



March 21, 2022

Ms. Monica Smith  
Environmental Specialist  
Harvest Four Corners  
1755 Arroyo Drive  
Bloomfield, New Mexico 87413

**Subject: 2021 Annual Groundwater Report  
Lateral H-21 Pipeline Release  
Incident Number NCS1907233330  
Rio Arriba County, New Mexico**

Dear Ms. Smith,

On behalf of Harvest Four Corners, LLC (Harvest), WSP USA Inc. (WSP), presents this annual report for activities conducted at the Lateral H-21 Pipeline Release (Site), Incident Number NCS1907233330, between January and December 2021. The scope of work for this project was continued remediation and monitoring of petroleum hydrocarbon impacts to groundwater resulting from a pipeline release in March 2019.

## INTRODUCTION

The Site is located approximately 300 feet east of Largo Canyon Wash in Dogie Canyon between Julian Canyon and Forbes Canyon in Unit F of Section 4, Township 25 North, Range 6 West, Rio Arriba County, New Mexico, approximately 28 miles southeast of Blanco, New Mexico (Figure 1). The Site is an active pipeline that transports gas to the Dogie Compression Station, which is located approximately 1,750 feet northwest of the Site. On March 12, 2019, an unknown volume of produced water and natural gas condensate and approximately 658 thousand cubic feet (MCF) of natural gas were released from the Site due to corrosion on the pipeline. Upon discovery, the release was immediately contained, and the pipeline was shut in. An initial C-141 was submitted to the New Mexico Oil Conservation Division (NMOCD) on March 13, 2019, and assigned incident number NCS1907233330.

Harvest excavated approximately 3,200 cubic yards of impacted soil and subsequently disposed of the soil at the Envirotech Landfarm in Bloomfield, New Mexico. The excavation extent is illustrated on Figure 2. A NMOCD representative witnessed collection of eight confirmation soil samples from the excavation sidewalls on March 29 and April 5, 2019. Laboratory analytical results indicated the concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX), total petroleum hydrocarbons (TPH), and chloride in soil on the sidewalls of the excavation were below the NMOCD Table 1 closure criteria. Soil analytical results were previously submitted in the *Revised Stage 1 Abatement Plan* submitted in June 2021. While excavating, groundwater was encountered at approximately 4 feet below ground surface (bgs). After impacted soil was removed, Harvest backfilled a portion of the excavation with clean fill and left a portion of the excavation open to allow access to the groundwater.

Between early April and June 2019, Harvest pumped approximately 3,800 barrels of fluid from the excavation and disposed of it at Agua Moss in Bloomfield, New Mexico. WSP was retained by Harvest to collect grab samples of the water in the portion of the excavation that remained open. Five water samples were collected from the open excavation between April 3 and June 6, 2019, to evaluate the quality of groundwater. All five samples exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard for benzene.

In July 2019, temporary monitoring wells TMW01 through TMW08 were installed to delineate impacts to groundwater. Boreholes were advanced using a hand auger ranging from 5 feet to 8 feet bgs. Once saturated soils were encountered, the boreholes were advanced an additional 2.5 feet into the saturated zone to allow temporary monitoring wells to be installed within the groundwater aquifer. Prepacked temporary groundwater monitoring wells were installed in each borehole with screened casing across the groundwater interface and solid casing to the

WSP USA  
848 EAST SECOND AVENUE  
DURANGO, CO 81301

Tel.: 970-385-1096  
wsp.com

Review of the 2021 Annual Groundwater Report: **Content satisfactory**

1. Continue quarterly groundwater sampling for monitoring wells TMW01, TMW02, TMW03, TMW04, TMW06, TMW07, TMW08, TMW09, and TMW10.
2. Continue quarterly groundwater monitoring until eight consecutive quarters of compliance with NMWQCC standards is achieved in lieu of submitting a Stage 2 Abatement Plan
3. If contaminant concentrations rebound and exceed NMWQCC standards, a Stage 2 Abatement Plan per NMAC 19.15.30 remediation alternative must be completed
4. Submit the Annual Monitoring Report to the OCD no later than March 31, 2023.



surface. Wells were constructed out of 2-inch diameter Schedule 40 polyvinyl chloride (PVC) casing and prepacked 2-inch Schedule 40 PVC 0.010-inch slotted screen wrapped with 65-mesh stainless steel screen and prepacked with 20/40 silica sand. Annulus volume between the prepacked well screen and the borehole were filled with clean, native fill material. The monitoring wells were completed with flush-mount well vaults with steel protective plates and were cemented into the ground. Temporary monitoring well TMW05 was found to be destroyed in 2020.

In April 2021, temporary monitoring wells TMW09 and TMW10 were installed in the same manner described above to further delineate impacted groundwater observed in TMW03. Temporary groundwater monitoring well locations are depicted on Figures 2 through 4.

## SCOPE OF WORK

Quarterly groundwater monitoring activities were conducted at the Site in April, September, and November of 2021. WSP measured groundwater elevations and collected groundwater samples from monitoring wells TMW01, TMW02, TMW03, TMW04, TMW06, TMW07, TMW08, TMW09, and TMW10.

## WATER LEVEL MEASUREMENTS

During each quarterly monitoring event, WSP measured depth to groundwater and total depth in all existing wells with an oil/water interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with distilled water prior to each measurement. WSP used top-of-casing elevations above mean sea level (amsl) to determine groundwater elevations and draft inferred groundwater potentiometric surfaces to determine groundwater flow direction and gradient. Contours were inferred based on groundwater elevations and physical characteristics at the Site (topography, proximity to irrigation ditches, etc.). Groundwater elevation data are summarized in Table 1. Groundwater elevations and potentiometric surfaces are depicted for each quarterly monitoring event on Figure 2 (April 2021), Figure 3 (September 2021), and Figure 4 (November 2021).

## GROUNDWATER SAMPLING

The volume of groundwater in monitoring wells was calculated and a minimum of three well casing volumes of groundwater were purged from each monitoring well or until the monitoring well purged dry using a peristaltic pump and dedicated tubing. Purge water was collected and disposed of at a nearby Harvest facility. Groundwater samples were collected into laboratory provided sample containers. Groundwater samples were submitted to Hall Environmental Analytical Laboratory (HEAL) for laboratory analysis of BTEX by Environmental Protection Agency (EPA) Method 8021B or by EPA method 8260. Samples were labeled with the date and time of collection, monitoring well name, project name, sample collector's name, and parameters to be analyzed. Samples were immediately sealed and packed on ice. No sample was collected from well temporary monitoring well TMW04 in September 2021 due to an insufficient water column present in the well.

## GROUNDWATER SAMPLING RESULTS

Groundwater flow direction at the Site is generally north and east towards Largo Canyon. Measurable phase-separated hydrocarbons (PSH) was not detected in any monitoring wells during the 2021 quarterly sampling events. Groundwater analytical results indicate BTEX concentrations did not exceed NMWQCC standards in any of the wells sampled in 2021. Groundwater analytical results are presented in Table 2 and laboratory analytical reports are included in Enclosure A.

## CONCLUSIONS

The quantity of soil excavated from the area surrounding the release point and the total volume of fluid pumped from the excavation appear to have remediated the impacts to soil and the majority of the impacts to groundwater. This is confirmed by the absence of sidewall soil exceeding the NMOCD Table 1 closure criteria following excavation activities and decreasing dissolved-phase benzene concentrations in groundwater over time after the installation of temporary monitoring wells. Previously observed elevated benzene concentrations in groundwater have since diminished to below NMWQCC standards for the three 2021 quarterly sampling events.



## FUTURE WORK

Harvest proposes continued groundwater sampling on a quarterly basis for monitoring wells TMW01, TMW02, TMW03, TMW04, TMW06, TMW07, TMW08, TMW09, and TMW10. Quarterly sampling will continue until BTEX concentrations do not exceed NMWQCC standards for eight consecutive quarters.

Kind regards,

A handwritten signature in black ink that reads "Gregory Palese".

Gregory Palese  
Assistant Consultant, Geologist

A handwritten signature in black ink that reads "Brooke Herb".

Brooke Herb  
Senior Consultant, Geologist

### Enclosed:

Figure 1: Site Location Map

Figure 2: Groundwater Elevations and Analytical Results (April 2021)

Figure 3: Groundwater Elevations and Analytical Results (September 2021)

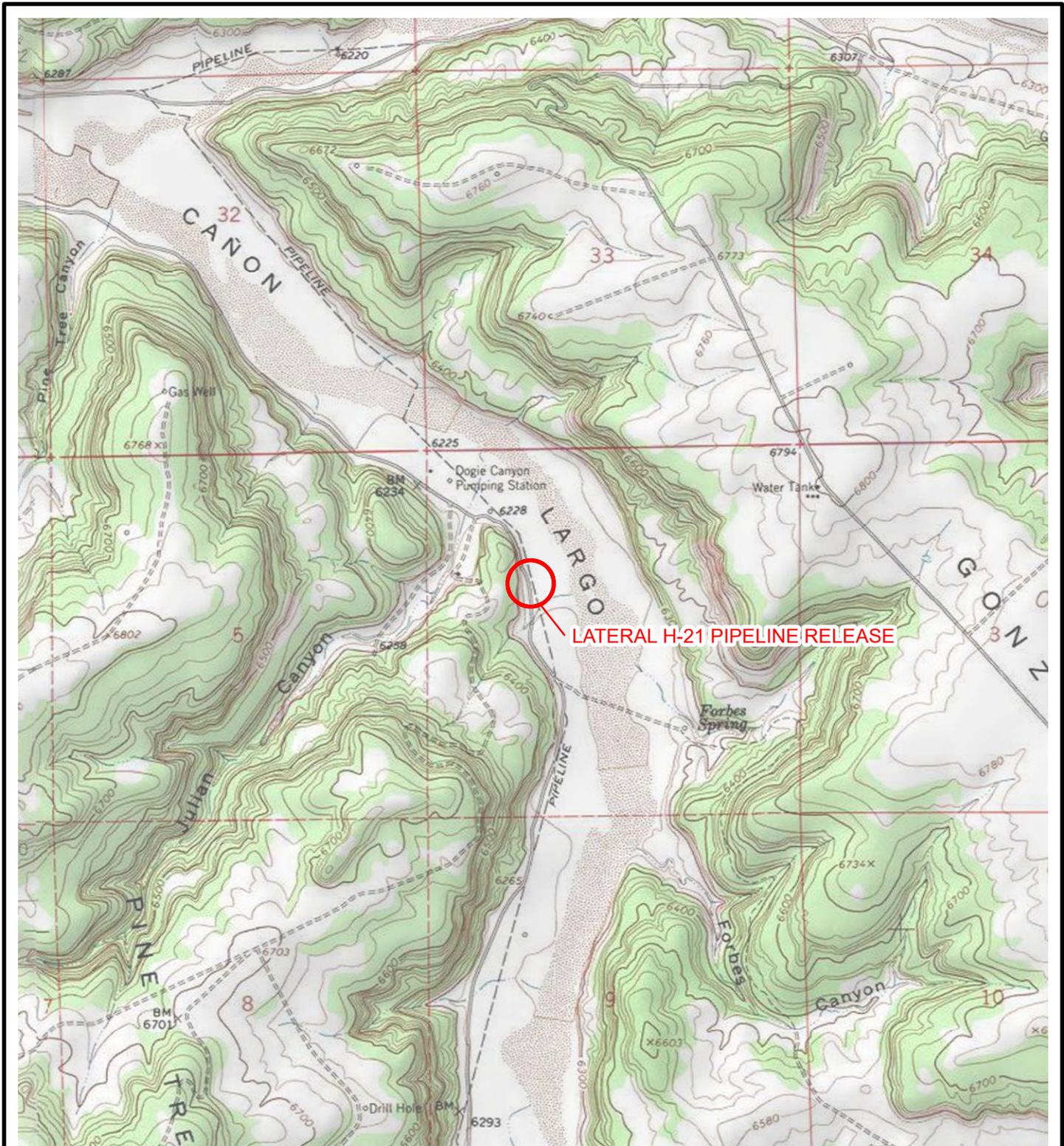
Figure 4: Groundwater Elevations and Analytical Results (November 2021)

Table 1: Groundwater Elevation Summary

Table 2: Groundwater Analytical Results

Enclosure A: Laboratory Analytical Reports

## FIGURES

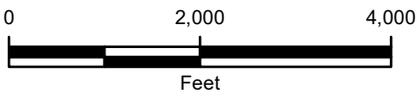


LATERAL H-21 PIPELINE RELEASE

IMAGE COURTESY OF ESRI/USGS

LEGEND

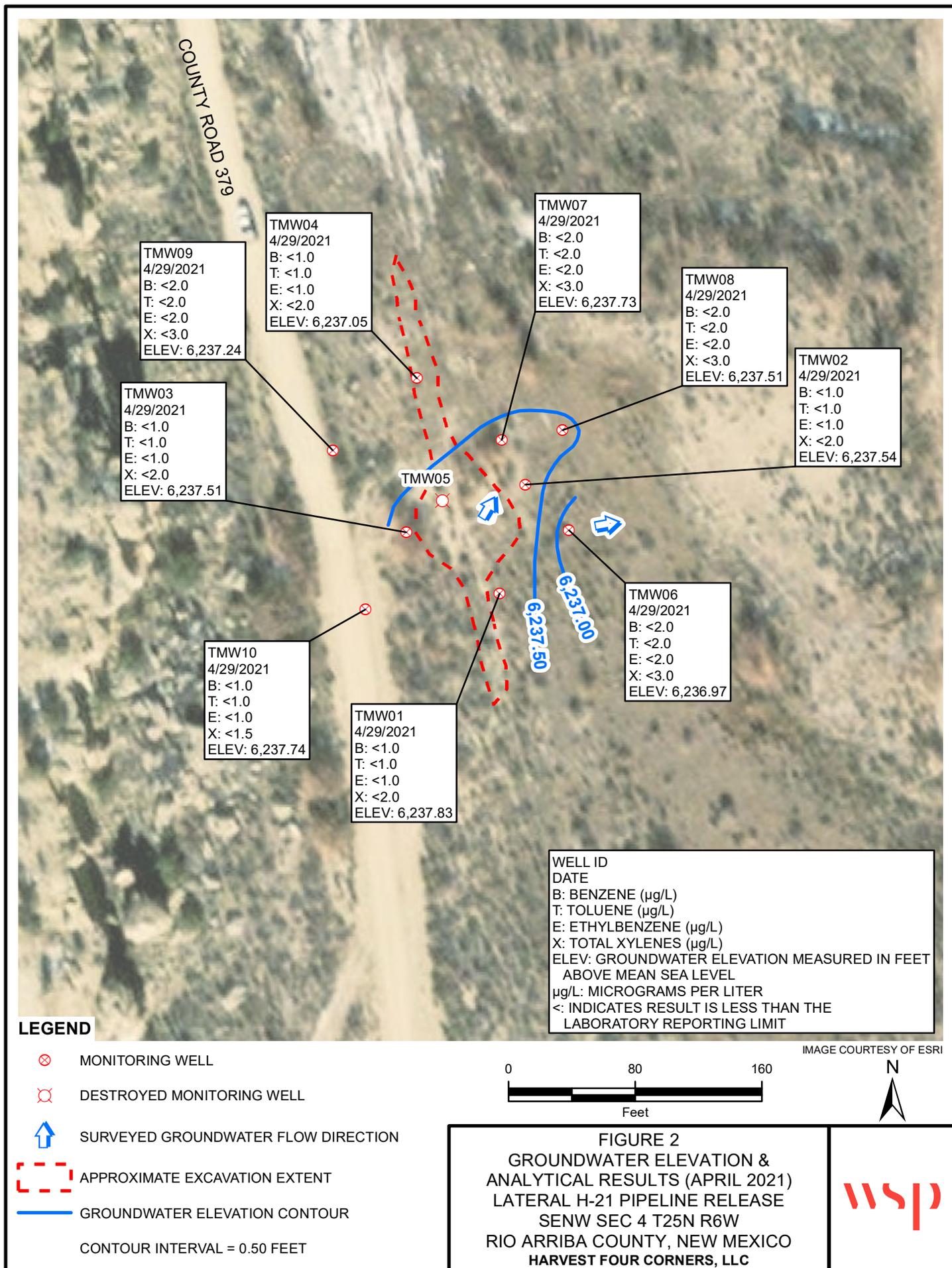
○ SITE LOCATION

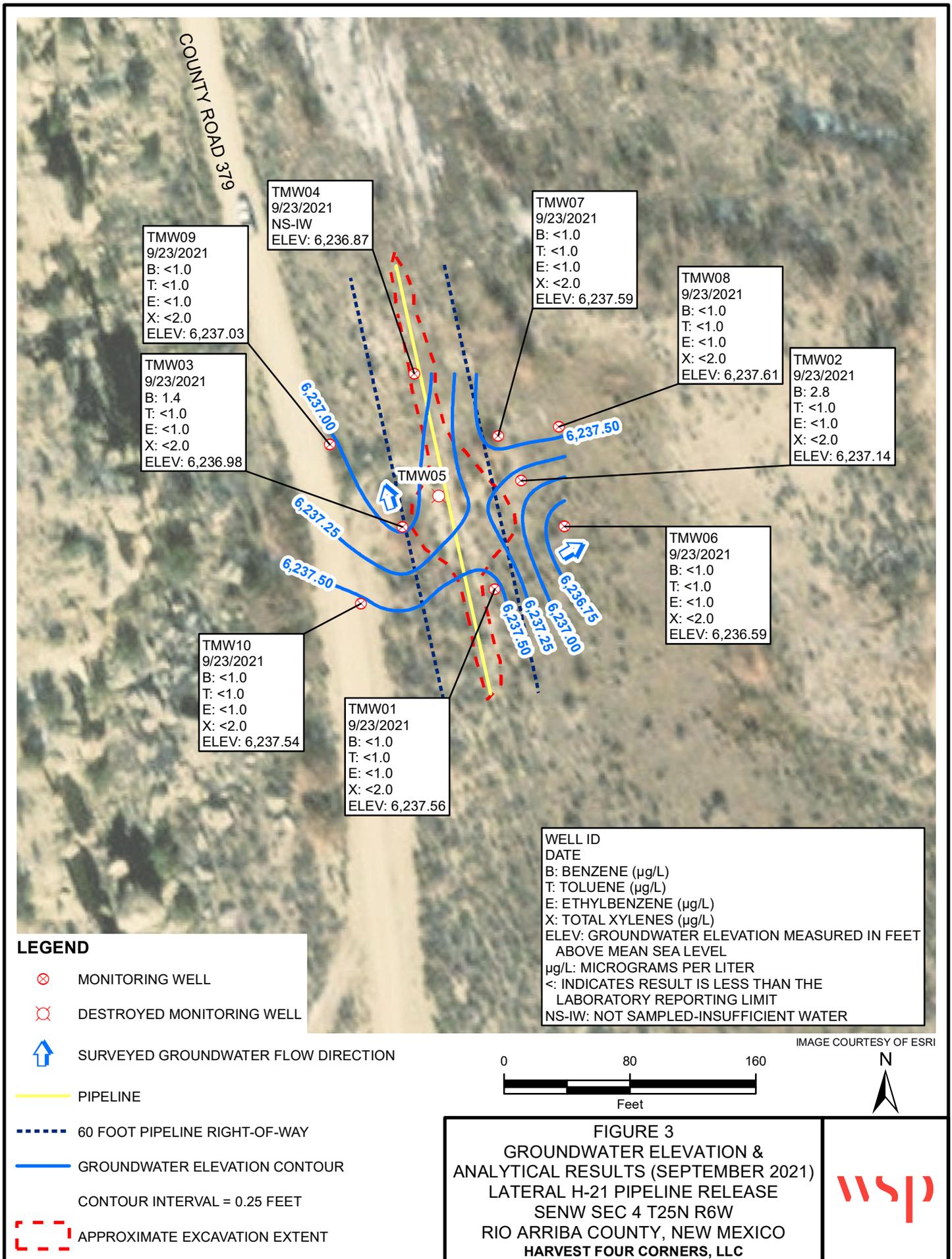


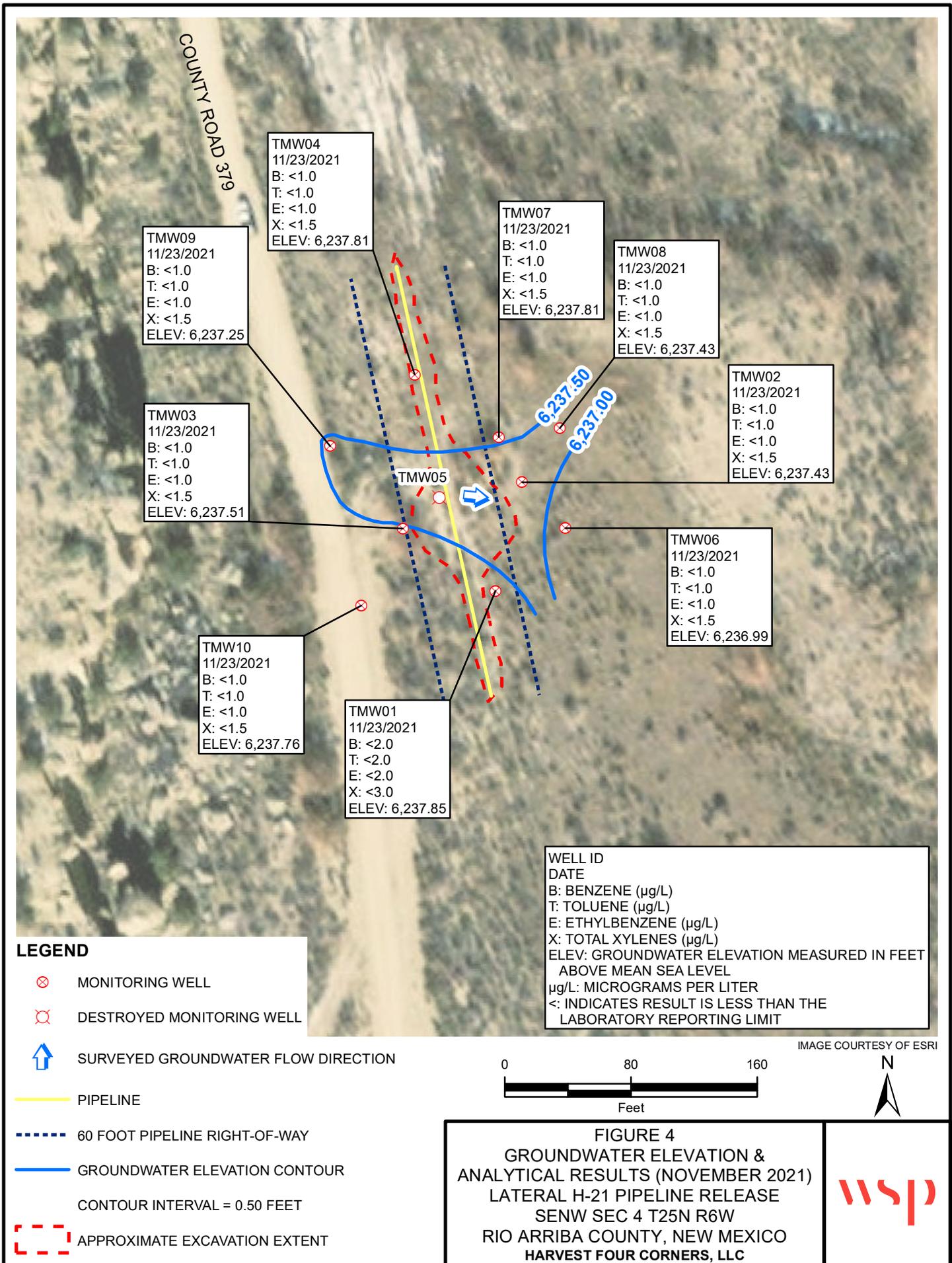
**FIGURE 1**  
**SITE LOCATION MAP**  
**LATERAL H-21 PIPELINE RELEASE**  
**SENW SEC 4 T25N-R6W**  
**RIO ARRIBA COUNTY, NEW MEXICO**  
**HARVEST FOUR CORNERS, LLC**



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## TABLES

TABLE 1

**GROUNDWATER ELEVATION SUMMARY  
LATERAL H-21 PIPELINE RELEASE  
RIO ARRIBA COUNTY, NEW MEXICO**

Well ID	Sample Date	Top of Casing Elevation (feet AMSL)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
TMW01	7/17/2019	6,242.12	4.11	6,238.01
	7/23/2019		4.12	6,238.00
	7/25/2019		4.10	6,238.02
	8/7/2020		4.23	6,237.89
	4/29/2021		4.29	6,237.83
	9/23/2021		4.56	6,237.56
	11/23/2021		4.27	6,237.85
TMW02	7/17/2019	6,241.00	3.25	6,237.75
	7/23/2019		3.26	6,237.74
	7/25/2019		3.25	6,237.75
	8/7/2020		3.22	6,237.78
	4/29/2021		3.46	6,237.54
	9/23/2021		3.86	6,237.14
	11/23/2021		3.57	6,237.43
TMW03	7/17/2019	6,242.60	4.77	6,237.83
	7/23/2019		5.66	6,236.94
	7/25/2019		4.83	6,237.77
	8/7/2020		5.96	6,236.64
	4/29/2021		5.09	6,237.51
	9/23/2021		5.02	6,237.58
	11/23/2021		5.09	6,237.51
TMW04	7/17/2019	6,241.57	4.20	6,237.37
	7/23/2019		5.60	6,235.97
	7/25/2019		4.28	6,237.29
	8/7/2020		4.50	6,237.07
	4/29/2021		4.52	6,237.05
	9/23/2021		4.70	6,236.87
	11/23/2021		3.76	6,237.81
TMW05	7/17/2019	6,241.74	4.01	6,237.73
	7/23/2019		4.02	6,237.72
	7/25/2019		4.02	6,237.72
	8/7/2020		Destroyed	Destroyed
TMW06	7/23/2019	6,240.61	3.54	6,237.07
	7/25/2019		3.43	6,237.18

**TABLE 1**

**GROUNDWATER ELEVATION SUMMARY  
LATERAL H-21 PIPELINE RELEASE  
RIO ARRIBA COUNTY, NEW MEXICO**

Well ID	Sample Date	Top of Casing Elevation (feet AMSL)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
TMW06	8/7/2020	6,240.61	3.64	6,236.97
	4/29/2021		3.64	6,236.97
	9/23/2021		4.02	6,236.59
	11/23/2021		3.62	6,236.99
TMW07	7/23/2019	6,241.42	3.55	6,237.87
	7/25/2019		3.45	6,237.97
	8/7/2020		3.70	6,237.72
	4/29/2021		3.69	6,237.73
	9/23/2021		3.83	6,237.59
	11/23/2021		3.61	6,237.81
TMW08	7/25/2019	6,240.90	3.25	6,237.65
	8/7/2020		3.52	6,237.38
	4/29/2021		3.39	6,237.51
	9/23/2021		3.29	6,237.61
	11/23/2021		3.47	6,237.43
TMW09	4/29/2021	6,243.66	6.42	6,237.24
	9/23/2021		6.63	6,237.03
	11/23/2021		6.41	6,237.25
TMW10	4/29/2021	6,243.94	6.20	6,237.74
	9/23/2021		6.40	6,237.54
	11/23/2021		6.18	6,237.76

**Notes:**

AMSL - above mean sea level

BTOC - below top of casing

TABLE 2

**GROUNDWATER ANALYTICAL RESULTS  
LATERAL H-21 PIPELINE RELEASE  
RIO ARRIBA COUNTY, NEW MEXICO**

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)
<b>NMWQCC Standard</b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>620</b>
Open Excavation Grab Samples	4/3/2019	<b>310</b>	330	8.3	41
	4/10/2019	<b>140</b>	89	2.7	20
	4/22/2019	<b>31</b>	36	<2.0	5.5
	5/9/2019	<b>220</b>	160	3.8	24
	6/3/2019	<b>39</b>	5.4	<1.0	<1.5
TMW01	7/17/2019	<1.0	<1.0	<1.0	<2.0
	8/7/2020	3.3	<1.0	6.0	<1.5
	4/29/2021	<1.0	<1.0	<1.0	<2.0
	9/23/2021	<1.0	<1.0	<1.0	<2.0
	11/23/2021	<2.0	<2.0	<2.0	<3.0
TMW02	7/17/2019	<b>49</b>	<1.0	<1.0	<2.0
	8/7/2020	<b>8.5</b>	<1.0	<1.0	<1.5
	4/29/2021	<1.0	<1.0	<1.0	<2.0
	9/23/2021	2.8	<1.0	<1.0	<2.0
	11/23/2021	<1.0	<1.0	<1.0	<1.5
TMW03	7/17/2019	<1.0	<1.0	<1.0	<2.0
	8/7/2020	<b>16</b>	<1.0	<1.0	<1.5
	4/29/2021	<1.0	<1.0	<1.0	<2.0
	9/23/2021	1.4	<1.0	<1.0	<2.0
	11/23/2021	<1.0	<1.0	<1.0	<1.5
TMW04	7/17/2019	<1.0	<1.0	<1.0	<2.0
	8/7/2020	<1.0	<1.0	<1.0	<1.5
	4/29/2021	<1.0	<1.0	<1.0	<2.0
	9/23/2021	NS-IW	NS-IW	NS-IW	NS-IW
	11/23/2021	<1.0	<1.0	<1.0	<1.5
TMW05	7/17/2019	<1.0	<1.0	<1.0	<2.0
	8/7/2020	Destroyed	Destroyed	Destroyed	Destroyed
TMW06	7/23/2019	<1.0	<1.0	<1.0	<1.5
	8/7/2020	<1.0	<1.0	<1.0	<1.5
	4/29/2021	<2.0	<2.0	<2.0	<3.0
	9/23/2021	<1.0	<1.0	<1.0	<2.0
	11/23/2021	<1.0	<1.0	<1.0	<1.5

TABLE 2

**GROUNDWATER ANALYTICAL RESULTS  
LATERAL H-21 PIPELINE RELEASE  
RIO ARRIBA COUNTY, NEW MEXICO**

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)
<b>NMWQCC Standard</b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>620</b>
TMW07	7/23/2019	<1.0	<1.0	<1.0	<1.5
TMW07	8/7/2020	<1.0	<1.0	<1.0	<1.5
	4/29/2021	<2.0	<2.0	<2.0	<3.0
	9/23/2021	<1.0	<1.0	<1.0	<2.0
	11/23/2021	<1.0	<1.0	<1.0	<1.5
TMW08	7/25/2019	2.2	<2.0	<2.0	<4.0
	8/7/2020	<1.0	<1.0	<1.0	<1.5
	4/29/2021	<2.0	<2.0	<2.0	<3.0
	9/23/2021	<1.0	<1.0	<1.0	<2.0
	11/23/2021	<1.0	<1.0	<1.0	<1.5
TMW09	4/29/2021	<2.0	<2.0	<2.0	<3.0
	9/23/2021	<1.0	<1.0	<1.0	<2.0
	11/23/2021	<1.0	<1.0	<1.0	<1.5
TMW10	4/29/2021	<1.0	<1.0	<1.0	<1.5
	9/23/2021	<1.0	<1.0	<1.0	<2.0
	11/23/2021	<1.0	<1.0	<1.0	<1.5

**Notes:**

NMWQCC- New Mexico Water Quality Control Commission

NS-IW - not sampled due to insufficient water

**Bold** - indicates result exceeds NMWQCC standard

µg/L- micrograms per liter

&lt; - indicates result is below laboratory reporting limit

ENCLOSURE A – LABORATORY ANALYTICAL REPORTS



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

May 07, 2021

Monica Smith

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX:

RE: Lateral H21

OrderNo.: 2104D17

Dear Monica Smith:

Hall Environmental Analysis Laboratory received 9 sample(s) on 4/30/2021 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 **2104D17**

Date Reported: 5/7/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW 01

**Project:** Lateral H21

**Collection Date:** 4/29/2021 12:10:00 PM

**Lab ID:** 2104D17-001

**Matrix:** AQUEOUS

**Received Date:** 4/30/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	5/4/2021 3:19:11 PM	B77139
Toluene	ND	1.0		µg/L	1	5/4/2021 3:19:11 PM	B77139
Ethylbenzene	ND	1.0		µg/L	1	5/4/2021 3:19:11 PM	B77139
Xylenes, Total	ND	2.0		µg/L	1	5/4/2021 3:19:11 PM	B77139
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	5/4/2021 3:19:11 PM	B77139

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 Value above quantitation range
	H Holding times for preparation 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	

**Analytical Report**

Lab Order **2104D17**

Date Reported: 5/7/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW 02

**Project:** Lateral H21

**Collection Date:** 4/29/2021 12:40:00 PM

**Lab ID:** 2104D17-002

**Matrix:** AQUEOUS

**Received Date:** 4/30/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0	P	µg/L	1	5/4/2021 3:42:59 PM	B77139
Toluene	ND	1.0	P	µg/L	1	5/4/2021 3:42:59 PM	B77139
Ethylbenzene	ND	1.0	P	µg/L	1	5/4/2021 3:42:59 PM	B77139
Xylenes, Total	ND	2.0	P	µg/L	1	5/4/2021 3:42:59 PM	B77139
Surr: 4-Bromofluorobenzene	102	70-130	P	%Rec	1	5/4/2021 3:42:59 PM	B77139

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 Value above quantitation range
	H Holding times for preparation 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	

**Analytical Report**

Lab Order **2104D17**

Date Reported: 5/7/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW 03

**Project:** Lateral H21

**Collection Date:** 4/29/2021 1:10:00 PM

**Lab ID:** 2104D17-003

**Matrix:** AQUEOUS

**Received Date:** 4/30/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	5/4/2021 4:06:41 PM	B77139
Toluene	ND	1.0		µg/L	1	5/4/2021 4:06:41 PM	B77139
Ethylbenzene	ND	1.0		µg/L	1	5/4/2021 4:06:41 PM	B77139
Xylenes, Total	ND	2.0		µg/L	1	5/4/2021 4:06:41 PM	B77139
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	5/4/2021 4:06:41 PM	B77139

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 Value above quantitation range
	H Holding times for preparation 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	

**Analytical Report**

Lab Order 2104D17

Date Reported: 5/7/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW 04

**Project:** Lateral H21

**Collection Date:** 4/29/2021 12:55:00 PM

**Lab ID:** 2104D17-004

**Matrix:** AQUEOUS

**Received Date:** 4/30/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0	P	µg/L	1	5/4/2021 4:30:20 PM	B77139
Toluene	ND	1.0	P	µg/L	1	5/4/2021 4:30:20 PM	B77139
Ethylbenzene	ND	1.0	P	µg/L	1	5/4/2021 4:30:20 PM	B77139
Xylenes, Total	ND	2.0	P	µg/L	1	5/4/2021 4:30:20 PM	B77139
Surr: 4-Bromofluorobenzene	103	70-130	P	%Rec	1	5/4/2021 4:30:20 PM	B77139

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 Value above quantitation range
	H Holding times for preparation 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	

**Analytical Report**

Lab Order **2104D17**

Date Reported: 5/7/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW 06

**Project:** Lateral H21

**Collection Date:** 4/29/2021 12:15:00 PM

**Lab ID:** 2104D17-005

**Matrix:** AQUEOUS

**Received Date:** 4/30/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>BRM</b>
Benzene	ND	2.0	D	µg/L	2	5/6/2021 3:44:36 PM	B77212
Toluene	ND	2.0	D	µg/L	2	5/6/2021 3:44:36 PM	B77212
Ethylbenzene	ND	2.0	D	µg/L	2	5/6/2021 3:44:36 PM	B77212
Xylenes, Total	ND	3.0	D	µg/L	2	5/6/2021 3:44:36 PM	B77212
Surr: 1,2-Dichloroethane-d4	113	70-130	D	%Rec	2	5/6/2021 3:44:36 PM	B77212
Surr: 4-Bromofluorobenzene	101	70-130	D	%Rec	2	5/6/2021 3:44:36 PM	B77212
Surr: Dibromofluoromethane	102	70-130	D	%Rec	2	5/6/2021 3:44:36 PM	B77212
Surr: Toluene-d8	104	70-130	D	%Rec	2	5/6/2021 3:44:36 PM	B77212

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 Value above quantitation range
	H Holding times for preparation 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	

**Analytical Report**

Lab Order **2104D17**

Date Reported: 5/7/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW 07

**Project:** Lateral H21

**Collection Date:** 4/29/2021 2:00:00 PM

**Lab ID:** 2104D17-006

**Matrix:** AQUEOUS

**Received Date:** 4/30/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>BRM</b>
Benzene	ND	2.0	D	µg/L	2	5/6/2021 4:11:54 PM	B77212
Toluene	ND	2.0	D	µg/L	2	5/6/2021 4:11:54 PM	B77212
Ethylbenzene	ND	2.0	D	µg/L	2	5/6/2021 4:11:54 PM	B77212
Xylenes, Total	ND	3.0	D	µg/L	2	5/6/2021 4:11:54 PM	B77212
Surr: 1,2-Dichloroethane-d4	108	70-130	D	%Rec	2	5/6/2021 4:11:54 PM	B77212
Surr: 4-Bromofluorobenzene	101	70-130	D	%Rec	2	5/6/2021 4:11:54 PM	B77212
Surr: Dibromofluoromethane	103	70-130	D	%Rec	2	5/6/2021 4:11:54 PM	B77212
Surr: Toluene-d8	101	70-130	D	%Rec	2	5/6/2021 4:11:54 PM	B77212

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 Value above quantitation range
	H Holding times for preparation 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	

**Analytical Report**

Lab Order **2104D17**

Date Reported: 5/7/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW 08

**Project:** Lateral H21

**Collection Date:** 4/29/2021 12:30:00 PM

**Lab ID:** 2104D17-007

**Matrix:** AQUEOUS

**Received Date:** 4/30/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>BRM</b>
Benzene	ND	2.0	D	µg/L	2	5/6/2021 4:39:02 PM	B77212
Toluene	ND	2.0	D	µg/L	2	5/6/2021 4:39:02 PM	B77212
Ethylbenzene	ND	2.0	D	µg/L	2	5/6/2021 4:39:02 PM	B77212
Xylenes, Total	ND	3.0	D	µg/L	2	5/6/2021 4:39:02 PM	B77212
Surr: 1,2-Dichloroethane-d4	112	70-130	D	%Rec	2	5/6/2021 4:39:02 PM	B77212
Surr: 4-Bromofluorobenzene	102	70-130	D	%Rec	2	5/6/2021 4:39:02 PM	B77212
Surr: Dibromofluoromethane	106	70-130	D	%Rec	2	5/6/2021 4:39:02 PM	B77212
Surr: Toluene-d8	102	70-130	D	%Rec	2	5/6/2021 4:39:02 PM	B77212

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 Value above quantitation range
	H Holding times for preparation 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	

**Analytical Report**

Lab Order **2104D17**

Date Reported: **5/7/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW 09

**Project:** Lateral H21

**Collection Date:** 4/29/2021 2:10:00 PM

**Lab ID:** 2104D17-008

**Matrix:** AQUEOUS

**Received Date:** 4/30/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>BRM</b>
Benzene	ND	2.0	D	µg/L	2	5/6/2021 2:50:12 PM	B77212
Toluene	ND	2.0	D	µg/L	2	5/6/2021 2:50:12 PM	B77212
Ethylbenzene	ND	2.0	D	µg/L	2	5/6/2021 2:50:12 PM	B77212
Xylenes, Total	ND	3.0	D	µg/L	2	5/6/2021 2:50:12 PM	B77212
Surr: 1,2-Dichloroethane-d4	107	70-130	D	%Rec	2	5/6/2021 2:50:12 PM	B77212
Surr: 4-Bromofluorobenzene	103	70-130	D	%Rec	2	5/6/2021 2:50:12 PM	B77212
Surr: Dibromofluoromethane	100	70-130	D	%Rec	2	5/6/2021 2:50:12 PM	B77212
Surr: Toluene-d8	103	70-130	D	%Rec	2	5/6/2021 2:50:12 PM	B77212

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 Value above quantitation range
	H Holding times for preparation 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	

**Analytical Report**

Lab Order **2104D17**

Date Reported: **5/7/2021**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW 10

**Project:** Lateral H21

**Collection Date:** 4/29/2021 2:15:00 PM

**Lab ID:** 2104D17-009

**Matrix:** AQUEOUS

**Received Date:** 4/30/2021 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>BRM</b>
Benzene	ND	1.0		µg/L	1	5/6/2021 5:06:14 PM	B77212
Toluene	ND	1.0		µg/L	1	5/6/2021 5:06:14 PM	B77212
Ethylbenzene	ND	1.0		µg/L	1	5/6/2021 5:06:14 PM	B77212
Xylenes, Total	ND	1.5		µg/L	1	5/6/2021 5:06:14 PM	B77212
Surr: 1,2-Dichloroethane-d4	116	70-130		%Rec	1	5/6/2021 5:06:14 PM	B77212
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	5/6/2021 5:06:14 PM	B77212
Surr: Dibromofluoromethane	110	70-130		%Rec	1	5/6/2021 5:06:14 PM	B77212
Surr: Toluene-d8	100	70-130		%Rec	1	5/6/2021 5:06:14 PM	B77212

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 Value above quantitation range
	H Holding times for preparation 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	

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2104D17

07-May-21

**Client:** Harvest  
**Project:** Lateral H21

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBW</b>	Batch ID: <b>B77139</b>	RunNo: <b>77139</b>								
Prep Date:	Analysis Date: <b>5/4/2021</b>	SeqNo: <b>2735291</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	20		20.00		100	70	130			

Sample ID: <b>100ng btex lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>B77139</b>	RunNo: <b>77139</b>								
Prep Date:	Analysis Date: <b>5/4/2021</b>	SeqNo: <b>2735292</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	80	120			
Toluene	21	1.0	20.00	0	103	80	120			
Ethylbenzene	20	1.0	20.00	0	101	80	120			
Xylenes, Total	61	2.0	60.00	0	101	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		101	70	130			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2104D17

07-May-21

**Client:** Harvest  
**Project:** Lateral H21

Sample ID: <b>100ng lcs</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8260: Volatiles Short List</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>B77212</b>		RunNo: <b>77212</b>							
Prep Date:	Analysis Date: <b>5/6/2021</b>		SeqNo: <b>2737949</b>				Units: <b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	95.4	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.7		10.00		96.7	70	130			

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8260: Volatiles Short List</b>							
Client ID: <b>PBW</b>	Batch ID: <b>B77212</b>		RunNo: <b>77212</b>							
Prep Date:	Analysis Date: <b>5/6/2021</b>		SeqNo: <b>2737955</b>				Units: <b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.5	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- 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: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Harvest Work Order Number: 2104D17 RcptNo: 1

Received By: Juan Rojas 4/30/2021 7:25:00 AM
Completed By: Desiree Dominguez 4/30/2021 8:51:00 AM
Reviewed By: JR 4/30/21

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: [signature] 4/30/21

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.1, Good, Yes, [ ], [ ], [ ]

# Chain-of-Custody Record

Client: Harvest Four corners

Mailing Address:

Phone #:

email or Fax#: monica Sendaval

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

Accreditation:     Az Compliance  
 NELAC       Other \_\_\_\_\_

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

Turn-Around Time:  
 Standard     Rush \_\_\_\_\_

Project Name: Lateral H21

Project #:

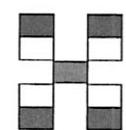
Project Manager: Brooke Herb - WSP

Sampler: E. Carroll

On Ice:     Yes     No

# of Coolers: 1

Cooler Temp (including CF): 0.1-0=0.1 (°C)



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

### Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	TEX 7 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)
4/29	12:16	GW	TMW01	3VOA	HCl	-001	X									
	12:40	GW	TMW02			-002										
	13:10		TMW03			-003										
	12:55		TMW04			-004										
	12:15		TMW06			-005										
	14:00		TMW07			-006										
	12:30		TMW08			-007										
	14:10		TMW09			-008										
	14:15		TMW10			-009										

Date: <u>4/29</u>	Time: <u>1630</u>	Relinquished by: <u>Eric Carroll</u>	Received by: <u>Monica Walter</u>	Via: _____	Date: <u>4/29/21</u>	Time: <u>1630</u>
Date: <u>4/29/21</u>	Time: <u>1806</u>	Relinquished by: <u>Monica Walter</u>	Received by: <u>[Signature]</u>	Via: _____	Date: <u>4/30/21</u>	Time: <u>7:25</u>

Remarks: Please cc: eric.carroll@wsp.com

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: [clients.hallenvironmental.com](http://clients.hallenvironmental.com)

October 06, 2021

Jennifer Deal

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Lateral H 21

OrderNo.: 2109E93

Dear Jennifer Deal:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/25/2021 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: 2109E93

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/6/2021

**CLIENT:** Harvest  
**Project:** Lateral H 21

**Lab Order:** 2109E93

**Lab ID:** 2109E93-001

**Collection Date:** 9/23/2021 3:10:00 PM

**Client Sample ID:** TMW 01

**Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	1.0		µg/L	1	9/30/2021 3:40:00 PM	R81727
Toluene	ND	1.0		µg/L	1	9/30/2021 3:40:00 PM	R81727
Ethylbenzene	ND	1.0		µg/L	1	9/30/2021 3:40:00 PM	R81727
Xylenes, Total	ND	2.0		µg/L	1	9/30/2021 3:40:00 PM	R81727
Surr: 4-Bromofluorobenzene	86.8	70-130		%Rec	1	9/30/2021 3:40:00 PM	R81727

**Lab ID:** 2109E93-002

**Collection Date:** 9/23/2021 2:40:00 PM

**Client Sample ID:** TMW 02

**Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	2.8	1.0		µg/L	1	9/30/2021 4:38:00 PM	R81727
Toluene	ND	1.0		µg/L	1	9/30/2021 4:38:00 PM	R81727
Ethylbenzene	ND	1.0		µg/L	1	9/30/2021 4:38:00 PM	R81727
Xylenes, Total	ND	2.0		µg/L	1	9/30/2021 4:38:00 PM	R81727
Surr: 4-Bromofluorobenzene	84.7	70-130		%Rec	1	9/30/2021 4:38:00 PM	R81727

**Lab ID:** 2109E93-003

**Collection Date:** 9/23/2021 3:30:00 PM

**Client Sample ID:** TMW 03

**Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	1.4	1.0		µg/L	1	9/30/2021 4:58:00 PM	R81727
Toluene	ND	1.0		µg/L	1	9/30/2021 4:58:00 PM	R81727
Ethylbenzene	ND	1.0		µg/L	1	9/30/2021 4:58:00 PM	R81727
Xylenes, Total	ND	2.0		µg/L	1	9/30/2021 4:58:00 PM	R81727
Surr: 4-Bromofluorobenzene	89.3	70-130		%Rec	1	9/30/2021 4:58:00 PM	R81727

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	Value above quantitation range
	H	Holding times for preparation 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		

## Analytical Report

Lab Order: 2109E93

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/6/2021

**CLIENT:** Harvest  
**Project:** Lateral H 21

**Lab Order:** 2109E93

**Lab ID:** 2109E93-004

**Collection Date:** 9/23/2021 2:15:00 PM

**Client Sample ID:** TMW 06

**Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	1.0		µg/L	1	9/30/2021 5:18:00 PM	R81727
Toluene	ND	1.0		µg/L	1	9/30/2021 5:18:00 PM	R81727
Ethylbenzene	ND	1.0		µg/L	1	9/30/2021 5:18:00 PM	R81727
Xylenes, Total	ND	2.0		µg/L	1	9/30/2021 5:18:00 PM	R81727
Surr: 4-Bromofluorobenzene	83.8	70-130		%Rec	1	9/30/2021 5:18:00 PM	R81727

**Lab ID:** 2109E93-005

**Collection Date:** 9/23/2021 3:50:00 PM

**Client Sample ID:** TMW 07

**Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	1.0		µg/L	1	9/30/2021 5:37:00 PM	R81727
Toluene	ND	1.0		µg/L	1	9/30/2021 5:37:00 PM	R81727
Ethylbenzene	ND	1.0		µg/L	1	9/30/2021 5:37:00 PM	R81727
Xylenes, Total	ND	2.0		µg/L	1	9/30/2021 5:37:00 PM	R81727
Surr: 4-Bromofluorobenzene	82.2	70-130		%Rec	1	9/30/2021 5:37:00 PM	R81727

**Lab ID:** 2109E93-006

**Collection Date:** 9/23/2021 3:40:00 PM

**Client Sample ID:** TMW 08

**Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	1.0		µg/L	1	9/30/2021 5:57:00 PM	R81727
Toluene	ND	1.0		µg/L	1	9/30/2021 5:57:00 PM	R81727
Ethylbenzene	ND	1.0		µg/L	1	9/30/2021 5:57:00 PM	R81727
Xylenes, Total	ND	2.0		µg/L	1	9/30/2021 5:57:00 PM	R81727
Surr: 4-Bromofluorobenzene	89.0	70-130		%Rec	1	9/30/2021 5:57:00 PM	R81727

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	Value above quantitation range
	H	Holding times for preparation 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		

**Analytical Report**

Lab Order: 2109E93

Date Reported: 10/6/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest  
**Project:** Lateral H 21

**Lab Order:** 2109E93

**Lab ID:** 2109E93-007

**Collection Date:** 9/23/2021 12:25:00 PM

**Client Sample ID:** TMW 09

**Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	1.0		µg/L	1	9/30/2021 6:36:00 PM	R81727
Toluene	ND	1.0		µg/L	1	9/30/2021 6:36:00 PM	R81727
Ethylbenzene	ND	1.0		µg/L	1	9/30/2021 6:36:00 PM	R81727
Xylenes, Total	ND	2.0		µg/L	1	9/30/2021 6:36:00 PM	R81727
Surr: 4-Bromofluorobenzene	89.9	70-130		%Rec	1	9/30/2021 6:36:00 PM	R81727

**Lab ID:** 2109E93-008

**Collection Date:** 9/23/2021 11:30:00 AM

**Client Sample ID:** TMW 10

**Matrix:** GROUNDWATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>CCM</b>
Benzene	ND	1.0		µg/L	1	9/30/2021 6:56:00 PM	R81727
Toluene	ND	1.0		µg/L	1	9/30/2021 6:56:00 PM	R81727
Ethylbenzene	ND	1.0		µg/L	1	9/30/2021 6:56:00 PM	R81727
Xylenes, Total	ND	2.0		µg/L	1	9/30/2021 6:56:00 PM	R81727
Surr: 4-Bromofluorobenzene	89.6	70-130		%Rec	1	9/30/2021 6:56:00 PM	R81727

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	Value above quantitation range
	H	Holding times for preparation 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		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2109E93

06-Oct-21

**Client:** Harvest  
**Project:** Lateral H 21

Sample ID: <b>100ng btex lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R81727</b>	RunNo: <b>81727</b>								
Prep Date:	Analysis Date: <b>9/30/2021</b>	SeqNo: <b>2889432</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	80	120			
Toluene	21	1.0	20.00	0	104	80	120			
Ethylbenzene	21	1.0	20.00	0	107	80	120			
Xylenes, Total	65	2.0	60.00	0	108	80	120			
Surr: 4-Bromofluorobenzene	18		20.00		89.0	70	130			

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBW</b>	Batch ID: <b>R81727</b>	RunNo: <b>81727</b>								
Prep Date:	Analysis Date: <b>9/30/2021</b>	SeqNo: <b>2889433</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	18		20.00		87.8	70	130			

Sample ID: <b>2109E93-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>TMW 01</b>	Batch ID: <b>R81727</b>	RunNo: <b>81727</b>								
Prep Date:	Analysis Date: <b>9/30/2021</b>	SeqNo: <b>2889439</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0.4226	95.0	80	120			
Toluene	19	1.0	20.00	0	96.8	80	120			
Ethylbenzene	20	1.0	20.00	0.2306	99.6	80	120			
Xylenes, Total	60	2.0	60.00	0	101	80	120			
Surr: 4-Bromofluorobenzene	17		20.00		85.5	70	130			

Sample ID: <b>2109E93-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>TMW 01</b>	Batch ID: <b>R81727</b>	RunNo: <b>81727</b>								
Prep Date:	Analysis Date: <b>9/30/2021</b>	SeqNo: <b>2889440</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0.4226	87.6	80	120	7.87	20	
Toluene	18	1.0	20.00	0	90.6	80	120	6.54	20	
Ethylbenzene	19	1.0	20.00	0.2306	92.5	80	120	7.23	20	
Xylenes, Total	56	2.0	60.00	0	93.9	80	120	6.89	20	
Surr: 4-Bromofluorobenzene	16		20.00		80.7	70	130	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- 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: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Harvest Work Order Number: 2109E93 RcptNo: 1

Received By: Tracy Casarrubias 9/25/2021 8:48:00 AM
Completed By: Juan Rojas 9/25/2021 10:56:23 AM
Reviewed By: jn 9/29/21

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: A 9-29-21

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Contains 2 rows of data.

# Chain-of-Custody Record

Client: Harvest Midstream

Attn: Jenn Fer Deal, jdeal@harvestmidstream.com

Mailing Address:

Phone #: 505-324-5128

email or Fax#:

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

Accreditation:  Az Compliance  
 NELAC       Other \_\_\_\_\_

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

Turn-Around Time:

Standard       Rush

Project Name: Lateral H-21

Project #: TE 090321009

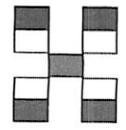
Project Manager: Danny Burns / Brooke Herb  
danny.burns@wsp.com  
Brooke.Herb@wsp.com

Sampler: Reece Hanson

On Ice:  Yes       No

# of Coolers: 2

Cooler Temp (including CF): See Remark (°C)



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	(BTEX) MTBE / TMB's (8024)	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)
9-23-21	1510	GW	TMW 01	3 VOA	HCL	-001										
	1440		TMW 02			-002										
	1530		TMW 03			-003										
	1415		TMW 06			-004										
	1550		TMW 07			-005										
	1540		TMW 08			-006										
	1225		TMW 09			-007										
	1130		TMW 10			-008										

Date: 9-24-21 Time: 1600 Relinquished by: [Signature]

Received by: [Signature] Via: CLMTR Date: 9-25-21 Time: 8:48

Remarks: **HOLD**, until further notice  
 Analyze all samples.  
 9/28/21  
 cooler 1 = 5.3 - 5.3  
 cooler 2 = 8.4 - 8.4

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: [clients.hallenvironmental.com](http://clients.hallenvironmental.com)

December 09, 2021

Brooke Herb

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX:

RE: Lateral H21

OrderNo.: 2111C17

Dear Brooke Herb:

Hall Environmental Analysis Laboratory received 9 sample(s) on 11/24/2021 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 2111C17

Date Reported: 12/9/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW01

**Project:** Lateral H21

**Collection Date:** 11/23/2021 10:53:00 AM

**Lab ID:** 2111C17-001

**Matrix:** GROUNDWA

**Received Date:** 11/24/2021 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>JR</b>
Benzene	ND	2.0	D	µg/L	2	11/30/2021 6:11:11 PM	R83191
Toluene	ND	2.0	D	µg/L	2	11/30/2021 6:11:11 PM	R83191
Ethylbenzene	ND	2.0	D	µg/L	2	11/30/2021 6:11:11 PM	R83191
Xylenes, Total	ND	3.0	D	µg/L	2	11/30/2021 6:11:11 PM	R83191
Surr: 1,2-Dichloroethane-d4	101	70-130	D	%Rec	2	11/30/2021 6:11:11 PM	R83191
Surr: Dibromofluoromethane	96.1	70-130	D	%Rec	2	11/30/2021 6:11:11 PM	R83191
Surr: Toluene-d8	98.0	70-130	D	%Rec	2	11/30/2021 6:11:11 PM	R83191

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	Value above quantitation range
	H	Holding times for preparation 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 2111C17

Date Reported: 12/9/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW02

**Project:** Lateral H21

**Collection Date:** 11/23/2021 12:48:00 PM

**Lab ID:** 2111C17-002

**Matrix:** GROUNDWA

**Received Date:** 11/24/2021 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>JR</b>
Benzene	ND	1.0		µg/L	1	11/30/2021 6:39:40 PM	R83191
Toluene	ND	1.0		µg/L	1	11/30/2021 6:39:40 PM	R83191
Ethylbenzene	ND	1.0		µg/L	1	11/30/2021 6:39:40 PM	R83191
Xylenes, Total	ND	1.5		µg/L	1	11/30/2021 6:39:40 PM	R83191
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	11/30/2021 6:39:40 PM	R83191
Surr: Dibromofluoromethane	98.1	70-130		%Rec	1	11/30/2021 6:39:40 PM	R83191
Surr: Toluene-d8	97.0	70-130		%Rec	1	11/30/2021 6:39:40 PM	R83191

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	Value above quantitation range
	H	Holding times for preparation 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 2111C17

Date Reported: 12/9/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW03

**Project:** Lateral H21

**Collection Date:** 11/23/2021 12:26:00 PM

**Lab ID:** 2111C17-003

**Matrix:** GROUNDWA

**Received Date:** 11/24/2021 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>JR</b>
Benzene	ND	1.0		µg/L	1	11/30/2021 7:08:19 PM	R83191
Toluene	ND	1.0		µg/L	1	11/30/2021 7:08:19 PM	R83191
Ethylbenzene	ND	1.0		µg/L	1	11/30/2021 7:08:19 PM	R83191
Xylenes, Total	ND	1.5		µg/L	1	11/30/2021 7:08:19 PM	R83191
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	11/30/2021 7:08:19 PM	R83191
Surr: Dibromofluoromethane	97.0	70-130		%Rec	1	11/30/2021 7:08:19 PM	R83191
Surr: Toluene-d8	98.4	70-130		%Rec	1	11/30/2021 7:08:19 PM	R83191

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	Value above quantitation range
	H	Holding times for preparation 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 2111C17

Date Reported: 12/9/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW04

**Project:** Lateral H21

**Collection Date:** 11/23/2021 1:49:00 PM

**Lab ID:** 2111C17-004

**Matrix:** GROUNDWA

**Received Date:** 11/24/2021 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>JR</b>
Benzene	ND	1.0		µg/L	1	11/30/2021 7:37:00 PM	R83191
Toluene	ND	1.0		µg/L	1	11/30/2021 7:37:00 PM	R83191
Ethylbenzene	ND	1.0		µg/L	1	11/30/2021 7:37:00 PM	R83191
Xylenes, Total	ND	1.5		µg/L	1	11/30/2021 7:37:00 PM	R83191
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	11/30/2021 7:37:00 PM	R83191
Surr: Dibromofluoromethane	97.6	70-130		%Rec	1	11/30/2021 7:37:00 PM	R83191
Surr: Toluene-d8	99.0	70-130		%Rec	1	11/30/2021 7:37:00 PM	R83191

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	Value above quantitation range
	H	Holding times for preparation 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 2111C17

Date Reported: 12/9/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW06

**Project:** Lateral H21

**Collection Date:** 11/23/2021 11:18:00 AM

**Lab ID:** 2111C17-005

**Matrix:** GROUNDWA

**Received Date:** 11/24/2021 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>JR</b>
Benzene	ND	1.0		µg/L	1	11/30/2021 8:05:41 PM	R83191
Toluene	ND	1.0		µg/L	1	11/30/2021 8:05:41 PM	R83191
Ethylbenzene	ND	1.0		µg/L	1	11/30/2021 8:05:41 PM	R83191
Xylenes, Total	ND	1.5		µg/L	1	11/30/2021 8:05:41 PM	R83191
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	11/30/2021 8:05:41 PM	R83191
Surr: Dibromofluoromethane	100	70-130		%Rec	1	11/30/2021 8:05:41 PM	R83191
Surr: Toluene-d8	97.3	70-130		%Rec	1	11/30/2021 8:05:41 PM	R83191

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	Value above quantitation range
	H	Holding times for preparation 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 2111C17

Date Reported: 12/9/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW07

**Project:** Lateral H21

**Collection Date:** 11/23/2021 1:28:00 PM

**Lab ID:** 2111C17-006

**Matrix:** GROUNDWA

**Received Date:** 11/24/2021 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>JR</b>
Benzene	ND	1.0		µg/L	1	11/30/2021 8:34:23 PM	R83191
Toluene	ND	1.0		µg/L	1	11/30/2021 8:34:23 PM	R83191
Ethylbenzene	ND	1.0		µg/L	1	11/30/2021 8:34:23 PM	R83191
Xylenes, Total	ND	1.5		µg/L	1	11/30/2021 8:34:23 PM	R83191
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	11/30/2021 8:34:23 PM	R83191
Surr: Dibromofluoromethane	96.4	70-130		%Rec	1	11/30/2021 8:34:23 PM	R83191
Surr: Toluene-d8	96.4	70-130		%Rec	1	11/30/2021 8:34:23 PM	R83191

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	Value above quantitation range
	H	Holding times for preparation 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 2111C17

Date Reported: 12/9/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW08

**Project:** Lateral H21

**Collection Date:** 11/23/2021 1:09:00 PM

**Lab ID:** 2111C17-007

**Matrix:** GROUNDWA

**Received Date:** 11/24/2021 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>JR</b>
Benzene	ND	1.0		µg/L	1	11/30/2021 9:02:59 PM	R83191
Toluene	ND	1.0		µg/L	1	11/30/2021 9:02:59 PM	R83191
Ethylbenzene	ND	1.0		µg/L	1	11/30/2021 9:02:59 PM	R83191
Xylenes, Total	ND	1.5		µg/L	1	11/30/2021 9:02:59 PM	R83191
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	11/30/2021 9:02:59 PM	R83191
Surr: Dibromofluoromethane	93.6	70-130		%Rec	1	11/30/2021 9:02:59 PM	R83191
Surr: Toluene-d8	98.0	70-130		%Rec	1	11/30/2021 9:02:59 PM	R83191

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	Value above quantitation range
	H	Holding times for preparation 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 2111C17

Date Reported: 12/9/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW09

**Project:** Lateral H21

**Collection Date:** 11/23/2021 2:10:00 PM

**Lab ID:** 2111C17-008

**Matrix:** GROUNDWA

**Received Date:** 11/24/2021 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: <b>JR</b>
Benzene	ND	1.0		µg/L	1	11/30/2021 9:31:36 PM	R83191
Toluene	ND	1.0		µg/L	1	11/30/2021 9:31:36 PM	R83191
Ethylbenzene	ND	1.0		µg/L	1	11/30/2021 9:31:36 PM	R83191
Xylenes, Total	ND	1.5		µg/L	1	11/30/2021 9:31:36 PM	R83191
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	11/30/2021 9:31:36 PM	R83191
Surr: Dibromofluoromethane	100	70-130		%Rec	1	11/30/2021 9:31:36 PM	R83191
Surr: Toluene-d8	98.6	70-130		%Rec	1	11/30/2021 9:31:36 PM	R83191

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	Value above quantitation range
	H	Holding times for preparation 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 2111C17

Date Reported: 12/9/2021

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Harvest

**Client Sample ID:** TMW10

**Project:** Lateral H21

**Collection Date:** 11/23/2021 12:04:00 PM

**Lab ID:** 2111C17-009

**Matrix:** GROUNDWA

**Received Date:** 11/24/2021 7:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260: VOLATILES SHORT LIST</b>							Analyst: JR
Benzene	ND	1.0		µg/L	1	11/30/2021 10:00:14 PM	R83191
Toluene	ND	1.0		µg/L	1	11/30/2021 10:00:14 PM	R83191
Ethylbenzene	ND	1.0		µg/L	1	11/30/2021 10:00:14 PM	R83191
Xylenes, Total	ND	1.5		µg/L	1	11/30/2021 10:00:14 PM	R83191
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	11/30/2021 10:00:14 PM	R83191
Surr: Dibromofluoromethane	97.6	70-130		%Rec	1	11/30/2021 10:00:14 PM	R83191
Surr: Toluene-d8	98.3	70-130		%Rec	1	11/30/2021 10:00:14 PM	R83191

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	Value above quantitation range
	H	Holding times for preparation 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#: 2111C17

09-Dec-21

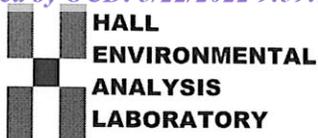
**Client:** Harvest  
**Project:** Lateral H21

Sample ID: <b>100ng lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8260: Volatiles Short List</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>R83191</b>	RunNo: <b>83191</b>								
Prep Date:	Analysis Date: <b>11/30/2021</b>	SeqNo: <b>2955404</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	21	1.0	20.00	0	107	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.8	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.1	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260: Volatiles Short List</b>								
Client ID: <b>PBW</b>	Batch ID: <b>R83191</b>	RunNo: <b>83191</b>								
Prep Date:	Analysis Date: <b>11/30/2021</b>	SeqNo: <b>2955405</b>	Units: <b>µg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- 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: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Harvest Work Order Number: 2111C17 RcptNo: 1

Received By: Cheyenne Cason 11/24/2021 7:43:00 AM

Completed By: Isaiah Ortiz 11/24/2021 9:33:41 AM

Reviewed By: See 11/24/21

Handwritten initials: Cason, I-Ort

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: JR 11/24/21

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.4, Good, Not Present, , ,



**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 91990

**CONDITIONS**

Operator: Harvest Four Corners, LLC 1111 Travis Street Houston, TX 77002	OGRID: 373888
	Action Number: 91990
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

**CONDITIONS**

Created By	Condition	Condition Date
nvelez	Review of the 2021 Annual Groundwater Report: Content satisfactory 1. Continue quarterly groundwater sampling for monitoring wells TMW01, TMW02, TMW03, TMW04, TMW06, TMW07, TMW08, TMW09, and TMW10. 2. Continue quarterly groundwater monitoring until eight consecutive quarters of compliance with NMWQCC standards is achieved in lieu of submitting a Stage 2 Abatement Plan 3. If contaminant concentrations rebound and exceed NMWQCC standards, a Stage 2 Abatement Plan per NMAC 19.15.30 remediation alternative must be completed 4. Submit the Annual Monitoring Report to the OCD no later than March 31, 2023.	11/28/2022