S	Tes	tCode: EP	A Method	8015D: Gasol	ine Range		
Client ID:	LCSS	Batch ID: 694	102	F	RunNo: 90 2	220				
Prep Date:	8/10/2022	Analysis Date: 8/	12/2022	5	SeqNo: 32	18945	Units: mg/K	g		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	ge Organics (GRO)	26 5.0	25.00	0	103	72.3	137			
Surr: BFB		2100	1000		210	37.7	212			
Sample ID:	mb-69407	SampType: ME	BLK	Tes	tCode: EP	A Method	8015D: Gasol	ine Range		
Client ID:	PBS	Batch ID: 694	107	F	RunNo: 90 :	220				
Prep Date:	8/10/2022	Analysis Date: 8/	13/2022	9	SeqNo: 32	18968	Units: mg/K	g		

Qualifiers:

Analyte

Surr: BFB

Client ID:

Prep Date:

Surr: BFB

Analyte

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Gasoline Range Organics (GRO)

Gasoline Range Organics (GRO)

Sample ID: LCS-69407

LCSS

8/10/2022

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference

Result

ND

1000

Result

22

1900

PQL

SampType: LCS

Batch ID: 69407

Analysis Date: 8/13/2022

PQL

5.0

5.0

B Analyte detected in the associated Method Blank

104

RunNo: 90220

%REC

88.4

191

SeqNo: 3218969

LowLimit

LowLimit

72.3

37.7

37.7

TestCode: EPA Method 8015D: Gasoline Range

HighLimit

212

Units: mg/Kg

137

212

HighLimit

%RPD

%RPD

RPDLimit

RPDLimit

Qual

Qual

E Estimated value

0

SPK value SPK Ref Val %REC

1000

25.00

1000

SPK value SPK Ref Val

- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

1900

WO#: 2208578

18-Aug-22

Client: Vertex Resources Services, Inc. **Project:** Routh SWD Tank Battery

Sample ID: 2208578-002ams	SampT	ype: MS	}	Tes	!						
Client ID: WES22-12 0-4'	Batch	Batch ID: 69407 RunNo: 90220									
Prep Date: 8/10/2022	Analysis D)ate: 8/	13/2022	5	SeqNo: 32	218971	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	23	4.9	24.41	0	95.0	70	130				
Surr: BFB	1900		976.6		197	37.7	212				

Sample ID: 2208578-002amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: WES22-12 0-4' Batch ID: 69407 RunNo: 90220 Prep Date: 8/10/2022 Analysis Date: 8/13/2022 SeqNo: 3218972 Units: mg/Kg %RPD Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit **RPDLimit** Qual Gasoline Range Organics (GRO) 22 4.9 24.41 90.8 70 4.43 20

197

37.7

212

0

0

976.6

Qualifiers:

Surr: BFB

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Client:

Project:

Hall Environmental Analysis Laboratory, Inc.

Vertex Resources Services, Inc.

Routh SWD Tank Battery

WO#: **2208578**

18-Aug-22

roject. Routin 5	WD Tallk I	Juiter y								
Sample ID: mb	Samp ⁻	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	iles		
Client ID: PBS	Batc	h ID: B9	0220	F	RunNo: 90	0220				
Prep Date:	Analysis [Date: 8/	12/2022	;	SeqNo: 32	218998	Units: %Red	:		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130			
Sample ID: 100ng btex lcs	Samp	Гуре: LC	S	Tes	tCode: EF	PA Method	8021B: Volati	iles		
Client ID: LCSS	Batc	h ID: B9	0220	F	RunNo: 90	0220				
Prep Date:	Analysis [Date: 8/	12/2022	;	SeqNo: 32	218999	Units: %Red	;		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		104	70	130			
Sample ID: mb-69402	Samp	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	iles		
Client ID: PBS	Batc	h ID: 694	402	F	RunNo: 90	0220				
Prep Date: 8/10/2022	Analysis [Date: 8/	12/2022	;	SeqNo: 32	219002	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		105	70	130			

Sample ID: Ics-69402	Samp	ype: LC	S	Tes	tCode: EF	d 8021B: Volatiles				
Client ID: LCSS	Batch ID: 69402				RunNo: 90					
Prep Date: 8/10/2022	Analysis [Date: 8/1	12/2022	SeqNo: 3219003			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	80	120			
Toluene	0.95	0.050	1.000	0	94.8	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.0	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.9	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	70	130			

Sample ID: mb-69407	TestCode: EPA Method 8021B: Volatiles									
Client ID: PBS Batch ID: 69407				F	RunNo: 90					
Prep Date: 8/10/2022	Analysis Date: 8/13/2022			SeqNo: 3219026			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208578**

18-Aug-22

Client: Vertex Resources Services, Inc.
Project: Routh SWD Tank Battery

Sample ID: mb-69407 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PRS Batch ID: 69407 RunNo: 90220 Prep Date: 8/10/2022 Analysis Date: 8/13/2022 SeqNo: 3219026 Units: mg/Kg SPK Ref Val %RPD **RPDLimit** Analyte Result SPK value %REC LowLimit HighLimit Qual Surr: 4-Bromofluorobenzene 1.0 1.000 101 70 130

Sample ID: Ics-69407 TestCode: EPA Method 8021B: Volatiles SampType: LCS Client ID: LCSS Batch ID: 69407 RunNo: 90220 Prep Date: 8/10/2022 Analysis Date: 8/13/2022 SeqNo: 3219027 Units: mg/Kg %REC %RPD **RPDLimit** Analyte Result **PQL** SPK value SPK Ref Val LowLimit HighLimit Qual Benzene 0.86 0.025 1.000 n 86.4 80 120 Toluene 0.91 0.050 1.000 0 91.2 80 120 Ethylbenzene 0.92 0.050 1.000 0 922 80 120 0 Xylenes, Total 2.8 0.10 3.000 917 80 120 Surr: 4-Bromofluorobenzene 1.0 1.000 105 70 130

Sample ID: 2208578-003ams TestCode: EPA Method 8021B: Volatiles SampType: MS WES22-13 0-4' Client ID: Batch ID: 69407 RunNo: 90220 Prep Date: 8/10/2022 Analysis Date: 8/13/2022 SeqNo: 3219030 Units: mg/Kg %REC LowLimit **RPDLimit** Result PQL SPK value SPK Ref Val HighLimit %RPD Qual Analyte 0.89 0.024 0.9662 0 91.7 68.8 120 Renzene Toluene 0.94 0.048 0.9662 0 97.8 73.6 124 0.97 0 101 72.7 Ethylbenzene 0.048 0.9662 129 Xylenes, Total 2.9 0.097 2.899 0 100 126 Surr: 4-Bromofluorobenzene 0.9662 103 130 1.0 70

Sample ID: 2208578-003amsd TestCode: EPA Method 8021B: Volatiles SampType: MSD Client ID: WES22-13 0-4' Batch ID: 69407 RunNo: 90220 Prep Date: 8/10/2022 Analysis Date: 8/13/2022 SeqNo: 3219031 Units: mg/Kg %RPD **RPDLimit** POI SPK value SPK Ref Val %REC HighLimit Analyte Result LowLimit Qual Benzene 0.88 0.024 0.9766 0 90.3 68.8 120 0.514 20 0 97.2 20 Toluene 0.95 0.049 0.9766 73.6 124 0.504 Ethylbenzene 0.98 0.049 0.9766 0 100 72.7 129 0.182 20 0 20 Xylenes, Total 2.9 0.098 2.930 99.2 75.7 126 0.0816 Surr: 4-Bromofluorobenzene 1.0 0.9766 105 70 130 0 0

Sample ID: Ics-69398 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: **LCSS** Batch ID: 69398 RunNo: 90279 Prep Date: Analysis Date: 8/15/2022 Units: %Rec 8/10/2022 SeqNo: 3220401 **PQL** SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result LowLimit HighLimit 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208578**

18-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: Ics-69398 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 69398 RunNo: 90279

Prep Date: 8/10/2022 Analysis Date: 8/15/2022 SeqNo: 3220401 Units: %Rec

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

Surr: 4-Bromofluorobenzene 1.1 1.000 107 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 Num	nber: 22(8578			RcptNo: 1	
Received By:	Juan Rojas	8/10/2022 7:05:00	АМ		Hear	39		
Completed By:	Sean Livingston	8/10/2022 7:59:26	AM		<	1	erop.	
Reviewed By:	Jn8/10/22),	-6	1701-	
Chain of Cus	stody							
1. Is Chain of C	ustody complete?		Yes	~	No		Not Present	
2. How was the	sample delivered?		Cou	rier				
Log In								
	npt made to cool the samp	es?	Yes	V	No		NA 🗆	
4. Were all samp	ples received at a temperal	ture of >0° C to 6.0°C	Yes	V	No		NA 🗆	
5. Sample(s) in	proper container(s)?		Yes	V	No			
6. Sufficient sam	ple volume for indicated te	st(s)?	Yes	V	No			
	except VOA and ONG) pro		Yes	V				
	tive added to bottles?		Yes		No	V	NA 🗆	
9. Received at le	ast 1 vial with headspace	1/4" for AQ VOA?	Yes		No		NA 🗹	
	nple containers received br		Yes		No	V	A	-
44.5							# of preserved bottles checked	/
	ork match bottle labels? ancies on chain of custody)		Yes	V	No		for pH: (<2 or >12 unless r	-4-45
	orrectly identified on Chain	of Custody?	Yes	~	No		Adjusted?	otea)
	analyses were requested?		Yes	V	No			
14. Were all holdin	ng times able to be met? ustomer for authorization.)		Yes	V	No		Checked by: KPG 8-	0.22
	ing (if applicable)							
	tified of all discrepancies w	ith this order?	Yes		No		NA 🗸	
Person I	Notified:	Date:						
By Who	m:	Via:	eMa	ail 🖂	Phone	Fav	☐ In Person	
Regardin	ng:					ı un	III I CISOII	
Client In	structions:							
16. Additional ren	narks:							
17. Cooler Inform	mation							
Cooler No	Temp °C Condition	Seal Intact Seal No	Seal Da	ate	Signed E	3v		
1	1.9 Good		_1641.02		- 3	,		

	oliani ol-castoay Necola	ם	alli-Alonina IIIIe.					•					
Client: Ver+C	(extex (FOA)		区 Standard		THE S DAW			I	HALL	EN	VIE	ENVIRONMENTAL	d by
			Project Name:					1	N N		V	AIMALTSIS LABORATOR	OCI N
Mailing Address:	on lile		Rovath	SWD Tan	Routh SWD Tank Braten,		www.h	v dividi	ww.ha	www.hallenvironmental.com	nment	al.com): 1/1
	0		Project #:		0		Tolar	A SAF	SINE	Albud	nerqu	Albuquerque, NIM 87109	8/20
Phone #:			32E	01-911-00-	01-10			25-54	1el. 303-343-3973	Analysis Reguest	-606	rax 505-345-4107	23 2
email or Fax#:			Project Manager:	ager:			((φ † ₍	havi	(3)	22.
QA/QC Package:	☐ Level 4 (Full Validation)		Mon	Monica Peppin	0.0	(1208) s	CB, ²		SINIS	OS '⁵Oc		JnəsdA\	:39 PM
Accreditation: ☐ A:	☐ Az Compliance ☐ Other		Sampler: On Ice:	Sally (Partau I			4-6-6-	0 <i>17</i> 9 J	NO ⁵ ' I	()	resent	
☐ EDD (Type)			# of Coolers:		2					'£C	10/	4) u	
			Cooler Temp	Cooler Temp(including cF): い名トじロン	8+6,1=1.9 (°C)							liforn	
Date Time Matrix	x Sample Name		Container Type and #	Preservative Type	HEAL No.		08:머식1 9G 1808	M) 803	PAHs b	3),F, B S260 (V	S) 07S	o2 lsto	
8/8 1330 801	1 WES22-11	17-0	1 403 jar	je								L	
1335	WES 22-12	0-4	3-		200					-			
1340	WES 22-13	1.0			500								
1 345 1	WES22-14	0-41		_	700	_				F			
								H					
E. Time: R	Relinquished by:	m.	Received by:	Via:	Date Time	Remarks:	ks:						
	Sally Ceratan		~	dryn	-1					(7	(Page
99/2 1900 ac	dem v	<u>r</u> \	Kecelved by:	Via:	Date Time	1		3	rec	t D	=	direct Bill total	469 of
		_	1	412117	10000								2 - 10 10 10 2 3 10 2



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

OrderNo.: 2208698

August 18, 2022

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

FAX:

RE: Routh SWD Tank Battery

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/11/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2208698

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/18/2022

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-02 0-4'

Project: Routh SWD Tank Battery **Collection Date:** 8/9/2022 2:35:00 PM

Lab ID: 2208698-001 **Matrix:** SOIL **Received Date:** 8/11/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/17/2022 1:46:18 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/17/2022 1:46:18 AM
Surr: DNOP	82.3	21-129	%Rec	1	8/17/2022 1:46:18 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/16/2022 3:23:55 AM
Surr: BFB	83.2	37.7-212	%Rec	1	8/16/2022 3:23:55 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/16/2022 3:23:55 AM
Toluene	ND	0.049	mg/Kg	1	8/16/2022 3:23:55 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/16/2022 3:23:55 AM
Xylenes, Total	ND	0.098	mg/Kg	1	8/16/2022 3:23:55 AM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	8/16/2022 3:23:55 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	270	60	mg/Kg	20	8/17/2022 6:54:17 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 7

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-04 0-4'

Project: Routh SWD Tank Battery **Collection Date:** 8/9/2022 1:00:00 PM

Lab ID: 2208698-002 **Matrix:** SOIL **Received Date:** 8/11/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	8/17/2022 2:02:17 AM
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	8/17/2022 2:02:17 AM
Surr: DNOP	62.4	21-129	%Rec	1	8/17/2022 2:02:17 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/16/2022 3:47:35 AM
Surr: BFB	83.3	37.7-212	%Rec	1	8/16/2022 3:47:35 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/16/2022 3:47:35 AM
Toluene	ND	0.050	mg/Kg	1	8/16/2022 3:47:35 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/16/2022 3:47:35 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/16/2022 3:47:35 AM
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	8/16/2022 3:47:35 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	280	60	mg/Kg	20	8/17/2022 7:06:39 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 7

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-06 0-4'

Project: Routh SWD Tank Battery Collection Date: 8/9/2022 9:00:00 AM

Lab ID: 2208698-003 **Matrix:** SOIL **Received Date:** 8/11/2022 7:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/17/2022 2:18:03 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/17/2022 2:18:03 AM
Surr: DNOP	76.7	21-129	%Rec	1	8/17/2022 2:18:03 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/16/2022 4:11:14 AM
Surr: BFB	86.6	37.7-212	%Rec	1	8/16/2022 4:11:14 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/16/2022 4:11:14 AM
Toluene	ND	0.050	mg/Kg	1	8/16/2022 4:11:14 AM
Ethylbenzene	ND	0.050	mg/Kg	1	8/16/2022 4:11:14 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/16/2022 4:11:14 AM
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	8/16/2022 4:11:14 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	250	60	mg/Kg	20	8/17/2022 7:19:00 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208698**

18-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-69570 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 69570 RunNo: 90338

Prep Date: 8/17/2022 Analysis Date: 8/17/2022 SeqNo: 3223889 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-69570 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 69570 RunNo: 90338

Prep Date: 8/17/2022 Analysis Date: 8/17/2022 SeqNo: 3223890 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 94.7 90 110

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

ND

ND

15

50

WO#: **2208698**

18-Aug-22

Client: Vertex Resources Services, Inc.
Project: Routh SWD Tank Battery

Sample ID: MB-69473	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics	
Client ID: PBS	Batch ID: 69473	RunNo: 90276	
Prep Date: 8/12/2022	Analysis Date: 8/16/2022	SeqNo: 3221171 Units: %Rec	
Analyte	Result PQL SPK value S	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit	Qual
Surr: DNOP	8.3 10.00	83.1 21 129	
Sample ID: LCS-69473	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics	
Client ID: LCSS	Batch ID: 69473	RunNo: 90276	
Prep Date: 8/12/2022	Analysis Date: 8/16/2022	SeqNo: 3221173 Units: %Rec	
Analyte	Result PQL SPK value S	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit	Qual
Surr: DNOP	4.3 5.000	86.6 21 129	
Sample ID: MB-69512	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics	
Client ID: PBS	Batch ID: 69512	RunNo: 90276	
Prep Date: 8/15/2022	Analysis Date: 8/16/2022	SeqNo: 3222536 Units: mg/Kg	
Analyte	Result PQL SPK value S	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit	Qual

Surr: DNOP	8.7		10.00		86.8	21	129			
Sample ID: LCS-69512	SampT	ype: LC	s	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: LCSS	Batcl	n ID: 69	512	F	RunNo: 90	0276				
Prep Date: 8/15/2022	Analysis D	Date: 8/	16/2022	9	SeqNo: 32	222537	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	15	50.00	0	85.9	64.4	127			
Surr: DNOD	4.0		5 000		80.3	21	120			

Qualifiers:

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

Diesel Range Organics (DRO)

Motor Oil Range Organics (MRO)

- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208698**

18-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: mb-69442 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 69442 RunNo: 90279

Prep Date: 8/11/2022 Analysis Date: 8/16/2022 SeqNo: 3220352 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 830 1000 83.3 37.7 212

Sample ID: Ics-69442 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

1000

Client ID: LCSS Batch ID: 69442 RunNo: 90279

1800

Prep Date: 8/11/2022 Analysis Date: 8/15/2022 SeqNo: 3220353 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 91.1 72.3 137

176

37.7

212

Qualifiers:

Surr: BFB

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 6 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208698**

18-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

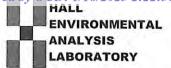
Sample ID: mb-69442	Samp	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	les		-
Client ID: PBS	Batcl	h ID: 69 4	142	F	RunNo: 90	0279				
Prep Date: 8/11/2022	Analysis [Date: 8/	16/2022	5	SeqNo: 32	220382	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130			

Sample ID: LCS-69442	SampT	ype: LC	S	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Batcl	n ID: 69 4	142	F	RunNo: 90	0279				
Prep Date: 8/11/2022	Analysis D	Date: 8/1	15/2022	9	SeqNo: 32	220383	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	99.4	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	70	130			

Qualifiers:

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

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

Sample Log-In Check List

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample(s) in proper conta Sufficient sample volume f	ingston 8/11/2022 8:36:5 8/11/2022 8:36:5 8/11/2022 8:36:5		Glandy Sala No 🗆	Not Present 🗌	
Chain of Custody 1. Is Chain of Custody comp 2. How was the sample deliving Log In 3. Was an attempt made to one 4. Were all samples received 5. Sample(s) in proper conta 6. Sufficient sample volume for the contact of the co	9111/22 plete? vered?	Yes 🗹			
Chain of Custody 1. Is Chain of Custody comp 2. How was the sample deliving Log In 3. Was an attempt made to one 4. Were all samples received 5. Sample(s) in proper conta 6. Sufficient sample volume for the contact of the co	plete? vered?				
1. Is Chain of Custody comp 2. How was the sample deliv Log In 3. Was an attempt made to comp 4. Were all samples received 5. Sample(s) in proper conta 6. Sufficient sample volume f 7. Are samples (except VOA)	vered?		No 🗌	Not Present	
Log In 3. Was an attempt made to on 4. Were all samples received 5. Sample(s) in proper conta 6. Sufficient sample volume for 7. Are samples (except VOA)	vered?		No 🗌	Not Present	
Log In 3. Was an attempt made to out 4. Were all samples received 5. Sample(s) in proper conta 6. Sufficient sample volume for Are samples (except VOA)		Courier			
Was an attempt made to one of the control of the co	cool the samples?				
4. Were all samples received 5. Sample(s) in proper conta 6. Sufficient sample volume f 7. Are samples (except VOA	cool the samples?				
 Sample(s) in proper conta Sufficient sample volume f Are samples (except VOA) 		Yes 🗸	No 🗌	NA 🗌	
 Sufficient sample volume f Are samples (except VOA) 	d at a temperature of >0° C to 6.0°C	Yes 🔽	No 🗆	NA 🗆	
7. Are samples (except VOA	ainer(s)?	Yes 🗸	No 🗆		
	for indicated test(s)?	Yes 🔽	No 🗆		
3. Was preservative added to	and ONG) properly preserved?	Yes 🗸	No 🗌		
	o bottles?	Yes	No 🗹	NA 🗌	
Received at least 1 vial wit	th headspace <1/4" for AQ VOA?	Yes	No 🗌	NA 🗹	
0. Were any sample containe	ers received broken?	Yes	No 🗸	# of preserved	
Does paperwork match bo (Note discrepancies on cha		Yes 🔽	No 🗆	bottles checked for pH:	>12 unless noted)
2. Are matrices correctly iden		Yes 🔽	No 🗆	Adjusted?	
3. Is it clear what analyses we	vere requested?	Yes 🗸	No 🗆		
 Were all holding times able (If no, notify customer for a 		Yes 🗹	No 🗆	Checked by:	Sec 8/11/22
pecial Handling (if app	plicable)				
5. Was client notified of all d	tiscrepancies with this order?	Yes	No 🗆	NA 🗸	
Person Notified:	Da	ite:			1
By Whom:	Via	a: eMail	Phone Fax	☐ In Person	
Regarding:					
Client Instructions:					
6. Additional remarks:					-
7. Cooler Information					
Cooler No Temp °C					

2:22:39 PM	19:00 1 WEST-00 0-4"	13.00 WES22-04 0-4	8/9/4:35 Soil WESSZ-02 04	email or Fax#: QA/QC Package: Standard	Mailing Address: M JW	Page Chain-of-Custody Record Page Flient: VEYTEX (EUE)
Received by: Received by:			1 400 jur	Project Mana Project Mana On loe: # of Coolers: Cooler Tempo	Project #:	Turn-Around Time: Standard Project Name:
Via:			ice	Ca Ca Yes	2 CMS	ime:
Date Time 8/10/12 1/30 Date Time	०७३	200	001	Peppin 1 Butter 4.1-0=4.1 (°C)	SWD Tank Bestery	: Z Rush 5 WM
Ren		_	<	TEX/ MTBE / TMB's (8021)		
Remarks:	_		7	PH:8015D(GRO / DRO / MRO)	490 Te	
8. "				081 Pesticides/8082 PCB's	4901 Hawkins NE Tel. 505-345-3975	
V&				DB (Method 504.1)	awkir 5-34:	< DI
7				AHs by 8310 or 8270SIMS	1s NF	HALL ANAL
direct bill 60G			-	CRA 8 Metals	5 1	
			/	260 (VOA)	Albuqu Fax	ENVI
					quer x 50	S S
				270 (Semi-VOA) otal Coliform (Present/Absent)	que,)5-34	
				otal Coliform (Present/Absent)	Albuquerque, NM 87109 Fax 505-345-4107	ENVIRONMENTA YSIS LABORATOR Provironmental.com
					109	Z E
		-				74
						T D

HALL ENVIRONMENTAL



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

August 25, 2022

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

FAX:

RE: Routh SWD Tank Battery OrderNo.: 2208818

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 23 sample(s) on 8/12/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-98 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 9:00:00 AM

 Lab ID:
 2208818-001
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/17/2022 5:12:12 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/17/2022 5:12:12 PM
Surr: DNOP	101	21-129	%Rec	1	8/17/2022 5:12:12 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/18/2022 2:49:04 AM
Surr: BFB	104	37.7-212	%Rec	1	8/18/2022 2:49:04 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/17/2022 1:09:47 AM
Toluene	ND	0.049	mg/Kg	1	8/17/2022 1:09:47 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/17/2022 1:09:47 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/17/2022 1:09:47 AM
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	8/17/2022 1:09:47 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	660	59	mg/Kg	20	8/17/2022 11:50:41 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-99 9'

Project: Routh SWD Tank Battery **Collection Date:** 8/10/2022 9:05:00 AM 2208818-002 Lab ID: Matrix: SOIL Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	8/17/2022 5:26:17 PM
Motor Oil Range Organics (MRO)	ND	42	mg/Kg	1	8/17/2022 5:26:17 PM
Surr: DNOP	101	21-129	%Rec	1	8/17/2022 5:26:17 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/18/2022 3:12:37 AM
Surr: BFB	108	37.7-212	%Rec	1	8/18/2022 3:12:37 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/17/2022 1:33:27 AM
Toluene	ND	0.049	mg/Kg	1	8/17/2022 1:33:27 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/17/2022 1:33:27 AM
Xylenes, Total	ND	0.097	mg/Kg	1	8/17/2022 1:33:27 AM
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	8/17/2022 1:33:27 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	940	59	mg/Kg	20	8/18/2022 12:03:02 AM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank

Ε Estimated value

J Analyte detected below quantitation limits

Sample pH Not In Range

Page 2 of 30 RL Reporting Limit

Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-100 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 9:10:00 AM

 Lab ID:
 2208818-003
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/17/2022 5:40:10 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/17/2022 5:40:10 PM
Surr: DNOP	96.1	21-129	%Rec	1	8/17/2022 5:40:10 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/18/2022 3:36:09 AM
Surr: BFB	102	37.7-212	%Rec	1	8/18/2022 3:36:09 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	8/17/2022 2:20:45 AM
Toluene	ND	0.048	mg/Kg	1	8/17/2022 2:20:45 AM
Ethylbenzene	ND	0.048	mg/Kg	1	8/17/2022 2:20:45 AM
Xylenes, Total	ND	0.095	mg/Kg	1	8/17/2022 2:20:45 AM
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	1	8/17/2022 2:20:45 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	530	61	mg/Kg	20	8/18/2022 12:15:23 AM

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

Qualifiers:

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

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-101 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 9:15:00 AM

 Lab ID:
 2208818-004
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/17/2022 5:54:21 PM Motor Oil Range Organics (MRO) ND 8/17/2022 5:54:21 PM 49 mg/Kg 1 Surr: DNOP 102 21-129 %Rec 1 8/17/2022 5:54:21 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/18/2022 3:59:42 AM 4.8 mg/Kg 1 Surr: BFB 102 37.7-212 %Rec 1 8/18/2022 3:59:42 AM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/17/2022 2:44:20 AM 0.024 mg/Kg 1 Toluene ND 0.048 mg/Kg 1 8/17/2022 2:44:20 AM Ethylbenzene ND 0.048 mg/Kg 1 8/17/2022 2:44:20 AM Xylenes, Total ND 0.097 mg/Kg 8/17/2022 2:44:20 AM 1 Surr: 4-Bromofluorobenzene 106 70-130 %Rec 1 8/17/2022 2:44:20 AM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride mg/Kg 8/18/2022 12:52:26 AM 310 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-102 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 9:20:00 AM

 Lab ID:
 2208818-005
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/17/2022 6:08:17 PM Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 8/17/2022 6:08:17 PM 21-129 Surr: DNOP %Rec 1 8/17/2022 6:08:17 PM 111 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/18/2022 4:23:12 AM 4.8 mg/Kg 1 Surr: BFB 106 37.7-212 %Rec 1 8/18/2022 4:23:12 AM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/17/2022 3:07:57 AM 0.024 mg/Kg 1 Toluene ND 0.048 mg/Kg 1 8/17/2022 3:07:57 AM Ethylbenzene ND 0.048 mg/Kg 1 8/17/2022 3:07:57 AM Xylenes, Total ND 0.097 mg/Kg 8/17/2022 3:07:57 AM 1 Surr: 4-Bromofluorobenzene 103 70-130 %Rec 1 8/17/2022 3:07:57 AM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride mg/Kg 8/18/2022 1:04:46 AM 650 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-103 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 9:25:00 AM

 Lab ID:
 2208818-006
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/17/2022 6:22:24 PM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 8/17/2022 6:22:24 PM Surr: DNOP 103 21-129 %Rec 1 8/17/2022 6:22:24 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/18/2022 4:46:47 AM 4.9 mg/Kg 1 Surr: BFB 103 37.7-212 %Rec 1 8/18/2022 4:46:47 AM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/17/2022 3:31:28 AM 0.024 mg/Kg 1 Toluene ND 0.049 mg/Kg 1 8/17/2022 3:31:28 AM Ethylbenzene ND 0.049 mg/Kg 1 8/17/2022 3:31:28 AM Xylenes, Total ND 0.097 mg/Kg 8/17/2022 3:31:28 AM 1 Surr: 4-Bromofluorobenzene 106 70-130 %Rec 1 8/17/2022 3:31:28 AM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride mg/Kg 8/18/2022 1:17:07 AM 580 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-104 9'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 9:30:00 AM

 Lab ID:
 2208818-007
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/17/2022 6:37:13 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/17/2022 6:37:13 PM
Surr: DNOP	106	21-129	%Rec	1	8/17/2022 6:37:13 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/18/2022 5:10:27 AM
Surr: BFB	106	37.7-212	%Rec	1	8/18/2022 5:10:27 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/17/2022 3:55:06 AM
Toluene	ND	0.049	mg/Kg	1	8/17/2022 3:55:06 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/17/2022 3:55:06 AM
Xylenes, Total	ND	0.099	mg/Kg	1	8/17/2022 3:55:06 AM
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	1	8/17/2022 3:55:06 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	580	60	mg/Kg	20	8/18/2022 1:29:28 AM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

 $ND \qquad Not \ Detected \ at \ the \ Reporting \ Limit$

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-105 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 9:35:00 AM

 Lab ID:
 2208818-008
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/17/2022 6:52:13 PM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 8/17/2022 6:52:13 PM Surr: DNOP 92.5 21-129 %Rec 1 8/17/2022 6:52:13 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: BRM Gasoline Range Organics (GRO) ND 8/18/2022 12:59:00 AM 4.8 mg/Kg 1 Surr: BFB 95.4 37.7-212 %Rec 1 8/18/2022 12:59:00 AM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/17/2022 4:18:46 AM 0.024 mg/Kg 1 Toluene ND 0.048 mg/Kg 1 8/17/2022 4:18:46 AM Ethylbenzene ND 0.048 mg/Kg 1 8/17/2022 4:18:46 AM Xylenes, Total ND 0.097 mg/Kg 8/17/2022 4:18:46 AM 1 Surr: 4-Bromofluorobenzene 102 70-130 %Rec 1 8/17/2022 4:18:46 AM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride mg/Kg 8/18/2022 1:41:48 AM 910 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-106 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 9:40:00 AM

 Lab ID:
 2208818-009
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/17/2022 7:07:24 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/17/2022 7:07:24 PM
Surr: DNOP	96.2	21-129	%Rec	1	8/17/2022 7:07:24 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/18/2022 1:19:00 AM
Surr: BFB	96.8	37.7-212	%Rec	1	8/18/2022 1:19:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/17/2022 4:42:26 AM
Toluene	ND	0.049	mg/Kg	1	8/17/2022 4:42:26 AM
Ethylbenzene	ND	0.049	mg/Kg	1	8/17/2022 4:42:26 AM
Xylenes, Total	ND	0.098	mg/Kg	1	8/17/2022 4:42:26 AM
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	8/17/2022 4:42:26 AM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	1600	60	mg/Kg	20	8/18/2022 1:54:08 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-107 6'

Project: Routh SWD Tank Battery **Collection Date:** 8/10/2022 9:45:00 AM

Lab ID: 2208818-010 **Matrix:** SOIL **Received Date:** 8/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/17/2022 7:22:33 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/17/2022 7:22:33 PM
Surr: DNOP	105	21-129	%Rec	1	8/17/2022 7:22:33 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/16/2022 3:44:00 PM
Surr: BFB	97.7	37.7-212	%Rec	1	8/16/2022 3:44:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: CCM
Benzene	ND	0.025	mg/Kg	1	8/16/2022 3:44:00 PM
Toluene	ND	0.049	mg/Kg	1	8/16/2022 3:44:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/16/2022 3:44:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/16/2022 3:44:00 PM
Surr: 4-Bromofluorobenzene	96.6	70-130	%Rec	1	8/16/2022 3:44:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	530	60	mg/Kg	20	8/18/2022 2:06:29 AM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-108 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 9:50:00 AM

 Lab ID:
 2208818-011
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/17/2022 7:53:02 PM Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 8/17/2022 7:53:02 PM Surr: DNOP 89.5 21-129 %Rec 1 8/17/2022 7:53:02 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM Gasoline Range Organics (GRO) ND 4.7 8/16/2022 4:04:00 PM mg/Kg 1 Surr: BFB 99.3 37.7-212 %Rec 1 8/16/2022 4:04:00 PM **EPA METHOD 8021B: VOLATILES** Analyst: CCM Benzene ND 8/16/2022 4:04:00 PM 0.023 mg/Kg 1 Toluene ND 0.047 mg/Kg 1 8/16/2022 4:04:00 PM Ethylbenzene ND 0.047 mg/Kg 1 8/16/2022 4:04:00 PM Xylenes, Total ND 0.093 mg/Kg 8/16/2022 4:04:00 PM 1 Surr: 4-Bromofluorobenzene 97.3 70-130 %Rec 1 8/16/2022 4:04:00 PM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride mg/Kg 8/18/2022 2:18:51 AM 470 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-109 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 9:55:00 AM

 Lab ID:
 2208818-012
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) 72 15 mg/Kg 1 8/17/2022 8:08:20 PM Motor Oil Range Organics (MRO) 110 49 mg/Kg 1 8/17/2022 8:08:20 PM Surr: DNOP 111 21-129 %Rec 1 8/17/2022 8:08:20 PM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: CCM Gasoline Range Organics (GRO) ND 8/16/2022 4:24:00 PM 4.8 mg/Kg 1 Surr: BFB 97.6 37.7-212 %Rec 1 8/16/2022 4:24:00 PM **EPA METHOD 8021B: VOLATILES** Analyst: CCM Benzene ND 8/16/2022 4:24:00 PM 0.024 mg/Kg 1 Toluene ND 0.048 mg/Kg 1 8/16/2022 4:24:00 PM Ethylbenzene ND 0.048 mg/Kg 1 8/16/2022 4:24:00 PM Xylenes, Total ND 0.096 mg/Kg 8/16/2022 4:24:00 PM 1 Surr: 4-Bromofluorobenzene 94.9 70-130 %Rec 1 8/16/2022 4:24:00 PM **EPA METHOD 300.0: ANIONS** Analyst: CAS Chloride mg/Kg 8/18/2022 2:39:53 PM 800 60 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-110

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 10:00:00 AM

 Lab ID:
 2208818-013
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	8/19/2022 2:12:11 PM
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	8/19/2022 2:12:11 PM
Surr: DNOP	67.8	21-129	%Rec	1	8/19/2022 2:12:11 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	2400	60	mg/Kg	20	8/18/2022 3:17:07 PM
EPA METHOD 8260B: VOLATILES SHORT L	IST				Analyst: JR
Benzene	ND	0.024	mg/Kg	1	8/17/2022 4:20:46 PM
Toluene	ND	0.048	mg/Kg	1	8/17/2022 4:20:46 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/17/2022 4:20:46 PM
Xylenes, Total	ND	0.096	mg/Kg	1	8/17/2022 4:20:46 PM
Surr: 1,2-Dichloroethane-d4	103	70-130	%Rec	1	8/17/2022 4:20:46 PM
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	8/17/2022 4:20:46 PM
Surr: Dibromofluoromethane	116	70-130	%Rec	1	8/17/2022 4:20:46 PM
Surr: Toluene-d8	98.4	70-130	%Rec	1	8/17/2022 4:20:46 PM
EPA METHOD 8015D MOD: GASOLINE RAN	GE				Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/17/2022 4:20:46 PM
Surr: BFB	116	70-130	%Rec	1	8/17/2022 4:20:46 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-111

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 10:05:00 AM

 Lab ID:
 2208818-014
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/19/2022 2:26:15 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/19/2022 2:26:15 PM
Surr: DNOP	81.0	21-129	%Rec	1	8/19/2022 2:26:15 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	850	60	mg/Kg	20	8/18/2022 3:29:31 PM
EPA METHOD 8260B: VOLATILES SHORT L	IST				Analyst: JR
Benzene	ND	0.024	mg/Kg	1	8/17/2022 4:49:30 PM
Toluene	ND	0.049	mg/Kg	1	8/17/2022 4:49:30 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/17/2022 4:49:30 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/17/2022 4:49:30 PM
Surr: 1,2-Dichloroethane-d4	104	70-130	%Rec	1	8/17/2022 4:49:30 PM
Surr: 4-Bromofluorobenzene	110	70-130	%Rec	1	8/17/2022 4:49:30 PM
Surr: Dibromofluoromethane	119	70-130	%Rec	1	8/17/2022 4:49:30 PM
Surr: Toluene-d8	96.9	70-130	%Rec	1	8/17/2022 4:49:30 PM
EPA METHOD 8015D MOD: GASOLINE RAN	GE				Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/17/2022 4:49:30 PM
Surr: BFB	117	70-130	%Rec	1	8/17/2022 4:49:30 PM

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

Qualifiers:

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

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-112

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 10:10:00 AM

 Lab ID:
 2208818-015
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	8/19/2022 2:40:36 PM
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	8/19/2022 2:40:36 PM
Surr: DNOP	74.1	21-129	%Rec	1	8/19/2022 2:40:36 PM
EPA METHOD 300.0: ANIONS					Analyst: CAS
Chloride	1400	60	mg/Kg	20	8/18/2022 3:41:56 PM
EPA METHOD 8260B: VOLATILES SHORT LI	ST				Analyst: JR
Benzene	ND	0.024	mg/Kg	1	8/17/2022 5:18:16 PM
Toluene	ND	0.048	mg/Kg	1	8/17/2022 5:18:16 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/17/2022 5:18:16 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/17/2022 5:18:16 PM
Surr: 1,2-Dichloroethane-d4	104	70-130	%Rec	1	8/17/2022 5:18:16 PM
Surr: 4-Bromofluorobenzene	106	70-130	%Rec	1	8/17/2022 5:18:16 PM
Surr: Dibromofluoromethane	119	70-130	%Rec	1	8/17/2022 5:18:16 PM
Surr: Toluene-d8	98.4	70-130	%Rec	1	8/17/2022 5:18:16 PM
EPA METHOD 8015D MOD: GASOLINE RANG	GE				Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/17/2022 5:18:16 PM
Surr: BFB	118	70-130	%Rec	1	8/17/2022 5:18:16 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-85

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 1:30:00 PM

 Lab ID:
 2208818-016
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/19/2022 2:54:36 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/19/2022 2:54:36 PM
Surr: DNOP	83.1	21-129	%Rec	1	8/19/2022 2:54:36 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	190	60	mg/Kg	20	8/18/2022 12:57:07 PM
EPA METHOD 8260B: VOLATILES SHORT LIST					Analyst: JR
Benzene	ND	0.024	mg/Kg	1	8/17/2022 5:47:02 PM
Toluene	ND	0.048	mg/Kg	1	8/17/2022 5:47:02 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/17/2022 5:47:02 PM
Xylenes, Total	ND	0.096	mg/Kg	1	8/17/2022 5:47:02 PM
Surr: 1,2-Dichloroethane-d4	107	70-130	%Rec	1	8/17/2022 5:47:02 PM
Surr: 4-Bromofluorobenzene	108	70-130	%Rec	1	8/17/2022 5:47:02 PM
Surr: Dibromofluoromethane	122	70-130	%Rec	1	8/17/2022 5:47:02 PM
Surr: Toluene-d8	101	70-130	%Rec	1	8/17/2022 5:47:02 PM
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/17/2022 5:47:02 PM
Surr: BFB	122	70-130	%Rec	1	8/17/2022 5:47:02 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-124

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 1:35:00 PM

 Lab ID:
 2208818-017
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 13 mg/Kg 1 8/19/2022 3:09:02 PM Motor Oil Range Organics (MRO) ND 45 mg/Kg 1 8/19/2022 3:09:02 PM Surr: DNOP 79.9 21-129 %Rec 1 8/19/2022 3:09:02 PM **EPA METHOD 300.0: ANIONS** Analyst: NAI Chloride 530 60 8/18/2022 1:09:31 PM mg/Kg 20 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JR ND 0.024 8/17/2022 6:15:44 PM mg/Kg 1 Toluene ND 8/17/2022 6:15:44 PM 0.047 mg/Kg 1 Ethylbenzene ND 0.047 mg/Kg 1 8/17/2022 6:15:44 PM Xylenes, Total ND 0.095 mg/Kg 1 8/17/2022 6:15:44 PM Surr: 1,2-Dichloroethane-d4 104 70-130 %Rec 8/17/2022 6:15:44 PM 1 Surr: 4-Bromofluorobenzene 107 70-130 %Rec 1 8/17/2022 6:15:44 PM Surr: Dibromofluoromethane 70-130 %Rec 1 8/17/2022 6:15:44 PM 119 Surr: Toluene-d8 101 70-130 %Rec 1 8/17/2022 6:15:44 PM **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JR Gasoline Range Organics (GRO) ND mg/Kg 8/17/2022 6:15:44 PM 47 1 Surr: BFB 121 70-130 %Rec 1 8/17/2022 6:15:44 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-125

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 1:40:00 PM

 Lab ID:
 2208818-018
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/19/2022 3:23:38 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/19/2022 3:23:38 PM
Surr: DNOP	78.0	21-129	%Rec	1	8/19/2022 3:23:38 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	540	60	mg/Kg	20	8/18/2022 1:21:56 PM
EPA METHOD 8260B: VOLATILES SHORT LIST	•				Analyst: JR
Benzene	ND	0.024	mg/Kg	1	8/17/2022 6:44:27 PM
Toluene	ND	0.048	mg/Kg	1	8/17/2022 6:44:27 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/17/2022 6:44:27 PM
Xylenes, Total	ND	0.096	mg/Kg	1	8/17/2022 6:44:27 PM
Surr: 1,2-Dichloroethane-d4	108	70-130	%Rec	1	8/17/2022 6:44:27 PM
Surr: 4-Bromofluorobenzene	106	70-130	%Rec	1	8/17/2022 6:44:27 PM
Surr: Dibromofluoromethane	119	70-130	%Rec	1	8/17/2022 6:44:27 PM
Surr: Toluene-d8	98.8	70-130	%Rec	1	8/17/2022 6:44:27 PM
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/17/2022 6:44:27 PM
Surr: BFB	118	70-130	%Rec	1	8/17/2022 6:44:27 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

 $ND \qquad Not \ Detected \ at \ the \ Reporting \ Limit$

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-126

Project: Routh SWD Tank Battery Collection Date: 8/10/2022 1:45:00 PM Lab ID: 2208818-019 Matrix: SOIL Received Date: 8/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/19/2022 3:37:46 PM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 8/19/2022 3:37:46 PM Surr: DNOP 76.7 21-129 %Rec 1 8/19/2022 3:37:46 PM **EPA METHOD 300.0: ANIONS** Analyst: NAI Chloride 410 60 8/18/2022 1:34:21 PM mg/Kg 20 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JR ND 0.024 8/17/2022 7:13:08 PM mg/Kg 1 Toluene ND 8/17/2022 7:13:08 PM 0.049 mg/Kg 1 Ethylbenzene ND 0.049 mg/Kg 1 8/17/2022 7:13:08 PM Xylenes, Total ND 0.098 mg/Kg 1 8/17/2022 7:13:08 PM Surr: 1,2-Dichloroethane-d4 109 70-130 %Rec 8/17/2022 7:13:08 PM 1 Surr: 4-Bromofluorobenzene 103 70-130 %Rec 1 8/17/2022 7:13:08 PM Surr: Dibromofluoromethane 125 70-130 %Rec 1 8/17/2022 7:13:08 PM Surr: Toluene-d8 99.8 70-130 %Rec 1 8/17/2022 7:13:08 PM **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JR Gasoline Range Organics (GRO) ND mg/Kg 8/17/2022 7:13:08 PM 49 1 Surr: BFB 116 70-130 %Rec 1 8/17/2022 7:13:08 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

Sample pH Not In Range RL

Page 19 of 30 Reporting Limit

Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-127

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 1:50:00 PM

 Lab ID:
 2208818-020
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/19/2022 1:53:49 PM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 8/19/2022 1:53:49 PM Surr: DNOP 95.2 21-129 %Rec 1 8/19/2022 1:53:49 PM **EPA METHOD 300.0: ANIONS** Analyst: NAI Chloride 570 60 8/18/2022 1:46:45 PM mg/Kg 20 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JR ND 0.023 8/17/2022 7:41:52 PM mg/Kg 1 Toluene ND 8/17/2022 7:41:52 PM 0.046 mg/Kg 1 Ethylbenzene ND 0.046 mg/Kg 1 8/17/2022 7:41:52 PM Xylenes, Total ND 0.093 mg/Kg 1 8/17/2022 7:41:52 PM Surr: 1,2-Dichloroethane-d4 109 70-130 %Rec 8/17/2022 7:41:52 PM 1 Surr: 4-Bromofluorobenzene 107 70-130 %Rec 1 8/17/2022 7:41:52 PM Surr: Dibromofluoromethane 122 70-130 %Rec 1 8/17/2022 7:41:52 PM Surr: Toluene-d8 99.5 70-130 %Rec 1 8/17/2022 7:41:52 PM **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JR Gasoline Range Organics (GRO) ND mg/Kg 8/17/2022 7:41:52 PM 46 1 Surr: BFB 119 70-130 %Rec 1 8/17/2022 7:41:52 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-128

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 1:55:00 PM

 Lab ID:
 2208818-021
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/19/2022 2:17:45 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/19/2022 2:17:45 PM
Surr: DNOP	86.6	21-129	%Rec	1	8/19/2022 2:17:45 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	200	61	mg/Kg	20	8/18/2022 1:59:10 PM
EPA METHOD 8260B: VOLATILES SHORT L	IST				Analyst: JR
Benzene	ND	0.024	mg/Kg	1	8/17/2022 8:10:33 PM
Toluene	ND	0.048	mg/Kg	1	8/17/2022 8:10:33 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/17/2022 8:10:33 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/17/2022 8:10:33 PM
Surr: 1,2-Dichloroethane-d4	105	70-130	%Rec	1	8/17/2022 8:10:33 PM
Surr: 4-Bromofluorobenzene	109	70-130	%Rec	1	8/17/2022 8:10:33 PM
Surr: Dibromofluoromethane	121	70-130	%Rec	1	8/17/2022 8:10:33 PM
Surr: Toluene-d8	97.7	70-130	%Rec	1	8/17/2022 8:10:33 PM
EPA METHOD 8015D MOD: GASOLINE RAN	GE				Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/17/2022 8:10:33 PM
Surr: BFB	119	70-130	%Rec	1	8/17/2022 8:10:33 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-129

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 2:00:00 PM

 Lab ID:
 2208818-022
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/19/2022 2:41:52 PM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 8/19/2022 2:41:52 PM Surr: DNOP 105 21-129 %Rec 1 8/19/2022 2:41:52 PM **EPA METHOD 300.0: ANIONS** Analyst: NAI Chloride 590 60 8/18/2022 2:11:34 PM mg/Kg 20 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JR ND 0.024 8/17/2022 8:39:15 PM mg/Kg 1 Toluene ND 8/17/2022 8:39:15 PM 0.047 mg/Kg 1 Ethylbenzene ND 0.047 mg/Kg 1 8/17/2022 8:39:15 PM Xylenes, Total ND 0.095 mg/Kg 1 8/17/2022 8:39:15 PM Surr: 1,2-Dichloroethane-d4 105 70-130 %Rec 8/17/2022 8:39:15 PM 1 Surr: 4-Bromofluorobenzene 107 70-130 %Rec 1 8/17/2022 8:39:15 PM Surr: Dibromofluoromethane 70-130 %Rec 1 8/17/2022 8:39:15 PM 118 Surr: Toluene-d8 99.8 70-130 %Rec 1 8/17/2022 8:39:15 PM **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JR Gasoline Range Organics (GRO) ND mg/Kg 8/17/2022 8:39:15 PM 47 1 Surr: BFB 120 70-130 %Rec 1 8/17/2022 8:39:15 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-130

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/10/2022 2:05:00 PM

 Lab ID:
 2208818-023
 Matrix: SOIL
 Received Date: 8/12/2022 7:20:00 AM

Result **RL Qual Units** DF **Date Analyzed Analyses EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: **DGH** Diesel Range Organics (DRO) ND 15 mg/Kg 1 8/19/2022 3:52:06 PM Motor Oil Range Organics (MRO) ND 50 mg/Kg 1 8/19/2022 3:52:06 PM Surr: DNOP 84.4 21-129 %Rec 1 8/19/2022 3:52:06 PM **EPA METHOD 300.0: ANIONS** Analyst: NAI Chloride 140 60 8/18/2022 2:23:59 PM mg/Kg 20 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: JR ND 0.024 8/17/2022 9:07:54 PM mg/Kg 1 Toluene ND 8/17/2022 9:07:54 PM 0.048 mg/Kg 1 Ethylbenzene ND 0.048 mg/Kg 1 8/17/2022 9:07:54 PM Xylenes, Total ND 0.096 mg/Kg 1 8/17/2022 9:07:54 PM Surr: 1,2-Dichloroethane-d4 104 70-130 %Rec 8/17/2022 9:07:54 PM 1 Surr: 4-Bromofluorobenzene 105 70-130 %Rec 1 8/17/2022 9:07:54 PM Surr: Dibromofluoromethane 70-130 %Rec 1 8/17/2022 9:07:54 PM 117 Surr: Toluene-d8 99.2 70-130 %Rec 1 8/17/2022 9:07:54 PM **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: JR Gasoline Range Organics (GRO) ND mg/Kg 8/17/2022 9:07:54 PM 4 8 1 Surr: BFB 119 70-130 %Rec 1 8/17/2022 9:07:54 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Client:

Project:

Hall Environmental Analysis Laboratory, Inc.

Routh SWD Tank Battery

Vertex Resources Services, Inc.

WO#: **2208818**

25-Aug-22

Sample ID: MB-69587	SampType: mblk	TestCode: EPA Method	300.0: Anions			
Client ID: PBS	Batch ID: 69587	RunNo: 90338				
Prep Date: 8/17/2022	Analysis Date: 8/17/2022	SeqNo: 3223921	Units: mg/Kg			
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qua		
Chloride	ND 1.5					
Sample ID: LCS-69587	SampType: Ics	TestCode: EPA Method	300.0: Anions			
Client ID: LCSS	Batch ID: 69587	RunNo: 90338				
Prep Date: 8/17/2022	Analysis Date: 8/17/2022	SeqNo: 3223922	Units: mg/Kg			
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qua		
Chloride	14 1.5 15.00	0 94.2 90	110			
Sample ID: MB-69603	SampType: mblk	TestCode: EPA Method	300.0: Anions			
Client ID: PBS	Batch ID: 69603	RunNo: 90384				
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226290	Units: mg/Kg			
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qua		
Chloride	ND 1.5					
Sample ID: LCS-69603	SampType: Ics	TestCode: EPA Method				

Chloride	14	1.5	15.00	0	95.4	90	110			
Sample ID: MB-69596	SampT	ype: mb	lk	Tes	tCode: EF	PA Method	300.0: Anions	S		
Client ID: PBS	Batch	1D: 695	596	F	RunNo: 90	387				
Prep Date: 8/18/2022	Analysis D	ate: 8/	18/2022		SeqNo: 32	226928	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

SPK Ref Val

RunNo: 90384

%REC

SeqNo: 3226292

LowLimit

Units: mg/Kg

%RPD

RPDLimit

Qual

HighLimit

Sample ID: LCS-69596	SampType	TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID:	RunNo: 90387							
Prep Date: 8/18/2022	Analysis Date:	SeqNo: 3226929			Units: mg/Kg				
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5 15.00	0	93.2	90	110			

Batch ID: 69603

Analysis Date: 8/18/2022

PQL

SPK value

Result

Qualifiers:

Client ID:

Prep Date:

Analyte

LCSS

8/18/2022

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208818**

25-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Rouin Sv	VD Tank Battery		
Sample ID: MB-69529	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 69529	RunNo: 90347	
Prep Date: 8/16/2022	Analysis Date: 8/17/2022	SeqNo: 3223156	Units: mg/Kg
Analyte	Result PQL SPK val	ue SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 15		
Motor Oil Range Organics (MRO) Surr: DNOP	ND 50 12 10.	00 115 21	129
oun. Divoi	12 10.	113 21	123
Sample ID: LCS-69529	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 69529	RunNo: 90347	
Prep Date: 8/16/2022	Analysis Date: 8/17/2022	SeqNo: 3223157	Units: mg/Kg
Analyte	Result PQL SPK val	ue SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	46 15 50.		127
Surr: DNOP	4.4 5.0	00 88.3 21	129
Sample ID: MB-69564	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 69564	RunNo: 90423	
Prep Date: 8/17/2022	Analysis Date: 8/19/2022	SeqNo: 3227135	Units: mg/Kg
Analyte	Result PQL SPK val	ue SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 15		
Motor Oil Range Organics (MRO)	ND 50	20 050 04	400
Surr: DNOP	8.5 10.	00 85.3 21	129
Sample ID: LCS-69564	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 69564	RunNo: 90423	
Prep Date: 8/17/2022	Analysis Date: 8/19/2022	SeqNo: 3227136	Units: mg/Kg
Analyte	Result PQL SPK val	ue SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	47 15 50.		
Surr: DNOP	4.2 5.0	00 83.4 21	129
Sample ID: 2208818-013AMS	SampType: MS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: BES22-110	Batch ID: 69564	RunNo: 90431	
Prep Date: 8/17/2022	Analysis Date: 8/19/2022	SeqNo: 3232643	Units: mg/Kg
Analyte	Result PQL SPK val	ue SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	44 15 49.	80 0 88.7 36.1	154
Surr: DNOP	4.3 4.9	86.7 21	129

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208818 25-Aug-22**

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: 2208818-013AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **BES22-110** Batch ID: **69564** RunNo: **90431**

Prep Date: 8/17/2022 Analysis Date: 8/19/2022 SeqNo: 3232644 Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 40 13 42.81 94.3 36.1 154 9.01 33.9 Surr: DNOP 3.7 4.281 87.4 21 129 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208818**

25-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: mb-69518 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 69518 RunNo: 90345

Prep Date: 8/15/2022 Analysis Date: 8/17/2022 SeqNo: 3223615 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 105 37.7 212

Sample ID: Ics-69518 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

1000

Client ID: LCSS Batch ID: 69518 RunNo: 90345

2100

Prep Date: 8/15/2022 Analysis Date: 8/17/2022 SeqNo: 3223616 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 26 5.0 25.00 0 104 72.3 137

210

37.7

212

Qualifiers:

Surr: BFB

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208818**

25-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: mb-69518	Samp ⁻	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: PBS	Batc	h ID: 69 5	518	F	RunNo: 90	0310				
Prep Date: 8/15/2022	Analysis [Date: 8/	16/2022	5	SeqNo: 32	222136	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		105	70	130			

Sample ID: LCS-69518	SampT	ype: LC	s	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: LCSS	Batcl	n ID: 695	518	F	RunNo: 90	0310				
Prep Date: 8/15/2022	Analysis D	Date: 8/1	16/2022	9	SeqNo: 32	222137	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.4	80	120			
Toluene	0.97	0.050	1.000	0	96.8	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.1	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.7	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208818**

25-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: Ics-69536	Samp	Гуре: LC :	S4	Tes	tCode: EF	PA Method	8260B: Volati	les Short I	List	
Client ID: BatchQC	Batcl	h ID: 695	36	F	RunNo: 90	0366				
Prep Date: 8/16/2022	Analysis [Date: 8/ 1	17/2022	5	SeqNo: 32	224318	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.9	80	120			
Toluene	0.91	0.050	1.000	0	90.6	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.5	80	120			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		105	70	130			
Surr: Dibromofluoromethane	0.57		0.5000		115	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			

Sample ID: mb-69536	Samp	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8260B: Volati	les Short l	List	
Client ID: PBS	Batcl	h ID: 695	536	F	RunNo: 90	0366				
Prep Date: 8/16/2022	Analysis [Date: 8/	17/2022	5	SeqNo: 32	224319	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		108	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.8	70	130			
Surr: Dibromofluoromethane	0.59		0.5000		119	70	130			
Surr: Toluene-d8	0.49		0.5000		97.4	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208818 25-Aug-22

Client: Vertex Resources Services, Inc. **Project:** Routh SWD Tank Battery

Sample ID: Ics-69536 SampType: LCS TestCode: EPA Method 8015D Mod: Gasoline Range Client ID: LCSS Batch ID: 69536 RunNo: 90366 Units: mg/Kg Prep Date: 8/16/2022 Analysis Date: 8/17/2022 SeqNo: 3224342 **PQL** SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual Gasoline Range Organics (GRO) 23 5.0 25.00 0 92.0 70 130 Surr: BFB 570 500.0 115 70 130

Sample ID: mb-69536 SampType: MBLK TestCode: EPA Method 8015D Mod: Gasoline Range Client ID: PBS Batch ID: 69536 RunNo: 90366 Prep Date: 8/16/2022 Analysis Date: 8/17/2022 SeqNo: 3224343 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

580

500.0

115

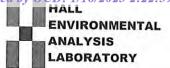
70

130

Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

EL: 303-343-39/3 FAX: 505-345-4107 Website; www.hallenvironmental.com

Sample Log-In Check List

Client Name:	Vertex Resources Services, Inc.	Work Order Num	ber: 2208818		RcptNo: 1
Received By:	Juan Rojas	8/12/2022 7:20:00	АМ	Hears &	
Completed By:	Cheyenne Cason	8/12/2022 9:43:24	AM	Clear 2	
Reviewed By:	DAD 8/12/2	2			
Chain of Cus	tody				
1. Is Chain of C	ustody complete?		Yes 🗸	No 🗌	Not Present
2. How was the	sample delivered?		Courier		
122.6			200		
Log In 3 Was an attention	npt made to cool the sample	202		40.	🗆
o. was an atten	ipi made to cool the sample	es ?	Yes 🗸	No 🗔	NA 🗌
4. Were all samp	oles received at a temperate	ure of >0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗆
5. Sample(s) in	proper container(s)?		Yes 🔽	No 🗌	
6. Sufficient sam	ple volume for indicated tes	st(s)?	Yes 🗸	No 🗌	
7. Are samples (except VOA and ONG) prop	perly preserved?	Yes 🗸	No 🗌	
8. Was preserva	tive added to bottles?		Yes	No 🗸	NA 🗆
9. Received at le	ast 1 vial with headspace <	1/4" for AQ VOA?	Yes	No 🗌	NA 🗸
10. Were any san	nple containers received bro	oken?	Yes	No 🗸	acksonous —
	STATE OF THE STATE				# of preserved bottles checked
	rk match bottle labels?		Yes 🗸	No 🗌	for pH: (<2 or >12 unless noted)
	orrectly identified on Chain	of Custody?	Yes 🗸	No 🗆	Adjusted?
	analyses were requested?		Yes 🗸	No 🗆	
	ng times able to be met? estomer for authorization.)		Yes 🗸	No 🗆	Checked by: 10 6 12 2
	ing (if applicable)				
	tified of all discrepancies wi	th this order?	Yes	No 🗌	NA 🗹
Person	Notified:	Date:			
By Who	m:	Via:	Teal of A taxy	hone Fax	In Person
Regardi	ng:				
Client In	structions:				
16. Additional ren	narks:				
17. Cooler Inform	The second secon				
Cooler No	Temp °C Condition	Seal Intact Seal No	Seal Date	Signed By	

22 1900	Relinquished by:	6/10 16:45 Sally Octor	Relinquished by:	9.55 BEX22-109	9:50 BES22-108	9:45 BES 22-107	9.40 BES22-1010	9:35 BES21-10S	9:30 BEST-104	9:25 BES22-103	9.20 BES22-102	9:15 BES12-101	9:10 BES 22-100	9:05 BES21-99	8/10 9:00 Spil BES22-98	Date Time Matrix Sample Name	□ EDD (Type)	□ NELAC □ Other	Accreditation: Az Compliance	QA/QC Package:	email or Fax#:	Phone #:	U	Mailing Address: ON Iil	Pag	Blient: Vertex (EOG)	Chain-of-Custody Record
1	Received by: Via:	Commission	Received by: Via:	e e	lo'	6'	(o'	6'	q'	9'	Q'	Q.	9.	9.	9. 1400 pm ice	Cooler Temp(including CF): (2). Container Type and # Type	# of Coolers: 1	1	Sampler: SPC	idation) Mornica Pelopin	Project Manager:	275-00716	Project #:	Routh SWD Tank Battery	Project Name:	型 Standard	Turn-Around Time:
2	Time	20 120	Date Time	017	012011	010	COY	800	007	006	005	COM	003	007	B	1208818 (°C)		□ No		popin		6	¢	nk Battery	,	Rush S One	
			Remarks:	-										-	<			_	_	3's (802			Г	5		11	
<	5		arks:	-	-						_				<	TPH:8015E 8081 Pesti							Tel.	4901		H	
1	tien is	0	3													EDB (Meth			-	FUBS			Tel. 505-345-3975	4901 Hawkins NE			
C	10	Luck	2													PAHs by 8		-	_	0SIMS			345-3	kins	WW !		
														П		RCRA 8 M						4	3975	NE -	w 1	NALYSIS	=
5	2.	11	-	-										>	1	Cl, F, Br,	NO:	3, N	102	PO ₄ , S	SO ₄	\naly	T	Alb	llenv	4	Π
	-	1	٦													8260 (VOA	()					/sis	ax	ndne	ironn	SIS	
(DIL FOR															8270 (Sem	i-VC	DA)				Analysis Request	505-	enbue	Th	- 5	
7	2															Total Colifo	orm	(Pr	ese	nt/Abse	ent)	lest	Fax 505-345-4107	Albuquerque, NM 87109	www hallenvironmental com	LABORATOR	ENVIDONMENTA



HALL ENVIRONMENTAL ANALYSIS LABORATORY

Phone # Page 5:38 of 5:3	Plane #	ain-of-Cu lenter (dress: On	Chain-of-Custody Record Werter (E06) g Address: On title #*	Turn-Around Time: Standard Rus Project Name: Project #: 22E-00716	WD TA	Standard Rush 5 Day Standard Rush 5 Day ject Name: ROWTH SWD TANK Buttony ject #: 22E-00716		490 Te	HALL ANAI www.ha 4901 Hawkins NE Tel. 505-345-3975	5-34;	HALL ANAI www.ha kins NE		LYSI: LYSI: allenviron - Albuqu - Fax	SIS VSIS VSIS VIDENTIAL SERVICE SER	IRO LAE mental.cc erque, NI 505-345-	IALL ENVIRONMENTA NALYSIS LABORATOF www.hallenvironmental.com ins NE - Albuquerque, NM 87109 45-3975 Fax 505-345-4107 Analysis Request	Ö.∑
email or Fax#:	r Fax#:			Project Manager:			1)	0)		_	-	_	04		-1	nt)	
QA/QC Pack	QA/QC Package:		□ Level 4 (Full Validation)		Pep	2.	3's (8021	O/MR	PCB's		OSIMS	DO 0	PO ₄ , S			nt/Abser	
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Re	f necessary,	samples sub	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice	bcontracted to other accrec	tited laboratori	ine This serves as notice of this	חחפפו	A VIII	חוופ ווה	- nin	1		500	north r	atata	of this possibility. Any sub-contracted data will be clearly notated on the analytical report	Ľ.



HALL ENVIRONMENTAL

Released to Imaging: 5/18/2023 9:18:24 AM



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

August 25, 2022

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

FAX:

RE: Routh SWD Tank Battery OrderNo.: 2208879

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 21 sample(s) on 8/13/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-131 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:00:00 AM

 Lab ID:
 2208879-001
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/19/2022 9:27:31 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/19/2022 9:27:31 PM
Surr: DNOP	74.6	21-129	%Rec	1	8/19/2022 9:27:31 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/17/2022 7:03:00 PM
Surr: BFB	99.8	37.7-212	%Rec	1	8/17/2022 7:03:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 3:10:00 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 3:10:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 3:10:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/18/2022 3:10:00 PM
Surr: 4-Bromofluorobenzene	96.4	70-130	%Rec	1	8/18/2022 3:10:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	2300	150	mg/Kg	50	8/22/2022 6:20:03 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 1 of 28

Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-132 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:05:00 AM

 Lab ID:
 2208879-002
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/19/2022 10:09:40 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/19/2022 10:09:40 PM
Surr: DNOP	85.8	21-129	%Rec	1	8/19/2022 10:09:40 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/17/2022 7:23:00 PM
Surr: BFB	100	37.7-212	%Rec	1	8/17/2022 7:23:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 3:30:00 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 3:30:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 3:30:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/18/2022 3:30:00 PM
Surr: 4-Bromofluorobenzene	94.8	70-130	%Rec	1	8/18/2022 3:30:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	3300	300	mg/Kg	100	8/20/2022 9:09:42 PM

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

Qualifiers:

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

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-133 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:10:00 AM

 Lab ID:
 2208879-003
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE C	RGANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/19/2022 10:23:39 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/19/2022 10:23:39 PM
Surr: DNOP	83.9	21-129	%Rec	1	8/19/2022 10:23:39 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/17/2022 7:43:00 PM
Surr: BFB	100	37.7-212	%Rec	1	8/17/2022 7:43:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 3:49:00 PM
Toluene	ND	0.050	mg/Kg	1	8/18/2022 3:49:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/18/2022 3:49:00 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/18/2022 3:49:00 PM
Surr: 4-Bromofluorobenzene	94.6	70-130	%Rec	1	8/18/2022 3:49:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	12000	600	mg/Kg	200	8/22/2022 4:41:15 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-134 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:15:00 AM

 Lab ID:
 2208879-004
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/19/2022 10:37:40 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/19/2022 10:37:40 PM
Surr: DNOP	87.5	21-129	%Rec	1	8/19/2022 10:37:40 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/17/2022 8:03:00 PM
Surr: BFB	102	37.7-212	%Rec	1	8/17/2022 8:03:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 4:09:00 PM
Toluene	ND	0.050	mg/Kg	1	8/18/2022 4:09:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/18/2022 4:09:00 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/18/2022 4:09:00 PM
Surr: 4-Bromofluorobenzene	95.5	70-130	%Rec	1	8/18/2022 4:09:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	11000	590	mg/Kg	200	8/22/2022 4:53:36 PM

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

Qualifiers:

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

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-135 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:20:00 AM

 Lab ID:
 2208879-005
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: DGH				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/19/2022 10:51:38 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/19/2022 10:51:38 PM
Surr: DNOP	79.5	21-129	%Rec	1	8/19/2022 10:51:38 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/17/2022 8:23:00 PM
Surr: BFB	102	37.7-212	%Rec	1	8/17/2022 8:23:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 4:29:00 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 4:29:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 4:29:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/18/2022 4:29:00 PM
Surr: 4-Bromofluorobenzene	94.8	70-130	%Rec	1	8/18/2022 4:29:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	5600	150	mg/Kg	50	8/22/2022 5:05:57 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-136 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:25:00 AM

 Lab ID:
 2208879-006
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: DGH				
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	8/19/2022 11:05:38 PM
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	8/19/2022 11:05:38 PM
Surr: DNOP	73.0	21-129	%Rec	1	8/19/2022 11:05:38 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/17/2022 8:42:00 PM
Surr: BFB	105	37.7-212	%Rec	1	8/17/2022 8:42:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/18/2022 4:49:00 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 4:49:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 4:49:00 PM
Xylenes, Total	ND	0.097	mg/Kg	1	8/18/2022 4:49:00 PM
Surr: 4-Bromofluorobenzene	96.8	70-130	%Rec	1	8/18/2022 4:49:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	3100	150	mg/Kg	50	8/22/2022 5:18:18 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-137 6'

Project: Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:30:00 AM

 Lab ID: 2208879-007
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE (Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/19/2022 11:19:36 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/19/2022 11:19:36 PM
Surr: DNOP	80.4	21-129	%Rec	1	8/19/2022 11:19:36 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/17/2022 9:02:00 PM
Surr: BFB	98.7	37.7-212	%Rec	1	8/17/2022 9:02:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/18/2022 7:25:00 PM
Toluene	ND	0.048	mg/Kg	1	8/18/2022 7:25:00 PM
Ethylbenzene	ND	0.048	mg/Kg	1	8/18/2022 7:25:00 PM
Xylenes, Total	ND	0.096	mg/Kg	1	8/18/2022 7:25:00 PM
Surr: 4-Bromofluorobenzene	96.1	70-130	%Rec	1	8/18/2022 7:25:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	1700	60	mg/Kg	20	8/19/2022 1:02:10 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 7 of 28

Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-138 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:35:00 AM

 Lab ID:
 2208879-008
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: DGH				
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/19/2022 11:33:34 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/19/2022 11:33:34 PM
Surr: DNOP	81.7	21-129	%Rec	1	8/19/2022 11:33:34 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/17/2022 9:22:00 PM
Surr: BFB	95.1	37.7-212	%Rec	1	8/17/2022 9:22:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 7:45:00 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 7:45:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 7:45:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/18/2022 7:45:00 PM
Surr: 4-Bromofluorobenzene	94.6	70-130	%Rec	1	8/18/2022 7:45:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	170	60	mg/Kg	20	8/19/2022 1:14:34 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-139 6'

Project: Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:40:00 AM

 Lab ID: 2208879-009
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	Analyst: DGH				
Diesel Range Organics (DRO)	150	15	mg/Kg	1	8/19/2022 11:47:34 PM
Motor Oil Range Organics (MRO)	160	49	mg/Kg	1	8/19/2022 11:47:34 PM
Surr: DNOP	84.9	21-129	%Rec	1	8/19/2022 11:47:34 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/17/2022 9:42:00 PM
Surr: BFB	97.9	37.7-212	%Rec	1	8/17/2022 9:42:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/18/2022 8:05:00 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 8:05:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 8:05:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/18/2022 8:05:00 PM
Surr: 4-Bromofluorobenzene	94.8	70-130	%Rec	1	8/18/2022 8:05:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	1100	60	mg/Kg	20	8/19/2022 1:26:58 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 9 of 28

Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-140 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:45:00 AM

 Lab ID:
 2208879-010
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qua	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/20/2022 12:01:29 AM
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/20/2022 12:01:29 AM
Surr: DNOP	82.5	21-129	%Rec	1	8/20/2022 12:01:29 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/17/2022 10:01:00 PM
Surr: BFB	100	37.7-212	%Rec	1	8/17/2022 10:01:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 8:24:00 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 8:24:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 8:24:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/18/2022 8:24:00 PM
Surr: 4-Bromofluorobenzene	97.4	70-130	%Rec	1	8/18/2022 8:24:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	150	59	mg/Kg	20	8/19/2022 1:39:23 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-141 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:50:00 AM

 Lab ID:
 2208879-011
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/20/2022 12:15:29 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/20/2022 12:15:29 AM
Surr: DNOP	83.8	21-129	%Rec	1	8/20/2022 12:15:29 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/17/2022 10:41:00 PM
Surr: BFB	101	37.7-212	%Rec	1	8/17/2022 10:41:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.024	mg/Kg	1	8/18/2022 8:44:00 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 8:44:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 8:44:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/18/2022 8:44:00 PM
Surr: 4-Bromofluorobenzene	97.1	70-130	%Rec	1	8/18/2022 8:44:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	530	60	mg/Kg	20	8/19/2022 1:51:48 PM

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

Qualifiers:

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

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-142 6'

Project: Routh SWD Tank Battery
 Collection Date: 8/11/2022 10:55:00 AM

 Lab ID: 2208879-012
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: DGH				
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	8/20/2022 12:29:25 AM
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/20/2022 12:29:25 AM
Surr: DNOP	85.9	21-129	%Rec	1	8/20/2022 12:29:25 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/17/2022 11:01:00 PM
Surr: BFB	99.2	37.7-212	%Rec	1	8/17/2022 11:01:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 9:04:00 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 9:04:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 9:04:00 PM
Xylenes, Total	ND	0.099	mg/Kg	1	8/18/2022 9:04:00 PM
Surr: 4-Bromofluorobenzene	98.1	70-130	%Rec	1	8/18/2022 9:04:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	540	60	mg/Kg	20	8/19/2022 2:04:13 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-143 6'

 Project:
 Routh SWD Tank Battery
 Collection Date: 8/11/2022 1:30:00 PM

 Lab ID:
 2208879-013
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGA	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/20/2022 12:43:23 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/20/2022 12:43:23 AM
Surr: DNOP	79.7	21-129	%Rec	1	8/20/2022 12:43:23 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/17/2022 11:20:00 PM
Surr: BFB	99.1	37.7-212	%Rec	1	8/17/2022 11:20:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 9:24:00 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 9:24:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 9:24:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/18/2022 9:24:00 PM
Surr: 4-Bromofluorobenzene	98.1	70-130	%Rec	1	8/18/2022 9:24:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	5900	300	mg/Kg	100	8/22/2022 5:55:22 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-144 6'

Project: Routh SWD Tank Battery
 Collection Date: 8/11/2022 11:00:00 AM

 Lab ID: 2208879-014
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE	Analyst: DGH				
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/20/2022 12:57:19 AM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/20/2022 12:57:19 AM
Surr: DNOP	76.5	21-129	%Rec	1	8/20/2022 12:57:19 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/17/2022 11:40:00 PM
Surr: BFB	102	37.7-212	%Rec	1	8/17/2022 11:40:00 PM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 9:43:00 PM
Toluene	ND	0.050	mg/Kg	1	8/18/2022 9:43:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/18/2022 9:43:00 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/18/2022 9:43:00 PM
Surr: 4-Bromofluorobenzene	97.2	70-130	%Rec	1	8/18/2022 9:43:00 PM
EPA METHOD 300.0: ANIONS					Analyst: NAI
Chloride	5600	300	mg/Kg	100	8/22/2022 6:07:42 PM

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

Qualifiers:

Value exceeds Maximum Contaminant Level.

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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-145 6'

Project: Routh SWD Tank Battery
 Collection Date: 8/11/2022 11:05:00 AM

 Lab ID: 2208879-015
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: DGH				
Diesel Range Organics (DRO)	ND	13	mg/Kg	1	8/20/2022 1:11:15 AM
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/20/2022 1:11:15 AM
Surr: DNOP	79.1	21-129	%Rec	1	8/20/2022 1:11:15 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/18/2022
Surr: BFB	101	37.7-212	%Rec	1	8/18/2022
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 10:03:00 PM
Toluene	ND	0.050	mg/Kg	1	8/18/2022 10:03:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/18/2022 10:03:00 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/18/2022 10:03:00 PM
Surr: 4-Bromofluorobenzene	96.8	70-130	%Rec	1	8/18/2022 10:03:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	1300	60	mg/Kg	20	8/19/2022 2:41:27 PM

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

Qualifiers:

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

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-146 5'

Project: Routh SWD Tank Battery
 Collection Date: 8/11/2022 11:10:00 AM

 Lab ID: 2208879-016
 Matrix: SOIL
 Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: DGH				
Diesel Range Organics (DRO)	18	14	mg/Kg	1	8/20/2022 1:25:21 AM
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/20/2022 1:25:21 AM
Surr: DNOP	71.8	21-129	%Rec	1	8/20/2022 1:25:21 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/18/2022 12:20:00 AM
Surr: BFB	98.0	37.7-212	%Rec	1	8/18/2022 12:20:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 10:23:00 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 10:23:00 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 10:23:00 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/18/2022 10:23:00 PM
Surr: 4-Bromofluorobenzene	95.1	70-130	%Rec	1	8/18/2022 10:23:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	450	60	mg/Kg	20	8/19/2022 2:53:51 PM

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

Qualifiers:

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

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-147 10'

Project: Routh SWD Tank Battery **Collection Date:** 8/11/2022 1:35:00 PM

Lab ID: 2208879-017 **Matrix:** SOIL **Received Date:** 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/20/2022 1:39:24 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/20/2022 1:39:24 AM
Surr: DNOP	83.9	21-129	%Rec	1	8/20/2022 1:39:24 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/18/2022 12:39:00 AM
Surr: BFB	102	37.7-212	%Rec	1	8/18/2022 12:39:00 AM
EPA METHOD 8021B: VOLATILES					Analyst: BRM
Benzene	ND	0.025	mg/Kg	1	8/18/2022 11:02:00 PM
Toluene	ND	0.050	mg/Kg	1	8/18/2022 11:02:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/18/2022 11:02:00 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/18/2022 11:02:00 PM
Surr: 4-Bromofluorobenzene	97.1	70-130	%Rec	1	8/18/2022 11:02:00 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	470	60	mg/Kg	20	8/19/2022 6:24:48 PM

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

Qualifiers:

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

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Analytical Report

Lab Order **2208879**Date Reported: **8/25/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-148 10'

Project: Routh SWD Tank Battery **Collection Date:** 8/11/2022 1:40:00 PM

Lab ID: 2208879-018 **Matrix:** SOIL **Received Date:** 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/20/2022 1:53:21 AM
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	8/20/2022 1:53:21 AM
Surr: DNOP	82.3	21-129	%Rec	1	8/20/2022 1:53:21 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/18/2022 4:23:15 PM
Surr: BFB	105	37.7-212	%Rec	1	8/18/2022 4:23:15 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/18/2022 4:23:15 PM
Toluene	ND	0.049	mg/Kg	1	8/18/2022 4:23:15 PM
Ethylbenzene	ND	0.049	mg/Kg	1	8/18/2022 4:23:15 PM
Xylenes, Total	ND	0.098	mg/Kg	1	8/18/2022 4:23:15 PM
Surr: 4-Bromofluorobenzene	95.7	70-130	%Rec	1	8/18/2022 4:23:15 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	440	60	mg/Kg	20	8/19/2022 6:37:13 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-149 10'

Project: Routh SWD Tank Battery **Collection Date:** 8/11/2022 1:45:00 PM

Lab ID: 2208879-019 **Matrix:** SOIL **Received Date:** 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	8/19/2022 6:26:17 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/19/2022 6:26:17 PM
Surr: DNOP	74.2	21-129	%Rec	1	8/19/2022 6:26:17 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/18/2022 4:46:56 PM
Surr: BFB	107	37.7-212	%Rec	1	8/18/2022 4:46:56 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/18/2022 4:46:56 PM
Toluene	ND	0.050	mg/Kg	1	8/18/2022 4:46:56 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/18/2022 4:46:56 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/18/2022 4:46:56 PM
Surr: 4-Bromofluorobenzene	97.1	70-130	%Rec	1	8/18/2022 4:46:56 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	360	60	mg/Kg	20	8/19/2022 6:49:38 PM

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

Qualifiers:

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

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Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-150 10'

Project: Routh SWD Tank Battery **Collection Date:** 8/11/2022 1:50:00 PM

Lab ID: 2208879-020 **Matrix:** SOIL **Received Date:** 8/13/2022 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	15	mg/Kg	1	8/19/2022 6:40:17 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/19/2022 6:40:17 PM
Surr: DNOP	80.5	21-129	%Rec	1	8/19/2022 6:40:17 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/18/2022 5:10:31 PM
Surr: BFB	102	37.7-212	%Rec	1	8/18/2022 5:10:31 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	8/18/2022 5:10:31 PM
Toluene	ND	0.050	mg/Kg	1	8/18/2022 5:10:31 PM
Ethylbenzene	ND	0.050	mg/Kg	1	8/18/2022 5:10:31 PM
Xylenes, Total	ND	0.10	mg/Kg	1	8/18/2022 5:10:31 PM
Surr: 4-Bromofluorobenzene	98.0	70-130	%Rec	1	8/18/2022 5:10:31 PM
EPA METHOD 300.0: ANIONS					Analyst: JTT
Chloride	350	60	mg/Kg	20	8/19/2022 7:02:03 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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2208879-021

Lab ID:

Analytical Report Lab Order 2208879

Received Date: 8/13/2022 7:40:00 AM

Date Reported: 8/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-151 10'

Matrix: SOIL

Project: Routh SWD Tank Battery **Collection Date:** 8/11/2022 1:55:00 PM

Result **RL Qual Units** DF **Date Analyzed Analyses** Analyst: **DGH EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Diesel Range Organics (DRO) ND 14 mg/Kg 1 8/19/2022 12:19:56 AM Motor Oil Range Organics (MRO) ND 47 mg/Kg 1 8/19/2022 12:19:56 AM Surr: DNOP 80.3 21-129 %Rec 1 8/19/2022 12:19:56 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 8/18/2022 5:34:13 PM 4.9 mg/Kg 1 Surr: BFB 105 37.7-212 %Rec 1 8/18/2022 5:34:13 PM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 8/18/2022 5:34:13 PM 0.025 mg/Kg 1 Toluene ND 0.049 mg/Kg 1 8/18/2022 5:34:13 PM Ethylbenzene ND 0.049 mg/Kg 1 8/18/2022 5:34:13 PM Xylenes, Total ND 0.099 mg/Kg 8/18/2022 5:34:13 PM 1 Surr: 4-Bromofluorobenzene 96.3 70-130 %Rec 1 8/18/2022 5:34:13 PM **EPA METHOD 300.0: ANIONS** Analyst: JTT Chloride mg/Kg 8/19/2022 7:39:17 PM 790 61 20

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208879

25-Aug-22

Client:	Vertex Resources Services, Inc.
Project:	Routh SWD Tank Battery

Project:		SWD Tank Battery	
Sample ID:	MB-69616	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID:	PBS	Batch ID: 69616	RunNo: 90387
Prep Date:	8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226960 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		ND 1.5	
Sample ID:	LCS-69616	SampType: Ics	TestCode: EPA Method 300.0: Anions
Client ID:	LCSS	Batch ID: 69616	RunNo: 90387
Prep Date:	8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226961 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		14 1.5 15.00	0 93.8 90 110
Sample ID:	MB-69629	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID:	PBS	Batch ID: 69629	RunNo: 90418
Prep Date:	8/19/2022	Analysis Date: 8/19/2022	SeqNo: 3228072 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		ND 1.5	
Sample ID:	LCS-69629	SampType: Ics	TestCode: EPA Method 300.0: Anions
Client ID:	LCSS	Batch ID: 69629	RunNo: 90418
Prep Date:	8/19/2022	Analysis Date: 8/19/2022	SeqNo: 3228073 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		14 1.5 15.00	0 91.1 90 110
Sample ID:	MB-69643	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID:	PBS	Batch ID: 69643	RunNo: 90418
Prep Date:	8/19/2022	Analysis Date: 8/19/2022	SeqNo: 3228127 Units: mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride		ND 1.5	
Sample ID:	LCS-69643	SampType: Ics	TestCode: EPA Method 300.0: Anions
Client ID:	LCSS	Batch ID: 69643	RunNo: 90418
Client ID: Prep Date:		Batch ID: 69643 Analysis Date: 8/19/2022	RunNo: 90418 SeqNo: 3228128 Units: mg/Kg

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208879 25-Aug-22**

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Project: Routh SW	/D Tank B	Battery								
Sample ID: MB-69574	SampT	уре: МЕ	BLK	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: PBS	Batch	ID: 69	574	I	RunNo: 90423					
Prep Date: 8/17/2022	Analysis D	ate: 8/	19/2022	;	SeqNo: 32	228242	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.3		10.00		83.3	21	129			
Sample ID: LCS-69574	SampT	ype: LC	S	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: LCSS	Batch	ID: 69 5	574	ſ	RunNo: 90	0423				
Prep Date: 8/17/2022	Analysis D	ate: 8/	19/2022	;	SeqNo: 32	228243	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	15	50.00	0	88.0	64.4	127			
Surr: DNOP	4.3		5.000		85.6	21	129			
Sample ID: 2208879-001AMS	SampT	уре: М S	3	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: BES22-131 6'	Batch	ID: 69 5	574	RunNo: 90423						
Prep Date: 8/17/2022	Analysis D	Analysis Date: 8/19/2022			SeqNo: 3228245 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	15	48.40	0	82.4	36.1	154			
Surr: DNOP	4.1		4.840		83.8	21	129			
Sample ID: 2208879-001AMSD	SampT	ype: MS	SD	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: BES22-131 6'	Batch	ID: 69	574	i	RunNo: 90	0423				
Prep Date: 8/17/2022	Analysis D	ate: 8/	19/2022	;	SeqNo: 32	228246	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	15	49.65	0	77.6	36.1	154	3.38	33.9	
Surr: DNOP	3.9		4.965		78.5	21	129	0	0	
Sample ID: MB-69588	SampT	уре: МЕ	BLK	Tes	stCode: EF	PA Method	8015M/D: Die	sel Range	Organics	
Client ID: PBS	Batch	ID: 69	588	I	RunNo: 90	394				
Prep Date: 8/17/2022	Analysis D	ate: 8/	18/2022	;	SeqNo: 32	231792	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50			·	_				
Surr: DNOP	8.7		10.00		87.1	21	129			

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208879**

25-Aug-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: LCS-69588	SampT	ype: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch	n ID: 695	588	RunNo: 90394								
Prep Date: 8/17/2022	Analysis D)ate: 8/	18/2022	9	SeqNo: 32	231796	Units: mg/K	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	47	15	50.00	0	93.8	64.4	127					
Surr: DNOP	4.6		5.000		91.2	21	129					
Sample ID: 2208879-021AMS	SampType: MS TestCode: FPA Method 8015M/D: Diesel Range Organics											

Sample ID: 2208879-021AMS	Sampı	ype: MS	5	l estcode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: BES22-151 10'	Batch	Batch ID: 69588			RunNo: 90394					
Prep Date: 8/17/2022	Analysis D	Date: 8/	19/2022	SeqNo: 3231797			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	14	48.08	12.42	84.1	36.1	154			
Surr: DNOP	4.4		4.808		91.8	21	129			

Sample ID:	2208879-021AMSD	SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID:	BES22-151 10'	Batch	ID: 695	588	F	RunNo: 9(394				
Prep Date:	8/17/2022	Analysis D	ate: 8/	19/2022	SeqNo: 3231798			Units: mg/Kg			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	47	15	49.80	12.42	69.9	36.1	154	11.3	33.9	
Surr: DNOP		3.7		4.980		73.7	21	129	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2208879

25-Aug-22

Project:	Routh SWD Tank Battery
Client:	Vertex Resources Services, Inc

Project:	Routh SW	/D Tank Ba	attery								
Sample ID:	lcs-69547	SampTy	pe: LC:	s	Tes	tCode: El	PA Method	8015D: Gaso	line Range		
Client ID:	LCSS	Batch	ID: 695	547	R	RunNo: 9	0339				
Prep Date:	8/16/2022	Analysis Da	ate: 8/ 1	17/2022	SeqNo: 3223657			Units: mg/Kg			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
_	e Organics (GRO)	22	5.0	25.00	0	87.5	72.3	137			
Surr: BFB		2000		1000		205	37.7	212			
Sample ID:	mb-69547	SampTy	ре: МВ	BLK	TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	PBS	Batch	ID: 695	547	R	RunNo: 9	0339				
Prep Date:	8/16/2022	Analysis Da	ate: 8/ 1	17/2022	S	SeqNo: 3	223658	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	e Organics (GRO)	ND 1000	5.0	1000		103	37.7	212			
Sample ID:		SampTy	•		TestCode: EPA Method 8015D: Gasoline Range						
	PBS		ID: 695			RunNo: 9		I I alian na			
Prep Date:	8/16/2022	Analysis Da		18/2022	\$	SeqNo: 3		Units: mg/K	•		
Analyte	o Organica (CBO)	Result ND	PQL 5.0	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	e Organics (GRO)	1100	5.0	1000		107	37.7	212			
Sample ID:	loc 60551	SampTy	rno: I C	<u> </u>	Tos	tCodo: El	DA Mothod	901ED: Gasa	lina Banga		
Client ID:			ID: 695		TestCode: EPA Method 8015D: Gasoline Range RunNo: 90389						
Prep Date:	8/16/2022	Analysis Da			SeqNo: 3225365			Units: mg/Kg			
Analyte	3,13,2022	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	e Organics (GRO)	27	5.0	25.00	0	108	72.3	137	/0KFD	KFDLIIIII	Quai
Surr: BFB	. ,	2200		1000		215	37.7	212			S
Sample ID:	2208879-018ams	SampTy	pe: MS	}	Tes	tCode: EI	PA Method	8015D: Gaso	line Range		
Client ID:	BES22-148 10'	Batch	ID: 695	551	R	RunNo: 9	0389		_		
Prep Date:	8/16/2022	Analysis Da	nte: 8/ 1	18/2022	S	SeqNo: 3	225367	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	e Organics (GRO)	27	4.9	24.30	0	110	70	130			
Surr: BFB		2100		971.8		214	37.7	212			S
Sample ID:	2208879-018amsd	SampTy	pe: MS	SD.	Tes	tCode: El	PA Method	8015D: Gaso	line Range		
Client ID:	BES22-148 10'	Batch	ID: 695	551	RunNo: 90389						
Prep Date:	8/16/2022	Analysis Da	ate: 8/ 1	18/2022	S	SeqNo: 3	225368	Units: mg/K	(g		
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
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference
- Analyte detected in the associated Method Blank
- Estimated value
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Limit RL

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Hall Environmental Analysis Laboratory, Inc.

2100

WO#: **2208879 25-Aug-22**

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Surr: BFB

Sample ID: 2208879-018amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: BES22-148 10' Batch ID: 69551 RunNo: 90389 Prep Date: 8/16/2022 Analysis Date: 8/18/2022 SeqNo: 3225368 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 27 4.9 24.46 0 111 70 130 1.63 20

213

37.7

212

0

0

S

978.5

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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208879 25-Aug-22**

Client: Vertex Resources Services, Inc.
Project: Routh SWD Tank Battery

Sample ID: Ics-69547	SampT	ype: LC	S	Tes	tCode: EF	PA Method	8021B: Volati	iles		
Client ID: LCSS	Batcl	n ID: 695	547	F	RunNo: 90	0339				
Prep Date: 8/16/2022	Analysis D	Date: 8/1	17/2022	\$	SeqNo: 32	223687	Units: mg/K	(g		
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	0.96	0.050	1.000	0	96.2	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.4	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.2	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130			

Sample ID: mb-69547	Samp1	уре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: PBS	Batcl	n ID: 695	547	F	RunNo: 90	0339				
Prep Date: 8/16/2022	Analysis D	Date: 8/	17/2022	5	SeqNo: 32	223688	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.5	70	130			

Sample ID: mb-69551	Samp1	уре: МВ	BLK	Tes	tCode: EF	les						
Client ID: PBS	Batcl	n ID: 695	551	F	RunNo: 90	389						
Prep Date: 8/16/2022	Analysis D	Date: 8/1	18/2022	5	SeqNo: 32	225418	Units: mg/K	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	ND	0.025										
Toluene	ND	0.050										
Ethylbenzene	ND	0.050										
Xylenes, Total	ND	0.10										
Surr: 4-Bromofluorobenzene	0.99		1.000		99.3	70	130					

Sample ID: LCS-69551	s	Tes	tCode: EF	PA Method	8021B: Volati	les				
Client ID: LCSS	Batch	n ID: 695	551	F	RunNo: 90	0389				
Prep Date: 8/16/2022	Analysis D	Date: 8/1	18/2022	5	SeqNo: 32	225419	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	80	120			
Toluene	1.0	0.050	1.000	0	105	80	120			
Ethylbenzene	1.1	0.050	1.000	0	105	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	70	130			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2208879 25-Aug-22**

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

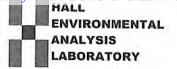
Sample ID: 2208879-019ams	Samp ⁻	Туре: м S	;	Tes	tCode: EF	PA Method	8021B: Volati	les		
Client ID: BES22-149 10'	Batc	h ID: 695	551	F	RunNo: 90	0389				
Prep Date: 8/16/2022	Analysis [Date: 8/	18/2022		SeqNo: 32	225423	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	0.9911	0	99.9	68.8	120			
Toluene	1.0	0.050	0.9911	0	104	73.6	124			
Ethylbenzene	1.0	0.050	0.9911	0	105	72.7	129			
Xylenes, Total	3.1	0.099	2.973	0	104	75.7	126			
Surr: 4-Bromofluorobenzene	0.99		0.9911		99.5	70	130			

Sample ID: 2208879-019ams	d Samp	Туре: МЅ	SD	Tes	stCode: El	PA Method	8021B: Volati	les		
Client ID: BES22-149 10'	Bato	h ID: 695	551	F	RunNo: 90	0389				
Prep Date: 8/16/2022	Analysis	Date: 8/	18/2022	9	SeqNo: 3	225424	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	0.9814	0	93.4	68.8	120	7.68	20	
Toluene	0.94	0.049	0.9814	0	96.3	73.6	124	9.02	20	
Ethylbenzene	0.93	0.049	0.9814	0	95.3	72.7	129	10.7	20	
Xylenes, Total	2.8	0.098	2.944	0	94.5	75.7	126	10.5	20	
Surr: 4-Bromofluorobenzene	0.97		0.9814		98.4	70	130	0	0	

Qualifiers:

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

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

		Website: ww			an.com		
Client Name:	Vertex Resources Services, Inc.	Work Order Num	nber: 220	8879		RcptN	o;: 1
Received By:	Juan Rojas	8/13/2022 7:40:00	AM		(Juan Eng)		
Completed By:	Tracy Casarrubias	8/13/2022 10:42:1	0 AM				
Reviewed By:	Time	8/13/22					
Chain of Cust	tody						
1. Is Chain of Cu	stody complete?		Yes	V	No 🗌	Not Present	
2. How was the s	sample delivered?		Cou	rier			
Log In							
Was an attempt	ot made to cool the samp	les?	Yes	V	No 🗌	NA 🗆	
4. Were all sampl	les received at a tempera	ture of >0° C to 6.0°C	Yes	V	No 🗌	NA 🗆	
5. Sample(s) in p	roper container(s)?		Yes	V	No 🗌		
6. Sufficient samp	ole volume for indicated to	est(s)?	Yes	V	No 🗆		
7. Are samples (e	xcept VOA and ONG) pro	operly preserved?	Yes	V	No 🗌		
8. Was preservati	ve added to bottles?		Yes		No 🗸	NA 🗌	
9. Received at lea	st 1 vial with headspace	<1/4" for AQ VOA?	Yes		No 🗆	NA 🗹	
0. Were any samp	ple containers received b	roken?	Yes		No 🗸	#	
	k match bottle labels?		Yes	V	No 🗆	# of preserved bottles checked for pH:	3.25 - 3
	ncies on chain of custody		147.0				or >12 unless noted)
	orrectly identified on Chair analyses were requested		Yes	V	No L	Adjusted?	
4. Were all holding	g times able to be met? stomer for authorization.)		Yes Yes		No 🗌	Checked by:	Jn8/13
	ng (if applicable)						
5. Was client notif	fied of all discrepancies v	vith this order?	Yes		No 🗌	NA 🗹	
Person N	lotified:	Date					
By Whom	n:	Via:	eMa	ail 🗍 F	Phone Fax	☐ In Person	
Regarding	g:				100 C Q - 1 (1277)	, Howard III	
000	structions:						

Seal Date

Signed By

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Cooler No

Temp °C

0.5

Condition

Yes

Good

Seal Intact Seal No

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H		WW SGISWEET TOOL	4901 Flawkins NE	Tel. 505-345-3975		100	NR() O	782 (1)	8/s	HD) ebi	MT 15D etho	81EX) 08:H9T 69 1808 M) 803 M) 804	>												Remarks:	ָר. רַי
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				F. C.	00-416	iger:	Denning.		SPC	□ Yes		Cooler Temp(including cF): 0 JFC - 1	Preservative Type	ice												Via:	Via:
☑ Standard	Project Name:	Routh SW	Project #:	1	177	Project Manager	Monien	امرمرماما	Sampler:	On Ice:	# of Coolers:	Cooler Temp	Container Type and #	1 407 lar	()											Received by:	
								idation)						6	6,	6'	6"	10'	10'	- 6'	6'	(0,	101	(0,	0	, , <	
(504)		VILLE		>				□ Level 4 (Full Validation)	mpliance				Sample Name	BES 22-131	BES 22 - 132	BES 22-133	BES22-(34)	BES22-135	BES22-136	BES 22- 137	BES22-138	BES22-139	BES22-140	BES22- 141	BES22-142	B	dby:
" Vertex (EOG)		3: (m)							☐ Az Compliance	□ Other			Matrix	- Wi-	, –										1	Relinquished by:	Re
Wert		Mailing Address:			#:	email or Fax#:	QA/QC Package:	ndard	Accreditation:	-AC	EDD (Type)		Time	10:00	10:05	01:01	10:15	10:20	10:25	10:30	10:35	10:40	10:45	10:50	10.5E	Time: (7:03	Time:
Client:		Mailing			Phone #:	email	QA/QC	□ Standard	Accred				Date	8/1				Ä								Date: 8/11	Date:

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on file	☑ Standard ☑ Rush 5 Dlu/K	5 Deux			ANAL		Y	ANAI YSTS I ABODATOD	AL O
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Proje	Routh SWD Tau	Tank Bottony	490	4901 Hawkins NE		Albuc	mineriue	- Albuquerane, NM 87109	
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Phone #:	22E-00716		D		A 180-0	Analysis	s Request	Sub-S45-4107 Request	
email or Fax#: Proje	Project Manager:				H	⊅C	L	(1)	
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Accreditation: Az Compliance Sampler:	oler: SPC			_	3270	٥٥,		uəs	
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Container Time Matrix Sample Name Type and	Preservative # Type	HEAL NO.		8081 Pe M) 803	PAHs b	SSE0 (V	8) 0728	Total Co	
X 8011 BESZZ-143 (0' 11	93.	013	>		-				
11:00 1 BESZZ-144 6"	2	510	_			-			
11:05 BES22-145 6'		510							
2-146		016			F				
47		TID							
18:40 BES 22-148 10'		810							
BES22-149		610							
13:50 BES12-150 10'		070							
13:55 85622-151 10'	_	120	_						
Time: Relinquished by: 7.03	bd by: Via:	Date Time	Remarks:	7000	213	- 6			
Relinquished by Re	Via:	Pate Pate		25	1 5	11/2 x	1	50	



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

September 26, 2022

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

FAX:

RE: Routh SWD Tank Battery OrderNo.: 2209A31

Dear Michael Moffitt:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/21/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report Lab Order 2209A31

Date Reported: 9/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-05 0-4'

Project: Routh SWD Tank Battery **Collection Date:** 9/19/2022 2:20:00 PM

Lab ID: 2209A31-001 **Matrix:** MEOH (SOIL) **Received Date:** 9/21/2022 7:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	9/21/2022 10:19:04 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	9/21/2022 10:19:04 AM
Surr: DNOP	89.4	21-129	%Rec	1	9/21/2022 10:19:04 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	9/21/2022 8:57:58 AM
Surr: BFB	95.5	37.7-212	%Rec	1	9/21/2022 8:57:58 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.019	mg/Kg	1	9/21/2022 8:57:58 AM
Toluene	ND	0.039	mg/Kg	1	9/21/2022 8:57:58 AM
Ethylbenzene	ND	0.039	mg/Kg	1	9/21/2022 8:57:58 AM
Xylenes, Total	ND	0.078	mg/Kg	1	9/21/2022 8:57:58 AM
Surr: 4-Bromofluorobenzene	96.8	70-130	%Rec	1	9/21/2022 8:57:58 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	600	60	mg/Kg	20	9/21/2022 11:56:11 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 7

Analytical Report Lab Order 2209A31

Date Reported: 9/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-133 6.5'

Project: Routh SWD Tank Battery Collection Date: 9/19/2022 11:35:00 AM

Lab ID: 2209A31-002 **Matrix:** MEOH (SOIL) **Received Date:** 9/21/2022 7:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	9/21/2022 10:29:35 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	9/21/2022 10:29:35 AM
Surr: DNOP	87.3	21-129	%Rec	1	9/21/2022 10:29:35 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	9/21/2022 9:21:26 AM
Surr: BFB	98.0	37.7-212	%Rec	1	9/21/2022 9:21:26 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.017	mg/Kg	1	9/21/2022 9:21:26 AM
Toluene	ND	0.035	mg/Kg	1	9/21/2022 9:21:26 AM
Ethylbenzene	ND	0.035	mg/Kg	1	9/21/2022 9:21:26 AM
Xylenes, Total	ND	0.070	mg/Kg	1	9/21/2022 9:21:26 AM
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	9/21/2022 9:21:26 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	2200	60	mg/Kg	20	9/21/2022 12:08:35 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

ting Limit Page 2 of 7

Analytical Report Lab Order 2209A31

Date Reported: 9/26/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc. Client Sample ID: BES22-134 6.5'

Project: Routh SWD Tank Battery Collection Date: 9/19/2022 11:40:00 AM

Lab ID: 2209A31-003 **Matrix:** MEOH (SOIL) **Received Date:** 9/21/2022 7:30:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: DGH
Diesel Range Organics (DRO)	ND	14	mg/Kg	1	9/21/2022 10:40:07 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	9/21/2022 10:40:07 AM
Surr: DNOP	77.2	21-129	%Rec	1	9/21/2022 10:40:07 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	9/21/2022 9:44:57 AM
Surr: BFB	95.5	37.7-212	%Rec	1	9/21/2022 9:44:57 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.021	mg/Kg	1	9/21/2022 9:44:57 AM
Toluene	ND	0.041	mg/Kg	1	9/21/2022 9:44:57 AM
Ethylbenzene	ND	0.041	mg/Kg	1	9/21/2022 9:44:57 AM
Xylenes, Total	ND	0.083	mg/Kg	1	9/21/2022 9:44:57 AM
Surr: 4-Bromofluorobenzene	98.0	70-130	%Rec	1	9/21/2022 9:44:57 AM
EPA METHOD 300.0: ANIONS					Analyst: JMT
Chloride	3900	150	mg/Kg	50	9/21/2022 3:18:57 PM

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 7

Hall Environmental Analysis Laboratory, Inc.

2209A31

WO#:

26-Sep-22

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-70315 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 70315 RunNo: 91197

Prep Date: 9/21/2022 Analysis Date: 9/21/2022 SeqNo: 3264230 Units: mg/Kg

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

Chloride ND 1.5

Sample ID: LCS-70315 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 70315 RunNo: 91197

Prep Date: 9/21/2022 Analysis Date: 9/21/2022 SeqNo: 3264231 Units: mg/Kg

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

Chloride 14 1.5 15.00 0 91.9 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 7

Hall Environmental Analysis Laboratory, Inc.

2209A31 26-Sep-22

WO#:

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: MB-70306	SampT	уре: МВ	LK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch	n ID: 70 3	306	F	RunNo: 9 1	1191						
Prep Date: 9/21/2022	Analysis D	oate: 9/2	21/2022	5	SeqNo: 32	262758	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	ND	15										
Motor Oil Range Organics (MRO)	ND	50										
Surr: DNOP	10		10.00		104	21	129					

Sample ID: LCS-70306	SampT	ype: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch	n ID: 70 3	306	F	RunNo: 91191							
Prep Date: 9/21/2022	Analysis D	oate: 9/2	21/2022	9	SeqNo: 32	262759	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	52	15	50.00	0	104	64.4	127					
Surr: DNOP	4.8		5.000		96.0	21	129					

Qualifiers:

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

Page 5 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209A31 26-Sep-22**

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

Sample ID: mb-70296 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 70296 RunNo: 91188

Prep Date: 9/20/2022 Analysis Date: 9/21/2022 SeqNo: 3263138 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 98.4 37.7 212

Sample ID: Ics-70296 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

1000

Client ID: LCSS Batch ID: 70296 RunNo: 91188

2000

Prep Date: 9/20/2022 Analysis Date: 9/21/2022 SeqNo: 3263139 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 26 5.0 25.00 0 105 72.3 137

197

37.7

212

Qualifiers:

Surr: BFB

- 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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 6 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209A31 26-Sep-22**

Client: Vertex Resources Services, Inc.

Project: Routh SWD Tank Battery

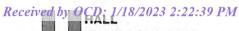
Sample ID: mb-70296 Client ID: PBS Prep Date: 9/20/2022	F	tCode: EF RunNo: 9 1 SeqNo: 3 2	1188	8021B: Volati Units: mg/K						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000	99.9 70			130			

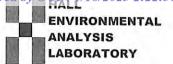
Sample ID: LCS-70296	Samp	Гуре: LC	S	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batcl	h ID: 70 2	296	F	RunNo: 91188							
Prep Date: 9/20/2022	Analysis [Date: 9/ 2	21/2022	9	SeqNo: 32	263179	Units: mg/Kg					
Analyte	Result PQL SPK valu			SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	0.93	0.025	1.000	0	92.8	80	120					
Toluene	0.94	0.050	1.000	0	94.4	80	120					
Ethylbenzene	0.94	0.050	1.000	0	94.5	80	120					
Xylenes, Total	0	95.6	80	120								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	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 range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 7 of 7





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 Numbe	r: 220	9A31		RcptN	lo: 1
Received By: Juan Rojas	9/21/2022 7:30:00 AM	1		Juan 3		
Completed By: Cheyenne Cason	9/21/2022 8:04:40 AN	1		Chal		
Reviewed By: 7 n a/20/2 9/21	122					
Chain of Custody						
1. Is Chain of Custody complete?		Yes	~	No 🗌	Not Present	
2. How was the sample delivered?		Cou	rier			
Log In						
3. Was an attempt made to cool the samples?		Yes	V	No 🗌	NA 🗆	
Were all samples received at a temperature of	f >0° C to 6.0°C	Yes	V	No 🗆	NA 🗆	ń
5. Sample(s) in proper container(s)?		Yes	~	No 🗌		
6. Sufficient sample volume for indicated test(s)?		Yes	V	No 🗌		
7. Are samples (except VOA and ONG) properly	preserved?	Yes	V	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 🗸	# of preserved	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes	V	No 🗆	bottles checked for pH:	or ≥12 unless noted)
12. Are matrices correctly identified on Chain of Ci	ustody?	Yes	V	No 🗌	Adjusted?	2
3. Is it clear what analyses were requested?		Yes	~	No 🗌		
4. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes	V	No 🗌	Checked by:	KPa9a1
Special Handling (if applicable)						
15. Was client notified of all discrepancies with thi	is order?	Yes		No 🗆	NA 🗹	
Person Notified:	Date:		-			
By Whom:	Via:	eM	ail 🗌	Phone Fax	In Person	
Regarding:		- 3.0			- NO MATERIAL DE LA COMPANSION DE LA COM	
Client Instructions:						
16. Additional remarks:						
	I Intact Seal No S	Seal D	ate	Signed By		

ecew	HALL ENVIRONMENTAL					22:	39 PM													ruge	555 0
	IVIRON	www hallenvironmental com	4901 Hawkins NE - Albuquerque, NM 87109	Fax 505-345-4107	Analysis Request	(11	ıəsdA∖i			οΛ-	iməS	7) 0328 3) 0728 3) 0521 5) 0531									toa
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	Ì	*	901 Hawkins	Tel. 505-345-3975			ocB,²	S808 (1.4	70⊆ 3/S	ebia ba	estio Neth	8081 F									are
			4				`S08) a ЯМ∖С					<u> </u>	>	-	_				Remarks		
Turn-Around Time:	□ Standard □ Kush □ M.L.	Project Name:	Buth SND Tank Botton	Project #:	22E - 0046-10	Project Manager:	Michael Mollitt	Fr. SPC	On Ice: A-Yes D No	# of Coolers:	Cooler Temp(including CF): 1.5-0-1.5- (°C)	Container Preservative HEAL No. Type and # Type	1 tonjar ice		603				Received by: Via: , Date Time	6	Via: Date T
Chain-of-Custody Record	06)		n Hile	0			☐ Level 4 (Full Validation)					Sample Name	WES22-05 0-4"	BES12-183 10.5'	BES 22-134 10.5'				ed by:	y Cartar	ed∮by:
1-of-C	Client: VWHW (EDG)		is: Oh				ai.	□ Az Cc	□ Other			Matrix	14:20 Spil	-	1				Relinquished by:	Sally	Relinquished by:
Chain	Very		Mailing Address:		:# e	email or Fax#:	QA/QC Package:	Accreditation:	LAC	□ EDD (Type)		Time		11:35	11:40				Time:	16:30	Date: Time: F
	Client		Mailin		Phone #:	email	QA/QC	Accre	□ NELAC			Date	61/6	_	-				Date:	9/19	Date:

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. **Santa Fe, NM 87505**

CONDITIONS

Action 177221

CONDITIONS

Operator:	OGRID:
EOG RESOURCES INC	7377
P.O. Box 2267	Action Number:
Midland, TX 79702	177221
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By		Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2218654480 ROUTH DEEP SWD #2, thank you. This closure is approved.	5/18/2023