

September 26, 2022

Mr. Cory Smith
Environmental Specialist Supervisor
Environmental Bureau
EMNRD – Oil Conservation Division
5200 Oakland Avenue N.E. Suite 100
Albuquerque, New Mexico 87113

RE: Surface Soil Sampling, Eagle Springs Wellsite, Sandoval County, New Mexico

Dear Mr. Smith:

On behalf of the New Mexico Energy, Minerals and Natural Resources Department – Oil Conservation Division (OCD), INTERA Incorporated (INTERA) recently collected and submitted three (3) surface soil samples from the Eagle Springs 8 Federal #002M (API 30-045-20950) Wellsite (Site) for laboratory analysis to assess for a potential release of produced water. Our understanding is that reports were received by The New Mexico Environment Department (NMED) indicating the potential for unauthorized, experimental use of produced water for irrigation of a small plot at the Site.

To guide the field, laboratory, and data reporting efforts associated with this project, INTERA prepared a Scope of Work (SOW) and Cost Estimate (CE) dated July 22, 2022 (INTERA, 2022), which OCD approved on July 25, 2022 (PO No. 72613). All field activities followed procedures detailed in the SOW/CE with no deviations. This scope is for a simple quantification analysis and not a full characterization of a potential release which would require significantly more samples.

Field Activities

This sampling event was conducted on August 12, 2022, by Emily Woolsey of INTERA, accompanied by Cory Smith, Nelson Velez, and Monica Kuehling of the OCD, and Susan Lucas Kamat, Jason Herman, Kathleen Murphy, and Lei Hu of the NMED. The operator's son, Jeremiah, arrived on Site during the sampling event. The general Site location and sample locations are provided in **Figure 1**. A photolog of the field activities is included as **Attachment A**. The raised bed area, fenced in with barbed wire and t-posts, contained 16 labeled rows approximately 4 feet in length. The row labels were illegible, and the experiment appeared to be abandoned. Vegetation type within the fenced area was consistent with the vegetation in the surrounding disturbed area including various grasses and Russian thistle, but at a higher plant density (Photos 1 and 2). Jeremiah indicated that the raised bed was set up about a year ago. In conversation with the OCD, Jeremiah mentioned utilization of water from his home well to irrigate the bed during the experiment.

Three (3) soil samples were collected on Site (**Figure 1**) at the surface from 0 to 4" depth including a composite sample from within the fenced in raised bed (ES-01; Photos 1 and 2), a composite sample collected along the drainage channel issuing from the fenced area (ES-02; Photos 3 and 4), and a sample collected in

an undisturbed area south of the wellsite to serve as a background sample (ES-03; Photo 6 and 7).

- ES-01 was collected as a 3-point composite sample from 1-3" depth for anion analysis and from 3-4" depth for volatiles analysis. The ES-01 samples for BTEX and TPH analysis were collected using a syringe extraction and methanol preservation method at a slightly deeper interval to get below the surficial material where volatilization would have been the greatest. The ES-01 composite sample consisted of a silty, fine-grained sand material amended with perlite.
- ES-02 was collected as a 3-point composite sample from 0-3" depth including from the intermittently ponded area at the end of the drainage channel from the raised bed. Algae and recent livestock presence was evident in the ponded area. The ES-02 composite sample consisted of silty, fine to medium-grained sand with a higher moisture content than the other two samples collected.
- The ES-03 background sample was collected from 0-3" depth and consisted of silty, fine-grained sand.

Each sample was labeled and transported to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico for analysis of the following:

- Benzene, ethylbenzene, toluene, xylene (BTEX) Volatile Organic Compounds (VOCs) by United States environmental Protection Agency (EPA) Method 8021B (ES-01)
- Total Petroleum Hydrocarbons (TPH) gasoline, diesel, and motor oil (GRO, DRO, MRO) by EPA Method 8015M/D (ES-01)
- Anion Standards (F^- , Cl^- , Br^- , NO_2^- , NO_3^- , PO_4^{3-} , SO_4^{2-}) by EPA Method 300.0 (ES-01, ES-02, and ES-03)

Results

The results are summarized on **Table 1** and the laboratory issued analytical reports are included as **Attachment B**. The only measured constituents above their respective detection limits in any of the samples were the chloride, fluoride, nitrate, and sulfate anions. Method blanks and spiked method blanks run by the laboratory passed quality control requirements. Non-detection of BTEX or TPH compounds in ES-01 indicate that there was likely not a release containing significant hydrocarbons within the fenced raised bed area. Background (ES-03) levels were non-detect for all anions except nitrate, which was just above the reporting limit. Compared to background, fluoride, nitrate, and sulfate were elevated in the sample collected within the raised bed area (ES-01) and similarly, fluoride, chloride, and sulfate were elevated in the channel soils (ES-02). The fluoride detected in ES-01 and ES-02 may have leached from the perlite present in the raised bed material, which is known to contain significant level of fluoride.

According to the most protective concentration standards contained in Table 1 of the 2018 Spill Rule (19.15.29 NMAC), the threshold criteria for soils impacted by a release of produced water is a chloride concentration of 600 mg/kg. Sample ES-02 contains only slightly elevated chloride (12 mg/kg) relative to background, which was below detection for chloride (<7.5 mg/kg). If these soils had been impacted by untreated, briny produced water (~4,000-6,000 mg/kg (USGS and WaterSTAR)), we would expect much higher chloride values (i.e., >600 mg/kg).

These results, relative to background levels, suggest irrigation of the raised bed with a source other than untreated produced water. To identify the source of the water used for irrigation with some certainty, a comparison of geochemistry data produced from this investigation with data collected from potential irrigation water sources, coupled with an evaluation of data concerning the volumes and periods of

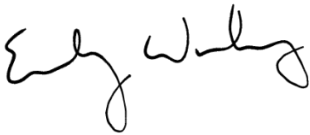
application, are necessary. Data revealing the extent of filtration would be necessary to determine if the water used for irrigation derived from treated produced water.

Three surface samples are not sufficient to perform a full characterization of irrigated land conditions or statistical analyses, as such, any observations contained in this writeup should be viewed as preliminary pending further investigation.

If you have any questions, please contact me at 505.246.1600 or ewoolsey@intera.com. Thank you for the opportunity to support the OCD on this project.

Sincerely,

INTERA Incorporated



Emily Woolsey
Project Manager, Hydrogeologist

References

INTERA Incorporated (INTERA). 2022. Work Plan and Cost Estimate for Soil Sampling and Analysis of Wellsite in the Eagle Springs Field, Sandoval County, New Mexico. July 22.

New Mexico Administrative Code (NMAC), 2018, 19.15.29.11-13 Site Assessment/Characterization for Releases
<https://www.srca.nm.gov/parts/title19/19.015.0029.html>

USGS National Produced Waters Geochemical Database v2.3 and Map of Sample Locations
<https://www.sciencebase.gov/catalog/item/59d25d63e4b05fe04cc235f9>; [PWApp \(usgs.gov\)](#)

WaterSTAR: New Mexico Produced Water Data Portal
<https://nmpw.waterstar.org/?wellPageSize=50&wellPage=1&samplePageSize=50&samplePage=1&>



Enclosures:

- Figure 1. Sample Location Map
- Table 1. Soil Analytical Results
- Attachment A – Photograph Log
- Attachment B – Laboratory Analytical Report

Figure



Legend

-  Soil Sampling Locations
-  Fenced Area

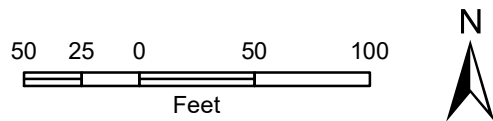


Figure 1
 Sample Location Map for Eagle Springs 8 Federal #002M
 Sandoval County, New Mexico

Table

TABLE 1
Laboratory Analytical Results - Soil Samples
 Eagle Springs 8 Federal #002M Wellsite, Sandoval County, New Mexico

Analytes		Soil Sample ID			
		ES-01	ES-02	ES-03	MeOH Blank
		Concentration (mg/kg)			
Anions	Bromide	< 1.5	< 1.5	< 1.5	
	Chloride	< 7.5	12	< 7.5	
	Fluoride	6.2	3	< 1.5	
	Nitrate (As N)	17	< 1.5	2	
	Nitrite (As N)	< 1.5	< 1.5	< 1.5	
	Sulfate	70	100	< 7.5	
BTEX Volatiles	Benzene	< 0.026			< 0.025
	Toluene	< 0.053			< 0.050
	Ethylbenzene	< 0.053			< 0.050
	Xylenes, Total	< 0.11			< 0.10
TPH	Gasoline Range Organics (GRO)	< 5.3			
	Diesel Range Organics (DRO)	< 14			
	Motor Oil Range Organics (MRO)	< 46			

Notes:

All samples collected on 8/12/2022.

MeOH Blank: methanol blank solution

TPH: Total Petroleum Hydrocarbons

See laboratory analytical report for complete list of analyzed constituents.

Attachment A

Photograph Log



Photo 1. Fenced in area of wellsite containing a slightly elevated soil bed with 16 rows approximately 4-ft in length. A 3-point composite sample (ES-01) was collected within the fenced area.



Photo 2. Looking north at fenced area of wellsite with vegetation including various grasses and Russian thistle consistent with surrounding disturbed area vegetation.



Photo 3. Looking northwest along small drainage channel from fenced raised bed area at the flagged 3-point composite sample locations for ES-02.



Photo 4. One of the three-point composite sample locations for ES-02 collected from the intermittent ponding area at end of the small drainage channel derived from the fenced in raised bed. This low area contained evidence of recent livestock presence.



Photo 5. Close-up of one of the 16 soil bed row labels within the fenced area. Labels were written on blue tape and covered in plastic but deemed illegible due to weathering.



Photo 6. Looking south at background sample (ES-03) collection location in undisturbed area south of wellsite.



Photo 7. Looking north at background sample (ES-03) collection location in undisturbed area south of wellsite infrastructure. Photo includes members of NMED and NM OCD.

Attachment B

Laboratory Analytical Report



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

August 23, 2022

Emily Woolsey

Intera, Inc.

2440 Louisiana Blvd NE Suite 700

Albuquerque, NM 87110

TEL: (505) 246-1600

FAX: (505) 246-2600

RE: OCD Eagle Springs

OrderNo.: 2208871

Dear Emily Woolsey:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/12/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2208871

Date Reported: 8/23/2022

CLIENT: Intera, Inc.

Client Sample ID: ES-01

Project: OCD Eagle Springs

Collection Date: 8/12/2022 12:14:00 PM

Lab ID: 2208871-001

Matrix: MEOH (SOIL)

Received Date: 8/12/2022 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: NAI
Fluoride	6.2	1.5		mg/Kg	5	8/17/2022 11:10:00 PM	69576
Chloride	ND	7.5		mg/Kg	5	8/17/2022 11:10:00 PM	69576
Nitrogen, Nitrite (As N)	ND	1.5		mg/Kg	5	8/17/2022 11:10:00 PM	69576
Bromide	ND	1.5		mg/Kg	5	8/17/2022 11:10:00 PM	69576
Nitrogen, Nitrate (As N)	17	1.5		mg/Kg	5	8/17/2022 11:10:00 PM	69576
Sulfate	70	7.5		mg/Kg	5	8/17/2022 11:10:00 PM	69576
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/17/2022 8:38:38 PM	69529
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/17/2022 8:38:38 PM	69529
Surr: DNOP	95.3	21-129		%Rec	1	8/17/2022 8:38:38 PM	69529
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.3		mg/Kg	1	8/16/2022 5:40:46 PM	G90310
Surr: BFB	84.5	37.7-212		%Rec	1	8/16/2022 5:40:46 PM	G90310
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.026		mg/Kg	1	8/16/2022 5:40:46 PM	B90310
Toluene	ND	0.053		mg/Kg	1	8/16/2022 5:40:46 PM	B90310
Ethylbenzene	ND	0.053		mg/Kg	1	8/16/2022 5:40:46 PM	B90310
Xylenes, Total	ND	0.11		mg/Kg	1	8/16/2022 5:40:46 PM	B90310
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/16/2022 5:40:46 PM	B90310

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2208871

Date Reported: 8/23/2022

CLIENT: Intera, Inc.

Client Sample ID: ES-02

Project: OCD Eagle Springs

Collection Date: 8/12/2022 11:40:00 AM

Lab ID: 2208871-002

Matrix: SOIL

Received Date: 8/12/2022 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: NAI
Fluoride	3.0	1.5		mg/Kg	5	8/18/2022 12:24:29 AM	69576
Chloride	12	7.5		mg/Kg	5	8/18/2022 12:24:29 AM	69576
Nitrogen, Nitrite (As N)	ND	1.5		mg/Kg	5	8/18/2022 12:24:29 AM	69576
Bromide	ND	1.5		mg/Kg	5	8/18/2022 12:24:29 AM	69576
Nitrogen, Nitrate (As N)	ND	1.5		mg/Kg	5	8/18/2022 12:24:29 AM	69576
Sulfate	100	7.5		mg/Kg	5	8/18/2022 12:24:29 AM	69576

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2208871

Date Reported: 8/23/2022

CLIENT: Intera, Inc.

Client Sample ID: ES-03

Project: OCD Eagle Springs

Collection Date: 8/12/2022 12:30:00 PM

Lab ID: 2208871-003

Matrix: SOIL

Received Date: 8/12/2022 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: NAI
Fluoride	ND	1.5		mg/Kg	5	8/18/2022 12:49:18 AM	69576
Chloride	ND	7.5		mg/Kg	5	8/18/2022 12:49:18 AM	69576
Nitrogen, Nitrite (As N)	ND	1.5		mg/Kg	5	8/18/2022 12:49:18 AM	69576
Bromide	ND	1.5		mg/Kg	5	8/18/2022 12:49:18 AM	69576
Nitrogen, Nitrate (As N)	2.0	1.5		mg/Kg	5	8/18/2022 12:49:18 AM	69576
Sulfate	ND	7.5		mg/Kg	5	8/18/2022 12:49:18 AM	69576

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

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

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Intera, Inc.**Client Sample ID:** MeOH Blank**Project:** OCD Eagle Springs**Collection Date:****Lab ID:** 2208871-004**Matrix:** MEOH BLAN**Received Date:** 8/12/2022 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	8/16/2022 6:04:32 PM	B90310
Toluene	ND	0.050		mg/Kg	1	8/16/2022 6:04:32 PM	B90310
Ethylbenzene	ND	0.050		mg/Kg	1	8/16/2022 6:04:32 PM	B90310
Xylenes, Total	ND	0.10		mg/Kg	1	8/16/2022 6:04:32 PM	B90310
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/16/2022 6:04:32 PM	B90310

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208871

24-Aug-22

Client: Intera, Inc.
Project: OCD Eagle Springs

Sample ID: MB-69576	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69576	RunNo: 90334								
Prep Date: 8/17/2022	Analysis Date: 8/17/2022	SeqNo: 3224234	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.30								
Chloride	ND	1.5								
Nitrogen, Nitrite (As N)	ND	0.30								
Bromide	ND	0.30								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	ND	1.5								

Sample ID: LCS-69576	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69576	RunNo: 90334								
Prep Date: 8/17/2022	Analysis Date: 8/17/2022	SeqNo: 3224235	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.6	0.30	1.500	0	106	90	110			
Chloride	14	1.5	15.00	0	95.3	90	110			
Nitrogen, Nitrite (As N)	3.1	0.30	3.000	0	103	90	110			
Bromide	7.4	0.30	7.500	0	98.8	90	110			
Nitrogen, Nitrate (As N)	7.8	0.30	7.500	0	104	90	110			
Sulfate	31	1.5	30.00	0	103	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208871

24-Aug-22

Client: Intera, Inc.
Project: OCD Eagle Springs

Sample ID: MB-69529	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 69529	RunNo: 90347								
Prep Date: 8/16/2022	Analysis Date: 8/17/2022	SeqNo: 3223156	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		115	21	129			

Sample ID: LCS-69529	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 69529	RunNo: 90347								
Prep Date: 8/16/2022	Analysis Date: 8/17/2022	SeqNo: 3223157	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	15	50.00	0	92.7	64.4	127			
Surr: DNOP	4.4		5.000		88.3	21	129			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208871

24-Aug-22

Client: Intera, Inc.
Project: OCD Eagle Springs

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: G90310		RunNo: 90310							
Prep Date:	Analysis Date: 8/16/2022		SeqNo: 3222077		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	830		1000		83.2	37.7	212			

Sample ID: 2.5ug gro lcs	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: G90310		RunNo: 90310							
Prep Date:	Analysis Date: 8/16/2022		SeqNo: 3222078		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	83.8	72.3	137			
Surr: BFB	1700		1000		175	37.7	212			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208871

24-Aug-22

Client: Intera, Inc.
Project: OCD Eagle Springs

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: B90310		RunNo: 90310							
Prep Date:	Analysis Date: 8/16/2022		SeqNo: 3222123		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		100	70	130			

Sample ID: 100ng btex lcs	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: B90310		RunNo: 90310							
Prep Date:	Analysis Date: 8/16/2022		SeqNo: 3222124		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.1	0.050	1.000	0	106	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	70	130			

Qualifiers:

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

Sample Log-In Check List

Client Name: **Intera, Inc.**

Work Order Number: **2208871**

RcptNo: **1**

Received By: **Juan Rojas**

8/12/2022 3:50:00 PM

Juan Rojas

Completed By: **Cheyenne Cason**

8/12/2022 4:39:29 PM

Cheyenne Cason

Reviewed By:

JR 8/15/22

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: *KPA 8.15.22*

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	7.3	Good	Not Present			

Chain-of-Custody Record

Client: Emily Woolley (INTERA)

Mailing Address: 2440 Louisiana Blvd NE

Albuquerque, NM 87110 (Suik 700)

Phone #: 505-246-1600

email or Fax#: ewoolley@intera.com

QA/QC Package:

 Standard Level 4 (Full Validation)Accreditation: AZ Compliance NELAC Other EDD (Type) excel

Turn-Around Time:

 Standard Rush

Project Name:

002 Eagle Springs

Project #:

Task 2

NMGSD.M005.OCD-ETAGLE

Project Manager:

Emily Woolley

Sampler: Emily Woolley

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CF): 73-0-73 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
8/12/22	1214	Soil	ES-01	2	H ₃ O ₂	2208871
8/12/22	1206	Soil	ES-01	1	NA	001
8/12/22	1140	Soil	ES-02	1	NA	002
8/12/22	1230	Soil	ES-03	1	NA	003
			MeOH Blank			004
						MPG 8.15.22

BTEX / MTBE / TMB's (8021)

TPH:8015D (GRO / ORD / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

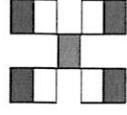
Cl⁻, Br⁻, NO₃⁻, PO₄⁻, SO₄⁻

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Analysis Request


**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Received by: [Signature] Date: 8/12/22 Time: 15:50

Relinquished by: [Signature]

Date: 8/12/22 Time: 1540

Relinquished by:

Date:

Received by: [Signature] Date: 8/12/22 Time: 15:50

Received by: [Signature] Date: 8/12/22 Time: 15:50

Remarks: all analyses on all samples per Emily

CWE 8/1/22