



Incident Number: nAPP2315059153

## Incident Assessment and Closure

State CO Valve Box #14

Section 6, Township 19 South, Range 25 East

County: EDDY

Vertex File Number: 22E-00716-01

**Prepared for:**

EOG Resources Inc

**Prepared by:**

Vertex Resource Services Inc.

**Date:**

June 2023

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**Release Assessment and Closure**  
**State CO Valve Box #14**  
**Section 6, Township 19 South, Range 25 East**  
**nAPP2315059153**  
**County: Eddy**

Prepared for:  
**EOG Resources Inc**  
 104 S. 4<sup>th</sup> Street  
 Artesia, NM 88210

**New Mexico Oil Conservation Division – District 2**  
 811 S. 1<sup>st</sup> Street  
 Artesia, New Mexico 88210

Prepared by:  
**Vertex Resource Services Inc.**  
 3101 Boyd Drive  
 Carlsbad, New Mexico 88220

*Jacob Reta*  
 \_\_\_\_\_  
 Jacob Reta, B.Sc.  
 INTERMEDIATE BIOLOGIST, REPORTING

6/29/2023  
 \_\_\_\_\_  
 Date

*Chance Dixon*  
 \_\_\_\_\_  
 Chance Dixon, B.Sc.  
 PROJECT MANAGER, REPORT REVIEW

6/29/2023  
 \_\_\_\_\_  
 Date

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## 1.0 Introduction

EOG Resources Inc. EOG retained Vertex Resource Services Inc. (Vertex) to conduct an assessment and remediation for a historically impacted area that was identified on May 30, 2023, at State CO Valve Box #14 nAPP2315059153 (hereafter referred to as the “site”). EOG submitted an initial C-141 Release Notification (Appendix A) to New Mexico Oil Conservation Division (NMOCD) District 2 on May 30, 2023. Incident ID number nAPP2315059153, was assigned to this incident.

This report provides a description of the incident assessment and remediation activities and demonstrates that closure criteria established in Table I of 19.15.29.12 *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) are being met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain approval from NMOCD for the closure of this incident, with the understanding that remediation of the site was conducted in a manner to achieve the requirements of 19.15.29.13.

## 2.0 Incident Description

In August of 2022, Vertex began investigating the possibility of contamination at the site. The date and time of the incident are undetermined with an unknown volume. The area displaying impact was along the valve box for the pipeline right-of-way, which had returned to native rangeland. It was determined that a release notification to NMOCD was required to address the remediation of the location after a thorough investigation of the underground pipeline infrastructure. This was based on the investigative samples presented in Figure 1 and Table 2. Additional details relevant to the release are presented in the C-141 Report.

## 3.0 Site Characteristics

The site is located approximately 8.4 miles Northwest of Seven Rivers, New Mexico. The legal location for the site is Section 6, Township 19 South and Range 25 East in Eddy County, New Mexico. The impacted area is located on private property. An aerial photograph and site schematic are presented on Figure 1.

*The Geological Map of New Mexico* (New Mexico Bureau of Geology and Mineral Resources, 2023) indicates the site’s surface geology primarily comprises QP – Piedmont alluvial deposits from the Holocene to the lower Pleistocene ages. The predominant soil texture on the site is Reagan-Upton. The karst geology potential for the site is medium (United States Department of the Interior, Bureau of Land Management, 2018).

The location was typical of oil and gas exploration and production sites in the western portion of the Permian Basin and was used for oil and gas production and transport. The following sections specifically describe the release area 32.68299, -104.52184 on or in proximity to the pipeline right-of-way (Figure 1).

The surrounding landscape is associated with ridges and fans with elevations ranging between 1,100 and 5,400 feet. The climate is semiarid with average annual precipitation ranging between 6 and 15 inches. The soil is well-drained with a high runoff. Using information from the United States Department of Agriculture, the dominant vegetation was determined to be blue grama. Creosotebush, mesquite, and catclaw mimosa are common shrubs (United States Department of Agriculture, Natural Resources Conservation Service, 2023).

#### 4.0 Closure Criteria Determination

Using site characterization information, a closure criteria determination worksheet (Appendix B) was completed to determine if the release was subject to any of the special case scenarios outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC. The nearest groundwater data is less than 25 years old and located less than 0.5 miles from the release site; therefore, the depth to groundwater can accurately be determined. The closure criteria for the site is determined to be associated with the following constituent concentration limits (Table 1).

	<b>Constituent</b>	<b>Limit</b>
0-4 feet bgs (19.15.29.13)	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
DTGW > 100 feet (19.15.29.12)	Chloride	20,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS – total dissolved solids

TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics

BTEX – benzene, toluene, ethylbenzene and xylenes

#### 5.0 Remedial Actions

Vertex conducted an investigation of the area beginning August 5, 2022, after the landowner observed possible impacts affecting the area. With multiple underground pipelines in the right-of-way belonging to different operators, the liable party was undetermined for the impacts. Vertex and another EOG contractor conducted hydrovac activities to attempt to identify which line, therefore operator, was liable for the impacts. With no conclusive evidence relinquishing liability to another operator, EOG made the environmentally conscience decision to complete the remediation of the impacted area.

Remediation efforts began on June 2, 2023, and were finalized on June 26, 2023. Vertex personnel directed and supervised the excavation of impacted soils. Field screening was completed on a total of 37 sample points and consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dextsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons), and Titration (chlorides). Field screening results were used to identify areas requiring further remediation. Soils were removed to a depth of 0' to 4' feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. Field screening results and DFRs documenting various phases of the remediation are presented in Appendix C.

Notification that confirmatory samples were being collected was provided to the NMOCD on May 31, 2023, and June 8, 2023. Notifications are included in Appendix D. Confirmatory composite samples were collected from the base and walls of the excavation in 200-square-foot increments. A total of 28 wall samples and 9 wall 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

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hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). Laboratory results are presented in Table 3, and the laboratory data reports are included in Appendix E. All confirmatory samples collected and analyzed were below closure criteria for the site.

## 6.0 Closure Request

Vertex recommends no additional remediation action to address the impacted area at the site. Laboratory analyses of confirmation samples collected at the site show final confirmatory values below NMOCD remediation closure criteria for areas where depth to groundwater is over 100 feet, with the top four feet meeting reclamation requirements of 19.15.29.13 NMAC. Laboratory analyses are shown in Table 3. There are no anticipated risks to human, ecological, or hydrological receptors at this site.

The excavation has been backfilled with non-waste-containing, uncontaminated, earthen material that was sourced locally and placed to meet the site's existing grade to prevent water ponding and erosion.

Vertex and EOG request that this incident (nAPP2315059153) be closed as all requirements set forth in Subsection E of 19.15.29.12 NMAC have been met. EOG certifies that all information in this report and the appendices are correct and that they have complied with all applicable closure requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain closure on the site.

Should you have any questions or concerns, please do not hesitate to contact Chance Dixon at 575.988.1472 or [cdixon@vertex.ca](mailto:cdixon@vertex.ca).

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## 7.0 References

- Google Inc. (2022). *Google Earth Pro (Version 7.3.3)* [Software]. Retrieved from <https://earth.google.com>
- New Mexico Bureau of Geology and Mineral Resources. (2023). *Interactive Geologic Map*. Retrieved from <https://maps.nmt.edu/>
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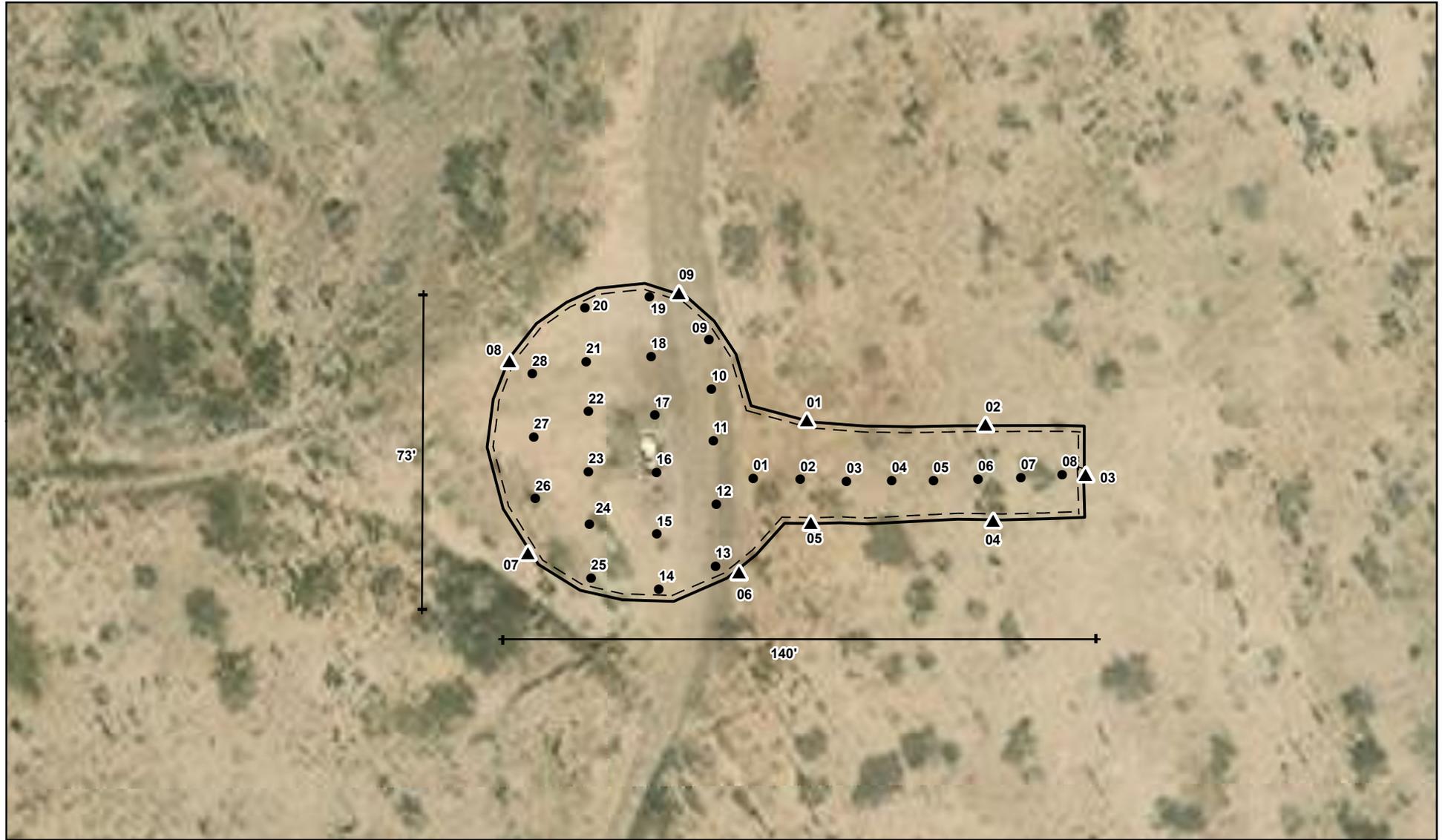
## 8.0 Limitations

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 and the Bureau of Land Management, 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.

## **FIGURES**

Document Path: G:\1-Projects\_US PROJECTS\EOG Resources Inc\22E-00716 (Howell Ranch Reclamation Projects)\001 - State Co Valve Box #14\Figure 2 Confirmation Schematic (State Co Valve Box #14)\_Request#16075.mxd



- Base Sample (Prefixed by "BES23-")
- ▲ Wall Sample (Prefixed by "WES23-")
-  Excavation to 4' (~5,598 sq.ft.)



0 5 10 20 ft.  
 Map Center:  
 Lat/Long: 32.682961, -104.521768

NAD 1983 UTM Zone 13N  
 Date: Jun 29/23



**Confirmatory Schematic  
 State Co Valve Box #14**

FIGURE:

**2**



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

Note: Georeferenced image from ESRI, 2021. GPS, Vertex Professional Services Ltd., 2023.

**VERSATILITY. EXPERTISE.**

Document Path: \\vx-sf01.corp.intern\shared\vps\04 - Geomatics\1-Projects\US PROJECTS\EOG Resources Inc\22E-00716 (Howell Ranch Reclamation Projects)\001 - State Co Valve Box #14\Figure 1 Characterization Schematic (State Co Valve Box #14).img



◆ Borehole ( Prefix by "BH22-" )



0 12.5 25 50 ft.  
 Map Center:  
 Lat/Long: 32.682802, -104.521835

WGS 1984 UTM Zone 13N  
 Date: Aug 25/22



**Characterization Schematic  
 State Co Valve Box #14**

FIGURE:

**1**



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

Note: Background imagery from ESRI, 2021. All other data from field survey by Vertex Professional Services, 2022.

**VERSATILITY. EXPERTISE.**

## **TABLES**

Client Name: EOG Resources, Inc.  
 Site Name: State CO Valve Box #14  
 NMOCD Tracking #: nAPP2315059153  
 Project #: 22E-00716 -01  
 Lab Report(sX): 2306396, 2306393, 2306485, 2306559, 2306628, 2306683

Table 3. Confirmatory Sample Field Screen and Laboratory Results - Depth to Groundwater >100 feet bgs (Reclamation)

Sample Description			Field Screening			Petroleum Hydrocarbons						Inorganic	
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration (ppm)	Volatile		Extractable				Chloride Concentration (mg/kg)	
						Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	(GRO + DRO) (mg/kg)		Total Petroleum Hydrocarbons (TPH) (mg/kg)
WES23-01	0-4	6/6/2023	-	62	383	ND	ND	ND	ND	ND	ND	ND	260
WES23-02	0-4	6/5/2023	-	85	483	ND	ND	ND	ND	ND	ND	ND	310
WES23-03	0-4	6/5/2023	-	92	578	ND	ND	ND	ND	ND	ND	ND	580
WES23-04	0-4	6/2/2023	-	98	520	ND	ND	ND	ND	ND	ND	ND	360
WES23-05	0-4	6/6/2023	-	58	588	ND	ND	ND	ND	ND	ND	ND	570
WES23-06	0-4	6/8/2023	-	81	498	ND	ND	ND	ND	ND	ND	ND	450
WES23-07	0-4	6/7/2023	-	58	500	ND	ND	ND	ND	ND	ND	ND	530
WES23-08	0-4	6/7/2023	-	57	388	ND	ND	ND	ND	ND	ND	ND	330
WES23-09	0-4	6/8/2023	-	75	475	ND	ND	ND	ND	ND	ND	ND	420
BES23-01	4	6/6/2023	-	62	615	ND	ND	ND	ND	ND	ND	ND	530
BES23-02	4	6/6/2023	-	66	898	ND	ND	ND	ND	ND	ND	ND	720
BES23-03	4	6/6/2023	-	58	650	ND	ND	ND	ND	ND	ND	ND	570
BES23-04	4	6/6/2023	-	50	730	ND	ND	ND	ND	ND	ND	ND	600
BES23-05	4	6/6/2023	-	71	873	ND	ND	ND	ND	ND	ND	ND	820
BES23-06	4	6/6/2023	-	64	890	ND	ND	ND	ND	ND	ND	ND	970
BES23-07	4	6/6/2023	-	64	788	ND	ND	ND	ND	ND	ND	ND	680
BES23-08	4	6/6/2023	-	63	850	ND	ND	ND	ND	ND	ND	ND	790
BES23-09	4	6/9/2023	-	78	495	ND	ND	ND	ND	ND	ND	ND	510
BES23-10	4	6/9/2023	-	105	1,140	ND	ND	ND	ND	ND	ND	ND	780
BES23-11	4	6/9/2023	-	153	1,213	ND	ND	ND	12	ND	12	12	920
BES23-12	4	6/9/2023	-	141	1,150	ND	ND	ND	10	ND	10	10	980
BES23-13	4	6/9/2023	-	99	1,150	ND	ND	ND	ND	ND	ND	ND	1200
BES23-14	4	6/9/2023	-	123	1,545	ND	ND	ND	ND	ND	ND	ND	1600
BES23-15	4	6/9/2023	-	92	1,250	ND	ND	ND	ND	ND	ND	ND	1200
BES23-16	4	6/9/2023	-	194	803	ND	ND	ND	11	ND	11	11	820
BES23-17	4	6/12/2023	-	186	1,425	ND	ND	ND	25	ND	25	25	1400
BES23-18	4	6/12/2023	-	91	1,100	ND	ND	ND	ND	ND	ND	ND	810
BES23-19	4	6/12/2023	-	82	1,250	ND	ND	ND	ND	ND	ND	ND	940
BES23-20	4	6/12/2023	-	955	1,175	ND	ND	ND	230	78	308	308	1000
BES23-21	4	6/12/2023	-	250	1,225	ND	2.011	33	61	ND	94	94	830
BES23-22	4	6/12/2023	-	110	928	ND	ND	ND	11	ND	11	11	720
BES23-23	4	6/12/2023	-	112	1,110	ND	ND	ND	9.2	ND	9.2	9.2	1000
BES23-24	4	6/12/2023	-	72	872	ND	ND	ND	ND	ND	ND	ND	730
BES23-25	4	6/12/2023	-	162	750	ND	ND	ND	ND	ND	ND	ND	440
BES23-26	4	6/12/2023	-	71	625	ND	ND	ND	ND	ND	ND	ND	470
BES23-27	4	6/12/2023	-	73	843	ND	ND	ND	ND	ND	ND	ND	500
BES23-28	4	6/12/2023	-	91	1,015	ND	ND	ND	ND	ND	ND	ND	840

"ND" Not Detected at the Reporting Limit  
 "-" indicates not analyzed/assessed



Client Name: EOG Resources, Inc.  
 Site Name: State Co Valve Box #14  
 NMOCD Tracking #:  
 Project #: 22E-00716-01  
 Lab Reports: 2208486

Table 2. Initial Characterization Field Screen and Laboratory Results - Depth to Groundwater >100 feet bgs (Reclamation)

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration (ppm)	Volatile		Extractable					Chloride Concentration (mg/kg)
						Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	(GRO + DRO) (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	
BH22-01	0	August 5, 2022	0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	August 5, 2022	0	-	<b>1,879</b>	ND	ND	ND	ND	ND	ND	ND	<b>780</b>
	4	August 5, 2022	0	-	3,429	ND	ND	ND	ND	ND	ND	ND	490
BH22-02	0	August 5, 2022	1	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	August 5, 2022	0	-	<b>4,840</b>	ND	ND	ND	ND	ND	ND	ND	<b>710</b>
	4	August 5, 2022	0	-	3,064	ND	ND	ND	ND	ND	ND	ND	430
BH22-03	0	August 5, 2022	1	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	August 5, 2022	0	-	<b>3,371</b>	ND	ND	ND	ND	ND	ND	ND	<b>700</b>
	4	August 5, 2022	0	-	2,495	ND	ND	ND	ND	ND	ND	ND	440
BH22-04	0	August 5, 2022	0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	August 5, 2022	0	-	<b>2,514</b>	ND	ND	ND	ND	ND	ND	ND	<b>700</b>
	4	August 5, 2022	0	-	3,779	ND	ND	ND	ND	ND	ND	ND	750
BH22-05	0	August 5, 2022	0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	August 5, 2022	0	-	<b>3,036</b>	ND	ND	ND	ND	ND	ND	ND	<b>1400</b>
	4	August 5, 2022	0	-	3,029	ND	ND	ND	ND	ND	ND	ND	700
BH22-06	0	August 5, 2022	0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	August 5, 2022	0	-	<b>1,900</b>	ND	ND	ND	ND	ND	ND	ND	<b>1100</b>
	4	August 5, 2022	0	-	2,655	ND	ND	ND	ND	ND	ND	ND	1300
BH22-07	0	August 5, 2022	0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	August 5, 2022	0	-	<b>1,977</b>	ND	ND	ND	ND	ND	ND	ND	<b>1000</b>
	4	August 5, 2022	0	-	2,485	ND	ND	ND	ND	ND	ND	ND	910
BH22-08	0	August 5, 2022	0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	August 5, 2022	0	-	<b>691</b>	ND	ND	ND	ND	ND	ND	ND	160
	4	August 5, 2022	0	-	3,889	ND	ND	ND	ND	ND	ND	ND	370
BH22-09	0	August 5, 2022	0	27	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	August 5, 2022	0	59	184	ND	ND	ND	ND	ND	ND	ND	ND
	4	August 5, 2022	0	34	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH22-10	0	August 5, 2022	0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2	August 5, 2022	0	-	<b>1,275</b>	ND	ND	ND	ND	ND	ND	ND	580
	4	August 5, 2022	0	-	3,345	ND	ND	ND	ND	ND	ND	ND	1400

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

**Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria**



## **APPENDIX A - NMOCD C-141 Closure Request**

Incident ID	nAPP2315059153
District RP	
Facility ID	
Application ID	

## Closure

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

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Chase Settle Title: Rep Safety & Environmental Sr

Signature: Chase Settle Date: 06/30/2023

email: Chase\_Settle@eogresources.com Telephone: 575-748-1471

**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.

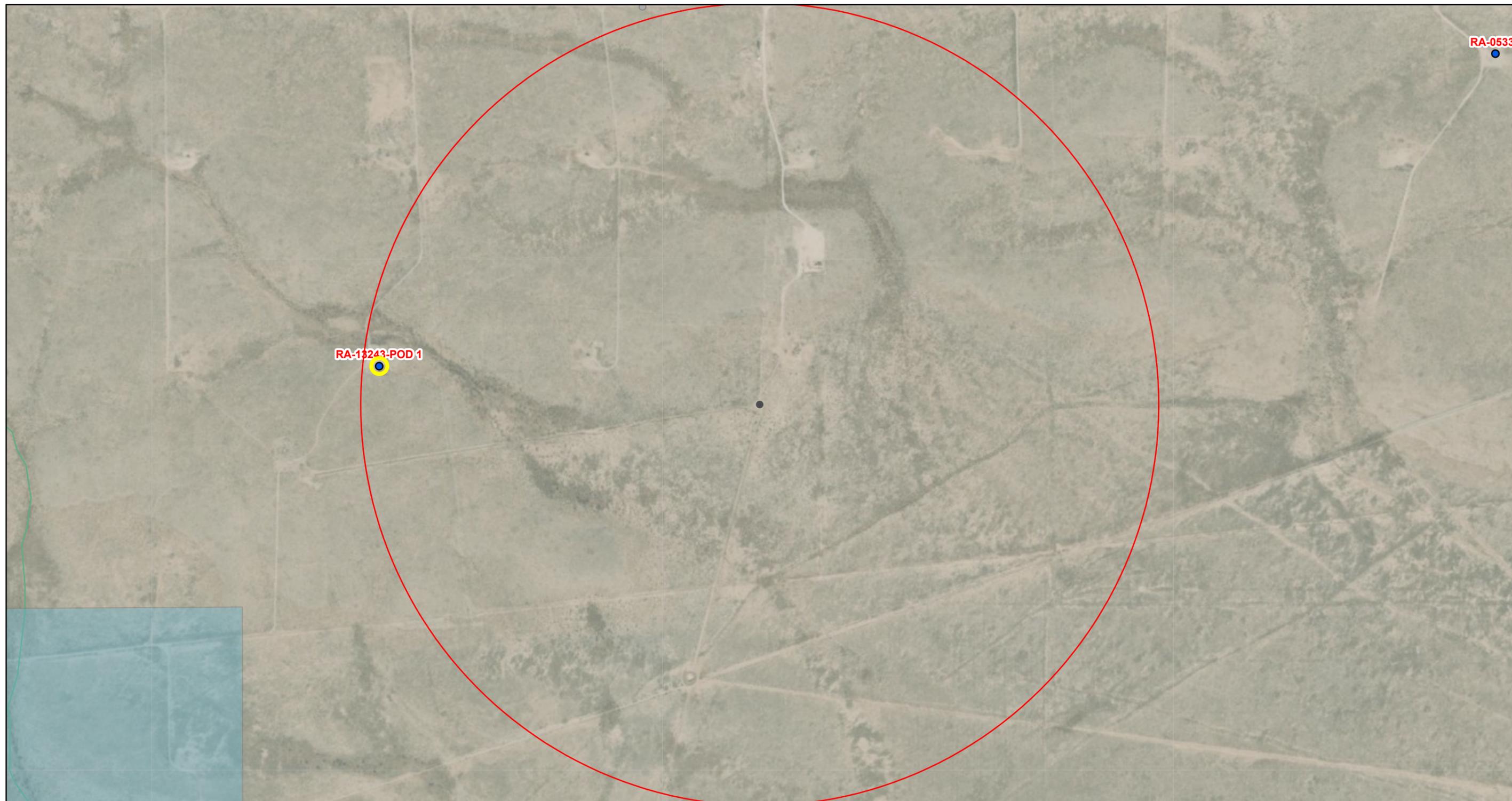
Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

## **APPENDIX B – Closure Criteria Research Documentation**

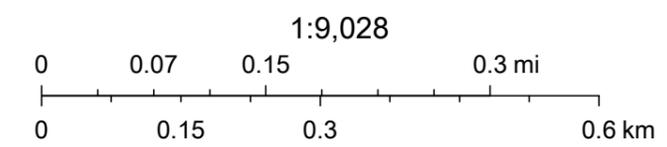
Closure Criteria Worksheet			
Site Name: State CO Valve Box #14			
Spill Coordinates:		X: 32.682802	Y: -104.521835
Site Specific Conditions		Value	Unit
1	Depth to Groundwater	105	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	No	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	4,792	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	9,022	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or	1,591	feet
	ii) Within 1000 feet of any fresh water well or spring	1,591	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland		feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	Medium	Critical High Medium Low
10	Within a 100-year Floodplain	>500	year
11	Soil Type	Reagan-Upton	
12	Ecological Classification	Loamy	
13	Geology	Qp	
<b>NMAC 19.15.29.12 E (Table 1) Closure Criteria</b>		>100'	<50' 51-100' >100'

# RA-13243-POD1 0.5 Mile Radius



6/28/2023, 9:15:19 AM

- GIS WATERS PODs
- Active
  -
- OSE District Boundary
- New Mexico State Trust Lands
- Subsurface Estate
  - Both Estates
- NHD Flowlines
- Stream River
  - SiteBoundaries
- Water Right Regulations
- Closure Area



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





# New Mexico Office of the State Engineer

## Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)
		(quarters are smallest to largest)				
<b>Well Tag</b>	<b>POD Number</b>	<b>Q64 Q16 Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	<b>X      Y</b>
NA	RA 13243 POD 1	4    3    3	06	19S	25E	544060    3616318

**Driller License:** 1670                      **Driller Company:** HARRISON & COOPER, INC. (WD-1670)

**Driller Name:** KENNY COOPER

**Drill Start Date:** 09/26/2022            **Drill Finish Date:** 09/26/2022            **Plug Date:**

**Log File Date:** 12/09/2022            **PCW Rev Date:**                                    **Source:**

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

**Casing Size:**                                    **Depth Well:** 105 feet                            **Depth Water:**

	<b>Casing Perforations:</b>	<b>Top</b>	<b>Bottom</b>
		95	105

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.

2/19/23 11:11 AM

POINT OF DIVERSION SUMMARY



1:9,028

Legend Basemap Query

- Watershed Survey Schedule
- Wild & Scenic Rivers
- Wetland Action Plans
- Wilderness Areas
- Roads
- Legislative
- Counties
- Urban Areas
- Drinking Water Sources
- Points of Diversion
- National Hydrography Dataset

**National Hydrograph Dataset**

**Points**

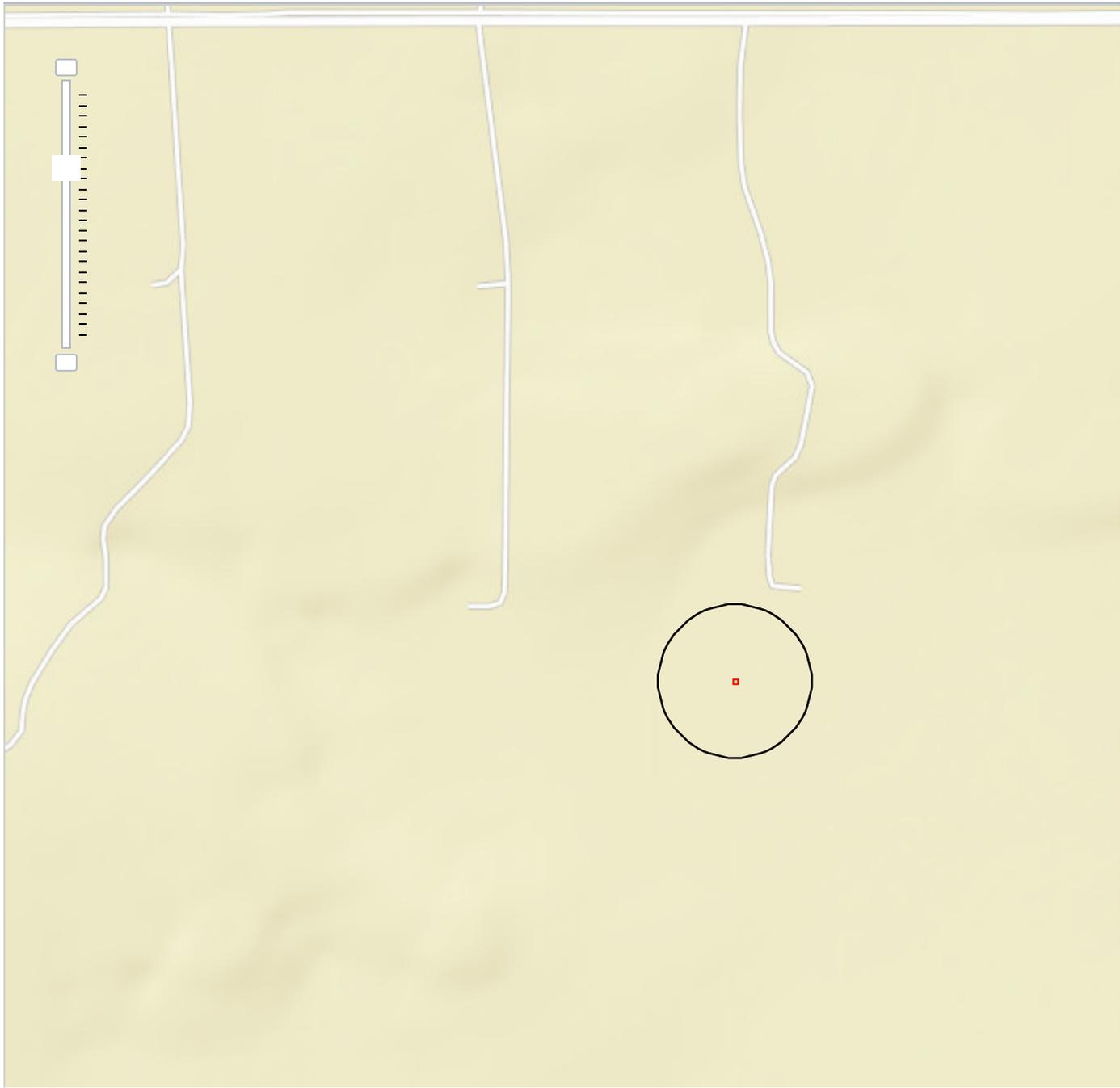
- Gaging Station
- Rapids
- Spring/Seep
- Waterfall
- Well

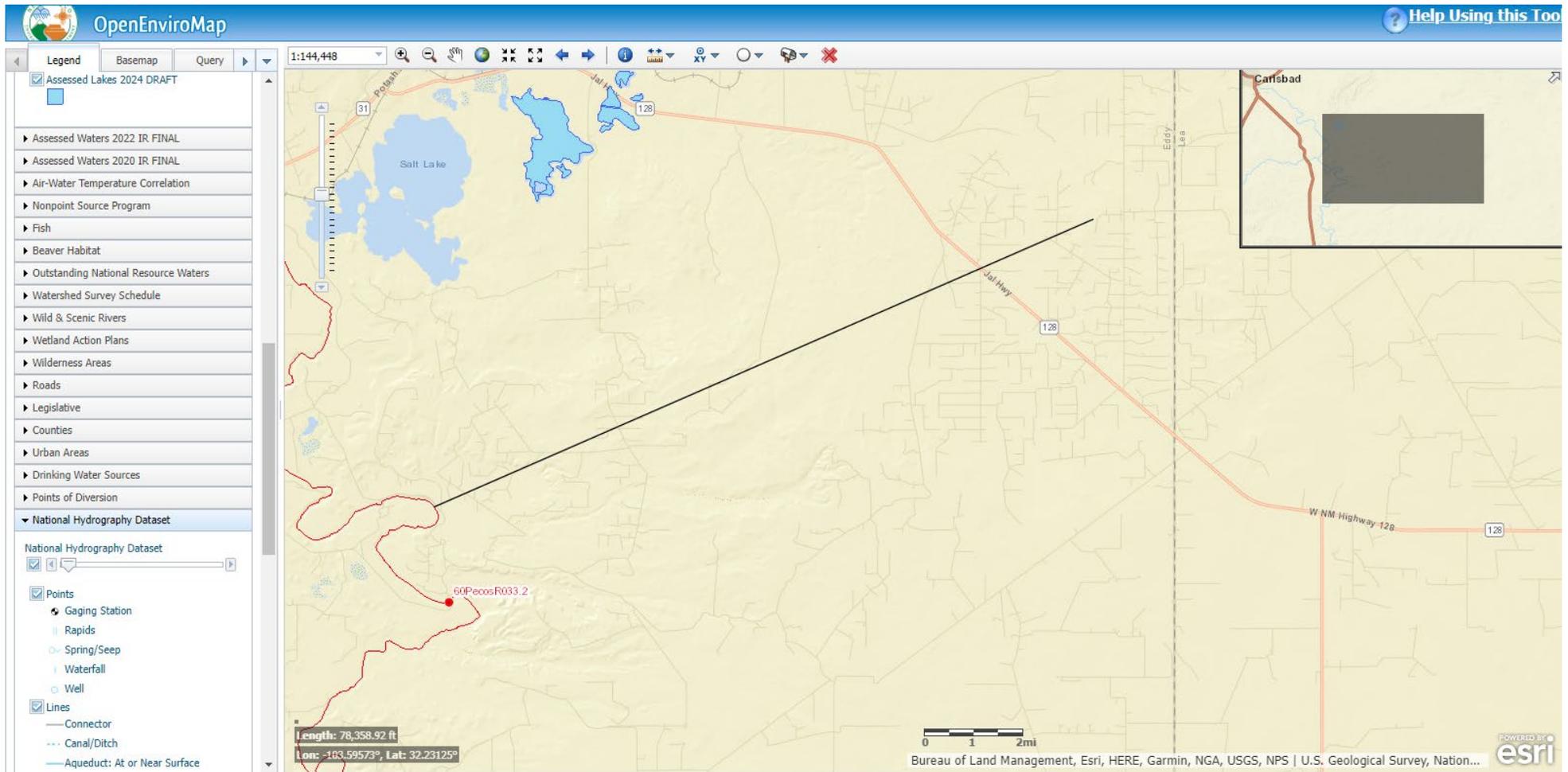
**Lines**

- Connector
- Canal/Ditch
- Aqueduct: At or Near Surface
- Aqueduct: Underground
- Pipeline: Siphon
- Intermittent Stream
- Perennial Stream
- Artificial Path

**Waterbodies**

- Playa
- Intermittent Lake
- Perennial Lake

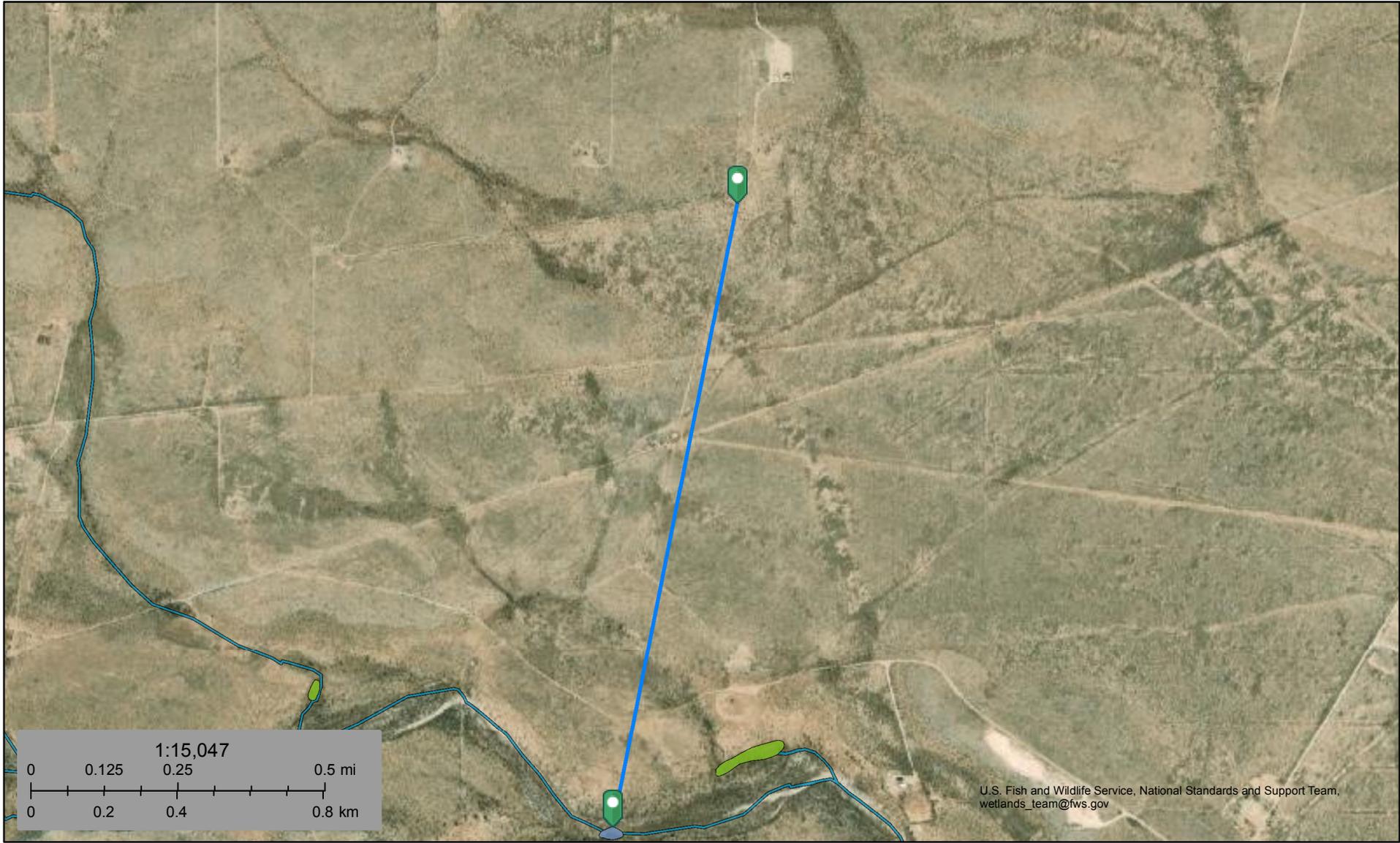




The screenshot displays the OpenEnviroMap web application interface. On the left side, there is a legend panel with a tree view of categories including Watershed Survey Schedule, Wild & Scenic Rivers, Wetland Action Plans, Wilderness Areas, Roads, Legislative, Counties, Urban Areas, Drinking Water Sources, Points of Diversion, and National Hydrography Dataset. The National Hydrography Dataset is expanded to show sub-categories: Points (Gaging Station, Rapids, Spring/Seep, Waterfall, Well), Lines (Connector, Canal/Ditch, Aqueduct: At or Near Surface, Aqueduct: Underground, Pipeline: Siphon, Intermittent Stream, Perennial Stream, Artificial Path), Waterbodies (Playa, Intermittent Lake, Perennial Lake, High Water Stage Intermittent Lake, Average Water Stage Intermittent), Lake (Normal Pool Stage Perennial Lake, Aquaculture Reservoir, Disposal Reservoir, Evaporator Reservoir, Treatment Reservoir, Wetland), and Areas (Area to be Submerged, Uncontrolled Inundation Area). The main map area shows a topographic map with a network of white lines representing water features. A red square marker is visible on the map, surrounded by a black circle, with a tooltip that says "Click to add a point". At the bottom of the map, there is a scale bar (0, 300, 600ft) and a coordinate display showing "Lon: -104.51953°, Lat: 32.68446°". The footer text includes "Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, Intermap, NGA, USGS | New Mexico Environment Departm..." and the Esri logo.



# State CO Valve Box #14 Lake 4,792 ft



February 19, 2023

### Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

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

- Lake
- Other
- Riverine

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

# State CO Valve Box #14

9,022 feet to closest residence

## Legend

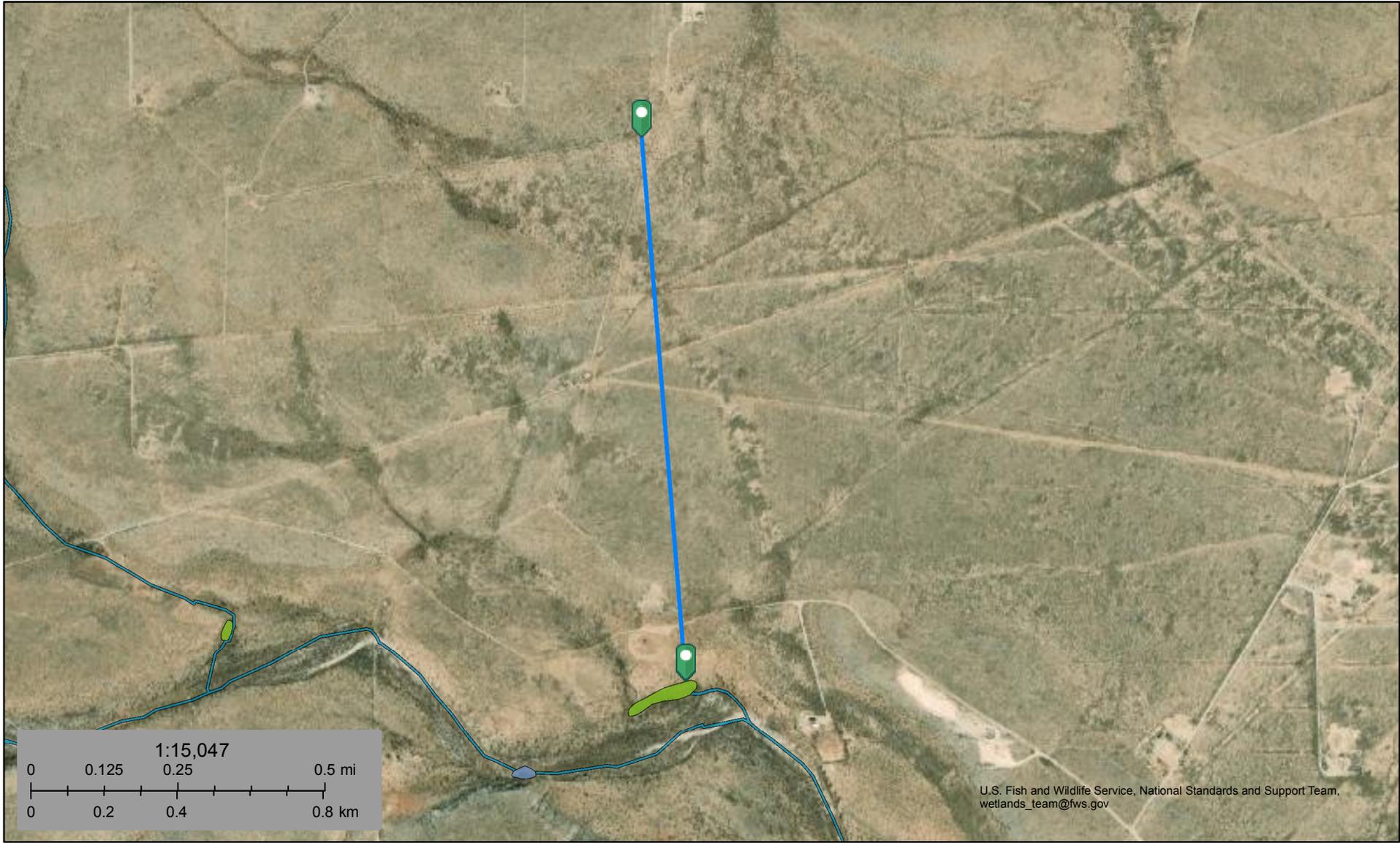
-  32.682802, -104.521835
-  9,022 ft

32.682802, -104.521835





# State CO Valve Box #14 Wetland 4,114 ft



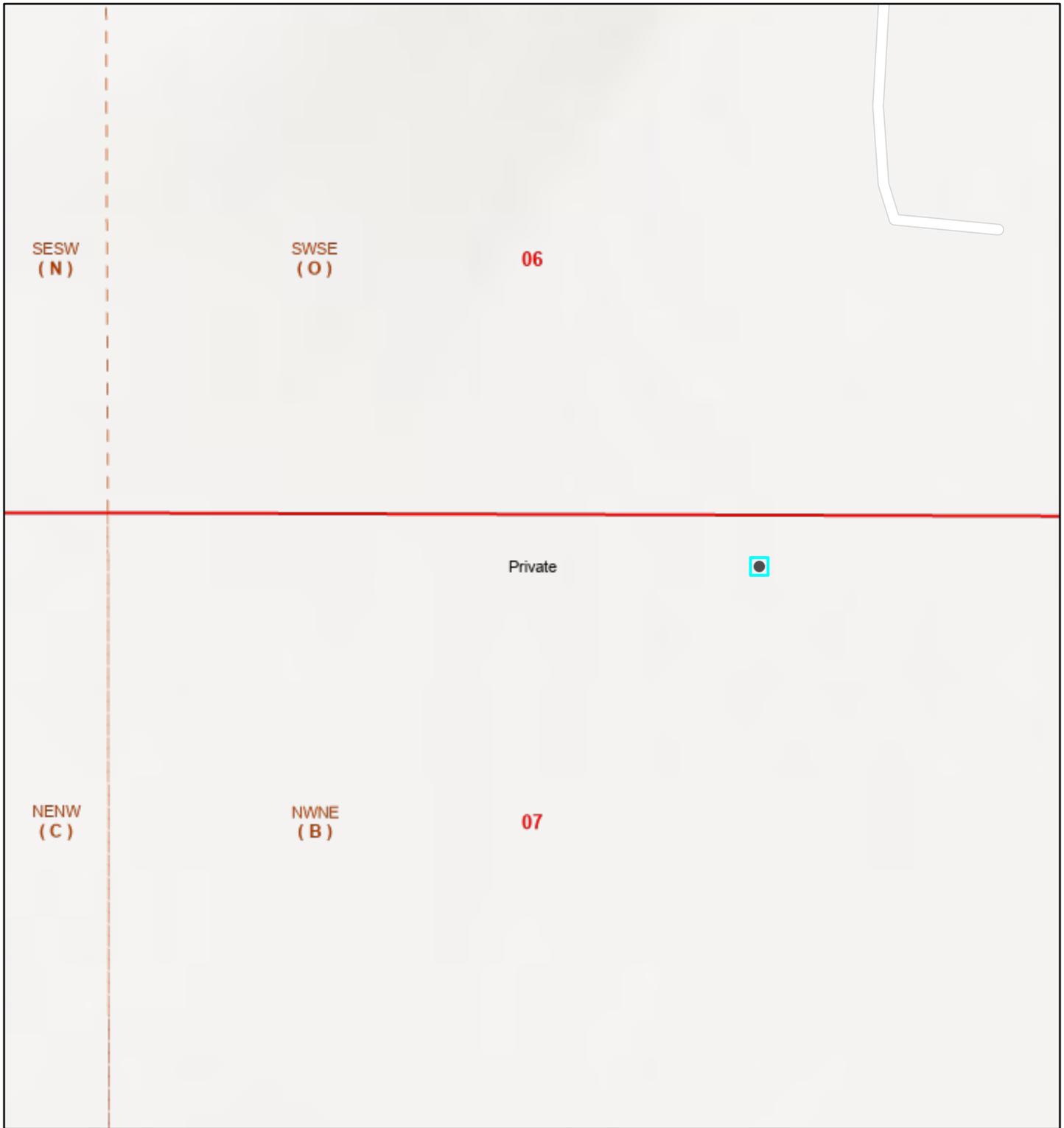
February 19, 2023

### Wetlands

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

# Active Mines in New Mexico



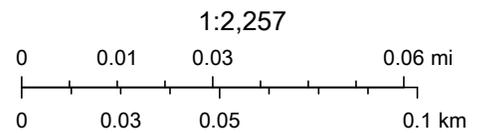
2/19/2023, 2:47:27 PM

Land Ownership

P

 PLSS Second Division

 PLSS First Division



U.S. BLM, Esri Community Maps Contributors, New Mexico State University, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Sources: Esri, Airbus DS, USGS, NGA, NASA,

EMNRD MMD GIS Coordinator

# National Flood Hazard Layer FIRMette



104°31'37"W 32°41'13"N



## Legend

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

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

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

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
		Area of Undetermined Flood Hazard <i>Zone D</i>

GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

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

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/19/2023 at 4:50 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.



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

# Custom Soil Resource Report for Eddy Area, New Mexico



# Preface

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

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

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

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

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

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

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## How Soil Surveys Are Made

---

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

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

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

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

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

## Custom Soil Resource Report

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

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

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

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

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

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

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

### Custom Soil Resource Report

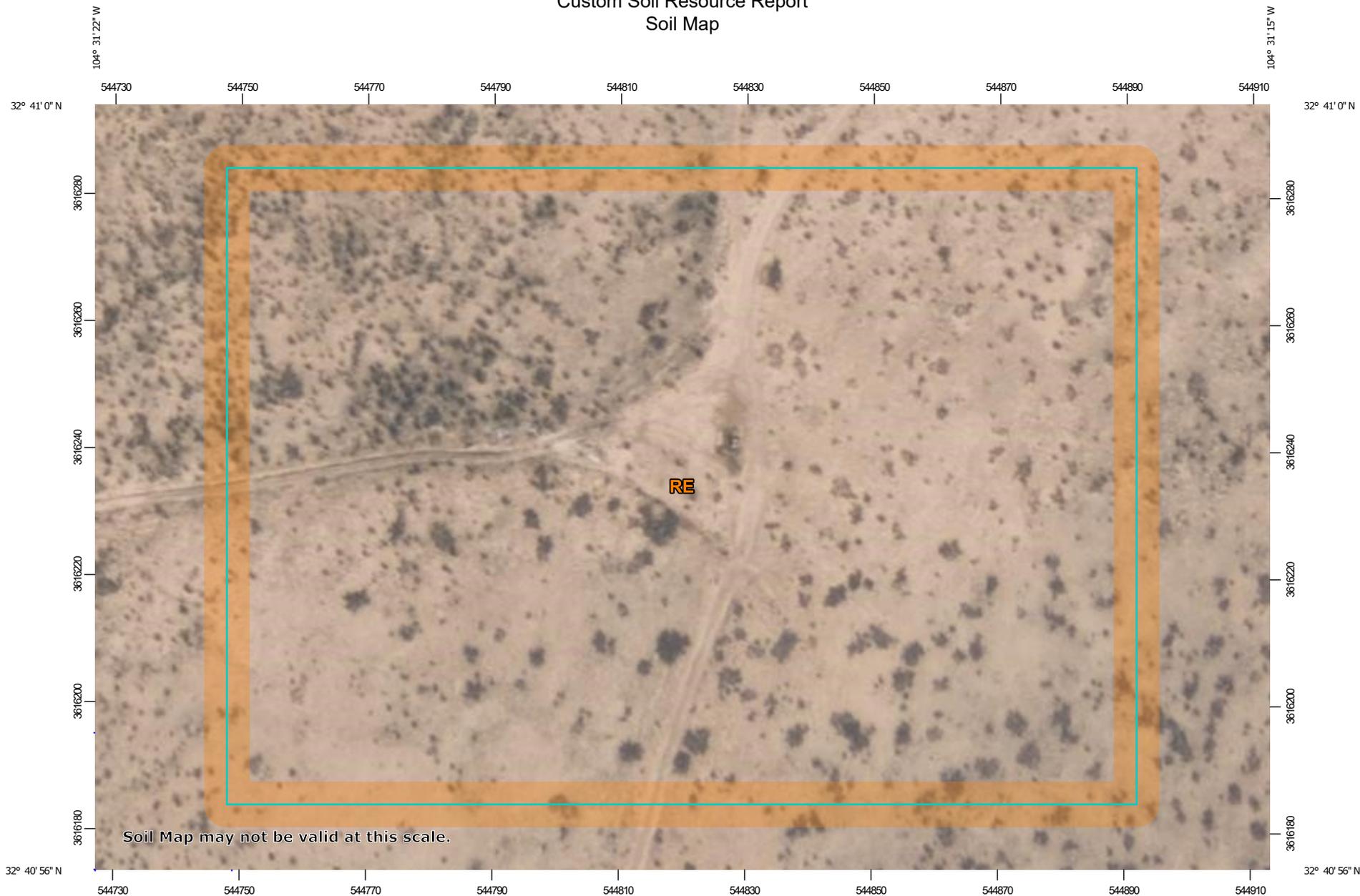
identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

## Soil Map

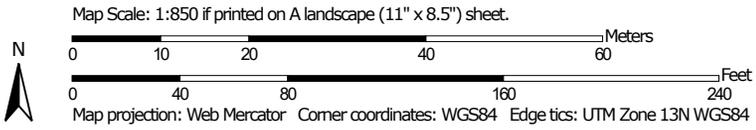
---

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

### Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.



Custom Soil Resource Report

**MAP LEGEND**

**Area of Interest (AOI)**

 Area of Interest (AOI)

**Soils**

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

**Special Point Features**

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

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

**Water Features**

 Streams and Canals

**Transportation**

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

**Background**

 Aerial Photography

**MAP INFORMATION**

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

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

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

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

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

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

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

Soil Survey Area: Eddy Area, New Mexico  
 Survey Area Data: Version 18, Sep 8, 2022

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

Date(s) aerial images were photographed: Feb 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.

## Custom Soil Resource Report

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
RE	Reagan-Upton association, 0 to 9 percent slopes	3.6	100.0%
<b>Totals for Area of Interest</b>		<b>3.6</b>	<b>100.0%</b>

## Map Unit Descriptions

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

## Custom Soil Resource Report

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

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

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

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

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

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

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

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

## Custom Soil Resource Report

**Eddy Area, New Mexico****RE—Reagan-Upton association, 0 to 9 percent slopes****Map Unit Setting***National map unit symbol:* 1w5d*Elevation:* 1,100 to 5,400 feet*Mean annual precipitation:* 6 to 14 inches*Mean annual air temperature:* 60 to 64 degrees F*Frost-free period:* 180 to 240 days*Farmland classification:* Farmland of statewide importance**Map Unit Composition***Reagan and similar soils:* 70 percent*Upton and similar soils:* 25 percent*Minor components:* 5 percent*Estimates are based on observations, descriptions, and transects of the mapunit.***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:* Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)*Sodium adsorption ratio, maximum:* 1.0*Available water supply, 0 to 60 inches:* Moderate (about 8.2 inches)**Interpretive groups***Land capability classification (irrigated):* 2e*Land capability classification (nonirrigated):* 6e*Hydrologic Soil Group:* B*Ecological site:* R042CY153NM - Loamy*Hydric soil rating:* No

## Custom Soil Resource Report

**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:* R042CY159NM - Shallow Loamy  
*Hydric soil rating:* No

**Minor Components****Atoka**

*Percent of map unit:* 3 percent  
*Ecological site:* R070BC007NM - Loamy  
*Hydric soil rating:* No

**Pima**

*Percent of map unit:* 2 percent  
*Ecological site:* R070BC017NM - Bottomland  
*Hydric soil rating:* No

## References

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242)

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## APPENDIX C – Daily Field and Sampling Report(s)

## Ecological Reference Worksheet

**Author(s) / participant(s):** John Tunberg,

**Contact for lead author :** 505-761-4488

**Reference site used? Yes/No**

No

**Date:** 2/12/2010 **MLRA:** 42.3 **Ecological Site:** Loamy This *must* be verified based on soils and climate (see Ecological Site Description). Current plant community *cannot* be used to identify the ecological site.

**Indicators:** 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 **each** 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 occur 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 susceptible 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, 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) >= soap tree 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**

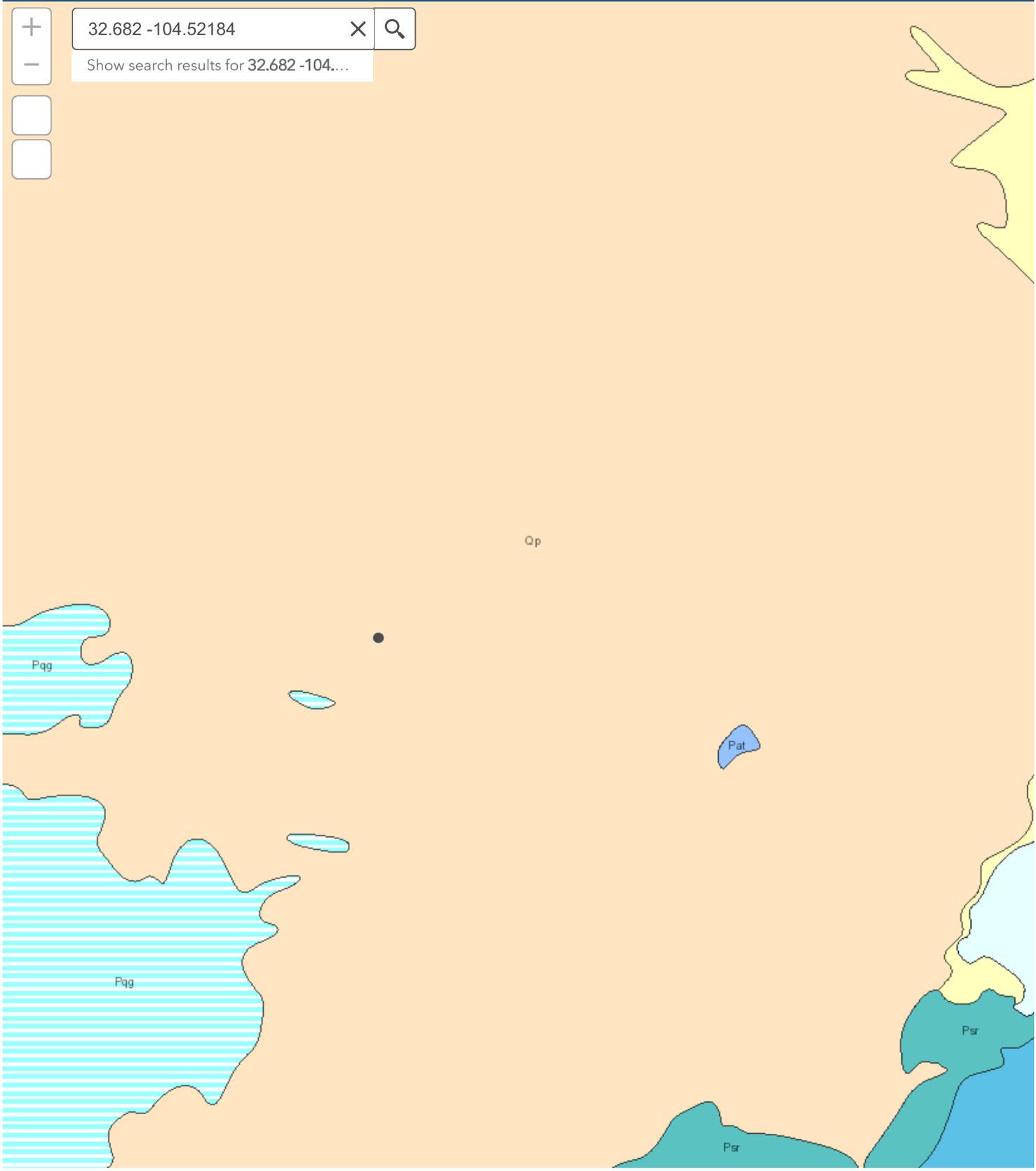
Tarbrush, creosote and mesquite can be invaders to this site. Invasive plants should not occur in reference plant community. However, lovegrass, Russian thistle, kochia, and other nonnative annuals may initially invade following extended disturbance. Mesquite and tarbrush and creosote and lovegrass are 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 tarbrush 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).



# NMBGMR Interactive Resources Map



2mi

-104.470 32.801 Degrees

App State  
Click to restore the map extent and layers visibility where you left off.

## **APPENDIX C - Daily Field Reports with Photographs**



# Daily Site Visit Report

Client:	<u>EOG Resources Inc.</u>	Inspection Date:	<u>6/12/2023</u>
Site Location Name:	<u>State CO Valve Box #14</u>	Report Run Date:	<u>6/12/2023 10:03 PM</u>
Client Contact Name:	<u>Chase Settle</u>	API #:	<u></u>
Client Contact Phone #:	<u>575-703-6537</u>		
Unique Project ID	<u></u>	Project Owner:	<u></u>
Project Reference #	<u></u>	Project Manager:	<u></u>

## Summary of Times

Arrived at Site	<u>6/12/2023 9:23 AM</u>
Departed Site	<u>6/12/2023 4:30 PM</u>

## Field Notes

**15:33** Arrived on site and filled out JSA

Had Standard Safety crew sign JSA

**15:34** Today's focus is to finish collecting Base samples on the west side of the excavation and to continue having materials from excavation hauled off site to an approved waste disposal facility

**15:36** Base samples collected:  
BES23-17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, and 28 @ 4' in depth

All samples were field screened on Titration and Petro Flag

All samples are clean per criteria on Chlorides and TPH in field screenings

**15:37** The crew continued to have materials hauled off site

No dig with equipment occurred today

**15:38** Crew and I are waiting for directions on how to address the 8"-> 2" Polyline on the west side of the excavation



# Daily Site Visit Report

## Site Photos

Viewing Direction: South



Area where Base samples were collected today  
Facing South

Viewing Direction: North



Area where Base samples were collected  
Facing North

Viewing Direction: Northeast



Overview of site  
Facing Northeast

Viewing Direction: Southeast



Overview of site  
Facing Southeast



# Daily Site Visit Report

**Viewing Direction: East**



Descriptive Photo - 5  
Viewing Direction: East  
Caption: Overview of the trench on the east side of the site  
Facing East  
Created: 6/12/2023 3:47:48 PM  
Lat:32.683003, Long:-104.521751

Overview of the trench on the east side of the site

Facing East

**Viewing Direction: North**



Descriptive Photo - 6  
Viewing Direction: North  
Caption: Materials to be hauled off site to approved waste disposal facility  
Facing North  
Created: 6/12/2023 3:48:51 PM  
Lat:32.682957, Long:-104.521492

Materials to be hauled off site to approved waste disposal facility

# Daily Site Visit Report



## Daily Site Visit Signature

**Inspector:** Jacob Reta

**Signature:**

A handwritten signature in black ink, appearing to be 'JR', written over a horizontal line. The signature is stylized and cursive.



# Daily Site Visit Report

Client:	<u>EOG Resources Inc.</u>	Inspection Date:	<u>6/12/2023</u>
Site Location Name:	<u>State CO Valve Box #14</u>	Report Run Date:	<u>6/12/2023 10:04 PM</u>
Client Contact Name:	<u>Chase Settle</u>	API #:	<u></u>
Client Contact Phone #:	<u>575-703-6537</u>		
Unique Project ID	<u></u>	Project Owner:	<u></u>
Project Reference #	<u></u>	Project Manager:	<u></u>

### Summary of Times

Arrived at Site	<u>6/12/2023 3:51 PM</u>
Departed Site	<u>6/12/2023 4:30 PM</u>

### Field Notes

- 15:51** Onsite to document the soil type on the walls of the excavation
- 16:01** All walls throughout the excavation are loamy topsoil

### Next Steps & Recommendations

1



# Daily Site Visit Report

## Site Photos

Viewing Direction: Northeast



North wall of the trench on the east side of the site

Topsoil

Viewing Direction: Southeast



South wall of the trench on the east side of the site

Topsoil



# Daily Site Visit Report

<b>Viewing Direction: Southeast</b>
 <p><small>Descriptive Photo - 3 Viewing Direction: Southeast Desc: Southeast wall of the circle on the west side of the site Topsoil Created: 6/12/2023 3:54:32 PM Lat: 32.982965, Long: -104.521737</small></p>
Southeast wall of the circle on the west side of the site
Topsoil

<b>Viewing Direction: Southwest</b>
 <p><small>Descriptive Photo - 4 Viewing Direction: Southwest Desc: Southwest wall of the circle on the west side of the site Topsoil Created: 6/12/2023 3:55:12 PM Lat: 32.982965, Long: -104.521840</small></p>
Southwest wall of the circle on the west side of the site
Topsoil



# Daily Site Visit Report

<b>Viewing Direction: Northwest</b>
 <p><small>Descriptive Photo - 5 Viewing Direction: Northwest Base: Northwest wall of the circle on the west side of the site Topsoil Created: 6/12/2023 3:38:11 PM Lat:32.983006, Long:-104.521916</small></p>
Northwest wall of the circle on the west side of the site
Topsoil

<b>Viewing Direction: Northwest</b>
 <p><small>Descriptive Photo - 6 Viewing Direction: Northwest Base: Northwest wall of the circle on the west side of the site Topsoil Created: 6/12/2023 3:38:59 PM Lat:32.983120, Long:-104.521949</small></p>
Northwest wall of the circle on the west side of the site
Topsoil



## Daily Site Visit Report

<b>Viewing Direction: Northeast</b>
 <p><small>Descriptive Photo: Viewing Direction: Northeast User: Northeast wall of the circle on the west side of the site Topic: Created: 6/12/2023 3:57:38 PM Lat: 32.862043, Long: -104.631734</small></p>
Northeast wall of the circle on the west side of the site
Topsoil

# Daily Site Visit Report



Daily Site Visit Signature

Inspector: Jacob Reta

Signature:

A handwritten signature in black ink, appearing to be 'JR', written over a horizontal line. The word 'Signature' is faintly visible on the line.

## **APPENDIX D – Notifications**

**From:** [Tina Huerta](#)  
**To:** [ocd.enviro@emnrd.nm.gov](mailto:ocd.enviro@emnrd.nm.gov); [Alan & Cheryl](#); [Austin Weyant](#)  
**Cc:** [Katie Jamison](#); [Michael Yemm](#); [Terrence Gant](#)  
**Subject:** State CO Valve Box 14 (nAPP2315059153) Sampling Notification  
**Date:** May 30, 2023 4:46:48 PM  
**Attachments:** [image001.png](#)

---

Good afternoon,

EOG Resources, Inc. respectfully submits notification (2) business days prior to conducting sampling on the following location.

State CO Valve Box 14  
C-7-19S-25E  
Eddy County, NM  
nAPP2315059153

Sampling will begin at 9:00 a.m. on Friday, June 2, 2023, and continue through Friday, June 9, 2023.

Thank you,

*Tina Huerta*  
*Regulatory Specialist*  
*Direct: 575.748.4168*  
*Cell: 575.703.3121*  
*Email: [tina\\_huerta@eogresources.com](mailto:tina_huerta@eogresources.com)*



**Artesia Division**

**From:** [Chase Settle](#)  
**To:** [Chance Dixon](#)  
**Subject:** FW: State CO Valve Box 14 (nAPP2315059153) Sampling Notification  
**Date:** June 8, 2023 10:46:42 AM  
**Attachments:** [image001.png](#)

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**From:** Tina Huerta <Tina\_Huerta@eogresources.com>  
**Sent:** Thursday, June 8, 2023 10:43 AM  
**To:** ocd.enviro@emnrd.nm.gov; Alan & Cheryl <ahowell@pvtn.net>; Austin Weyant <austin@atkinseng.com>  
**Cc:** Katie Jamison <Katie\_Jamison@eogresources.com>; Michael Yemm <Michael\_Yemm@eogresources.com>; Terrence Gant <Terry\_Gant@eogresources.com>  
**Subject:** State CO Valve Box 14 (nAPP2315059153) Sampling Notification

Good morning,

EOG Resources, Inc. respectfully submits notification (2) business days prior to conducting sampling on the following location.

State CO Valve Box 14  
C-7-19S-25E  
Eddy County, NM  
nAPP2315059153

Sampling will begin at 12:00 p.m. on Monday, June 12, 2023, and continue through Friday, June 16, 2023.

Thank you,

*Tina Huerta*  
*Regulatory Specialist*  
*Direct: 575.748.4168*  
*Cell: 575.703.3121*  
*Email: [tina\\_huerta@eogresources.com](mailto:tina_huerta@eogresources.com)*



**Artesia Division**

## **APPENDIX E – Laboratory Data Reports and Chain of Custody Forms**



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

August 18, 2022

Monica Peppin

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

RE: State Co Valve Box 14

OrderNo.: 2208486

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 30 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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-01 0'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 8:25:00 AM

**Lab ID:** 2208486-001

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/13/2022 10:10:54 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/13/2022 10:10:54 AM
Surr: DNOP	39.1	21-129		%Rec	1	8/13/2022 10:10:54 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/12/2022 5:16:00 AM
Surr: BFB	94.6	37.7-212		%Rec	1	8/12/2022 5:16:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 5:16:00 AM
Toluene	ND	0.050		mg/Kg	1	8/12/2022 5:16:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/12/2022 5:16:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/12/2022 5:16:00 AM
Surr: 4-Bromofluorobenzene	85.9	70-130		%Rec	1	8/12/2022 5:16:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 12:18:46 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-01 2'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 9:00:00 AM

**Lab ID:** 2208486-002

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/13/2022 10:25:26 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/13/2022 10:25:26 AM
Surr: DNOP	50.2	21-129		%Rec	1	8/13/2022 10:25:26 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/12/2022 5:36:00 AM
Surr: BFB	95.9	37.7-212		%Rec	1	8/12/2022 5:36:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 5:36:00 AM
Toluene	ND	0.049		mg/Kg	1	8/12/2022 5:36:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/12/2022 5:36:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/12/2022 5:36:00 AM
Surr: 4-Bromofluorobenzene	85.7	70-130		%Rec	1	8/12/2022 5:36:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	780	60		mg/Kg	20	8/15/2022 12:56:01 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-01 4'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 9:05:00 AM

**Lab ID:** 2208486-003

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/13/2022 10:39:56 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/13/2022 10:39:56 AM
Surr: DNOP	49.7	21-129		%Rec	1	8/13/2022 10:39:56 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/12/2022 5:55:00 AM
Surr: BFB	97.6	37.7-212		%Rec	1	8/12/2022 5:55:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>BRM</b>
Benzene	ND	0.024		mg/Kg	1	8/12/2022 5:55:00 AM
Toluene	ND	0.048		mg/Kg	1	8/12/2022 5:55:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/12/2022 5:55:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/12/2022 5:55:00 AM
Surr: 4-Bromofluorobenzene	87.0	70-130		%Rec	1	8/12/2022 5:55:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	490	60		mg/Kg	20	8/15/2022 1:08:26 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-02 0'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 8:30:00 AM

**Lab ID:** 2208486-004

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/13/2022 10:54:38 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/13/2022 10:54:38 AM
Surr: DNOP	33.9	21-129		%Rec	1	8/13/2022 10:54:38 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/12/2022 6:15:00 AM
Surr: BFB	95.7	37.7-212		%Rec	1	8/12/2022 6:15:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>BRM</b>
Benzene	ND	0.023		mg/Kg	1	8/12/2022 6:15:00 AM
Toluene	ND	0.047		mg/Kg	1	8/12/2022 6:15:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/12/2022 6:15:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	8/12/2022 6:15:00 AM
Surr: 4-Bromofluorobenzene	86.1	70-130		%Rec	1	8/12/2022 6:15:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 1:20:51 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-02 2'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 9:15:00 AM

**Lab ID:** 2208486-005

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/13/2022 11:09:21 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/13/2022 11:09:21 AM
Surr: DNOP	40.5	21-129		%Rec	1	8/13/2022 11:09:21 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/12/2022 6:35:00 AM
Surr: BFB	95.0	37.7-212		%Rec	1	8/12/2022 6:35:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>BRM</b>
Benzene	ND	0.024		mg/Kg	1	8/12/2022 6:35:00 AM
Toluene	ND	0.048		mg/Kg	1	8/12/2022 6:35:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/12/2022 6:35:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/12/2022 6:35:00 AM
Surr: 4-Bromofluorobenzene	84.5	70-130		%Rec	1	8/12/2022 6:35:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	710	60		mg/Kg	20	8/15/2022 1:33:15 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-02 4'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 9:20:00 AM

**Lab ID:** 2208486-006

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/13/2022 11:24:08 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/13/2022 11:24:08 AM
Surr: DNOP	37.8	21-129		%Rec	1	8/13/2022 11:24:08 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/12/2022 6:55:00 AM
Surr: BFB	95.9	37.7-212		%Rec	1	8/12/2022 6:55:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>BRM</b>
Benzene	ND	0.024		mg/Kg	1	8/12/2022 6:55:00 AM
Toluene	ND	0.048		mg/Kg	1	8/12/2022 6:55:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/12/2022 6:55:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	8/12/2022 6:55:00 AM
Surr: 4-Bromofluorobenzene	85.5	70-130		%Rec	1	8/12/2022 6:55:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	430	60		mg/Kg	20	8/15/2022 1:45:40 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-03 0'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 8:30:00 AM

**Lab ID:** 2208486-007

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/13/2022 11:38:58 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/13/2022 11:38:58 AM
Surr: DNOP	35.4	21-129		%Rec	1	8/13/2022 11:38:58 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/12/2022 7:14:00 AM
Surr: BFB	96.6	37.7-212		%Rec	1	8/12/2022 7:14:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>BRM</b>
Benzene	ND	0.024		mg/Kg	1	8/12/2022 7:14:00 AM
Toluene	ND	0.048		mg/Kg	1	8/12/2022 7:14:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/12/2022 7:14:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/12/2022 7:14:00 AM
Surr: 4-Bromofluorobenzene	85.9	70-130		%Rec	1	8/12/2022 7:14:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 1:58:04 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-03 2'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 8:35:00 AM

**Lab ID:** 2208486-008

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/13/2022 11:53:50 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/13/2022 11:53:50 AM
Surr: DNOP	35.3	21-129		%Rec	1	8/13/2022 11:53:50 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/13/2022 12:50:00 AM
Surr: BFB	96.8	37.7-212		%Rec	1	8/13/2022 12:50:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/13/2022 12:50:00 AM
Toluene	ND	0.050		mg/Kg	1	8/13/2022 12:50:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/13/2022 12:50:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	8/13/2022 12:50:00 AM
Surr: 4-Bromofluorobenzene	84.9	70-130		%Rec	1	8/13/2022 12:50:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	700	60		mg/Kg	20	8/15/2022 2:10:28 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-03 4'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 8:40:00 AM

**Lab ID:** 2208486-009

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/13/2022 12:08:45 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/13/2022 12:08:45 PM
Surr: DNOP	36.5	21-129		%Rec	1	8/13/2022 12:08:45 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/13/2022 1:10:00 AM
Surr: BFB	92.1	37.7-212		%Rec	1	8/13/2022 1:10:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/13/2022 1:10:00 AM
Toluene	ND	0.050		mg/Kg	1	8/13/2022 1:10:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/13/2022 1:10:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	8/13/2022 1:10:00 AM
Surr: 4-Bromofluorobenzene	83.1	70-130		%Rec	1	8/13/2022 1:10:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	440	60		mg/Kg	20	8/15/2022 2:47:39 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-04 0'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 8:35:00 AM

**Lab ID:** 2208486-010

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 5:40:33 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/12/2022 5:40:33 AM
Surr: DNOP	59.2	21-129		%Rec	1	8/12/2022 5:40:33 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 3:24:53 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 11:12:57 AM
Toluene	ND	0.049		mg/Kg	1	8/12/2022 11:12:57 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/12/2022 11:12:57 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/12/2022 11:12:57 AM
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/12/2022 11:12:57 AM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/12/2022 11:12:57 AM
Surr: Dibromofluoromethane	124	70-130		%Rec	1	8/12/2022 11:12:57 AM
Surr: Toluene-d8	102	70-130		%Rec	1	8/12/2022 11:12:57 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/12/2022 11:12:57 AM
Surr: BFB	120	70-130		%Rec	1	8/12/2022 11:12:57 AM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-04 2'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 9:35:00 AM

**Lab ID:** 2208486-011

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/12/2022 6:22:18 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/12/2022 6:22:18 AM
Surr: DNOP	86.3	21-129		%Rec	1	8/12/2022 6:22:18 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	700	60		mg/Kg	20	8/15/2022 3:37:18 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 12:39:04 PM
Toluene	ND	0.049		mg/Kg	1	8/12/2022 12:39:04 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/12/2022 12:39:04 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/12/2022 12:39:04 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/12/2022 12:39:04 PM
Surr: 4-Bromofluorobenzene	99.5	70-130		%Rec	1	8/12/2022 12:39:04 PM
Surr: Dibromofluoromethane	120	70-130		%Rec	1	8/12/2022 12:39:04 PM
Surr: Toluene-d8	99.3	70-130		%Rec	1	8/12/2022 12:39:04 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/12/2022 12:39:04 PM
Surr: BFB	114	70-130		%Rec	1	8/12/2022 12:39:04 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-04 4'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 9:40:00 AM

**Lab ID:** 2208486-012

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 6:36:08 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/12/2022 6:36:08 AM
Surr: DNOP	74.8	21-129		%Rec	1	8/12/2022 6:36:08 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	750	60		mg/Kg	20	8/15/2022 3:49:42 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 2:05:13 PM
Toluene	ND	0.049		mg/Kg	1	8/12/2022 2:05:13 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/12/2022 2:05:13 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/12/2022 2:05:13 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/12/2022 2:05:13 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/12/2022 2:05:13 PM
Surr: Dibromofluoromethane	121	70-130		%Rec	1	8/12/2022 2:05:13 PM
Surr: Toluene-d8	99.9	70-130		%Rec	1	8/12/2022 2:05:13 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/12/2022 2:05:13 PM
Surr: BFB	117	70-130		%Rec	1	8/12/2022 2:05:13 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-05 0'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 9:55:00 AM

**Lab ID:** 2208486-013

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 6:49:55 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/12/2022 6:49:55 AM
Surr: DNOP	77.3	21-129		%Rec	1	8/12/2022 6:49:55 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 4:02:07 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 2:34:04 PM
Toluene	ND	0.049		mg/Kg	1	8/12/2022 2:34:04 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/12/2022 2:34:04 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/12/2022 2:34:04 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/12/2022 2:34:04 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/12/2022 2:34:04 PM
Surr: Dibromofluoromethane	127	70-130		%Rec	1	8/12/2022 2:34:04 PM
Surr: Toluene-d8	98.5	70-130		%Rec	1	8/12/2022 2:34:04 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/12/2022 2:34:04 PM
Surr: BFB	114	70-130		%Rec	1	8/12/2022 2:34:04 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-05 2'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 10:00:00 AM

**Lab ID:** 2208486-014

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 7:03:36 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/12/2022 7:03:36 AM
Surr: DNOP	66.4	21-129		%Rec	1	8/12/2022 7:03:36 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	1400	60		mg/Kg	20	8/15/2022 4:14:32 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 3:02:52 PM
Toluene	ND	0.049		mg/Kg	1	8/12/2022 3:02:52 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/12/2022 3:02:52 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/12/2022 3:02:52 PM
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	8/12/2022 3:02:52 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/12/2022 3:02:52 PM
Surr: Dibromofluoromethane	130	70-130		%Rec	1	8/12/2022 3:02:52 PM
Surr: Toluene-d8	100	70-130		%Rec	1	8/12/2022 3:02:52 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/12/2022 3:02:52 PM
Surr: BFB	118	70-130		%Rec	1	8/12/2022 3:02:52 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-05 4'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 10:05:00 AM

**Lab ID:** 2208486-015

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/12/2022 7:17:09 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/12/2022 7:17:09 AM
Surr: DNOP	74.2	21-129		%Rec	1	8/12/2022 7:17:09 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JTT</b>
Chloride	700	60		mg/Kg	20	8/15/2022 4:26:57 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 3:31:38 PM
Toluene	ND	0.049		mg/Kg	1	8/12/2022 3:31:38 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/12/2022 3:31:38 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/12/2022 3:31:38 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/12/2022 3:31:38 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/12/2022 3:31:38 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	8/12/2022 3:31:38 PM
Surr: Toluene-d8	96.8	70-130		%Rec	1	8/12/2022 3:31:38 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/12/2022 3:31:38 PM
Surr: BFB	112	70-130		%Rec	1	8/12/2022 3:31:38 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-06 0'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 10:20:00 AM

**Lab ID:** 2208486-016

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 7:30:36 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/12/2022 7:30:36 AM
Surr: DNOP	69.0	21-129		%Rec	1	8/12/2022 7:30:36 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 3:12:56 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 4:00:25 PM
Toluene	ND	0.049		mg/Kg	1	8/12/2022 4:00:25 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/12/2022 4:00:25 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/12/2022 4:00:25 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/12/2022 4:00:25 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/12/2022 4:00:25 PM
Surr: Dibromofluoromethane	121	70-130		%Rec	1	8/12/2022 4:00:25 PM
Surr: Toluene-d8	97.8	70-130		%Rec	1	8/12/2022 4:00:25 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/12/2022 4:00:25 PM
Surr: BFB	112	70-130		%Rec	1	8/12/2022 4:00:25 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-06 2'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 10:25:00 AM

**Lab ID:** 2208486-017

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 7:44:23 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/12/2022 7:44:23 AM
Surr: DNOP	68.4	21-129		%Rec	1	8/12/2022 7:44:23 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	1100	60		mg/Kg	20	8/15/2022 3:49:56 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.024		mg/Kg	1	8/12/2022 4:29:13 PM
Toluene	ND	0.049		mg/Kg	1	8/12/2022 4:29:13 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/12/2022 4:29:13 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/12/2022 4:29:13 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/12/2022 4:29:13 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/12/2022 4:29:13 PM
Surr: Dibromofluoromethane	124	70-130		%Rec	1	8/12/2022 4:29:13 PM
Surr: Toluene-d8	95.1	70-130		%Rec	1	8/12/2022 4:29:13 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/12/2022 4:29:13 PM
Surr: BFB	113	70-130		%Rec	1	8/12/2022 4:29:13 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-06 4'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 10:30:00 AM

**Lab ID:** 2208486-018

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 7:58:04 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/12/2022 7:58:04 AM
Surr: DNOP	48.2	21-129		%Rec	1	8/12/2022 7:58:04 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	1300	59		mg/Kg	20	8/15/2022 4:51:42 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 4:58:04 PM
Toluene	ND	0.050		mg/Kg	1	8/12/2022 4:58:04 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/12/2022 4:58:04 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/12/2022 4:58:04 PM
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	8/12/2022 4:58:04 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/12/2022 4:58:04 PM
Surr: Dibromofluoromethane	130	70-130	S	%Rec	1	8/12/2022 4:58:04 PM
Surr: Toluene-d8	94.2	70-130		%Rec	1	8/12/2022 4:58:04 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/12/2022 4:58:04 PM
Surr: BFB	112	70-130		%Rec	1	8/12/2022 4:58:04 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-07 0'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 10:50:00 AM

**Lab ID:** 2208486-019

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 8:11:50 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/12/2022 8:11:50 AM
Surr: DNOP	44.6	21-129		%Rec	1	8/12/2022 8:11:50 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 5:04:03 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 5:26:51 PM
Toluene	ND	0.050		mg/Kg	1	8/12/2022 5:26:51 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/12/2022 5:26:51 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/12/2022 5:26:51 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/12/2022 5:26:51 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/12/2022 5:26:51 PM
Surr: Dibromofluoromethane	126	70-130		%Rec	1	8/12/2022 5:26:51 PM
Surr: Toluene-d8	97.3	70-130		%Rec	1	8/12/2022 5:26:51 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/12/2022 5:26:51 PM
Surr: BFB	116	70-130		%Rec	1	8/12/2022 5:26:51 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-07 2'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 10:55:00 AM

**Lab ID:** 2208486-020

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/12/2022 8:26:05 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/12/2022 8:26:05 AM
Surr: DNOP	42.2	21-129		%Rec	1	8/12/2022 8:26:05 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JMT</b>
Chloride	1000	60		mg/Kg	20	8/15/2022 5:16:22 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 5:55:39 PM
Toluene	ND	0.050		mg/Kg	1	8/12/2022 5:55:39 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/12/2022 5:55:39 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/12/2022 5:55:39 PM
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	8/12/2022 5:55:39 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/12/2022 5:55:39 PM
Surr: Dibromofluoromethane	124	70-130		%Rec	1	8/12/2022 5:55:39 PM
Surr: Toluene-d8	103	70-130		%Rec	1	8/12/2022 5:55:39 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/12/2022 5:55:39 PM
Surr: BFB	121	70-130		%Rec	1	8/12/2022 5:55:39 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-07 4'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 11:00:00 AM

**Lab ID:** 2208486-021

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/12/2022 8:39:39 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/12/2022 8:39:39 AM
Surr: DNOP	50.3	21-129		%Rec	1	8/12/2022 8:39:39 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>NAI</b>
Chloride	910	60		mg/Kg	20	8/15/2022 12:37:49 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 6:24:25 PM
Toluene	ND	0.050		mg/Kg	1	8/12/2022 6:24:25 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/12/2022 6:24:25 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/12/2022 6:24:25 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/12/2022 6:24:25 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/12/2022 6:24:25 PM
Surr: Dibromofluoromethane	129	70-130		%Rec	1	8/12/2022 6:24:25 PM
Surr: Toluene-d8	97.0	70-130		%Rec	1	8/12/2022 6:24:25 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/12/2022 6:24:25 PM
Surr: BFB	112	70-130		%Rec	1	8/12/2022 6:24:25 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-08 0'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 11:10:00 AM

**Lab ID:** 2208486-022

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 8:53:28 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/12/2022 8:53:28 AM
Surr: DNOP	45.7	21-129		%Rec	1	8/12/2022 8:53:28 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>NAI</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 1:15:01 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 6:53:15 PM
Toluene	ND	0.050		mg/Kg	1	8/12/2022 6:53:15 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/12/2022 6:53:15 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/12/2022 6:53:15 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/12/2022 6:53:15 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/12/2022 6:53:15 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	8/12/2022 6:53:15 PM
Surr: Toluene-d8	97.9	70-130		%Rec	1	8/12/2022 6:53:15 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/12/2022 6:53:15 PM
Surr: BFB	116	70-130		%Rec	1	8/12/2022 6:53:15 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-08 2'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 11:15:00 AM

**Lab ID:** 2208486-023

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 9:07:15 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/12/2022 9:07:15 AM
Surr: DNOP	56.3	21-129		%Rec	1	8/12/2022 9:07:15 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>NAI</b>
Chloride	160	60		mg/Kg	20	8/15/2022 1:27:26 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.024		mg/Kg	1	8/12/2022 7:22:02 PM
Toluene	ND	0.048		mg/Kg	1	8/12/2022 7:22:02 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/12/2022 7:22:02 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/12/2022 7:22:02 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/12/2022 7:22:02 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/12/2022 7:22:02 PM
Surr: Dibromofluoromethane	126	70-130		%Rec	1	8/12/2022 7:22:02 PM
Surr: Toluene-d8	97.4	70-130		%Rec	1	8/12/2022 7:22:02 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/12/2022 7:22:02 PM
Surr: BFB	112	70-130		%Rec	1	8/12/2022 7:22:02 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-08 4'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 11:20:00 AM

**Lab ID:** 2208486-024

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	8/12/2022 9:21:02 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/12/2022 9:21:02 AM
Surr: DNOP	57.3	21-129		%Rec	1	8/12/2022 9:21:02 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>NAI</b>
Chloride	370	60		mg/Kg	20	8/15/2022 1:39:50 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 7:50:47 PM
Toluene	ND	0.050		mg/Kg	1	8/12/2022 7:50:47 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/12/2022 7:50:47 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/12/2022 7:50:47 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/12/2022 7:50:47 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/12/2022 7:50:47 PM
Surr: Dibromofluoromethane	120	70-130		%Rec	1	8/12/2022 7:50:47 PM
Surr: Toluene-d8	99.1	70-130		%Rec	1	8/12/2022 7:50:47 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/12/2022 7:50:47 PM
Surr: BFB	117	70-130		%Rec	1	8/12/2022 7:50:47 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-09 0'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 11:35:00 AM

**Lab ID:** 2208486-025

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 9:35:02 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/12/2022 9:35:02 AM
Surr: DNOP	48.3	21-129		%Rec	1	8/12/2022 9:35:02 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>NAI</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 1:52:15 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 8:19:29 PM
Toluene	ND	0.050		mg/Kg	1	8/12/2022 8:19:29 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/12/2022 8:19:29 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/12/2022 8:19:29 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/12/2022 8:19:29 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/12/2022 8:19:29 PM
Surr: Dibromofluoromethane	123	70-130		%Rec	1	8/12/2022 8:19:29 PM
Surr: Toluene-d8	101	70-130		%Rec	1	8/12/2022 8:19:29 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/12/2022 8:19:29 PM
Surr: BFB	118	70-130		%Rec	1	8/12/2022 8:19:29 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-09 2'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 11:40:00 AM

**Lab ID:** 2208486-026

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 9:48:59 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/12/2022 9:48:59 AM
Surr: DNOP	51.6	21-129		%Rec	1	8/12/2022 9:48:59 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>NAI</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 2:04:39 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 8:48:10 PM
Toluene	ND	0.049		mg/Kg	1	8/12/2022 8:48:10 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/12/2022 8:48:10 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/12/2022 8:48:10 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	8/12/2022 8:48:10 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/12/2022 8:48:10 PM
Surr: Dibromofluoromethane	121	70-130		%Rec	1	8/12/2022 8:48:10 PM
Surr: Toluene-d8	97.2	70-130		%Rec	1	8/12/2022 8:48:10 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/12/2022 8:48:10 PM
Surr: BFB	113	70-130		%Rec	1	8/12/2022 8:48:10 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-09 4'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 11:45:00 AM

**Lab ID:** 2208486-027

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/12/2022 10:02:53 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/12/2022 10:02:53 AM
Surr: DNOP	54.8	21-129		%Rec	1	8/12/2022 10:02:53 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>NAI</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 6:12:42 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/12/2022 11:40:09 PM
Toluene	ND	0.050		mg/Kg	1	8/12/2022 11:40:09 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/12/2022 11:40:09 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/12/2022 11:40:09 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/12/2022 11:40:09 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/12/2022 11:40:09 PM
Surr: Dibromofluoromethane	121	70-130		%Rec	1	8/12/2022 11:40:09 PM
Surr: Toluene-d8	101	70-130		%Rec	1	8/12/2022 11:40:09 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/12/2022 11:40:09 PM
Surr: BFB	122	70-130		%Rec	1	8/12/2022 11:40:09 PM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-10 0'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 1:40:00 PM

**Lab ID:** 2208486-028

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/12/2022 10:16:51 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/12/2022 10:16:51 AM
Surr: DNOP	58.4	21-129		%Rec	1	8/12/2022 10:16:51 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>NAI</b>
Chloride	ND	60		mg/Kg	20	8/15/2022 6:25:07 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/13/2022 12:08:47 AM
Toluene	ND	0.049		mg/Kg	1	8/13/2022 12:08:47 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/13/2022 12:08:47 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/13/2022 12:08:47 AM
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/13/2022 12:08:47 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/13/2022 12:08:47 AM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/13/2022 12:08:47 AM
Surr: Toluene-d8	98.0	70-130		%Rec	1	8/13/2022 12:08:47 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/13/2022 12:08:47 AM
Surr: BFB	114	70-130		%Rec	1	8/13/2022 12:08:47 AM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-10 2'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 1:45:00 PM

**Lab ID:** 2208486-029

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	8/12/2022 10:30:46 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/12/2022 10:30:46 AM
Surr: DNOP	55.7	21-129		%Rec	1	8/12/2022 10:30:46 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>NAI</b>
Chloride	580	60		mg/Kg	20	8/15/2022 6:37:31 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/13/2022 12:37:21 AM
Toluene	ND	0.050		mg/Kg	1	8/13/2022 12:37:21 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/13/2022 12:37:21 AM
Xylenes, Total	ND	0.10		mg/Kg	1	8/13/2022 12:37:21 AM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/13/2022 12:37:21 AM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/13/2022 12:37:21 AM
Surr: Dibromofluoromethane	120	70-130		%Rec	1	8/13/2022 12:37:21 AM
Surr: Toluene-d8	102	70-130		%Rec	1	8/13/2022 12:37:21 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/13/2022 12:37:21 AM
Surr: BFB	118	70-130		%Rec	1	8/13/2022 12:37:21 AM

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

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

**Analytical Report**

Lab Order **2208486**

Date Reported: **8/18/2022**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** BH22-10 4'

**Project:** State Co Valve Box 14

**Collection Date:** 8/5/2022 1:50:00 PM

**Lab ID:** 2208486-030

**Matrix:** SOIL

**Received Date:** 8/9/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>SB</b>
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/13/2022 4:24:25 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/13/2022 4:24:25 AM
Surr: DNOP	84.8	21-129		%Rec	1	8/13/2022 4:24:25 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>BRM</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/13/2022 3:09:00 AM
Surr: BFB	88.5	37.7-212		%Rec	1	8/13/2022 3:09:00 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>BRM</b>
Benzene	ND	0.025		mg/Kg	1	8/13/2022 3:09:00 AM
Toluene	ND	0.050		mg/Kg	1	8/13/2022 3:09:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/13/2022 3:09:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/13/2022 3:09:00 AM
Surr: 4-Bromofluorobenzene	81.8	70-130		%Rec	1	8/13/2022 3:09:00 AM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>NAI</b>
Chloride	1400	60		mg/Kg	20	8/15/2022 6:49:55 PM

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208486

18-Aug-22

**Client:** Vertex Resources Services, Inc.

**Project:** State Co Valve Box 14

Sample ID: <b>MB-69495</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69495</b>	RunNo: <b>90282</b>								
Prep Date: <b>8/15/2022</b>	Analysis Date: <b>8/15/2022</b>	SeqNo: <b>3220645</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-69495</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>69495</b>	RunNo: <b>90282</b>								
Prep Date: <b>8/15/2022</b>	Analysis Date: <b>8/15/2022</b>	SeqNo: <b>3220647</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	99.3	90	110			

Sample ID: <b>MB-69494</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69494</b>	RunNo: <b>90295</b>								
Prep Date: <b>8/15/2022</b>	Analysis Date: <b>8/15/2022</b>	SeqNo: <b>3220734</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-69494</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>69494</b>	RunNo: <b>90295</b>								
Prep Date: <b>8/15/2022</b>	Analysis Date: <b>8/15/2022</b>	SeqNo: <b>3220735</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

Sample ID: <b>MB-69497</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69497</b>	RunNo: <b>90297</b>								
Prep Date: <b>8/15/2022</b>	Analysis Date: <b>8/15/2022</b>	SeqNo: <b>3220846</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-69497</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>69497</b>	RunNo: <b>90297</b>								
Prep Date: <b>8/15/2022</b>	Analysis Date: <b>8/15/2022</b>	SeqNo: <b>3220847</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208486

18-Aug-22

**Client:** Vertex Resources Services, Inc.

**Project:** State Co Valve Box 14

Sample ID: <b>MB-69396</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69396</b>	RunNo: <b>90193</b>								
Prep Date: <b>8/10/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3218163</b>	Units: <b>mg/Kg</b>							
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	7.2		10.00		71.5	21	129			

Sample ID: <b>LCS-69396</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>69396</b>	RunNo: <b>90193</b>								
Prep Date: <b>8/10/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3218164</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	15	50.00	0	96.1	64.4	127			
Surr: DNOP	2.8		5.000		55.4	21	129			

Sample ID: <b>2208486-010AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>BH22-04 0'</b>	Batch ID: <b>69396</b>	RunNo: <b>90193</b>								
Prep Date: <b>8/10/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3218166</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	15	48.73	0	85.7	36.1	154			
Surr: DNOP	2.3		4.873		48.2	21	129			

Sample ID: <b>2208486-010AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>BH22-04 0'</b>	Batch ID: <b>69396</b>	RunNo: <b>90193</b>								
Prep Date: <b>8/10/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3218167</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	14	48.31	0	80.8	36.1	154	6.76	33.9	
Surr: DNOP	2.0		4.831		41.3	21	129	0	0	

Sample ID: <b>LCS-69454</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>69454</b>	RunNo: <b>90247</b>								
Prep Date: <b>8/11/2022</b>	Analysis Date: <b>8/13/2022</b>	SeqNo: <b>3218544</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	15	50.00	0	77.3	64.4	127			
Surr: DNOP	3.9		5.000		78.7	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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208486

18-Aug-22

**Client:** Vertex Resources Services, Inc.

**Project:** State Co Valve Box 14

Sample ID: <b>MB-69454</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69454</b>	RunNo: <b>90247</b>								
Prep Date: <b>8/11/2022</b>	Analysis Date: <b>8/13/2022</b>	SeqNo: <b>3218546</b>	Units: <b>mg/Kg</b>							
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	9.2		10.00		92.3	21	129			

Sample ID: <b>MB-69436</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69436</b>	RunNo: <b>90272</b>								
Prep Date: <b>8/11/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3219906</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.8		10.00		88.2	21	129			

Sample ID: <b>LCS-69436</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>69436</b>	RunNo: <b>90272</b>								
Prep Date: <b>8/11/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3219907</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.8	21	129			

Sample ID: <b>MB-69420</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69420</b>	RunNo: <b>90272</b>								
Prep Date: <b>8/11/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3219908</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		93.0	21	129			

Sample ID: <b>LCS-69420</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>69420</b>	RunNo: <b>90272</b>								
Prep Date: <b>8/11/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3219909</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.0	21	129			

Sample ID: <b>MB-69434</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69434</b>	RunNo: <b>90272</b>								
Prep Date: <b>8/11/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3219910</b>	Units: <b>mg/Kg</b>							
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		86.6	21	129			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208486

18-Aug-22

**Client:** Vertex Resources Services, Inc.

**Project:** State Co Valve Box 14

Sample ID: <b>LCS-69434</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>69434</b>	RunNo: <b>90272</b>								
Prep Date: <b>8/11/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3219911</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	15	50.00	0	83.1	64.4	127			
Surr: DNOP	4.2		5.000		84.3	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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208486

18-Aug-22

**Client:** Vertex Resources Services, Inc.

**Project:** State Co Valve Box 14

Sample ID: <b>ics-69372</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>69372</b>		RunNo: <b>90181</b>							
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/11/2022</b>		SeqNo: <b>3216917</b>					Units: <b>mg/Kg</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	72.3	137			
Surr: BFB	2100		1000		212	37.7	212			

Sample ID: <b>mb-69372</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>69372</b>		RunNo: <b>90181</b>							
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/11/2022</b>		SeqNo: <b>3216918</b>					Units: <b>mg/Kg</b>		
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		92.2	37.7	212			

Sample ID: <b>ics-69398</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>69398</b>		RunNo: <b>90227</b>							
Prep Date: <b>8/10/2022</b>	Analysis Date: <b>8/13/2022</b>		SeqNo: <b>3218852</b>					Units: <b>mg/Kg</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.8	72.3	137			
Surr: BFB	2000		1000		197	37.7	212			

Sample ID: <b>mb-69398</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>69398</b>		RunNo: <b>90227</b>							
Prep Date: <b>8/10/2022</b>	Analysis Date: <b>8/13/2022</b>		SeqNo: <b>3218853</b>					Units: <b>mg/Kg</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		89.3	37.7	212			

Sample ID: <b>2208486-030ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BH22-10 4'</b>	Batch ID: <b>69398</b>		RunNo: <b>90227</b>							
Prep Date: <b>8/10/2022</b>	Analysis Date: <b>8/13/2022</b>		SeqNo: <b>3218855</b>					Units: <b>mg/Kg</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.9	24.73	0	99.2	70	130			
Surr: BFB	2000		989.1		199	37.7	212			

Sample ID: <b>2208486-030amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>BH22-10 4'</b>	Batch ID: <b>69398</b>		RunNo: <b>90227</b>							
Prep Date: <b>8/10/2022</b>	Analysis Date: <b>8/13/2022</b>		SeqNo: <b>3218856</b>					Units: <b>mg/Kg</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208486

18-Aug-22

**Client:** Vertex Resources Services, Inc.

**Project:** State Co Valve Box 14

Sample ID: <b>2208486-030amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>BH22-10 4'</b>	Batch ID: <b>69398</b>	RunNo: <b>90227</b>								
Prep Date: <b>8/10/2022</b>	Analysis Date: <b>8/13/2022</b>	SeqNo: <b>3218856</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	24.90	0	99.3	70	130	0.856	20	
Surr: BFB	1900		996.0		193	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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208486

18-Aug-22

**Client:** Vertex Resources Services, Inc.

**Project:** State Co Valve Box 14

Sample ID: <b>ics-69372</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>69372</b>		RunNo: <b>90181</b>							
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/11/2022</b>		SeqNo: <b>3216965</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.1	80	120			
Toluene	0.89	0.050	1.000	0	89.4	80	120			
Ethylbenzene	0.91	0.050	1.000	0	90.8	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.6	80	120			
Surr: 4-Bromofluorobenzene	0.88		1.000		87.8	70	130			

Sample ID: <b>mb-69372</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>69372</b>		RunNo: <b>90181</b>							
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/11/2022</b>		SeqNo: <b>3216966</b>		Units: <b>mg/Kg</b>					
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		85.1	70	130			

Sample ID: <b>mb-69398</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>69398</b>		RunNo: <b>90227</b>							
Prep Date: <b>8/10/2022</b>	Analysis Date: <b>8/13/2022</b>		SeqNo: <b>3218906</b>		Units: <b>mg/Kg</b>					
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	0.81		1.000		80.6	70	130			

Sample ID: <b>ics-69398</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>69398</b>		RunNo: <b>90279</b>							
Prep Date: <b>8/10/2022</b>	Analysis Date: <b>8/15/2022</b>		SeqNo: <b>3220401</b>		Units: <b>mg/Kg</b>					
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	0.94	0.050	1.000	0	94.2	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.9	80	120			
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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208486

18-Aug-22

**Client:** Vertex Resources Services, Inc.

**Project:** State Co Valve Box 14

Sample ID: <b>2208486-011ams</b>	SampType: <b>MS4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>BH22-04 2'</b>	Batch ID: <b>69373</b>	RunNo: <b>90281</b>								
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3220256</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	0.9852	0	88.1	75.8	123			
Toluene	0.86	0.049	0.9852	0	87.1	68.3	130			
Ethylbenzene	0.85	0.049	0.9852	0	86.5	76.6	132			
Xylenes, Total	2.8	0.099	2.956	0	93.4	74.7	132			
Surr: 1,2-Dichloroethane-d4	0.53		0.4926		108	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.4926		106	70	130			
Surr: Dibromofluoromethane	0.59		0.4926		120	70	130			
Surr: Toluene-d8	0.48		0.4926		98.3	70	130			

Sample ID: <b>2208486-011amsd</b>	SampType: <b>MSD4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>BH22-04 2'</b>	Batch ID: <b>69373</b>	RunNo: <b>90281</b>								
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3220257</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	0.9911	0	85.0	75.8	123	2.99	20	
Toluene	0.87	0.050	0.9911	0	87.4	68.3	130	1.01	20	
Ethylbenzene	0.86	0.050	0.9911	0	86.8	76.6	132	0.927	20	
Xylenes, Total	2.7	0.099	2.973	0	90.4	74.7	132	2.71	20	
Surr: 1,2-Dichloroethane-d4	0.52		0.4955		105	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.52		0.4955		106	70	130	0	0	
Surr: Dibromofluoromethane	0.62		0.4955		125	70	130	0	0	
Surr: Toluene-d8	0.51		0.4955		103	70	130	0	0	

Sample ID: <b>Ics-69373</b>	SampType: <b>LCS4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>69373</b>	RunNo: <b>90281</b>								
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3220276</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.3	80	120			
Toluene	0.84	0.050	1.000	0	84.4	80	120			
Ethylbenzene	0.85	0.050	1.000	0	84.9	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.5	80	120			
Surr: 1,2-Dichloroethane-d4	0.56		0.5000		112	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		107	70	130			
Surr: Dibromofluoromethane	0.60		0.5000		119	70	130			
Surr: Toluene-d8	0.50		0.5000		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 Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208486

18-Aug-22

**Client:** Vertex Resources Services, Inc.

**Project:** State Co Valve Box 14

Sample ID: <b>mb-69373</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69373</b>	RunNo: <b>90281</b>								
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3220277</b>			Units: <b>mg/Kg</b>					
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	0.53		0.5000		107	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		104	70	130			
Surr: Dibromofluoromethane	0.60		0.5000		119	70	130			
Surr: Toluene-d8	0.50		0.5000		99.7	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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2208486

18-Aug-22

**Client:** Vertex Resources Services, Inc.

**Project:** State Co Valve Box 14

Sample ID: <b>2208486-010ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>BH22-04 0'</b>	Batch ID: <b>69373</b>	RunNo: <b>90281</b>								
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3220229</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	24.95	0	89.8	65.9	123			
Surr: BFB	550		499.0		110	70	130			

Sample ID: <b>2208486-010amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>BH22-04 0'</b>	Batch ID: <b>69373</b>	RunNo: <b>90281</b>								
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3220230</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	24.85	0	87.4	65.9	123	3.11	20	
Surr: BFB	530		497.0		106	70	130	0	0	

Sample ID: <b>mb-69373</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>69373</b>	RunNo: <b>90281</b>								
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3220251</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	590		500.0		118	70	130			

Sample ID: <b>lcs-69373</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>69373</b>	RunNo: <b>90281</b>								
Prep Date: <b>8/9/2022</b>	Analysis Date: <b>8/12/2022</b>	SeqNo: <b>3220860</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.6	70	130			
Surr: BFB	560		500.0		111	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



# Sample Log-In Check List

Client Name: Vertex Resources Services, Inc. Work Order Number: 2208486 RcptNo: 1

Received By: Juan Rojas 8/9/2022 7:15:00 AM

*Juan Rojas*

Completed By: Sean Livingston 8/9/2022 8:31:41 AM

*Sean Livingston*

Reviewed By: *WPL 8.09.22*

### Chain of Custody

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

### Log In

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

# of preserved bottles checked for pH: \_\_\_\_\_  
(<2 or >12 unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: *jnsla/22*

### Special Handling (if applicable)

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

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

16. Additional remarks:

### 17. Cooler Information

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





### Chain-of-Custody Record

Client: Vertex  
 (SOG Chase Settlement)  
 Mailing Address:  
 \_\_\_\_\_  
 Phone #: \_\_\_\_\_  
 email or Fax#: \_\_\_\_\_  
 QA/QC Package:  
 Standard  Level 4 (Full Validation)  
 Accreditation:  Az Compliance  
 NELAC  Other  
 EDD (Type) \_\_\_\_\_

Turn-Around Time:  
 Standard  Rush 5 days  
 Project Name:  
Stowe Co Valve Box #14  
 Project #:  
226-00716-01  
 Project Manager:  
Monica Peppin  
 Sampler: Lynne Anderson  
 On Ice:  Yes  No  
 # of Coolers: 1  
 Cooler Temp (including CF): 0.4-0.1 = 0.3 (°C)

### Analysis Request

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

Received by: Monica Peppin Date: 8/18/22 Time: 1900  
 Received by: Lynne Anderson Date: 8/19/22 Time: 7:15

Remarks:  
Direct bill to SOG, Chase Settlement  
cc. M. Peppin for Final Report

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



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

June 16, 2023

Chance Dixon  
EOG  
105 South Fourth Street  
Artesia, NM 88210  
TEL:  
FAX

RE: State CO Valve Box 14

OrderNo.: 2306396

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/8/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order **2306396**

Date Reported: **6/16/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** WES23-02 0-4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/5/2023 11:00:00 AM

**Lab ID:** 2306396-001

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	310	60		mg/Kg	20	6/12/2023 10:08:04 AM	75515
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/9/2023 9:41:57 PM	75498
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/9/2023 9:41:57 PM	75498
Surr: DNOP	88.6	69-147		%Rec	1	6/9/2023 9:41:57 PM	75498
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/12/2023 5:47:00 PM	75478
Surr: BFB	105	15-244		%Rec	1	6/12/2023 5:47:00 PM	75478
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>KMN</b>
Benzene	ND	0.025		mg/Kg	1	6/12/2023 5:47:00 PM	75478
Toluene	ND	0.049		mg/Kg	1	6/12/2023 5:47:00 PM	75478
Ethylbenzene	ND	0.049		mg/Kg	1	6/12/2023 5:47:00 PM	75478
Xylenes, Total	ND	0.099		mg/Kg	1	6/12/2023 5:47:00 PM	75478
Surr: 4-Bromofluorobenzene	97.8	39.1-146		%Rec	1	6/12/2023 5:47:00 PM	75478

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306396**

Date Reported: **6/16/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** WES23-03 0-4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/5/2023 11:05:00 AM

**Lab ID:** 2306396-002

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	580	60		mg/Kg	20	6/12/2023 10:20:24 AM	75515
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/9/2023 9:52:54 PM	75498
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/9/2023 9:52:54 PM	75498
Surr: DNOP	88.5	69-147		%Rec	1	6/9/2023 9:52:54 PM	75498
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/12/2023 6:09:00 PM	75478
Surr: BFB	101	15-244		%Rec	1	6/12/2023 6:09:00 PM	75478
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>KMN</b>
Benzene	ND	0.024		mg/Kg	1	6/12/2023 6:09:00 PM	75478
Toluene	ND	0.048		mg/Kg	1	6/12/2023 6:09:00 PM	75478
Ethylbenzene	ND	0.048		mg/Kg	1	6/12/2023 6:09:00 PM	75478
Xylenes, Total	ND	0.096		mg/Kg	1	6/12/2023 6:09:00 PM	75478
Surr: 4-Bromofluorobenzene	95.4	39.1-146		%Rec	1	6/12/2023 6:09:00 PM	75478

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306396**

Date Reported: **6/16/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** WES23-04 0-4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/5/2023 11:10:00 AM

**Lab ID:** 2306396-003

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	360	60		mg/Kg	20	6/12/2023 10:57:26 AM	75515
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/9/2023 10:03:53 PM	75498
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/9/2023 10:03:53 PM	75498
Surr: DNOP	84.4	69-147		%Rec	1	6/9/2023 10:03:53 PM	75498
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	6/12/2023 6:31:00 PM	75478
Surr: BFB	103	15-244		%Rec	1	6/12/2023 6:31:00 PM	75478
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>KMN</b>
Benzene	ND	0.023		mg/Kg	1	6/12/2023 6:31:00 PM	75478
Toluene	ND	0.046		mg/Kg	1	6/12/2023 6:31:00 PM	75478
Ethylbenzene	ND	0.046		mg/Kg	1	6/12/2023 6:31:00 PM	75478
Xylenes, Total	ND	0.093		mg/Kg	1	6/12/2023 6:31:00 PM	75478
Surr: 4-Bromofluorobenzene	94.5	39.1-146		%Rec	1	6/12/2023 6:31:00 PM	75478

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306396

16-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>MB-75515</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75515</b>	RunNo: <b>97378</b>								
Prep Date: <b>6/12/2023</b>	Analysis Date: <b>6/12/2023</b>	SeqNo: <b>3538177</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-75515</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75515</b>	RunNo: <b>97378</b>								
Prep Date: <b>6/12/2023</b>	Analysis Date: <b>6/12/2023</b>	SeqNo: <b>3538178</b>	Units: <b>mg/Kg</b>							
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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306396

16-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>LCS-75498</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75498</b>	RunNo: <b>97343</b>								
Prep Date: <b>6/9/2023</b>	Analysis Date: <b>6/9/2023</b>	SeqNo: <b>3536614</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	35	10	50.00	0	70.8	61.9	130			
Surr: DNOP	5.0		5.000		99.4	69	147			

Sample ID: <b>MB-75498</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75498</b>	RunNo: <b>97343</b>								
Prep Date: <b>6/9/2023</b>	Analysis Date: <b>6/9/2023</b>	SeqNo: <b>3536619</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.3	69	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306396

16-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>ics-75478</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75478</b>	RunNo: <b>97367</b>								
Prep Date: <b>6/8/2023</b>	Analysis Date: <b>6/12/2023</b>	SeqNo: <b>3538457</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.4	70	130			
Surr: BFB	2200		1000		220	15	244			

Sample ID: <b>mb-75478</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75478</b>	RunNo: <b>97367</b>								
Prep Date: <b>6/8/2023</b>	Analysis Date: <b>6/12/2023</b>	SeqNo: <b>3538458</b>	Units: <b>mg/Kg</b>							
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	15	244			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306396

16-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>ics-75478</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>75478</b>		RunNo: <b>97367</b>							
Prep Date: <b>6/8/2023</b>	Analysis Date: <b>6/12/2023</b>		SeqNo: <b>3538472</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.9	70	130			
Toluene	0.93	0.050	1.000	0	92.9	70	130			
Ethylbenzene	0.92	0.050	1.000	0	92.4	70	130			
Xylenes, Total	2.8	0.10	3.000	0	92.3	70	130			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.3	39.1	146			

Sample ID: <b>mb-75478</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>75478</b>		RunNo: <b>97367</b>							
Prep Date: <b>6/8/2023</b>	Analysis Date: <b>6/12/2023</b>		SeqNo: <b>3538473</b>		Units: <b>mg/Kg</b>					
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	0.97		1.000		97.5	39.1	146			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: EOG Work Order Number: 2306396 RcptNo: 1

Received By: Tracy Casarrubias 6/8/2023 7:35:00 AM

Completed By: Tracy Casarrubias 6/8/2023 8:33:18 AM

Reviewed By: JWC 6/8/23

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by:
Handwritten: /SCM 06/08/23

Special Handling (if applicable)

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

Person Notified: [ ] Date: [ ]
By Whom: [ ] Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person [ ]
Regarding: [ ]
Client Instructions: Mailing address. Phone number and Email are missing on COC - TMC 6/8/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 3.3, Good, Yes, Yogi, [ ], [ ]

### Chain-of-Custody Record

Client: EOG Resources Inc

Mailing Address: on file

Phone #: \_\_\_\_\_

email or Fax#: \_\_\_\_\_

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

Accreditation:  Az Compliance  NELAC  Other

EDD (Type) \_\_\_\_\_

Turn-Around Time:  Standard  Rush 48 Hr

Project Name: State Co Valve Box #14

Project #: 22E-00716-01

Project Manager: C. Dixon

Sampler: S. Retz

On Ice:  Yes  No Yes

# of Coolers: 1

Cooler Temp (including CF): 3.3-0=3.3 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
6/6/23	11:00	Soil	WES23-02	402 Jar	Ice	2306396
	11:05		WES23-03			001
	11:10		WES23-04			002
						003

Date: 6/6/23 Time: 4:50 Relinquished by: S. Retz

Date: 6/7/23 Time: 1900 Relinquished by: Aluminum

Received by: Aluminum Date: 6/7/23 Time: 1000

Received by: Via: courier Date: 6/6/23 Time: 7:35



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

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

Remarks: Direct Bill to EOG

CC: Sachs Retz



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

June 19, 2023

Chance Dixon  
EOG  
105 South Fourth Street  
Artesia, NM 88210  
TEL:  
FAX:

RE: State CO Valve Box 14

OrderNo.: 2306393

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 10 sample(s) on 6/8/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order **2306393**

Date Reported: **6/19/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** WES23-01 0-4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/6/2023 10:00:00 AM

**Lab ID:** 2306393-001

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JTT</b>
Chloride	260	60		mg/Kg	20	6/9/2023 1:07:52 PM	75485
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/12/2023 1:05:05 AM	75472
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/12/2023 1:05:05 AM	75472
Surr: DNOP	58.7	69-147	S	%Rec	1	6/12/2023 1:05:05 AM	75472
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/9/2023 8:39:57 PM	75463
Surr: BFB	98.2	15-244		%Rec	1	6/9/2023 8:39:57 PM	75463
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/9/2023 8:39:57 PM	75463
Toluene	ND	0.048		mg/Kg	1	6/9/2023 8:39:57 PM	75463
Ethylbenzene	ND	0.048		mg/Kg	1	6/9/2023 8:39:57 PM	75463
Xylenes, Total	ND	0.096		mg/Kg	1	6/9/2023 8:39:57 PM	75463
Surr: 4-Bromofluorobenzene	92.3	39.1-146		%Rec	1	6/9/2023 8:39:57 PM	75463

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306393**

Date Reported: **6/19/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** WES23-05 0-4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/6/2023 10:10:00 AM

**Lab ID:** 2306393-002

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JTT</b>
Chloride	570	60		mg/Kg	20	6/9/2023 1:44:54 PM	75485
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	6/12/2023 1:29:44 AM	75472
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/12/2023 1:29:44 AM	75472
Surr: DNOP	85.4	69-147		%Rec	1	6/12/2023 1:29:44 AM	75472
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/9/2023 9:50:36 PM	75463
Surr: BFB	101	15-244		%Rec	1	6/9/2023 9:50:36 PM	75463
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/9/2023 9:50:36 PM	75463
Toluene	ND	0.048		mg/Kg	1	6/9/2023 9:50:36 PM	75463
Ethylbenzene	ND	0.048		mg/Kg	1	6/9/2023 9:50:36 PM	75463
Xylenes, Total	ND	0.097		mg/Kg	1	6/9/2023 9:50:36 PM	75463
Surr: 4-Bromofluorobenzene	96.0	39.1-146		%Rec	1	6/9/2023 9:50:36 PM	75463

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306393**

Date Reported: **6/19/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-01 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/6/2023 11:00:00 AM

**Lab ID:** 2306393-003

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JTT</b>
Chloride	530	60		mg/Kg	20	6/9/2023 2:46:38 PM	75485
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/12/2023 1:54:23 AM	75472
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/12/2023 1:54:23 AM	75472
Surr: DNOP	78.6	69-147		%Rec	1	6/12/2023 1:54:23 AM	75472
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/9/2023 11:00:46 PM	75463
Surr: BFB	95.5	15-244		%Rec	1	6/9/2023 11:00:46 PM	75463
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/9/2023 11:00:46 PM	75463
Toluene	ND	0.047		mg/Kg	1	6/9/2023 11:00:46 PM	75463
Ethylbenzene	ND	0.047		mg/Kg	1	6/9/2023 11:00:46 PM	75463
Xylenes, Total	ND	0.095		mg/Kg	1	6/9/2023 11:00:46 PM	75463
Surr: 4-Bromofluorobenzene	90.7	39.1-146		%Rec	1	6/9/2023 11:00:46 PM	75463

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306393**

Date Reported: **6/19/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-02 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/6/2023 11:05:00 AM

**Lab ID:** 2306393-004

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JTT</b>
Chloride	720	60		mg/Kg	20	6/9/2023 2:58:59 PM	75485
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/12/2023 2:18:59 AM	75472
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/12/2023 2:18:59 AM	75472
Surr: DNOP	81.2	69-147		%Rec	1	6/12/2023 2:18:59 AM	75472
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/9/2023 11:24:07 PM	75463
Surr: BFB	96.9	15-244		%Rec	1	6/9/2023 11:24:07 PM	75463
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	6/9/2023 11:24:07 PM	75463
Toluene	ND	0.049		mg/Kg	1	6/9/2023 11:24:07 PM	75463
Ethylbenzene	ND	0.049		mg/Kg	1	6/9/2023 11:24:07 PM	75463
Xylenes, Total	ND	0.099		mg/Kg	1	6/9/2023 11:24:07 PM	75463
Surr: 4-Bromofluorobenzene	91.6	39.1-146		%Rec	1	6/9/2023 11:24:07 PM	75463

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306393**

Date Reported: **6/19/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-03 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/6/2023 11:10:00 AM

**Lab ID:** 2306393-005

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JTT</b>
Chloride	570	60		mg/Kg	20	6/9/2023 3:11:20 PM	75485
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/13/2023 2:08:33 PM	75541
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/13/2023 2:08:33 PM	75541
Surr: DNOP	86.0	69-147		%Rec	1	6/13/2023 2:08:33 PM	75541
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/9/2023 11:47:39 PM	75463
Surr: BFB	95.0	15-244		%Rec	1	6/9/2023 11:47:39 PM	75463
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/9/2023 11:47:39 PM	75463
Toluene	ND	0.048		mg/Kg	1	6/9/2023 11:47:39 PM	75463
Ethylbenzene	ND	0.048		mg/Kg	1	6/9/2023 11:47:39 PM	75463
Xylenes, Total	ND	0.097		mg/Kg	1	6/9/2023 11:47:39 PM	75463
Surr: 4-Bromofluorobenzene	89.8	39.1-146		%Rec	1	6/9/2023 11:47:39 PM	75463

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306393**

Date Reported: **6/19/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-04 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/6/2023 11:15:00 AM

**Lab ID:** 2306393-006

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JTT</b>
Chloride	600	60		mg/Kg	20	6/9/2023 3:23:41 PM	75485
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/12/2023 3:08:07 AM	75472
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/12/2023 3:08:07 AM	75472
Surr: DNOP	78.9	69-147		%Rec	1	6/12/2023 3:08:07 AM	75472
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2023 12:10:59 AM	75463
Surr: BFB	98.3	15-244		%Rec	1	6/10/2023 12:10:59 AM	75463
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/10/2023 12:10:59 AM	75463
Toluene	ND	0.049		mg/Kg	1	6/10/2023 12:10:59 AM	75463
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 12:10:59 AM	75463
Xylenes, Total	ND	0.098		mg/Kg	1	6/10/2023 12:10:59 AM	75463
Surr: 4-Bromofluorobenzene	93.0	39.1-146		%Rec	1	6/10/2023 12:10:59 AM	75463

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306393**

Date Reported: **6/19/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-05 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/6/2023 11:20:00 AM

**Lab ID:** 2306393-007

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JTT</b>
Chloride	820	60		mg/Kg	20	6/9/2023 11:47:46 AM	75493
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/13/2023 3:29:46 AM	75472
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/13/2023 3:29:46 AM	75472
Surr: DNOP	78.4	69-147		%Rec	1	6/13/2023 3:29:46 AM	75472
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/10/2023 12:34:24 AM	75463
Surr: BFB	99.6	15-244		%Rec	1	6/10/2023 12:34:24 AM	75463
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/10/2023 12:34:24 AM	75463
Toluene	ND	0.048		mg/Kg	1	6/10/2023 12:34:24 AM	75463
Ethylbenzene	ND	0.048		mg/Kg	1	6/10/2023 12:34:24 AM	75463
Xylenes, Total	ND	0.095		mg/Kg	1	6/10/2023 12:34:24 AM	75463
Surr: 4-Bromofluorobenzene	94.8	39.1-146		%Rec	1	6/10/2023 12:34:24 AM	75463

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306393**

Date Reported: **6/19/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-06 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/6/2023 11:25:00 AM

**Lab ID:** 2306393-008

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JTT</b>
Chloride	970	60		mg/Kg	20	6/9/2023 12:25:01 PM	75493
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/13/2023 2:32:20 PM	75541
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/13/2023 2:32:20 PM	75541
Surr: DNOP	86.2	69-147		%Rec	1	6/13/2023 2:32:20 PM	75541
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/10/2023 12:57:54 AM	75463
Surr: BFB	96.2	15-244		%Rec	1	6/10/2023 12:57:54 AM	75463
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/10/2023 12:57:54 AM	75463
Toluene	ND	0.048		mg/Kg	1	6/10/2023 12:57:54 AM	75463
Ethylbenzene	ND	0.048		mg/Kg	1	6/10/2023 12:57:54 AM	75463
Xylenes, Total	ND	0.097		mg/Kg	1	6/10/2023 12:57:54 AM	75463
Surr: 4-Bromofluorobenzene	90.5	39.1-146		%Rec	1	6/10/2023 12:57:54 AM	75463

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306393**

Date Reported: **6/19/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-07 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/6/2023 11:30:00 AM

**Lab ID:** 2306393-009

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JTT</b>
Chloride	680	60		mg/Kg	20	6/9/2023 1:02:14 PM	75493
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/13/2023 2:55:59 PM	75541
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/13/2023 2:55:59 PM	75541
Surr: DNOP	86.1	69-147		%Rec	1	6/13/2023 2:55:59 PM	75541
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2023 1:21:33 AM	75463
Surr: BFB	94.9	15-244		%Rec	1	6/10/2023 1:21:33 AM	75463
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	6/10/2023 1:21:33 AM	75463
Toluene	ND	0.049		mg/Kg	1	6/10/2023 1:21:33 AM	75463
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 1:21:33 AM	75463
Xylenes, Total	ND	0.098		mg/Kg	1	6/10/2023 1:21:33 AM	75463
Surr: 4-Bromofluorobenzene	88.9	39.1-146		%Rec	1	6/10/2023 1:21:33 AM	75463

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306393**

Date Reported: **6/19/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-08 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/6/2023 11:35:00 AM

**Lab ID:** 2306393-010

**Matrix:** SOIL

**Received Date:** 6/8/2023 7:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JTT</b>
Chloride	790	60		mg/Kg	20	6/9/2023 1:51:52 PM	75493
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/13/2023 3:19:45 PM	75541
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/13/2023 3:19:45 PM	75541
Surr: DNOP	89.0	69-147		%Rec	1	6/13/2023 3:19:45 PM	75541
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/10/2023 1:45:05 AM	75463
Surr: BFB	95.3	15-244		%Rec	1	6/10/2023 1:45:05 AM	75463
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/10/2023 1:45:05 AM	75463
Toluene	ND	0.049		mg/Kg	1	6/10/2023 1:45:05 AM	75463
Ethylbenzene	ND	0.049		mg/Kg	1	6/10/2023 1:45:05 AM	75463
Xylenes, Total	ND	0.098		mg/Kg	1	6/10/2023 1:45:05 AM	75463
Surr: 4-Bromofluorobenzene	89.1	39.1-146		%Rec	1	6/10/2023 1:45:05 AM	75463

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306393

19-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>MB-75493</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75493</b>	RunNo: <b>97339</b>								
Prep Date: <b>6/9/2023</b>	Analysis Date: <b>6/9/2023</b>	SeqNo: <b>3536201</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-75493</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75493</b>	RunNo: <b>97339</b>								
Prep Date: <b>6/9/2023</b>	Analysis Date: <b>6/9/2023</b>	SeqNo: <b>3536202</b>	Units: <b>mg/Kg</b>							
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			

Sample ID: <b>MB-75485</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75485</b>	RunNo: <b>97340</b>								
Prep Date: <b>6/9/2023</b>	Analysis Date: <b>6/9/2023</b>	SeqNo: <b>3536299</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-75485</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75485</b>	RunNo: <b>97340</b>								
Prep Date: <b>6/9/2023</b>	Analysis Date: <b>6/9/2023</b>	SeqNo: <b>3536300</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.9	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 Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306393

19-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>LCS-75472</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75472</b>	RunNo: <b>97343</b>								
Prep Date: <b>6/8/2023</b>	Analysis Date: <b>6/9/2023</b>	SeqNo: <b>3536610</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	79.3	61.9	130			
Surr: DNOP	5.2		5.000		103	69	147			

Sample ID: <b>MB-75472</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75472</b>	RunNo: <b>97343</b>								
Prep Date: <b>6/8/2023</b>	Analysis Date: <b>6/9/2023</b>	SeqNo: <b>3536615</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		119	69	147			

Sample ID: <b>LCS-75541</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75541</b>	RunNo: <b>97392</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/13/2023</b>	SeqNo: <b>3538145</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	35	10	50.00	0	70.3	61.9	130			
Surr: DNOP	4.3		5.000		85.3	69	147			

Sample ID: <b>MB-75541</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75541</b>	RunNo: <b>97392</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/13/2023</b>	SeqNo: <b>3538147</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		87.9	69	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306393

19-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>ics-75463</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>75463</b>		RunNo: <b>97323</b>							
Prep Date: <b>6/8/2023</b>	Analysis Date: <b>6/9/2023</b>		SeqNo: <b>3537033</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.8	70	130			
Surr: BFB	2100		1000		206	15	244			

Sample ID: <b>mb-75463</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>75463</b>		RunNo: <b>97323</b>							
Prep Date: <b>6/8/2023</b>	Analysis Date: <b>6/9/2023</b>		SeqNo: <b>3537035</b>		Units: <b>mg/Kg</b>					
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	15	244			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306393

19-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>LCS-75463</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75463</b>	RunNo: <b>97323</b>								
Prep Date: <b>6/8/2023</b>	Analysis Date: <b>6/9/2023</b>	SeqNo: <b>3537095</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.7	70	130			
Toluene	0.89	0.050	1.000	0	89.4	70	130			
Ethylbenzene	0.89	0.050	1.000	0	88.7	70	130			
Xylenes, Total	2.7	0.10	3.000	0	90.0	70	130			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.8	39.1	146			

Sample ID: <b>mb-75463</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75463</b>	RunNo: <b>97323</b>								
Prep Date: <b>6/8/2023</b>	Analysis Date: <b>6/9/2023</b>	SeqNo: <b>3537097</b>	Units: <b>mg/Kg</b>							
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	0.97		1.000		96.7	39.1	146			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

# Sample Log-In Check List

Client Name: EOG Work Order Number: 2306393 RcptNo: 1

Received By: Tracy Casarrubias 6/8/2023 7:35:00 AM

Completed By: Tracy Casarrubias 6/8/2023 8:21:41 AM

Reviewed By: *TC 6/8/23*

### Chain of Custody

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

### Log In

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

# of preserved bottles checked for pH: \_\_\_\_\_  
(<2 or >12 unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

*SCM 06/08/23*

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
Regarding: \_\_\_\_\_  
Client Instructions: Mailing address, phone number and Email are missing on Coc- TMC 6/8/23

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes	Yogi		

### Chain-of-Custody Record

Client: EOG (Waters)

Mailing Address: on file

Phone #:

email or Fax#:

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation:  Az Compliance

NELAC  Other

EDD (Type)

Turn-Around Time:

Standard  Rush 48 Hr

Project Name:

State CO Valve Box #14

Project #:

22E-00716-01

Project Manager:

C. Dixon

Sampler: S. Reten

On Ice:  Yes  No 400i

# of Coolers: 1

Cooler Temp (including CF): 3.3-0 = 3.3 (°C)

Container Type and #

Preservative Type

HEAL No.

Date

Time

Matrix

Sample Name

0-4'

0-4'

4'

4'

4'

4'

4'

4'

4'

4'

Date: 6/29/23

Time: 1000

Relinquished by: S. Reten

Date: 6/29/23

Time: 1900

Relinquished by: [Signature]

Received by: [Signature]

Date: 6/17/23

Time: 1000

Received by: [Signature]

Date: 6/16/23

Time: 7:35

Remarks: Direct Bill to EOG

CC: S. Reten

### Analysis Request

BTEX / MTBE / TMB's (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

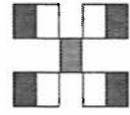
RCRA 8 Metals

Cl<sup>-</sup>, F<sup>-</sup>, Br<sup>-</sup>, NO<sub>3</sub><sup>-</sup>, NO<sub>2</sub><sup>-</sup>, PO<sub>4</sub><sup>3-</sup>, SO<sub>4</sub><sup>2-</sup>

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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



Hall Environmental Analysis Laboratory  
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June 20, 2023

Chance Dixon

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX

RE: State CO Valve Box 14

OrderNo.: 2306485

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/9/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Analytical Report**

Lab Order **2306485**

Date Reported: **6/20/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** WES23-07 0-4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/7/2023 11:00:00 AM

**Lab ID:** 2306485-001

**Matrix:** SOIL

**Received Date:** 6/9/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/13/2023 9:09:42 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/13/2023 9:09:42 AM
Surr: DNOP	97.8	69-147		%Rec	1	6/13/2023 9:09:42 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/13/2023 4:47:17 PM
Surr: BFB	100	15-244		%Rec	1	6/13/2023 4:47:17 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/13/2023 4:47:17 PM
Toluene	ND	0.047		mg/Kg	1	6/13/2023 4:47:17 PM
Ethylbenzene	ND	0.047		mg/Kg	1	6/13/2023 4:47:17 PM
Xylenes, Total	ND	0.094		mg/Kg	1	6/13/2023 4:47:17 PM
Surr: 4-Bromofluorobenzene	87.9	39.1-146		%Rec	1	6/13/2023 4:47:17 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	530	60		mg/Kg	20	6/13/2023 11:28:54 AM

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

**Analytical Report**

Lab Order **2306485**

Date Reported: **6/20/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Vertex Resources Services, Inc.

**Client Sample ID:** WES23-08 0-4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/7/2023 11:30:00 AM

**Lab ID:** 2306485-002

**Matrix:** SOIL

**Received Date:** 6/9/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/13/2023 9:20:11 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/13/2023 9:20:11 AM
Surr: DNOP	89.4	69-147		%Rec	1	6/13/2023 9:20:11 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/13/2023 5:11:01 PM
Surr: BFB	99.8	15-244		%Rec	1	6/13/2023 5:11:01 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	6/13/2023 5:11:01 PM
Toluene	ND	0.050		mg/Kg	1	6/13/2023 5:11:01 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/13/2023 5:11:01 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/13/2023 5:11:01 PM
Surr: 4-Bromofluorobenzene	86.5	39.1-146		%Rec	1	6/13/2023 5:11:01 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SNS</b>
Chloride	330	60		mg/Kg	20	6/13/2023 11:41:18 AM

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306485

20-Jun-23

**Client:** Vertex Resources Services, Inc.

**Project:** State CO Valve Box 14

Sample ID: <b>MB-75549</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75549</b>	RunNo: <b>97403</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/13/2023</b>	SeqNo: <b>3539950</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-75549</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75549</b>	RunNo: <b>97403</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/13/2023</b>	SeqNo: <b>3539951</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.0	90	110			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306485

20-Jun-23

**Client:** Vertex Resources Services, Inc.

**Project:** State CO Valve Box 14

Sample ID: <b>LCS-75540</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>75540</b>		RunNo: <b>97392</b>							
Prep Date: <b>6/12/2023</b>	Analysis Date: <b>6/13/2023</b>		SeqNo: <b>3538144</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.0	61.9	130			
Surr: DNOP	5.0		5.000		99.8	69	147			

Sample ID: <b>MB-75540</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>75540</b>		RunNo: <b>97392</b>							
Prep Date: <b>6/12/2023</b>	Analysis Date: <b>6/13/2023</b>		SeqNo: <b>3538146</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.3		10.00		93.0	69	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306485

20-Jun-23

**Client:** Vertex Resources Services, Inc.

**Project:** State CO Valve Box 14

Sample ID: <b>ics-75536</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75536</b>	RunNo: <b>97399</b>								
Prep Date: <b>6/12/2023</b>	Analysis Date: <b>6/13/2023</b>	SeqNo: <b>3538745</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.8	70	130			
Surr: BFB	2100		1000		208	15	244			

Sample ID: <b>mb-75536</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75536</b>	RunNo: <b>97399</b>								
Prep Date: <b>6/12/2023</b>	Analysis Date: <b>6/13/2023</b>	SeqNo: <b>3538746</b>	Units: <b>mg/Kg</b>							
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		97.4	15	244			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306485

20-Jun-23

**Client:** Vertex Resources Services, Inc.

**Project:** State CO Valve Box 14

Sample ID: <b>LCS-75536</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75536</b>	RunNo: <b>97399</b>								
Prep Date: <b>6/12/2023</b>	Analysis Date: <b>6/13/2023</b>	SeqNo: <b>3538747</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.025	1.000	0	79.8	70	130			
Toluene	0.81	0.050	1.000	0	81.3	70	130			
Ethylbenzene	0.81	0.050	1.000	0	81.0	70	130			
Xylenes, Total	2.5	0.10	3.000	0	81.9	70	130			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.2	39.1	146			

Sample ID: <b>mb-75536</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75536</b>	RunNo: <b>97399</b>								
Prep Date: <b>6/12/2023</b>	Analysis Date: <b>6/13/2023</b>	SeqNo: <b>3538748</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.85		1.000		85.4	39.1	146			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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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: 2306485

RcptNo: 1

Received By: Juan Rojas 6/9/2023 7:45:00 AM

Completed By: Cheyenne Cason 6/9/2023 8:25:59 AM

Reviewed By:

### Chain of Custody

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

2. How was the sample delivered? Courier

### Log In

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

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

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

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

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

8. Was preservative added to bottles? Yes  No  NA

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

10. Were any sample containers received broken? Yes  No

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

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

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

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

SCM  
06/09/23  
# of preserved bottles checked for pH: \_\_\_\_\_  
(<2 or >12 unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

### Special Handling (if applicable)

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

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

16. Additional remarks:

### 17. Cooler Information

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





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

June 20, 2023

Chance Dixon  
EOG  
105 South Fourth Street  
Artesia, NM 88210  
TEL:  
FAX

RE: State Co Valve Box 14

OrderNo.: 2306559

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/10/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order **2306559**

Date Reported: **6/20/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** WES23-06 0-4'

**Project:** State Co Valve Box 14

**Collection Date:** 6/8/2023 10:00:00 AM

**Lab ID:** 2306559-001

**Matrix:** SOIL

**Received Date:** 6/10/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	450	60		mg/Kg	20	6/14/2023 3:11:56 AM	75566
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/14/2023 9:54:10 AM	75565
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/14/2023 9:54:10 AM	75565
Surr: DNOP	112	69-147		%Rec	1	6/14/2023 9:54:10 AM	75565
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/14/2023 12:00:24 PM	75558
Surr: BFB	101	15-244		%Rec	1	6/14/2023 12:00:24 PM	75558
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	6/14/2023 12:00:24 PM	75558
Toluene	ND	0.049		mg/Kg	1	6/14/2023 12:00:24 PM	75558
Ethylbenzene	ND	0.049		mg/Kg	1	6/14/2023 12:00:24 PM	75558
Xylenes, Total	ND	0.098		mg/Kg	1	6/14/2023 12:00:24 PM	75558
Surr: 4-Bromofluorobenzene	88.8	39.1-146		%Rec	1	6/14/2023 12:00:24 PM	75558

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306559**

Date Reported: **6/20/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** WES23-09 0-4'

**Project:** State Co Valve Box 14

**Collection Date:** 6/8/2023 1:00:00 PM

**Lab ID:** 2306559-002

**Matrix:** SOIL

**Received Date:** 6/10/2023 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	420	60		mg/Kg	20	6/14/2023 3:24:21 AM	75566
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	6/14/2023 10:04:44 AM	75565
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/14/2023 10:04:44 AM	75565
Surr: DNOP	130	69-147		%Rec	1	6/14/2023 10:04:44 AM	75565
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/14/2023 12:23:57 PM	75558
Surr: BFB	99.7	15-244		%Rec	1	6/14/2023 12:23:57 PM	75558
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/14/2023 12:23:57 PM	75558
Toluene	ND	0.048		mg/Kg	1	6/14/2023 12:23:57 PM	75558
Ethylbenzene	ND	0.048		mg/Kg	1	6/14/2023 12:23:57 PM	75558
Xylenes, Total	ND	0.097		mg/Kg	1	6/14/2023 12:23:57 PM	75558
Surr: 4-Bromofluorobenzene	87.2	39.1-146		%Rec	1	6/14/2023 12:23:57 PM	75558

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306559

20-Jun-23

**Client:** EOG  
**Project:** State Co Valve Box 14

Sample ID: <b>mb-75566</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75566</b>	RunNo: <b>97403</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/13/2023</b>	SeqNo: <b>3540012</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>ics-75566</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75566</b>	RunNo: <b>97403</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/13/2023</b>	SeqNo: <b>3540013</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.3	90	110			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306559

20-Jun-23

**Client:** EOG  
**Project:** State Co Valve Box 14

Sample ID: <b>LCS-75565</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75565</b>	RunNo: <b>97423</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/14/2023</b>	SeqNo: <b>3539513</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	82.8	61.9	130			
Surr: DNOP	5.1		5.000		102	69	147			

Sample ID: <b>MB-75565</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75565</b>	RunNo: <b>97423</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/14/2023</b>	SeqNo: <b>3539514</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		108	69	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306559

20-Jun-23

**Client:** EOG  
**Project:** State Co Valve Box 14

Sample ID: <b>ics-75558</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75558</b>	RunNo: <b>97434</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/14/2023</b>	SeqNo: <b>3539941</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.1	70	130			
Surr: BFB	2000		1000		201	15	244			

Sample ID: <b>mb-75558</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75558</b>	RunNo: <b>97434</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/14/2023</b>	SeqNo: <b>3539942</b>	Units: <b>mg/Kg</b>							
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		97.7	15	244			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306559

20-Jun-23

**Client:** EOG  
**Project:** State Co Valve Box 14

Sample ID: <b>LCS-75558</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75558</b>	RunNo: <b>97434</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/14/2023</b>	SeqNo: <b>3539945</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.51	0.025	0.5000	0	102	70	130			
Toluene	0.54	0.050	0.5000	0	109	70	130			
Ethylbenzene	0.55	0.050	0.5000	0	109	70	130			
Xylenes, Total	1.7	0.10	1.500	0	112	70	130			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.3	39.1	146			

Sample ID: <b>mb-75558</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75558</b>	RunNo: <b>97434</b>								
Prep Date: <b>6/13/2023</b>	Analysis Date: <b>6/14/2023</b>	SeqNo: <b>3539946</b>	Units: <b>mg/Kg</b>							
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	39.1	146			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: EOG Work Order Number: 2306559 RcptNo: 1

Received By: Juan Rojas 6/10/2023 7:20:00 AM
Completed By: Juan Rojas 6/10/2023 8:12:39 AM
Reviewed By: [Signature] 6/12/23

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted? Checked by: JR 6/10/23

Special Handling (if applicable)

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

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

16. Additional remarks: Client missing mailing address, phone number, and email address. JR 6/10/23

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 1.4, Good, No, Yogi, [ ], [ ]





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

June 21, 2023

Chance Dixon

EOG

105 South Fourth Street

Artesia, NM 88210

TEL:

FAX:

RE: State CO Valve Box 14

OrderNo.: 2306628

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 8 sample(s) on 6/13/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Analytical Report**

Lab Order **2306628**

Date Reported: 6/21/2023

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-09 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/9/2023 9:30:00 AM

**Lab ID:** 2306628-001

**Matrix:** SOIL

**Received Date:** 6/13/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	510	60		mg/Kg	20	6/15/2023 3:37:04 PM	75612
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	6/15/2023 10:53:12 PM	75592
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	6/15/2023 10:53:12 PM	75592
Surr: DNOP	90.5	69-147		%Rec	1	6/15/2023 10:53:12 PM	75592
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/16/2023 11:22:00 AM	75583
Surr: BFB	102	15-244		%Rec	1	6/16/2023 11:22:00 AM	75583
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>KMN</b>
Benzene	ND	0.024		mg/Kg	1	6/16/2023 11:22:00 AM	75583
Toluene	ND	0.047		mg/Kg	1	6/16/2023 11:22:00 AM	75583
Ethylbenzene	ND	0.047		mg/Kg	1	6/16/2023 11:22:00 AM	75583
Xylenes, Total	ND	0.095		mg/Kg	1	6/16/2023 11:22:00 AM	75583
Surr: 4-Bromofluorobenzene	95.1	39.1-146		%Rec	1	6/16/2023 11:22:00 AM	75583

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

**Analytical Report**

Lab Order **2306628**

Date Reported: 6/21/2023

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-10 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/9/2023 9:35:00 AM

**Lab ID:** 2306628-002

**Matrix:** SOIL

**Received Date:** 6/13/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	780	60		mg/Kg	20	6/15/2023 3:49:28 PM	75612
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/15/2023 11:04:06 PM	75592
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/15/2023 11:04:06 PM	75592
Surr: DNOP	89.7	69-147		%Rec	1	6/15/2023 11:04:06 PM	75592
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/16/2023 11:43:00 AM	75583
Surr: BFB	103	15-244		%Rec	1	6/16/2023 11:43:00 AM	75583
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>KMN</b>
Benzene	ND	0.025		mg/Kg	1	6/16/2023 11:43:00 AM	75583
Toluene	ND	0.049		mg/Kg	1	6/16/2023 11:43:00 AM	75583
Ethylbenzene	ND	0.049		mg/Kg	1	6/16/2023 11:43:00 AM	75583
Xylenes, Total	ND	0.098		mg/Kg	1	6/16/2023 11:43:00 AM	75583
Surr: 4-Bromofluorobenzene	96.4	39.1-146		%Rec	1	6/16/2023 11:43:00 AM	75583

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

**Analytical Report**

Lab Order **2306628**

Date Reported: 6/21/2023

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-11 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/9/2023 9:40:00 AM

**Lab ID:** 2306628-003

**Matrix:** SOIL

**Received Date:** 6/13/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	920	60		mg/Kg	20	6/15/2023 4:01:52 PM	75612
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	12	10		mg/Kg	1	6/15/2023 11:14:59 PM	75592
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/15/2023 11:14:59 PM	75592
Surr: DNOP	92.6	69-147		%Rec	1	6/15/2023 11:14:59 PM	75592
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/16/2023 12:05:00 PM	75583
Surr: BFB	103	15-244		%Rec	1	6/16/2023 12:05:00 PM	75583
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>KMN</b>
Benzene	ND	0.025		mg/Kg	1	6/16/2023 12:05:00 PM	75583
Toluene	ND	0.049		mg/Kg	1	6/16/2023 12:05:00 PM	75583
Ethylbenzene	ND	0.049		mg/Kg	1	6/16/2023 12:05:00 PM	75583
Xylenes, Total	ND	0.099		mg/Kg	1	6/16/2023 12:05:00 PM	75583
Surr: 4-Bromofluorobenzene	96.7	39.1-146		%Rec	1	6/16/2023 12:05:00 PM	75583

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

**Analytical Report**

Lab Order **2306628**

Date Reported: 6/21/2023

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-12 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/9/2023 9:45:00 AM

**Lab ID:** 2306628-004

**Matrix:** SOIL

**Received Date:** 6/13/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	980	60		mg/Kg	20	6/15/2023 4:14:17 PM	75612
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	10	10		mg/Kg	1	6/15/2023 11:25:55 PM	75592
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/15/2023 11:25:55 PM	75592
Surr: DNOP	114	69-147		%Rec	1	6/15/2023 11:25:55 PM	75592
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/16/2023 12:27:00 PM	75583
Surr: BFB	103	15-244		%Rec	1	6/16/2023 12:27:00 PM	75583
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>KMN</b>
Benzene	ND	0.025		mg/Kg	1	6/16/2023 12:27:00 PM	75583
Toluene	ND	0.049		mg/Kg	1	6/16/2023 12:27:00 PM	75583
Ethylbenzene	ND	0.049		mg/Kg	1	6/16/2023 12:27:00 PM	75583
Xylenes, Total	ND	0.098		mg/Kg	1	6/16/2023 12:27:00 PM	75583
Surr: 4-Bromofluorobenzene	97.6	39.1-146		%Rec	1	6/16/2023 12:27:00 PM	75583

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

**Analytical Report**

Lab Order **2306628**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-13 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/9/2023 9:50:00 AM

**Lab ID:** 2306628-005

**Matrix:** SOIL

**Received Date:** 6/13/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	1200	60		mg/Kg	20	6/15/2023 12:29:53 PM	75617
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/15/2023 11:36:51 PM	75592
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/15/2023 11:36:51 PM	75592
Surr: DNOP	79.4	69-147		%Rec	1	6/15/2023 11:36:51 PM	75592
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/16/2023 12:51:00 PM	75583
Surr: BFB	101	15-244		%Rec	1	6/16/2023 12:51:00 PM	75583
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>KMN</b>
Benzene	ND	0.025		mg/Kg	1	6/16/2023 12:51:00 PM	75583
Toluene	ND	0.049		mg/Kg	1	6/16/2023 12:51:00 PM	75583
Ethylbenzene	ND	0.049		mg/Kg	1	6/16/2023 12:51:00 PM	75583
Xylenes, Total	ND	0.099		mg/Kg	1	6/16/2023 12:51:00 PM	75583
Surr: 4-Bromofluorobenzene	95.0	39.1-146		%Rec	1	6/16/2023 12:51:00 PM	75583

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

**Analytical Report**

Lab Order **2306628**

Date Reported: 6/21/2023

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-14 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/9/2023 9:55:00 AM

**Lab ID:** 2306628-006

**Matrix:** SOIL

**Received Date:** 6/13/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	1600	60		mg/Kg	20	6/15/2023 12:42:13 PM	75617
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/15/2023 11:47:49 PM	75592
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/15/2023 11:47:49 PM	75592
Surr: DNOP	89.5	69-147		%Rec	1	6/15/2023 11:47:49 PM	75592
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/16/2023 1:13:00 PM	75583
Surr: BFB	105	15-244		%Rec	1	6/16/2023 1:13:00 PM	75583
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>KMN</b>
Benzene	ND	0.025		mg/Kg	1	6/16/2023 1:13:00 PM	75583
Toluene	ND	0.050		mg/Kg	1	6/16/2023 1:13:00 PM	75583
Ethylbenzene	ND	0.050		mg/Kg	1	6/16/2023 1:13:00 PM	75583
Xylenes, Total	ND	0.10		mg/Kg	1	6/16/2023 1:13:00 PM	75583
Surr: 4-Bromofluorobenzene	98.2	39.1-146		%Rec	1	6/16/2023 1:13:00 PM	75583

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

**Analytical Report**

Lab Order **2306628**

Date Reported: 6/21/2023

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-15 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/9/2023 10:00:00 AM

**Lab ID:** 2306628-007

**Matrix:** SOIL

**Received Date:** 6/13/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	1200	60		mg/Kg	20	6/15/2023 12:54:34 PM	75617
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/15/2023 11:58:48 PM	75592
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/15/2023 11:58:48 PM	75592
Surr: DNOP	81.4	69-147		%Rec	1	6/15/2023 11:58:48 PM	75592
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/16/2023 1:35:00 PM	75583
Surr: BFB	103	15-244		%Rec	1	6/16/2023 1:35:00 PM	75583
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>KMN</b>
Benzene	ND	0.024		mg/Kg	1	6/16/2023 1:35:00 PM	75583
Toluene	ND	0.047		mg/Kg	1	6/16/2023 1:35:00 PM	75583
Ethylbenzene	ND	0.047		mg/Kg	1	6/16/2023 1:35:00 PM	75583
Xylenes, Total	ND	0.094		mg/Kg	1	6/16/2023 1:35:00 PM	75583
Surr: 4-Bromofluorobenzene	97.4	39.1-146		%Rec	1	6/16/2023 1:35:00 PM	75583

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

**Analytical Report**

Lab Order **2306628**

Date Reported: 6/21/2023

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-16 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/9/2023 10:05:00 AM

**Lab ID:** 2306628-008

**Matrix:** SOIL

**Received Date:** 6/13/2023 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	820	60		mg/Kg	20	6/15/2023 1:06:54 PM	75617
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	11	9.6		mg/Kg	1	6/20/2023 3:22:42 AM	75592
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/20/2023 3:22:42 AM	75592
Surr: DNOP	72.1	69-147		%Rec	1	6/20/2023 3:22:42 AM	75592
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>KMN</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/16/2023 1:57:00 PM	75583
Surr: BFB	104	15-244		%Rec	1	6/16/2023 1:57:00 PM	75583
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>KMN</b>
Benzene	ND	0.024		mg/Kg	1	6/16/2023 1:57:00 PM	75583
Toluene	ND	0.049		mg/Kg	1	6/16/2023 1:57:00 PM	75583
Ethylbenzene	ND	0.049		mg/Kg	1	6/16/2023 1:57:00 PM	75583
Xylenes, Total	ND	0.098		mg/Kg	1	6/16/2023 1:57:00 PM	75583
Surr: 4-Bromofluorobenzene	97.5	39.1-146		%Rec	1	6/16/2023 1:57:00 PM	75583

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Above Quantitation Range/Estimated Value
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306628

21-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>MB-75612</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75612</b>	RunNo: <b>97471</b>								
Prep Date: <b>6/15/2023</b>	Analysis Date: <b>6/15/2023</b>	SeqNo: <b>3542337</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-75612</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75612</b>	RunNo: <b>97471</b>								
Prep Date: <b>6/15/2023</b>	Analysis Date: <b>6/15/2023</b>	SeqNo: <b>3542338</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID: <b>MB-75617</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75617</b>	RunNo: <b>97494</b>								
Prep Date: <b>6/15/2023</b>	Analysis Date: <b>6/15/2023</b>	SeqNo: <b>3542499</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306628

21-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>LCS-75592</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>75592</b>		RunNo: <b>97480</b>							
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/15/2023</b>		SeqNo: <b>3541824</b>				Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	10	50.00	0	72.7	61.9	130			
Surr: DNOP	4.7		5.000		93.7	69	147			

Sample ID: <b>MB-75592</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>75592</b>		RunNo: <b>97480</b>							
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/15/2023</b>		SeqNo: <b>3541827</b>				Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		96.5	69	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306628

21-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>ics-75583</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>75583</b>		RunNo: <b>97501</b>							
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/16/2023</b>		SeqNo: <b>3543011</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.6	70	130			
Surr: BFB	2200		1000		216	15	244			

Sample ID: <b>mb-75583</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>75583</b>		RunNo: <b>97501</b>							
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/16/2023</b>		SeqNo: <b>3543012</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	970		1000		96.9	15	244			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306628

21-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>ics-75583</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>75583</b>		RunNo: <b>97501</b>							
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/16/2023</b>		SeqNo: <b>3543043</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.0	70	130			
Toluene	0.98	0.050	1.000	0	98.2	70	130			
Ethylbenzene	0.98	0.050	1.000	0	97.8	70	130			
Xylenes, Total	2.9	0.10	3.000	0	97.7	70	130			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.5	39.1	146			

Sample ID: <b>mb-75583</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>75583</b>		RunNo: <b>97501</b>							
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/16/2023</b>		SeqNo: <b>3543044</b>		Units: <b>mg/Kg</b>					
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		93.3	39.1	146			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: EOG Work Order Number: 2306628 RcptNo: 1

Received By: Tracy Casarrubias 6/13/2023 7:40:00 AM

Completed By: Tracy Casarrubias 6/13/2023 8:59:37 AM

Reviewed By: [Signature] 6/13/23

Chain of Custody

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

2. How was the sample delivered? Courier

Log In

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

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

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

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

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

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

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

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

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

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

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

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

# of preserved bottles checked for pH: Adjusted? Checked by: [Signature] 6/13/23

Special Handling (if applicable)

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

Person Notified: Date: By Whom: Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person Regarding: Client Instructions: Mailing address, phone number, and Email are missing on COC- TMC 6/13/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 2.3, Good, Yes, Yogi, [ ], [ ]

### Chain-of-Custody Record

Client: EOG (Vertex)

Mailing Address: on file

Phone #: \_\_\_\_\_

email or Fax#: \_\_\_\_\_

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

Accreditation:  Az Compliance  NELAC  Other

EDD (Type) \_\_\_\_\_

Turn-Around Time:  Standard  Rush 48 Hr

Project Name: State Co Valve Box #14

Project #: 22E-00716-01

Project Manager: C. Dixon

Sampler: J. Reto

On Ice:  Yes  No 4991

# of Coolers: 1

Cooler Temp (including CF): 2.3-0-2.3 (°C)

Date	Time	Matrix	Sample Name	Depth	Container Type and #	Preservative Type	HEAL No.
09/23	9:30	Soil	BES23-09	4'	402 Jar	Ice	2306620
	9:35		BES23-10	4'			001
	9:40		BES23-11	4'			002
	9:45		BES23-12	4'			003
	9:50		BES23-13	4'			004
	9:55		BES23-14	4'			005
	10:00		BES23-15	4'			006
	10:05		BES23-16	4'			007
							008

Analysis Request	
BTEX / MTBE / TMB's (8021)	TPH8015D(GRO / DRO / MRO)
8081 Pesticides/8082 PCB's	EDB (Method 504.1)
PAHs by 8310 or 8270SIMS	RCRA 8 Metals
Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub>	8260 (VOA)
	8270 (Semi-VOA)
	Total Coliform (Present/Absent)

Relinquished by: J. Reto Date: 09/23 16:04

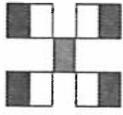
Relinquished by: [Signature] Date: 09/23 1900

Received by: [Signature] Date: 09/23 1000

Received by: [Signature] Date: 09/23 7:40

Remarks: Direct Bill to EOG

cc: S. Reto



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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



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

June 21, 2023

Chance Dixon

EOG

105 South Fourth Street

Artesia, NM 88210

TEL:

FAX:

RE: State CO Valve Box 14

OrderNo.: 2306683

Dear Chance Dixon:

Hall Environmental Analysis Laboratory received 12 sample(s) on 6/14/2023 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-17 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 1:00:00 PM

**Lab ID:** 2306683-001

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	1400	60		mg/Kg	20	6/15/2023 6:55:35 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	25	9.2		mg/Kg	1	6/20/2023 3:48:08 PM	75726
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/20/2023 3:48:08 PM	75726
Surr: DNOP	84.8	69-147		%Rec	1	6/20/2023 3:48:08 PM	75726
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/18/2023 11:32:23 PM	75595
Surr: BFB	98.3	15-244		%Rec	1	6/18/2023 11:32:23 PM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	6/18/2023 11:32:23 PM	75595
Toluene	ND	0.049		mg/Kg	1	6/18/2023 11:32:23 PM	75595
Ethylbenzene	ND	0.049		mg/Kg	1	6/18/2023 11:32:23 PM	75595
Xylenes, Total	ND	0.099		mg/Kg	1	6/18/2023 11:32:23 PM	75595
Surr: 4-Bromofluorobenzene	83.9	39.1-146		%Rec	1	6/18/2023 11:32:23 PM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-18 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 1:05:00 PM

**Lab ID:** 2306683-002

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	810	61		mg/Kg	20	6/15/2023 7:07:59 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/16/2023 4:53:57 AM	75600
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/16/2023 4:53:57 AM	75600
Surr: DNOP	73.8	69-147		%Rec	1	6/16/2023 4:53:57 AM	75600
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/19/2023 12:42:42 AM	75595
Surr: BFB	97.3	15-244		%Rec	1	6/19/2023 12:42:42 AM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	6/19/2023 12:42:42 AM	75595
Toluene	ND	0.049		mg/Kg	1	6/19/2023 12:42:42 AM	75595
Ethylbenzene	ND	0.049		mg/Kg	1	6/19/2023 12:42:42 AM	75595
Xylenes, Total	ND	0.099		mg/Kg	1	6/19/2023 12:42:42 AM	75595
Surr: 4-Bromofluorobenzene	83.7	39.1-146		%Rec	1	6/19/2023 12:42:42 AM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-19 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 1:10:00 PM

**Lab ID:** 2306683-003

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	940	60		mg/Kg	20	6/15/2023 7:20:24 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/16/2023 5:04:35 AM	75600
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/16/2023 5:04:35 AM	75600
Surr: DNOP	73.5	69-147		%Rec	1	6/16/2023 5:04:35 AM	75600
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/19/2023 1:52:40 AM	75595
Surr: BFB	94.1	15-244		%Rec	1	6/19/2023 1:52:40 AM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/19/2023 1:52:40 AM	75595
Toluene	ND	0.048		mg/Kg	1	6/19/2023 1:52:40 AM	75595
Ethylbenzene	ND	0.048		mg/Kg	1	6/19/2023 1:52:40 AM	75595
Xylenes, Total	ND	0.095		mg/Kg	1	6/19/2023 1:52:40 AM	75595
Surr: 4-Bromofluorobenzene	80.6	39.1-146		%Rec	1	6/19/2023 1:52:40 AM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-20 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 1:15:00 PM

**Lab ID:** 2306683-004

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	1000	60		mg/Kg	20	6/15/2023 7:32:48 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	230	9.3		mg/Kg	1	6/16/2023 5:15:13 AM	75600
Motor Oil Range Organics (MRO)	78	46		mg/Kg	1	6/16/2023 5:15:13 AM	75600
Surr: DNOP	90.3	69-147		%Rec	1	6/16/2023 5:15:13 AM	75600
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/19/2023 2:16:03 AM	75595
Surr: BFB	120	15-244		%Rec	1	6/19/2023 2:16:03 AM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.023		mg/Kg	1	6/19/2023 2:16:03 AM	75595
Toluene	ND	0.047		mg/Kg	1	6/19/2023 2:16:03 AM	75595
Ethylbenzene	ND	0.047		mg/Kg	1	6/19/2023 2:16:03 AM	75595
Xylenes, Total	ND	0.093		mg/Kg	1	6/19/2023 2:16:03 AM	75595
Surr: 4-Bromofluorobenzene	87.1	39.1-146		%Rec	1	6/19/2023 2:16:03 AM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-21 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 1:20:00 PM

**Lab ID:** 2306683-005

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	830	60		mg/Kg	20	6/15/2023 8:10:02 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	61	9.5		mg/Kg	1	6/16/2023 5:25:51 AM	75600
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/16/2023 5:25:51 AM	75600
Surr: DNOP	74.4	69-147		%Rec	1	6/16/2023 5:25:51 AM	75600
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	33	4.8		mg/Kg	1	6/19/2023 2:39:29 AM	75595
Surr: BFB	408	15-244	S	%Rec	1	6/19/2023 2:39:29 AM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/19/2023 2:39:29 AM	75595
Toluene	0.091	0.048		mg/Kg	1	6/19/2023 2:39:29 AM	75595
Ethylbenzene	0.52	0.048		mg/Kg	1	6/19/2023 2:39:29 AM	75595
Xylenes, Total	1.4	0.097		mg/Kg	1	6/19/2023 2:39:29 AM	75595
Surr: 4-Bromofluorobenzene	123	39.1-146		%Rec	1	6/19/2023 2:39:29 AM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-22 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 1:25:00 PM

**Lab ID:** 2306683-006

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	720	60		mg/Kg	20	6/15/2023 8:22:27 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	11	9.8		mg/Kg	1	6/16/2023 5:36:28 AM	75600
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/16/2023 5:36:28 AM	75600
Surr: DNOP	93.3	69-147		%Rec	1	6/16/2023 5:36:28 AM	75600
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/19/2023 3:02:47 AM	75595
Surr: BFB	100	15-244		%Rec	1	6/19/2023 3:02:47 AM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/19/2023 3:02:47 AM	75595
Toluene	ND	0.048		mg/Kg	1	6/19/2023 3:02:47 AM	75595
Ethylbenzene	ND	0.048		mg/Kg	1	6/19/2023 3:02:47 AM	75595
Xylenes, Total	ND	0.097		mg/Kg	1	6/19/2023 3:02:47 AM	75595
Surr: 4-Bromofluorobenzene	84.1	39.1-146		%Rec	1	6/19/2023 3:02:47 AM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-23 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 1:30:00 PM

**Lab ID:** 2306683-007

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	1000	60		mg/Kg	20	6/15/2023 8:34:52 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	9.2	8.5		mg/Kg	1	6/16/2023 5:47:08 AM	75600
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	6/16/2023 5:47:08 AM	75600
Surr: DNOP	95.4	69-147		%Rec	1	6/16/2023 5:47:08 AM	75600
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/19/2023 3:26:12 AM	75595
Surr: BFB	96.1	15-244		%Rec	1	6/19/2023 3:26:12 AM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/19/2023 3:26:12 AM	75595
Toluene	ND	0.049		mg/Kg	1	6/19/2023 3:26:12 AM	75595
Ethylbenzene	ND	0.049		mg/Kg	1	6/19/2023 3:26:12 AM	75595
Xylenes, Total	ND	0.098		mg/Kg	1	6/19/2023 3:26:12 AM	75595
Surr: 4-Bromofluorobenzene	81.6	39.1-146		%Rec	1	6/19/2023 3:26:12 AM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-24 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 2:00:00 PM

**Lab ID:** 2306683-008

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	730	60		mg/Kg	20	6/15/2023 9:12:05 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	6/16/2023 5:57:51 AM	75600
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/16/2023 5:57:51 AM	75600
Surr: DNOP	78.1	69-147		%Rec	1	6/16/2023 5:57:51 AM	75600
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/19/2023 3:49:45 AM	75595
Surr: BFB	98.8	15-244		%Rec	1	6/19/2023 3:49:45 AM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.024		mg/Kg	1	6/19/2023 3:49:45 AM	75595
Toluene	ND	0.048		mg/Kg	1	6/19/2023 3:49:45 AM	75595
Ethylbenzene	ND	0.048		mg/Kg	1	6/19/2023 3:49:45 AM	75595
Xylenes, Total	ND	0.097		mg/Kg	1	6/19/2023 3:49:45 AM	75595
Surr: 4-Bromofluorobenzene	84.4	39.1-146		%Rec	1	6/19/2023 3:49:45 AM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-25 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 2:05:00 PM

**Lab ID:** 2306683-009

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	440	60		mg/Kg	20	6/15/2023 9:24:30 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	6/20/2023 4:10:24 AM	75600
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	6/20/2023 4:10:24 AM	75600
Surr: DNOP	77.8	69-147		%Rec	1	6/20/2023 4:10:24 AM	75600
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/19/2023 4:13:03 AM	75595
Surr: BFB	98.9	15-244		%Rec	1	6/19/2023 4:13:03 AM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	6/19/2023 4:13:03 AM	75595
Toluene	ND	0.050		mg/Kg	1	6/19/2023 4:13:03 AM	75595
Ethylbenzene	ND	0.050		mg/Kg	1	6/19/2023 4:13:03 AM	75595
Xylenes, Total	ND	0.099		mg/Kg	1	6/19/2023 4:13:03 AM	75595
Surr: 4-Bromofluorobenzene	84.2	39.1-146		%Rec	1	6/19/2023 4:13:03 AM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-26 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 2:10:00 PM

**Lab ID:** 2306683-010

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	470	60		mg/Kg	20	6/15/2023 9:36:54 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/16/2023 6:19:14 AM	75600
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/16/2023 6:19:14 AM	75600
Surr: DNOP	76.1	69-147		%Rec	1	6/16/2023 6:19:14 AM	75600
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/19/2023 4:36:18 AM	75595
Surr: BFB	96.6	15-244		%Rec	1	6/19/2023 4:36:18 AM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.023		mg/Kg	1	6/19/2023 4:36:18 AM	75595
Toluene	ND	0.047		mg/Kg	1	6/19/2023 4:36:18 AM	75595
Ethylbenzene	ND	0.047		mg/Kg	1	6/19/2023 4:36:18 AM	75595
Xylenes, Total	ND	0.094		mg/Kg	1	6/19/2023 4:36:18 AM	75595
Surr: 4-Bromofluorobenzene	83.1	39.1-146		%Rec	1	6/19/2023 4:36:18 AM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-27 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 2:15:00 PM

**Lab ID:** 2306683-011

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	500	60		mg/Kg	20	6/15/2023 9:49:19 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>PRD</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/16/2023 6:29:57 AM	75600
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/16/2023 6:29:57 AM	75600
Surr: DNOP	91.8	69-147		%Rec	1	6/16/2023 6:29:57 AM	75600
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/19/2023 5:22:56 AM	75595
Surr: BFB	96.1	15-244		%Rec	1	6/19/2023 5:22:56 AM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	6/19/2023 5:22:56 AM	75595
Toluene	ND	0.049		mg/Kg	1	6/19/2023 5:22:56 AM	75595
Ethylbenzene	ND	0.049		mg/Kg	1	6/19/2023 5:22:56 AM	75595
Xylenes, Total	ND	0.098		mg/Kg	1	6/19/2023 5:22:56 AM	75595
Surr: 4-Bromofluorobenzene	82.0	39.1-146		%Rec	1	6/19/2023 5:22:56 AM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**Analytical Report**

Lab Order **2306683**

Date Reported: **6/21/2023**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** EOG

**Client Sample ID:** BES23-28 4'

**Project:** State CO Valve Box 14

**Collection Date:** 6/12/2023 2:20:00 PM

**Lab ID:** 2306683-012

**Matrix:** SOIL

**Received Date:** 6/14/2023 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>SNS</b>
Chloride	840	60		mg/Kg	20	6/15/2023 10:01:44 PM	75634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>DGH</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/20/2023 4:34:09 AM	75600
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/20/2023 4:34:09 AM	75600
Surr: DNOP	70.8	69-147		%Rec	1	6/20/2023 4:34:09 AM	75600
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JJP</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/19/2023 5:46:17 AM	75595
Surr: BFB	96.7	15-244		%Rec	1	6/19/2023 5:46:17 AM	75595
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JJP</b>
Benzene	ND	0.025		mg/Kg	1	6/19/2023 5:46:17 AM	75595
Toluene	ND	0.050		mg/Kg	1	6/19/2023 5:46:17 AM	75595
Ethylbenzene	ND	0.050		mg/Kg	1	6/19/2023 5:46:17 AM	75595
Xylenes, Total	ND	0.10		mg/Kg	1	6/19/2023 5:46:17 AM	75595
Surr: 4-Bromofluorobenzene	81.9	39.1-146		%Rec	1	6/19/2023 5:46:17 AM	75595

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306683

21-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>MB-75634</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75634</b>	RunNo: <b>97471</b>								
Prep Date: <b>6/15/2023</b>	Analysis Date: <b>6/15/2023</b>	SeqNo: <b>3542367</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-75634</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75634</b>	RunNo: <b>97471</b>								
Prep Date: <b>6/15/2023</b>	Analysis Date: <b>6/15/2023</b>	SeqNo: <b>3542368</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306683

21-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>LCS-75600</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>75600</b>		RunNo: <b>97480</b>							
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/15/2023</b>		SeqNo: <b>3542195</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	35	10	50.00	0	70.5	61.9	130			
Surr: DNOP	4.2		5.000		83.4	69	147			

Sample ID: <b>MB-75600</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>75600</b>		RunNo: <b>97480</b>							
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/15/2023</b>		SeqNo: <b>3542197</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.1		10.00		80.6	69	147			

Sample ID: <b>LCS-75726</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>75726</b>		RunNo: <b>97595</b>							
Prep Date: <b>6/20/2023</b>	Analysis Date: <b>6/20/2023</b>		SeqNo: <b>3548226</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.7	61.9	130			
Surr: DNOP	4.2		5.000		84.8	69	147			

Sample ID: <b>MB-75726</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>75726</b>		RunNo: <b>97595</b>							
Prep Date: <b>6/20/2023</b>	Analysis Date: <b>6/20/2023</b>		SeqNo: <b>3548230</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.6		10.00		86.2	69	147			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306683

21-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>2.5ug gro lcs</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R97534</b>		RunNo: <b>97534</b>							
Prep Date:	Analysis Date: <b>6/18/2023</b>		SeqNo: <b>3544468</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2200		1000		216	15	244			

Sample ID: <b>lcs-75595</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>75595</b>		RunNo: <b>97534</b>							
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/18/2023</b>		SeqNo: <b>3544469</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.4	70	130			
Surr: BFB	2000		1000		203	15	244			

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>GS97534</b>		RunNo: <b>97534</b>							
Prep Date:	Analysis Date: <b>6/18/2023</b>		SeqNo: <b>3544470</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		107	15	244			

Sample ID: <b>mb-75595</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>75595</b>		RunNo: <b>97534</b>							
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/18/2023</b>		SeqNo: <b>3544471</b>		Units: <b>mg/Kg</b>					
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	15	244			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2306683

21-Jun-23

**Client:** EOG  
**Project:** State CO Valve Box 14

Sample ID: <b>100ng btex lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>R97534</b>	RunNo: <b>97534</b>								
Prep Date:	Analysis Date: <b>6/18/2023</b>	SeqNo: <b>3544607</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.90		1.000		90.2	39.1	146			

Sample ID: <b>LCS-75595</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>75595</b>	RunNo: <b>97534</b>								
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/18/2023</b>	SeqNo: <b>3544608</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	1.000	0	80.8	70	130			
Toluene	0.82	0.050	1.000	0	81.6	70	130			
Ethylbenzene	0.81	0.050	1.000	0	80.8	70	130			
Xylenes, Total	2.5	0.10	3.000	0	82.0	70	130			
Surr: 4-Bromofluorobenzene	0.89		1.000		89.1	39.1	146			

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>R97534</b>	RunNo: <b>97534</b>								
Prep Date:	Analysis Date: <b>6/18/2023</b>	SeqNo: <b>3544609</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.89		1.000		89.0	39.1	146			

Sample ID: <b>mb-75595</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>75595</b>	RunNo: <b>97534</b>								
Prep Date: <b>6/14/2023</b>	Analysis Date: <b>6/18/2023</b>	SeqNo: <b>3544610</b>	Units: <b>mg/Kg</b>							
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	39.1	146			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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

Sample Log-In Check List

Client Name: EOG Work Order Number: 2306683 RcptNo: 1

Received By: Juan Rojas 6/14/2023 7:30:00 AM
Completed By: Tracy Casarrubias 6/14/2023 7:43:40 AM
Reviewed By: JR 6/14/23

Chain of Custody

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

Log In

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

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

Checked by: SCM 06/14/23

Special Handling (if applicable)

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

Person Notified: Date:
By Whom: Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person
Regarding:
Client Instructions: Mailing address, phone number and Email are missing on COC- TMC 6/14/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 2.0, Good, Yes, Morty, ,

### Chain-of-Custody Record

Client: EOG (Water)

Mailing Address: On file

Phone #:

email or Fax#:

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation:  AZ Compliance

NELAC  Other

EDD (Type)

Turn-Around Time:

Standard  Rush 48 Hr

Project Name:

State Co Valve Box #14

Project #:

22E-00716-01

Project Manager:

C. Dixon

Sampler: S. Reto

On Ice:  Yes  No

# of Coolers: 1

Cooler Temp (including CF): 20-0-2.0 (°C)

Container Type and #

Preservative Type

HEAL No.

408 Jnr Ice

001

002

003

004

005

006

007

008

009

010

011

012

Date: 06/14/23 17:38

Relinquished by: S. Reto

Date: 6/13/23 19:00

Relinquished by: [Signature]

Received by: [Signature]

Via: [Signature]

Date: 6/13/23 19:00

Date: 6/14/23 7:30

Remarks: Direct Bill to EOG

cc: S. Reto

### Analysis Request

BTEX / MTBE / TMBs (8021)

PH8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCBs

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl, F, Br, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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

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

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

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

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

CONDITIONS

Action 234925

**CONDITIONS**

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 234925
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
scwells	None	12/8/2023