

satisfactory

1. OCD approves this current revised Stage 1 Abatement Plan & Proposed Public Notice and Participation
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. OCD approves the public notice and participation draft associated with a Stage 1 Abatement Plan to address groundwater impacts identified at the Lateral H-21 pipeline release per 19.15.30.15 NMAC
5. Submit the Annual Monitoring Report to the OCD no later than March 31, 2022

HARVEST FOUR CORNERS, LLC

REVISED STAGE 1 ABATEMENT PLAN

LATERAL H-21 PIPELINE RELEASE

INCIDENT # NCS1907233330

JUNE 24, 2021



wsp



REVISED STAGE 1
ABATEMENT PLAN
LATERAL H-21 PIPELINE
RELEASE
INCIDENT #
NCS1907233330

HARVEST FOUR CORNERS, LLC

PROJECT NO.: TE090321009
DATE: JUNE 24, 2021

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June 24, 2021

New Mexico Energy, Minerals and Natural Resources Department
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

**Subject: Revised Stage 1 Abatement Plan
Lateral H-21 Pipeline Release
Incident # NCS1907233330**

To Whom It May Concern:

On behalf of Harvest Four Corners, LLC (Harvest), WSP USA Inc. (WSP), presents the following Revised Stage 1 Abatement Plan (AP-126-0) associated with subsurface hydrocarbon impacts encountered at the Lateral H-21 pipeline release (Site). This plan details the site description and background, initial response and assessment, site geologic and hydrologic characteristics, excavation activities, and monitoring well installation and sampling activities. The plan proposes additional monitoring activities and provides a proposed schedule for completion of those activities.

A previous version of a Stage 1 Abatement Plan was submitted to the New Mexico Oil Conservation Division (NMOCD) on July 31, 2019, and then resubmitted again on November 13, 2019, and January 29, 2020. Due to changing site conditions and a lack of response from the NMOCD regarding acknowledgement of receipt or approval of the preceding plans, Harvest respectfully requests that this current revised version replaces the previous submittals that have yet to be approved.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'D. Burns'.

Danny Burns
Consultant, Geologist

A handwritten signature in black ink, appearing to read 'Ashley L. Ager'.

Ashley L. Ager, MS, PG
Assistant Vice President, Geologist

cc: Monica Smith, Harvest Midstream



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1 SITE DESCRIPTION AND BACKGROUND

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 to the northwest. On March 12, 2019, an unknown volume of produced water and natural gas condensate and approximately 658 million cubic feet (MCF) of natural gas were released from the Lateral H-21 pipeline 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.

1.1 REGIONAL GEOLOGY AND HYDROLOGY

The area is regionally described as the Regina Member and the Cuba Mesa Member of the Eocene San Jose Formation (Baltz and West, 1967). To the east of the Site, in the valley bottom, lies Holocene alluvium. The Holocene alluvium that has accumulated in the valley bottoms consists of clay, silt, sand, and gravel and in the lowest portions of terrace deposits by streams. The Regina Member of the San Jose Formation is described as clay, shale, siltstone, mudstone, shaley sandstone, and sandy shale. The depositional environments of the Regina Member consist of floodplains and stream channel deposits derived mostly from the uplift of the Nacimiento. The Cuba Mesa Member of the San Jose Formation consists of conglomeritic sandstone with intermixed pebbles and cobbles of quartzite and granite derived from the highlands to the north in the San Juan and La Plata mountain ranges. The Regina and Cuba Mesa Members make up the lower portion of the San Jose formation and intertongue throughout its deposition (Mytton, 1983).

The fluvial sandstones within these geologic units in many cases host seasonal shallow aquifers. In many of the aquifers within the San Jose formation, the Regina Member generally serves as the confining layer, and the Cuba Mesa Members serves as the host rock for the aquifer. The intertonguing of these formations make many of the aquifers discontinuous and difficult to understand the hydraulic connectivity. Although a limited number of studies have been completed on the quality of water from the San Jose Formation and similar shallow alluvial aquifers, Stone and others (1983) reports transmissivity values ranging from 40 to 120 square feet per day (ft²/d) and the vertical hydraulic conductivity to be approximately 1.7 ft/d (Brown, 1976) in the San Jose Formation.

It is well known that groundwater close to Largo Canyon Wash is shallow, as the Quaternary alluvial deposits form shallow aquifers when intermixed with fine grained confining layers. The Site is approximately 300 feet west of the Largo Canyon Wash and approximately 2 feet higher in elevation than the center of the wash. Largo Canyon Wash is a seasonal wash that only flows after significant melting events of snowpack and occasionally throughout the year during heavy rainfall events. Multiple first order tributaries to Largo Canyon Wash are located within one mile of the Site including Julian Canyon Wash, Forbes Canyon Wash, and other smaller unnamed first order tributaries to Largo Canyon Wash. Aquifers in the San Jose Formation in the area are generally used for livestock and domestic water supplies.

1.2 LOCAL GEOLOGY AND HYDROLOGY

Geology at the Site consists mainly of sands, silts, and clays eroded and deposited from the Regina and Cuba Mesa Members of the San Jose Formation. The occurrence of organic rich clays and distribution of coarser grained lithologies at the Site suggest that the soils are often reworked and re-deposited by seasonal stream and sediment flow. Borelogs are included as Appendix A.

Lithologic observations from sediment collected in boreholes at the Site indicate groundwater is present between approximately 3 to 4 feet below ground surface (bgs). Generally, groundwater at the Site flows to the northeast towards Largo Canyon Wash but is likely subject to minor inflections depending on the time of year and the volume of water in Largo Canyon Wash. Shallow groundwater at the Site and the proximity to Largo Canyon Wash suggest

that the groundwater at the Site and nearby surface waters in Largo Canyon Wash are intrinsically related and contain similar chemical and hydraulic properties.

1.3 LAND AND WATER USE

Land use surrounding the Site consists of natural gas development and livestock grazing areas. The nearest residence is located approximately 4.4 miles northwest of the Site. The closest water well to the Site (permit number SJ-00207) is located at the Dogie Compression Station approximately 1,800 feet to the northwest of the Site (Figure 2). No data is listed for depth to groundwater on the New Mexico Office of the State Engineer (NMOSE) database but notes on the drilling log indicate that the water source is shallow. The closest surface water to the Site is Largo Canyon Wash (300 feet east) (Figure 2). The Forbes Spring is located approximately 3,100 feet southeast of the Site. No other residences or wells are located within one mile of the Site (Figure 2).

1.4 INITIAL RESPONSE

On March 12, 2019, an unknown volume of produced water and natural gas condensate and approximately 658 MCF of natural gas were released from the Lateral H-21 pipeline 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 NMOCD on March 13, 2019 and assigned incident number NCS1907233330. WSP characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of NMAC. Due to the Site having a depth to groundwater of less than 50 feet, the following NMOCD Table 1 closure criteria for soils apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 100 mg/kg total petroleum hydrocarbons (TPH); and 600 mg/kg chloride.

1.5 INITIAL REMEDIATION ACTIVITIES

Harvest excavated and disposed of approximately 3,200 cubic yards of impacted soil at the Envirotech Landfarm in Bloomfield, New Mexico. The excavation extent is illustrated on Figure 3. A NMOCD representative witnessed collection of eight confirmation soil samples from the excavation sidewalls on March 29, 2019, and April 5, 2019. Laboratory analytical results indicated that the concentrations of BTEX, TPH, and chloride in soil on the sidewalls of the excavation were below the NMOCD Table 1 closure criteria. Soil analytical results are summarized in Table 1, presented on Figure 3, and the laboratory analytical reports are included as Appendix B. While excavating, groundwater was encountered at approximately four feet 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.

2 GROUNDWATER SITE INVESTIGATION

2.1 OPEN EXCAVATION FLUID RECOVERY AND WATER SAMPLES

During the excavation and after a portion of the excavation was backfilled, Harvest pumped water from the excavation and collected it in a tank onsite to remediate benzene impacts by groundwater recovery. 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, 2019, 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, with concentrations ranging from 310 micrograms per liter ($\mu\text{g/L}$) on April 3, 2019, to 31 $\mu\text{g/L}$ on April 22, 2019. Results from these sampling events are summarized in Table 2 and the laboratory analytical reports are included as Appendix B. Although benzene concentrations generally decreased during groundwater recovery, the decline in concentrations was not significant or stable enough to achieve closure at the Site.

2.2 TEMPORARY MONITORING WELL INSTALLATION

Due to the benzene concentration still exceeding the NMWQCC standards after pumping water from the excavation, WSP returned to the Site in July 2019 and April 2021, to delineate impacts to groundwater. A total of ten boreholes were advanced using a hand auger ranging from 5 feet to 8 feet bgs. Soil borings were advanced within the excavation extent, in each cardinal direction outside of the known excavation extent, and laterally to the southeast and northeast to delineate impacts to groundwater. The soil borings were logged by a WSP geologist who inspected the soil for the presence or absence of petroleum hydrocarbon odor and/or staining. The soil was characterized by visually inspecting the soil samples and field screening the soil headspace using a photo-ionization detector (PID) to monitor for the presence of volatile organic vapors. The highest PID readings were near the surface, likely residual from excavation and backfilling activities. Additionally, high moisture content of the soil may have influenced the PID values. The highest headspace screening result was at the surface of TMW04 at 209.1 parts per million (ppm). The WSP geologist logged the depths at which saturated soils were encountered, indicating the depth to groundwater. Once these 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. Borelogs are included as Appendix A.

Prepacked temporary groundwater monitoring wells were installed in each borehole with screened casing across the groundwater interface and solid casing to the 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 groundwater monitoring well locations are depicted on Figure 3.

2.3 GROUNDWATER SAMPLING

Following well construction, an oil/water interface probe was used to measure depth to water and the total depth of the well. The temporary monitoring wells were then surveyed to obtain elevations above mean sea level for the top of casing. These elevations were used to determine the groundwater elevations and gradients to infer flow direction. Groundwater elevations are summarized in Table 3 and displayed on Figure 3.

Temporary monitoring wells were sampled by purging a minimum of three casing volumes. Groundwater quality parameters including pH, temperature (degrees Celsius), and conductivity (millisiemens per centimeter) were collected. Some temporary monitoring wells bailed dry before three full casing volumes were purged; therefore,

samples were collected just prior to the wells bailing dry. Groundwater samples were collected in June 2019, August 2020, and April 2021.

Groundwater samples were submitted for laboratory analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021. All samples were placed on ice to maintain a temperature of approximately 4 degrees Celsius (°C) and sealed in a cooler for delivery to Hall Environmental Analysis Laboratory (Hall), of Albuquerque, New Mexico, for analysis. Samples were labeled with the date and time of collection, sample name, sampler's name, and parameters to be analyzed. Strict chain-of-custody procedures were documented including the date and time sampled, sample number, type of sample, sampler's name and signature, preservative used, and analyses required.

2.4 RESULTS

Laboratory analytical results during the June 2019 groundwater sampling event indicated that the benzene concentration in TMW02 exceeded the NMWQCC standard with a concentration of 49 µg/L. Additional temporary monitoring wells TMW06 through TMW08 were installed to delineate the benzene impacts observed in TMW02. The subsequent delineation activities in June 2019 indicated laboratory analytical results for groundwater samples collected from temporary monitoring well TMW08 indicated a concentration of 2.2 µg/L benzene which is compliant with the NMWQCC standard. All other samples from the temporary monitoring wells were below laboratory reporting limits.

The June 2019 groundwater sampling events were submitted to the NMOCD in a Stage 1 Abatement Plan on July 31, 2019. However, no response was received from the NMOCD to approve or acknowledge the Stage 1 Abatement Plan within 60 days of submittal per NMAC 19.15.30.16. The Stage 1 Abatement Plan was resubmitted to the NMOCD on November 13, 2019 and January 29, 2020. No communication was received from the NMOCD.

A subsequent groundwater sampling event in August 2020 was conducted to monitor groundwater impact concentrations and determine if impacts were migrating. Laboratory analytical results during the August 2020 groundwater sampling event indicated benzene concentrations in TMW02 and TMW03 exceeded the NMWQCC standard with concentrations of 8.5 µg/L and 16 µg/L, respectively. Temporary monitoring well TMW01 exhibited a benzene concentration of 3.3 µg/L and ethylbenzene concentration of 6.0 µg/L, both of which are compliant with NMWQCC standards. All other samples during the August 2020 sampling event were below laboratory reporting limits. The impacts to groundwater were delineated in the downgradient direction towards the nearest watercourse, Largo Canyon Wash, and the exceeding concentrations were within range of the previous NMWQCC exceedance in TMW01. Based on these findings, additional groundwater events were postponed until a response from the NMOCD was received.

Harvest reassessed the Site during the first quarter of 2021 and opted to conduct another monitoring event and proceed with additional delineation even though NMOCD had not commented on the Stage 1 Abatement Plan. In April 2021, temporary monitoring wells TMW09 and TMW10 were installed to delineate impacts to groundwater downgradient and cross-gradient of TMW03.

The laboratory analytical results during the April 2021 groundwater event indicated that all samples were below laboratory reporting limits and in compliance with NMWQCC standards. The groundwater analytical results as compared to the NMWQCC standards are presented on Figure 4 and summarized in Table 2. The laboratory analytical reports are included as Appendix B.

Depth to groundwater during the April 2021 sampling event ranged from 3.39 feet below top of casing (btoc) (TMW08) to 6.42 feet btoc (TMW09). Based on topography, initial groundwater elevation data, and regional groundwater trends, the generalized groundwater flow direction is likely to the northeast with an overall change in elevation of 0.86 feet from the most upgradient well (TMW01) to the most downgradient well (TMW06). The total groundwater hydraulic gradient between TMW01 and TMW06 was calculated to be approximately 0.0160 feet per foot for the April 2021 monitoring event. However, initial data suggests groundwater gradient is relatively flat at the Site and is subject to seasonal changes due to the presence or absence of water in Largo Canyon Wash (Figure 3). The disturbed soil from the previous excavation activities may also influence the groundwater gradient at the Site. Groundwater elevations are summarized in Table 3.

2.5 CONCLUSIONS

The amount of soil excavated from the release point and the total volume of fluid pumped from the excavation have remediated the impacts to soil and the majority of the impacts to groundwater. This is evident by no impacted soil being detected during the installation of temporary monitoring wells and the decreasing benzene concentrations over time observed from grab samples collected from the open excavation. Previously observed elevated benzene concentrations in groundwater have since diminished to below NMWQCC standards. Therefore, WSP proposes that continued quarterly groundwater monitoring continues until eight consecutive quarters of compliance with NMWQCC standards is achieved in lieu of submitting a Stage 2 Abatement Plan. As no impacts to groundwater currently exist, a remediation proposal is not necessary. If contaminant concentrations rebound and exceed NMWQCC standards, a remediation alternative may be proposed in a Stage 2 Abatement Plan per NMAC 19.15.30.

2.6 QUALITY ASSURANCE

Sampling and analytical techniques have been identified in the text above and conform with the references identified in Subsection B of 20.6.2.3107 NMAC and with 20.6.4.14 NMAC of the water quality standards for interstate and intrastate surface waters in New Mexico.

3 RECOMMENDATIONS

3.1 PROPOSED GROUNDWATER MONITORING

WSP proposes quarterly groundwater monitoring at the Site beginning within 60 days of receipt of approval from the NMOCD of this Revised Stage 1 Abatement Plan. Fluid-level measurements will be monitored in all temporary monitoring wells using an oil/water interface probe. Each well will be purged of three well casing volumes or until the well is purged dry. Temporary monitoring wells containing sufficient groundwater will be sampled and submitted for laboratory analysis of BTEX by USEPA 8021.

3.2 PROPOSED SCHEDULE

WSP will continue groundwater sampling the Site on a quarterly basis until eight consecutive quarters of compliance with NMWQCC standards is achieved. If impacts to groundwater exceeding NMWQCC standards are observed consistently (subsequent quarterly events with concentrations exceeding NMWQCC standards by 10 percent), a Stage 2 Abatement Plan with remediation options for review from the NMOCD will be submitted.

WSP appreciates the opportunity to provide this report to the NMOCD. If you have any questions or comments regarding this Revised Stage 1 Abatement Plan, do not hesitate to contact Danny Burns at (970) 385-1096 or via email at danny.burns@WSP.com or Monica Smith at (505)-632-4475 or via email at msmith@harvestmidstream.com.

BIBLIOGRAPHY

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- Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.

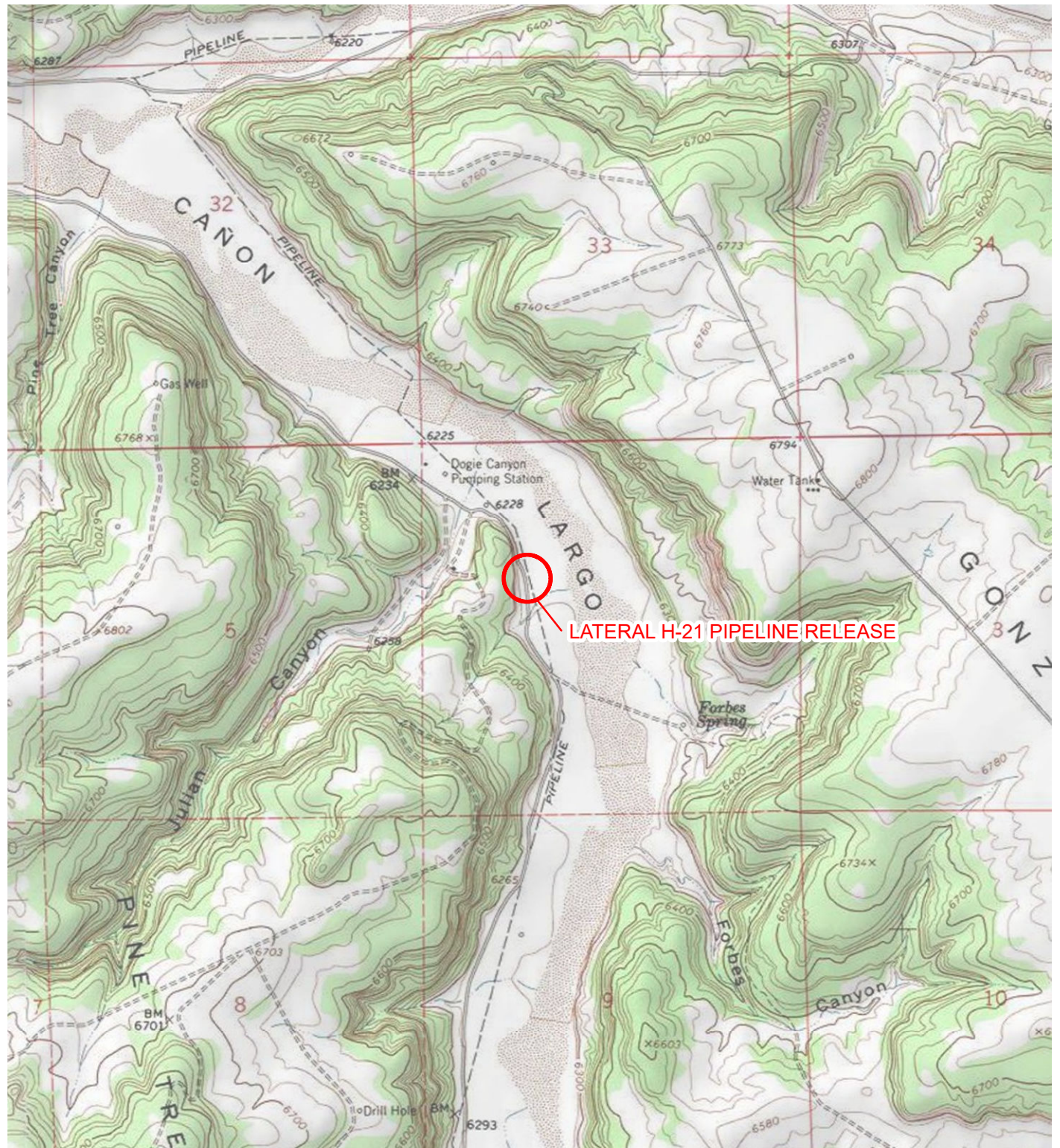
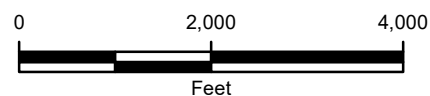
**LEGEND**

IMAGE COURTESY OF ESRI/USGS

○ SITE LOCATION



NEW MEXICO

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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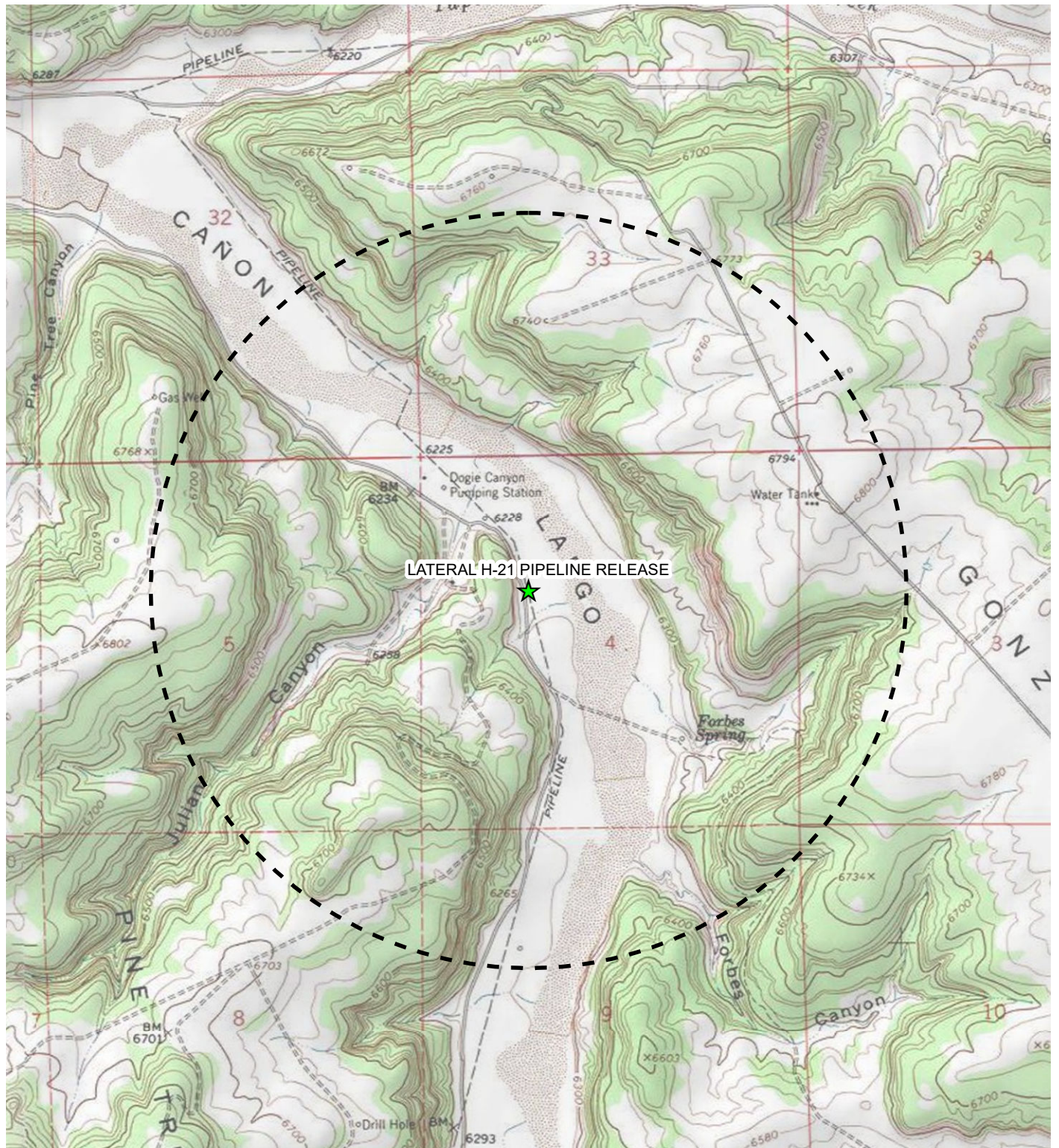
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IMAGE COURTESY OF ESRI/USGS

- ★ SITE LOCATION
- 1 MILE RADIUS

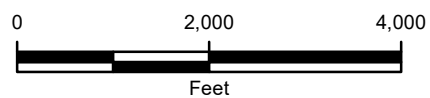
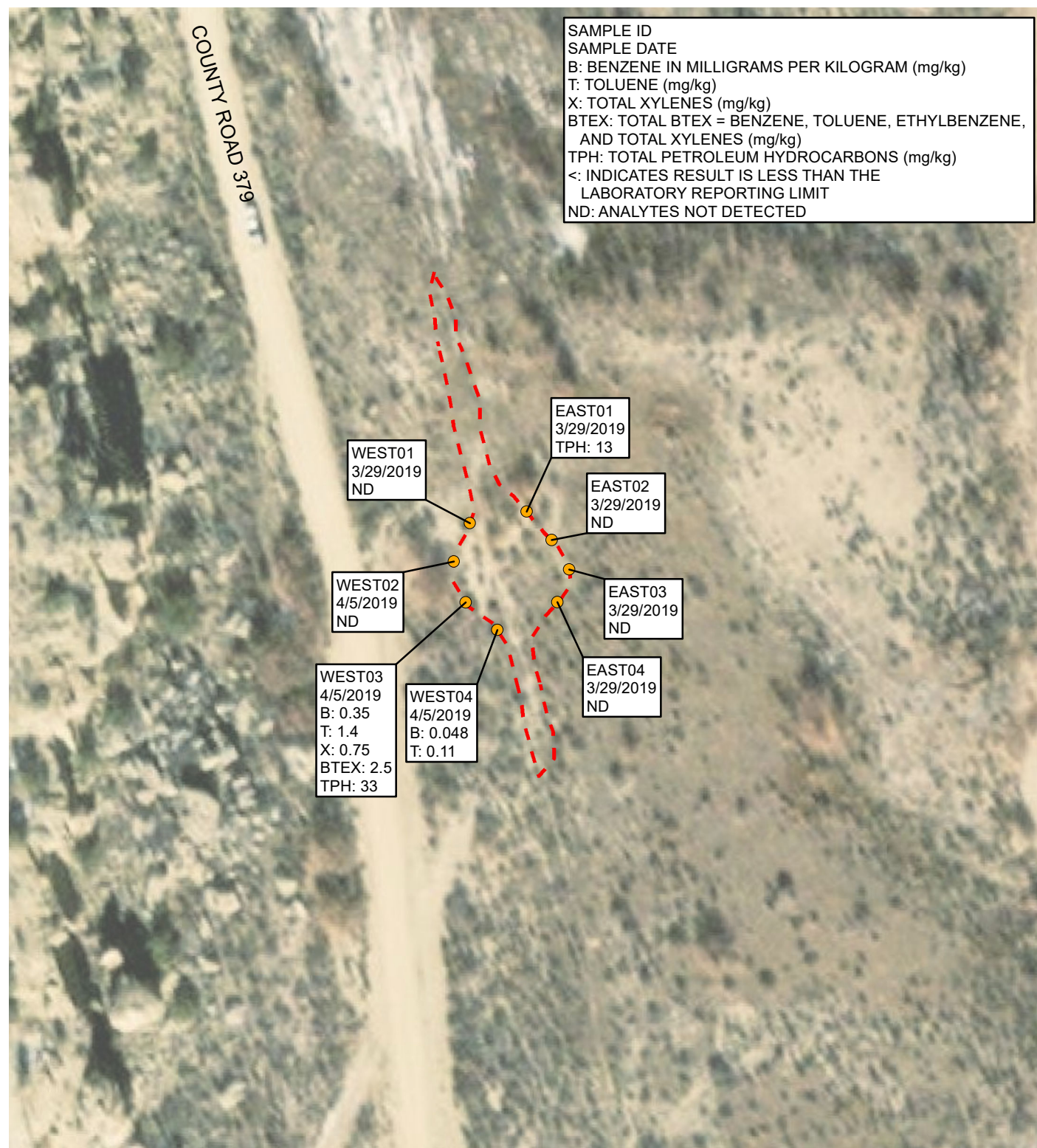


FIGURE 2
RECEPTOR MAP
LATERAL H-21 PIPELINE RELEASE
SENW SEC 4 T25N-R6W
RIO ARRIBA COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC



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SAMPLE ID
 SAMPLE DATE
 B: BENZENE IN MILLIGRAMS PER KILOGRAM (mg/kg)
 T: TOLUENE (mg/kg)
 X: TOTAL XYLENES (mg/kg)
 BTEX: TOTAL BTEX = BENZENE, TOLUENE, ETHYLBENZENE,
 AND TOTAL XYLENES (mg/kg)
 TPH: TOTAL PETROLEUM HYDROCARBONS (mg/kg)
 <: INDICATES RESULT IS LESS THAN THE
 LABORATORY REPORTING LIMIT
 ND: ANALYTES NOT DETECTED

**LEGEND**

- SOIL SAMPLE
- APPROXIMATE EXCAVATION EXTENT

IMAGE COURTESY OF ESRI

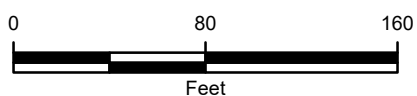


FIGURE 3
 SOIL ANALYTICAL RESULTS 2019
 LATERAL H-21 PIPELINE RELEASE
 SENW SEC 4 T25N R6W
 RIO ARRIBA COUNTY, NEW MEXICO
 HARVEST FOUR CORNERS, LLC

wsp

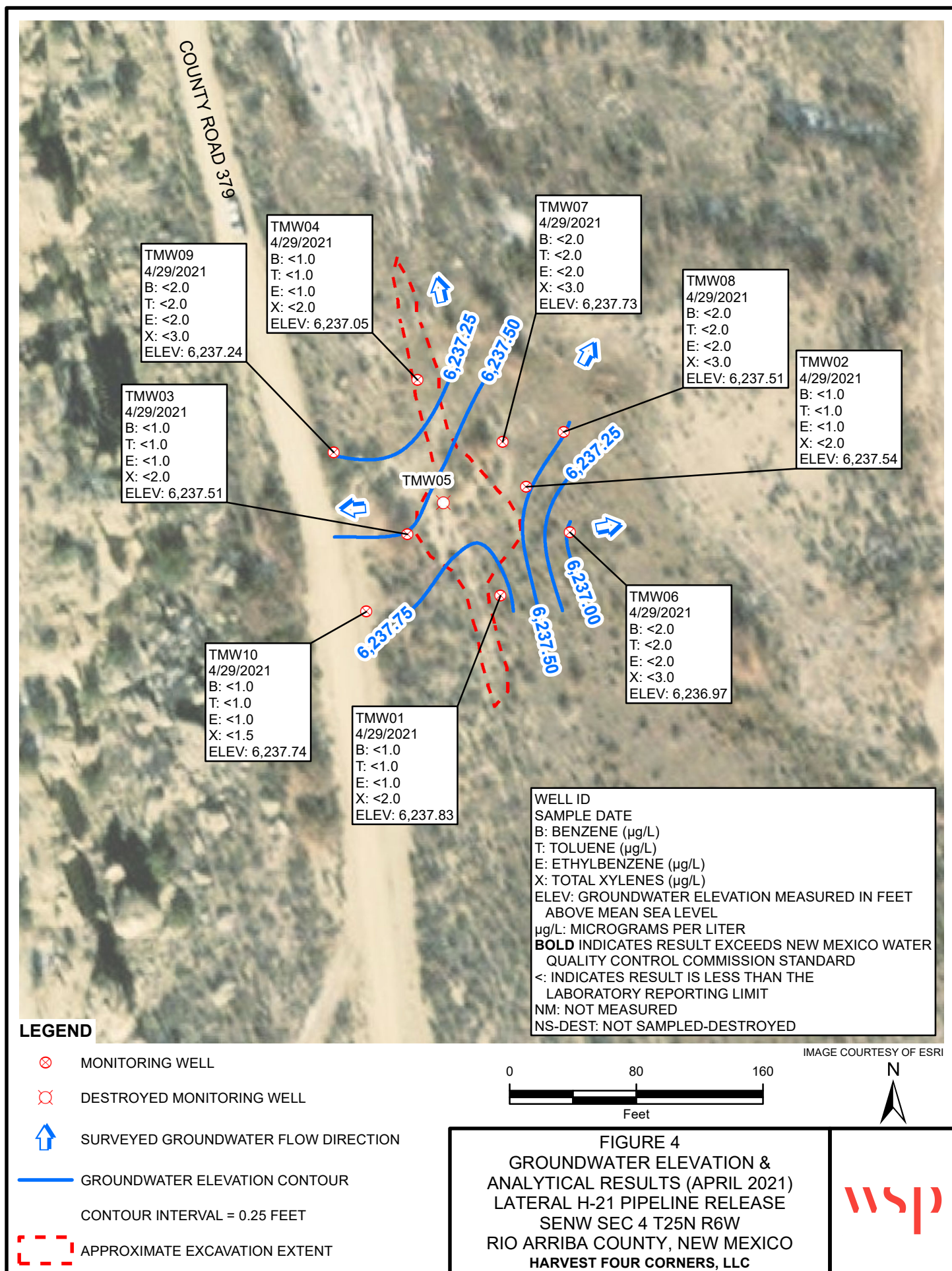


TABLE 1
SOIL ANALYTICAL RESULTS
LATERAL H-21 PIPELINE RELEASE
RIO ARriba COUNTY, NEW MEXICO (a)

Sample ID	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
East 01	3/29/2019	<0.015	<0.031	<0.031	<0.061	<0.138	<3.1	13	<48	13	<60
East 02	3/29/2019	<0.015	<0.029	<0.029	<0.059	<0.132	<2.9	<9.7	<49	<61.6	<61
East 03	3/29/2019	<0.015	<0.030	<0.030	<0.059	<0.134	<3.0	<9.3	<46	<58.3	<60
East 04	3/29/2019	<0.016	<0.031	<0.031	<0.062	<0.140	<3.1	<9.5	<47	<59.6	<60
West 01	3/29/2019	<0.015	<0.030	<0.030	<0.060	<0.135	<3.0	<9.3	<46	<58.3	<60
West 02	4/5/2019	<0.015	<0.029	<0.029	<0.059	<0.132	<2.9	<8.8	<44	<55.7	<60
West 03	4/5/2019	0.35	1.4	<0.17	0.75	2.5	33	<9.4	<47	33	<60
West 04	4/5/2019	0.048	0.11	<0.033	0.067	0.225	<3.3	<9.9	<49	<62.2	<60
NMOCD Remediation Action Level		10	NE	NE	NE	50	NE	NE	NE	100	600

a/

BTEX - benzene, toluene, ethylbenzene, and total xylenes analyzed by US EPA Method 8021B

DRO - diesel range organics analyzed by US EPA Method 8015D

GRO - gasoline range organics analyzed by US EPA Method 8015D

mg/kg - milligrams per kilogram

MRO - motor oil range organics analyzed by US EPA method 8015D

NE - not established

NMOCD - New Mexico Oil Conservation Division

TPH - total petroleum hydrocarbons (sum of GRO, DRO, and MRO)

< - indicates result is less than the stated laboratory reporting limit

TABLE 2

**GROUNDWATER ANALYTICAL RESULTS
LATERAL H-21 PIPELINE RELEASE
RIO ARriba COUNTY, NEW MEXICO (a)**

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)
Open Excavation Grab Samples	4/3/2019	310	330	8.3	41
	4/10/2019	140	89	2.7	20
	4/22/2019	31	36	<2.0	5.5
	5/9/2019	220	160	3.8	24
	6/3/2019	39	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
TMW02	7/17/2019	49	<1.0	<1.0	<2.0
	8/7/2020	8.5	<1.0	<1.0	<1.5
	4/29/2021	<1.0	<1.0	<1.0	<2.0
TMW03	7/17/2019	<1.0	<1.0	<1.0	<2.0
	8/7/2020	16	<1.0	<1.0	<1.5
	4/29/2021	<1.0	<1.0	<1.0	<2.0
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
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
TMW07	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
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
TMW09	4/29/2021	<2.0	<2.0	<2.0	<3.0
TMW10	4/29/2021	<1.0	<1.0	<1.0	<1.5
NMWQCC Standard		5	1,000	700	620

TABLE 2

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

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)
---------	-------------	-------------------	-------------------	-----------------------------	----------------------------

a/

NMWQCC- New Mexico Water Quality Control Commission

Bold - indicates result exceeds NMWQCC standard

µg/L- micrograms per liter

< - indicates result is below laboratory reporting limit

TABLE 3

**GROUNDWATER ELEVATION SUMMARY
LATERAL H-21 PIPELINE RELEASE
RIO ARriba COUNTY, NEW MEXICO (a)**

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
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
TNW03	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
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
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
	8/7/2020		3.64	6,236.97
	4/29/2021		3.64	6,236.97
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

TABLE 3

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

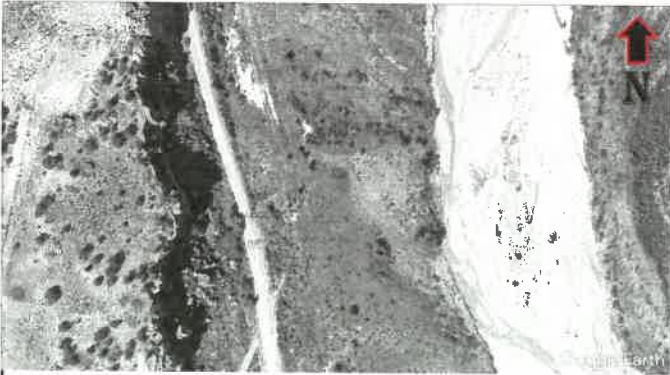

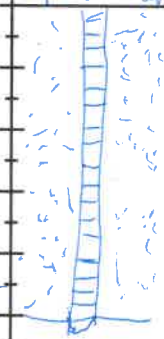
Well ID	Sample Date	Top of Casing Elevation (feet AMSL)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)
TMW08	7/25/2019	6,240.90	3.25	6,237.65
	8/7/2020		3.52	6,237.38
	4/29/2021		3.39	6,237.51
TMW09	4/29/2021	6,243.66	6.42	6,237.24
TMW10	4/29/2021	6,243.94	6.20	6,237.74

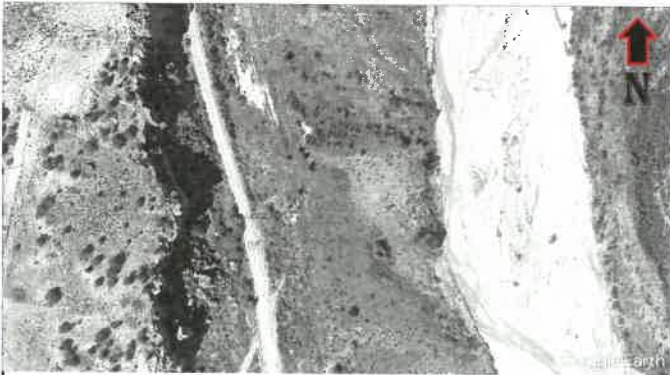

a/

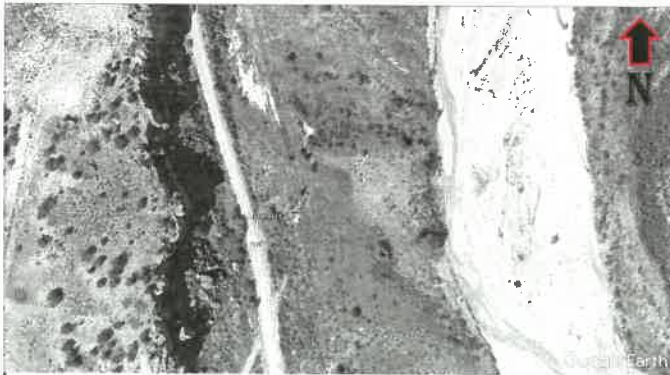

AMSL - above mean sea level

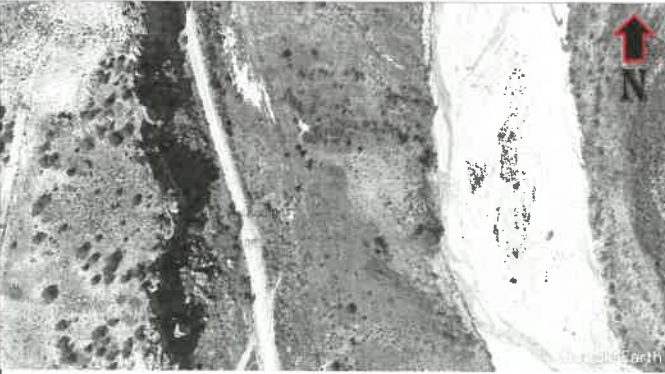

BTOC - below top of casing

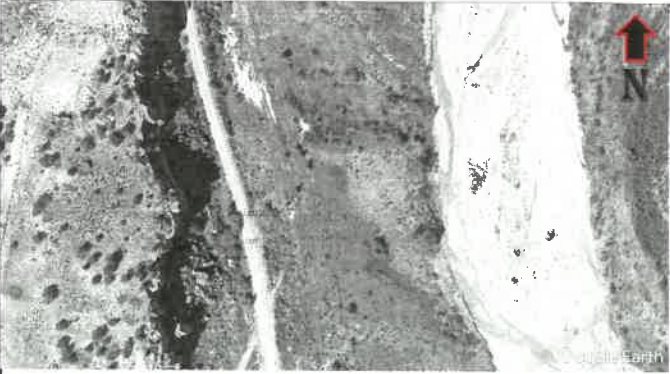

APPENDIX A: BORE LOGS



				 Advancing Opportunity 848 E. 2nd Ave Durango, Colorado 81301						
				BORING LOG/MONITORING WELL COMPLETION DIAGRAM						
Boring/Well Number: <u>BH01</u>				Project: <u>Lateral H-21</u>						
Date: <u>7/16/2019</u>				Project Number: <u>090319032</u>						
Logged By: <u>JA/EC</u>				Drilled By: <u>LTE</u>						
Drilling Method: <u>Hand Auger</u>				Sampling Method: <u>Hand Auger</u>						
Seal: <u>Sand</u>				Grout: <u>NA</u>						
Elevation:		Detector: <u>PID</u>		Diameter: <u>2"</u>		Length: <u>0</u>				
Gravel Pack: <u>NA 20-40 silica sand</u>		Casing Type: <u>Schedule 40 PVC</u>		Hole Diameter: <u>2"</u>		Depth to Liquid: <u>NA</u>				
Screen Type: <u>Schedule 40 PVC</u>		Slot: <u>0.010"</u>		Diameter: <u>2"</u>		Length: <u>5'</u>				
Total Depth: <u>5'</u>		Depth to Water: <u>3</u>								
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	92.5	NO		0			SP-SC	Dark reddish brown sand some silt no stain/odor	Flush mount
	moist	33.7	NO		1				<p>SAA</p> <p>↓</p> <p>Saturated sand/silt SAA</p> <p>Saturated clay dark brown/black</p> <p>TP = 5'</p>	
	moist	27.8	NO		2					
	wet	119.4	NO		3					
	Sat				4					
	Sat				5					
					6					
					7					
					8					
					9					
					10					
					11					
					12					
					13					
					14					
					15					



		 Advancing Opportunity 848 E. 2nd Ave Durango, Colorado 81301								
		BORING LOG/MONITORING WELL COMPLETION DIAGRAM								
Boring/Well Number: BH02		Project: Lateral H-21								
Date: 7/16/2019		Project Number: 090319032								
Logged By: JA/EC		Drilled By: LTE								
Drilling Method: Hand Auger		Sampling Method: Hand Auger								
Gravel Pack: NA 20-40 silica sand		Seal: Sand								
Grout: NA										
Casing Type: Schedule 40 PVC		Diameter: 2"	Length: 6'							
Screen Type: Schedule 40 PVC		Diameter: 2"	Length: 5'							
Slot: 0.010"		Total Depth: 5.5'	Depth to Liquid: NA							
Depth to Water: 3.5'										
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	dry	52.0	NO		0			SP-SC	poorly graded light brown/red sand w/ 10% silt	flush man
	dry	88.1			1					
	moist	23.0			2				SAA	
	moist	20.0			3				SAA	
	SAT				4				SAA, saturated	
	SAT				5					
					6					
					7					
					8					
					9					
					10					
					11					
					12					
					13					
					14					
					15					



		 Advancing Opportunity 848 E. 2nd Ave Durango, Colorado 81301								
		BORING LOG/MONITORING WELL COMPLETION DIAGRAM								
		Boring/Well Number: <u>BH03</u>	Project: <u>Lateral H-21</u>							
		Date: <u>7/16/2019</u>	Project Number: <u>090319032</u>							
Elevation:		Detector: <u>PID</u>	Drilling Method: <u>Hand Auger</u>	Sampling Method: <u>Hand Auger</u>						
Gravel Pack: <u>NA 20-40 Silica Sand</u>		Seal: <u>Sand</u>	Grout: <u>NA</u>							
Casing Type: <u>Schedule 40 PVC</u>		Diameter: <u>2"</u>	Length: <u>1'</u>	Hole Diameter: <u>2"</u>	Depth to Liquid: <u>NA</u>					
Screen Type: <u>Schedule 40 PVC</u>		Slot: <u>0.010"</u>	Diameter: <u>2"</u>	Length: <u>6'</u>	Total Depth: <u>6'</u>					
Depth to Water: <u>4'</u>										
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	19.7	NO		0			SP-SC	moist, lt reddish brown sand	Flush mouth
	moist	9.8	NO		1				Some silt < 10% no stain/odor	
	moist	3.0	NO		2				SA1 no stain/odor	
	moist	1.4	NO		3				SAA no stain/odor	
	moist	10.3	NO		4				SA1 no stain/odor	
					5					
					6				Saturated dark brown sand and clay	
					7					
					8				TD=6'	
					9					
					10					
					11					
					12					
					13					
					14					
					15					


				 Advancing Opportunity 848 E. 2nd Ave Durango, Colorado 81301							
				BORING LOG/MONITORING WELL COMPLETION DIAGRAM							
				Boring/Well Number: BH04				Project: Lateral H-21			
				Date: 7/16/2019				Project Number: 090319032			
Logged By: JA/EC				Drilled By: LTE							
Elevation:		Detector: PID		Drilling Method: Hand Auger		Sampling Method: Hand Auger					
Gravel Pack: NA 20-40 silica sand				Seal: band		Grout: NA					
Casing Type: Schedule 40 PVC				Diameter: 2"		Length: 1.5'					
Screen Type: Schedule 40 PVC				Slot: 0.010"		Hole Diameter: 2.5"					
Screen Type: Schedule 40 PVC				Slot: 0.010"		Total Depth: 6.5					
Depth to Liquid: NA				Depth to Water: 4.5'							
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion	
	Moist	209.1	NO		0"			SP-SC	light brown/reddish poorly graded sand w/ silt (10%) w/ interbedded black organic rich clay swampy smell	Mush mount	
	Moist	262	NO		1						
	moist	7.9	NO		2						
	moist	11.7	NO		3						
	moist	13.4	NO		4						
	SAT		NO		5				SAA, saturated		
	SAT		NO		6				SAA, saturated		
					7						
					8						
					9						
					10						
					11						
					12						
					13						
					14						
					15						

					 Advancing Opportunity 848 E. 2nd Ave Durango, Colorado 81301																													
					BORING LOG/MONITORING WELL COMPLETION DIAGRAM																													
					Boring Well Number: BH05					Project: Lateral H-21																								
					Date: 7/16/2019					Project Number: 090319032																								
Logged By: JA/EC					Drilled By: LTE																													
Elevation:					Detector: PID					Drilling Method: Hand Auger					Sampling Method: Hand Auger																			
Gravel Pack: NA 20-40 silica sand										Seal: Sand					Grout: NA																			
Casing Type: Schedule 40 PVC										Diameter: 2"					Length: 6"					Hole Diameter: 2"					Depth to Liquid:									
Screen Type: Schedule 40 PVC										Slot: 0.010"					Diameter: 2"					Length: 5'					Total Depth: 5.5					Depth to Water: 3.5'				
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks										Well Completion															
	moist	1.3	NO		0				moist lt reddish brown sand bits										Flush mount															
	moist	0.0	NO		1				som silt NO stain/odor																									
	moist	10.8	NO		2				SAA																									
	moist	15.1	NO		3				SAA																									
	sat	—	NO		4				SAA																									
					5				Saturated dark brown sandy clay																									
					6				<p style="text-align: center; font-size: 2em;">TDE 5.5'</p>																									
					7																													
					8																													
					9																													
					10																													
					11																													
					12																													
					13																													
					14																													
					15																													

 Advancing Opportunity 848 E. 2nd Ave Durango, Colorado 81301		BORING LOG/MONITORING WELL COMPLETION DIAGRAM											
		Boring/Well Number: BH-06					Project: Lateral H-21						
		Date: 7/22/19					Project Number: 090319032						
		Logged By: Travis Short					Drilled By: LTE						
Elevation:		Detector: PID		Drilling Method: Hand Auger			Sampling Method: Hand Auger						
Gravel Pack: 10-20 Silica Sand		NA 20-40 silica sand			Seal: sand			Grout: NA					
Casing Type: Schedule 40 PVC				Diameter: 2"		Length: 6"		Hole Diameter: 2"		Depth to Liquid: NA			
Screen Type: Schedule 40 PVC				Slot: 0.010"		Diameter: 2"		Length: 5'		Total Depth: 5.5'		Depth to Water: 3	
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks			Well Completion	
	moist	3.6	NO		0			SP-SC	Dark redish brown sand				
	moist	3.4	NO		1				Some Silt, No stain/odor				
	moist	3.0	NO		2								
	Sat.	Sat.	NO		3								
	Sat.	Sat.	NO		4				saturated sand/silt				
	Sat.	Sat.	NO		5				some grey coloring				
	Sat.	Sat.	NO		6				Saturated clay				
					7								
					8								
					9								
					10								
					11								
					12								
					13								
					14								
					15								

				 Advancing Opportunity 848 E. 2nd Ave Durango, Colorado 81301							
				BORING LOG/MONITORING WELL COMPLETION DIAGRAM							
				Boring/Well Number: BH-09				Project: Lateral H-21			
				Date: 7/22/19				Project Number: 090319032			
Elevation:				Detector: PID		Drilling Method: Hand Auger		Sampling Method: Hand Auger			
Gravel Pack: 10-20 Silica Sand NA 20-40 silica sand				Seal: sand		Grout: NA					
Casing Type: Schedule 40 PVC				Diameter: 2"		Length: 1'		Hole Diameter: 2"	Depth to Liquid:		
Screen Type: Schedule 40 PVC				Slot: 0.010"		Diameter: 2"		Length: 5'	Total Depth: 6'		
								Depth to Water: 4'			
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion	
	moist	1.1	NO		0				Dark redish brown sand	flush mount	
	moist	2.4	NO		1				Some silt, no stain/odor		
	moist	0.9	NO		2						
	moist	0.7	NO		3						
	Sat	Sat	NO		4						
	Sat	Sat	NO		5				Saturated Sand/Silt some grey coloring		
	Sat	Sat	NO		6				Saturated clay		
					7						
					8						
					9						
					10						
					11						
					12						
					13						
					14						
					15						

				 Advancing Opportunity 848 E. 2nd Ave Durango, Colorado 81301						
				BORING LOG/MONITORING WELL COMPLETION DIAGRAM						
Boring/Well Number: BH08				Project: Lateral H-21						
Date: 7-25-19				Project Number: 090319032						
Logged By: JA				Drilled By: JA						
Elevation:				Detector: PID		Drilling Method: Hard Auger				
Gravel Pack: 10-20 Silica Sand - 20-40 Silica Sand				Seal: Sand		Sampling Method: Hard Auger				
Casing Type: Schedule 40 PVC				Diameter: 2"		Hole Diameter: 2"				
Screen Type: Schedule 40 PVC				Slot: 0.010"		Depth to Liquid: NA				
				Diameter: 2"		Total Depth: 5.5				
				Length: 6"		Depth to Water: 3'				
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	M	10.5	NO		0				brown sand w/ silt (10%)	Flowmeter
	M	18.0	NO		1				w/ intermixed black	
	M	3.5	NO		2				organic rich clay	
	SAT				3				SAA, no clay, less silty	
	SAT				4				SAA	
					5					
					6					
					7					
					8					
					9					
					10					
					11					
					12					
					13					
					14					
					15					



WSP USA INC

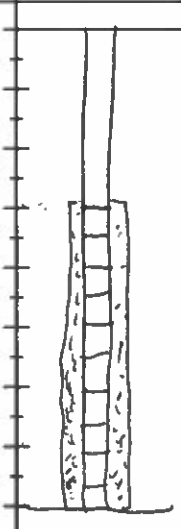
848 East 2nd Avenue

Durango, CO 81301


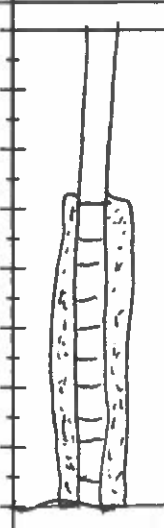
BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number:	TMW09	Project:	Lateral H21
Date:	4/26/2021	Project Number:	TE090321009
Logged By:	Eric Carroll	Drilled By:	WSP
Elevation:	6,243	Drilling Method:	Hand Auger
Detector:	PID	Sampling Method:	Continuous
Gravel Pack:	10-20 Silica Sand	Seal:	Bentonite
Casing Type:	Schedule 40 PVC	Grout:	Bentonite
Screen Type:	Schedule 40 PVC	Diameter:	2"
Slot:	0.010" Pre Pack Sand	Length:	3'
		Hole Diameter:	4"
		Depth to Liquid:	N/A
		Total Depth:	7'
		Depth to Water:	7'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	m	2.8	N		0			SP	Red brown, moist, fine sand, some organics	
					1					
	m	7.2	N		2			OH	Dark brown/black, fat clay, organic few sand, swampy odor	
	m	3.2	N		3			SM	lt. brown, moist, fine sand, little silt	
	m	2.1	N		4			ML	lt. brown, silt, few sand & clay	
	m	4.2	N		5			SP	lt. brown, moist coarse sand	
					6			SP	SAA	
	m	3.2	N		7			SP	SAA wet @ 7'	
	wt	2.3	N		8			SP		
	w		N		9			CH	Dark brown, wet sandy clay	
					10					
					11					
					12					
					13					
					14					
					15					



TD = 8'

		WSP USA INC								
		848 East 2nd Avenue								
		Durango, CO 81301								
		BORING LOG/MONITORING WELL COMPLETION DIAGRAM								
Boring/Well Number: TMW10		Project: Lateral H21								
Date: 4/26/2021		Project Number: TE090321009								
Logged By: Eric Carroll		Drilled By: WSP								
Elevation: 6,243	Detector: PID	Drilling Method: Hand Auger	Sampling Method: Continuous							
Gravel Pack: 10-20 Silica Sand		Seal: Bentonite	Grout: Bentonite							
Casing Type: Schedule 40 PVC		Diameter: 2" Length: 3'	Hole Diameter: 4" Depth to Liquid: NA							
Screen Type: Schedule 40 PVC Slot: 0.010" pie pack sand		Diameter: 2" Length: 5'	Total Depth: 6' Depth to Water: 6.5							
Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	m	1.6	N		0			SP	lt. brown, fine sand, some organics	
	m	4.3	N		1			SC	Dark brown, sand, some clay	
	m	1.9	N		2			CH	Dark brown, fat clay, few sand	
	m	3.7	N		3			SP	lt. brown, moist, coarse sand	
	m	1.7	N		4			SP	SAA	
	w	2.5	N		5			SP	SAA wet @ 6.5'	
	w	-	N		6			SP	SAA	
	w	-	N		7			CH	Dark Brown, sandy clay	
					8					
					9					
					10					
					11					
					12					
					13					
					14					
					15					

APPENDIX B: LABORATORY ANALYTICAL REPORTS



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

April 02, 2019

Kijun Hong

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Lateral H 21

OrderNo.: 1903E75

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/30/2019 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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1903E75

Date Reported: 4/2/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: East 01

Project: Lateral H 21

Collection Date: 3/29/2019 12:40:00 PM

Lab ID: 1903E75-001

Matrix: SOIL

Received Date: 3/30/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	4/1/2019 11:49:13 AM	43997
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	3/31/2019 3:45:39 PM	R58787
Surr: BFB	109	70-130		%Rec	1	3/31/2019 3:45:39 PM	R58787
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	13	9.6		mg/Kg	1	4/1/2019 8:39:31 AM	43986
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/1/2019 8:39:31 AM	43986
Surr: DNOP	98.1	70-130		%Rec	1	4/1/2019 8:39:31 AM	43986
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: RAA
Benzene	ND	0.015		mg/Kg	1	3/31/2019 3:45:39 PM	S58787
Toluene	ND	0.031		mg/Kg	1	3/31/2019 3:45:39 PM	S58787
Ethylbenzene	ND	0.031		mg/Kg	1	3/31/2019 3:45:39 PM	S58787
Xylenes, Total	ND	0.061		mg/Kg	1	3/31/2019 3:45:39 PM	S58787
Surr: 1,2-Dichloroethane-d4	85.8	70-130		%Rec	1	3/31/2019 3:45:39 PM	S58787
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	3/31/2019 3:45:39 PM	S58787
Surr: Dibromofluoromethane	90.0	70-130		%Rec	1	3/31/2019 3:45:39 PM	S58787
Surr: Toluene-d8	88.9	70-130		%Rec	1	3/31/2019 3:45:39 PM	S58787

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

Qualifiers:	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Analytical Report

Lab Order 1903E75

Date Reported: 4/2/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: East 02

Project: Lateral H 21

Collection Date: 3/29/2019 12:50:00 PM

Lab ID: 1903E75-002

Matrix: SOIL

Received Date: 3/30/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	61		mg/Kg	20	4/1/2019 12:01:38 PM	43997
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	2.9		mg/Kg	1	3/31/2019 4:14:12 PM	R58787
Surr: BFB	106	70-130		%Rec	1	3/31/2019 4:14:12 PM	R58787
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/1/2019 9:03:02 AM	43986
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/1/2019 9:03:02 AM	43986
Surr: DNOP	99.5	70-130		%Rec	1	4/1/2019 9:03:02 AM	43986
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: RAA
Benzene	ND	0.015		mg/Kg	1	3/31/2019 4:14:12 PM	S58787
Toluene	ND	0.029		mg/Kg	1	3/31/2019 4:14:12 PM	S58787
Ethylbenzene	ND	0.029		mg/Kg	1	3/31/2019 4:14:12 PM	S58787
Xylenes, Total	ND	0.059		mg/Kg	1	3/31/2019 4:14:12 PM	S58787
Surr: 1,2-Dichloroethane-d4	83.9	70-130		%Rec	1	3/31/2019 4:14:12 PM	S58787
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	3/31/2019 4:14:12 PM	S58787
Surr: Dibromofluoromethane	89.9	70-130		%Rec	1	3/31/2019 4:14:12 PM	S58787
Surr: Toluene-d8	87.3	70-130		%Rec	1	3/31/2019 4:14:12 PM	S58787

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

Qualifiers:	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Analytical Report

Lab Order 1903E75

Date Reported: 4/2/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: East 03

Project: Lateral H 21

Collection Date: 3/29/2019 1:00:00 PM

Lab ID: 1903E75-003

Matrix: SOIL

Received Date: 3/30/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	4/1/2019 12:14:03 PM	43997
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	3.0		mg/Kg	1	3/31/2019 4:42:45 PM	R58787
Surr: BFB	107	70-130		%Rec	1	3/31/2019 4:42:45 PM	R58787
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/1/2019 9:26:52 AM	43986
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/1/2019 9:26:52 AM	43986
Surr: DNOP	95.0	70-130		%Rec	1	4/1/2019 9:26:52 AM	43986
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: RAA
Benzene	ND	0.015		mg/Kg	1	3/31/2019 4:42:45 PM	S58787
Toluene	ND	0.030		mg/Kg	1	3/31/2019 4:42:45 PM	S58787
Ethylbenzene	ND	0.030		mg/Kg	1	3/31/2019 4:42:45 PM	S58787
Xylenes, Total	ND	0.059		mg/Kg	1	3/31/2019 4:42:45 PM	S58787
Surr: 1,2-Dichloroethane-d4	90.1	70-130		%Rec	1	3/31/2019 4:42:45 PM	S58787
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	3/31/2019 4:42:45 PM	S58787
Surr: Dibromofluoromethane	91.6	70-130		%Rec	1	3/31/2019 4:42:45 PM	S58787
Surr: Toluene-d8	88.9	70-130		%Rec	1	3/31/2019 4:42:45 PM	S58787

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

Qualifiers:	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Analytical Report

Lab Order 1903E75

Date Reported: 4/2/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: East 04

Project: Lateral H 21

Collection Date: 3/29/2019 1:15:00 PM

Lab ID: 1903E75-004

Matrix: SOIL

Received Date: 3/30/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	4/1/2019 12:51:17 PM	43997
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	3/31/2019 5:11:16 PM	R58787
Surr: BFB	109	70-130		%Rec	1	3/31/2019 5:11:16 PM	R58787
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/1/2019 9:50:42 AM	43986
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/1/2019 9:50:42 AM	43986
Surr: DNOP	96.2	70-130		%Rec	1	4/1/2019 9:50:42 AM	43986
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: RAA
Benzene	ND	0.016		mg/Kg	1	3/31/2019 5:11:16 PM	S58787
Toluene	ND	0.031		mg/Kg	1	3/31/2019 5:11:16 PM	S58787
Ethylbenzene	ND	0.031		mg/Kg	1	3/31/2019 5:11:16 PM	S58787
Xylenes, Total	ND	0.062		mg/Kg	1	3/31/2019 5:11:16 PM	S58787
Surr: 1,2-Dichloroethane-d4	85.5	70-130		%Rec	1	3/31/2019 5:11:16 PM	S58787
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	3/31/2019 5:11:16 PM	S58787
Surr: Dibromofluoromethane	87.7	70-130		%Rec	1	3/31/2019 5:11:16 PM	S58787
Surr: Toluene-d8	90.0	70-130		%Rec	1	3/31/2019 5:11:16 PM	S58787

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

Qualifiers:	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Analytical Report

Lab Order 1903E75

Date Reported: 4/2/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: West 01

Project: Lateral H 21

Collection Date: 3/29/2019 1:25:00 PM

Lab ID: 1903E75-005

Matrix: SOIL

Received Date: 3/30/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	4/1/2019 1:03:41 PM	43997
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	3.0		mg/Kg	1	3/31/2019 5:39:44 PM	R58787
Surr: BFB	109	70-130		%Rec	1	3/31/2019 5:39:44 PM	R58787
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/1/2019 10:14:23 AM	43986
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/1/2019 10:14:23 AM	43986
Surr: DNOP	97.6	70-130		%Rec	1	4/1/2019 10:14:23 AM	43986
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: RAA
Benzene	ND	0.015		mg/Kg	1	3/31/2019 5:39:44 PM	S58787
Toluene	ND	0.030		mg/Kg	1	3/31/2019 5:39:44 PM	S58787
Ethylbenzene	ND	0.030		mg/Kg	1	3/31/2019 5:39:44 PM	S58787
Xylenes, Total	ND	0.060		mg/Kg	1	3/31/2019 5:39:44 PM	S58787
Surr: 1,2-Dichloroethane-d4	86.8	70-130		%Rec	1	3/31/2019 5:39:44 PM	S58787
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	3/31/2019 5:39:44 PM	S58787
Surr: Dibromofluoromethane	90.1	70-130		%Rec	1	3/31/2019 5:39:44 PM	S58787
Surr: Toluene-d8	88.8	70-130		%Rec	1	3/31/2019 5:39:44 PM	S58787

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

Qualifiers:	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Analytical Report

Lab Order 1903E75

Date Reported: 4/2/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: Background

Project: Lateral H 21

Collection Date: 3/29/2019 1:40:00 PM

Lab ID: 1903E75-006

Matrix: SOIL

Received Date: 3/30/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	4/1/2019 1:16:06 PM	43997

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

Qualifiers:	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Page 6 of 11

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1903E75

02-Apr-19

Client: Harvest
Project: Lateral H 21

Sample ID: MB-43997		SampType: MBLK		TestCode: EPA Method 300.0: Anions						
Client ID: PBS		Batch ID: 43997		RunNo: 58782						
Prep Date: 4/1/2019		Analysis Date: 4/1/2019		SeqNo: 1976552		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-43997		SampType: LCS		TestCode: EPA Method 300.0: Anions						
Client ID: LCSS		Batch ID: 43997		RunNo: 58782						
Prep Date: 4/1/2019		Analysis Date: 4/1/2019		SeqNo: 1976553		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

Qualifiers:

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1903E75

02-Apr-19

Client: Harvest
Project: Lateral H 21

Sample ID: LCS-43986	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 43986		RunNo: 58785							
Prep Date: 3/30/2019	Analysis Date: 4/1/2019		SeqNo: 1975449		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	108	63.9	124			
Surr: DNOP	5.7		5.000		115	70	130			

Sample ID: MB-43986	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 43986		RunNo: 58785							
Prep Date: 3/30/2019	Analysis Date: 4/1/2019		SeqNo: 1975450		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		115	70	130			

Qualifiers:

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1903E75

02-Apr-19

Client: Harvest
Project: Lateral H 21

Sample ID: 100ng sl lcs		SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: LCSS		Batch ID: S58787		RunNo: 58787						
Prep Date:		Analysis Date: 3/31/2019		SeqNo: 1975465		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	82.7	70	130			
Toluene	0.95	0.050	1.000	0	94.6	70	130			
Ethylbenzene	0.93	0.050	1.000	0	92.6	70	130			
Xylenes, Total	2.8	0.10	3.000	0	93.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		85.5	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		107	70	130			
Surr: Dibromofluoromethane	0.42		0.5000		84.9	70	130			
Surr: Toluene-d8	0.45		0.5000		89.8	70	130			

Sample ID: 1903E75-002AMS		SampType: MS		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: East 02		Batch ID: S58787		RunNo: 58787						
Prep Date:		Analysis Date: 3/31/2019		SeqNo: 1975490		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.52	0.015	0.5889	0	87.8	68.9	131			
Toluene	0.55	0.029	0.5889	0	94.1	64.3	137			
Ethylbenzene	0.55	0.029	0.5889	0	93.8	70	130			
Xylenes, Total	1.7	0.059	1.767	0	94.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.25		0.2944		86.6	70	130			
Surr: 4-Bromofluorobenzene	0.30		0.2944		102	70	130			
Surr: Dibromofluoromethane	0.26		0.2944		87.1	70	130			
Surr: Toluene-d8	0.25		0.2944		85.9	70	130			

Sample ID: 1903E75-002AMSD		SampType: MSD		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: East 02		Batch ID: S58787		RunNo: 58787						
Prep Date:		Analysis Date: 3/31/2019		SeqNo: 1975491		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.51	0.015	0.5889	0	87.0	68.9	131	0.832	20	
Toluene	0.55	0.029	0.5889	0	93.2	64.3	137	0.965	20	
Ethylbenzene	0.55	0.029	0.5889	0	92.8	70	130	1.00	0	
Xylenes, Total	1.7	0.059	1.767	0	94.1	70	130	0.769	0	
Surr: 1,2-Dichloroethane-d4	0.25		0.2944		86.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.31		0.2944		104	70	130	0	0	
Surr: Dibromofluoromethane	0.27		0.2944		93.0	70	130	0	0	
Surr: Toluene-d8	0.26		0.2944		87.5	70	130	0	0	

Qualifiers:

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1903E75

02-Apr-19

Client: Harvest
Project: Lateral H 21

Sample ID: rb	SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBS	Batch ID: S58787		RunNo: 58787							
Prep Date:	Analysis Date: 3/31/2019		SeqNo: 1975498		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: 1,2-Dichloroethane-d4	0.42		0.5000		83.8	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		105	70	130			
Surr: Dibromofluoromethane	0.43		0.5000		85.5	70	130			
Surr: Toluene-d8	0.46		0.5000		91.2	70	130			

Qualifiers:

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1903E75

02-Apr-19

Client: Harvest
Project: Lateral H 21

Sample ID: 1903E75-001AMS	SampType: MS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: East 01	Batch ID: R58787	RunNo: 58787								
Prep Date:	Analysis Date: 3/31/2019	SeqNo: 1975533 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	13	3.1	15.29	0	83.7	68.2	135			
Surr: BFB	330		305.8		107	70	130			

Sample ID: 1903E75-001AMSD	SampType: MSD	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: East 01	Batch ID: R58787	RunNo: 58787								
Prep Date:	Analysis Date: 3/31/2019	SeqNo: 1975534 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	12	3.1	15.29	0	81.4	68.2	135	2.76	20	
Surr: BFB	320		305.8		106	70	130	0	0	

Sample ID: 2.5ug gro lcs	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: R58787	RunNo: 58787								
Prep Date:	Analysis Date: 3/31/2019	SeqNo: 1975539 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.2	70	130			
Surr: BFB	510		500.0		102	70	130			

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: R58787	RunNo: 58787								
Prep Date:	Analysis Date: 3/31/2019	SeqNo: 1975542 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	540		500.0		107	70	130			

Qualifiers:

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode



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

Sample Log-In Check List

Client Name: Harvest

Work Order Number: 1903E75

RcptNo: 1

Received By: Anne Thorne 3/30/2019 9:20:00 AM

Completed By: Anne Thorne 3/30/2019 9:56:09 AM

Reviewed By: *AM 3/30/19*Labeled by: *A 03/30/19**Anne Thorne**Anne Thorne*

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐5. Sample(s) in proper container(s)? Yes ☒ No ☐6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒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: _____

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
3	1.0	Good	Yes			



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

April 09, 2019

Kijun Hong

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX:

RE: Lateral H-21

OrderNo.: 1904417

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/6/2019 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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1904417

Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: West-02

Project: Lateral H-21

Collection Date: 4/5/2019 10:40:00 AM

Lab ID: 1904417-001

Matrix: MEOH (SOIL)

Received Date: 4/6/2019 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	4/8/2019 11:22:28 AM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	4/8/2019 10:43:34 AM	44189
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	4/8/2019 10:43:34 AM	44189
Surr: DNOP	99.3	70-130		%Rec	1	4/8/2019 10:43:34 AM	44189
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.9		mg/Kg	1	4/8/2019 10:12:02 AM	G58972
Surr: BFB	86.9	73.8-119		%Rec	1	4/8/2019 10:12:02 AM	G58972
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.015		mg/Kg	1	4/8/2019 10:12:02 AM	B58972
Toluene	ND	0.029		mg/Kg	1	4/8/2019 10:12:02 AM	B58972
Ethylbenzene	ND	0.029		mg/Kg	1	4/8/2019 10:12:02 AM	B58972
Xylenes, Total	ND	0.059		mg/Kg	1	4/8/2019 10:12:02 AM	B58972
Surr: 4-Bromofluorobenzene	86.5	80-120		%Rec	1	4/8/2019 10:12:02 AM	B58972

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

Qualifiers:	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Analytical Report

Lab Order 1904417

Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: West-03

Project: Lateral H-21

Collection Date: 4/5/2019 10:50:00 AM

Lab ID: 1904417-002

Matrix: MEOH (SOIL)

Received Date: 4/6/2019 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	4/8/2019 11:34:53 AM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/8/2019 11:05:48 AM	44189
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/8/2019 11:05:48 AM	44189
Surr: DNOP	99.4	70-130		%Rec	1	4/8/2019 11:05:48 AM	44189
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	33	17		mg/Kg	5	4/8/2019 10:35:33 AM	G58972
Surr: BFB	94.2	73.8-119		%Rec	5	4/8/2019 10:35:33 AM	G58972
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.35	0.084		mg/Kg	5	4/8/2019 10:35:33 AM	B58972
Toluene	1.4	0.17		mg/Kg	5	4/8/2019 10:35:33 AM	B58972
Ethylbenzene	ND	0.17		mg/Kg	5	4/8/2019 10:35:33 AM	B58972
Xylenes, Total	0.75	0.33		mg/Kg	5	4/8/2019 10:35:33 AM	B58972
Surr: 4-Bromofluorobenzene	91.1	80-120		%Rec	5	4/8/2019 10:35:33 AM	B58972

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

Qualifiers:	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Analytical Report

Lab Order 1904417

Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: West-04

Project: Lateral H-21

Collection Date: 4/5/2019 11:00:00 AM

Lab ID: 1904417-003

Matrix: MEOH (SOIL)

Received Date: 4/6/2019 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	4/8/2019 11:47:18 AM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: Irm
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/8/2019 11:28:02 AM	44189
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/8/2019 11:28:02 AM	44189
Surr: DNOP	100	70-130		%Rec	1	4/8/2019 11:28:02 AM	44189
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	4/8/2019 10:59:09 AM	G58972
Surr: BFB	84.4	73.8-119		%Rec	1	4/8/2019 10:59:09 AM	G58972
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.048	0.017		mg/Kg	1	4/8/2019 10:59:09 AM	B58972
Toluene	0.11	0.033		mg/Kg	1	4/8/2019 10:59:09 AM	B58972
Ethylbenzene	ND	0.033		mg/Kg	1	4/8/2019 10:59:09 AM	B58972
Xylenes, Total	0.067	0.067		mg/Kg	1	4/8/2019 10:59:09 AM	B58972
Surr: 4-Bromofluorobenzene	84.7	80-120		%Rec	1	4/8/2019 10:59:09 AM	B58972

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

Qualifiers:	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Page 3 of 7

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904417

09-Apr-19

Client: Harvest
Project: Lateral H-21

Sample ID: MB-44191	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 44191	RunNo: 58977								
Prep Date: 4/8/2019	Analysis Date: 4/8/2019	SeqNo: 1984926	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-44191	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 44191	RunNo: 58977								
Prep Date: 4/8/2019	Analysis Date: 4/8/2019	SeqNo: 1984927	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	90	110			

Qualifiers:

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1904417****09-Apr-19**

Client: Harvest
Project: Lateral H-21

Sample ID: LCS-44189	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 44189			RunNo: 58966						
Prep Date: 4/8/2019	Analysis Date: 4/8/2019			SeqNo: 1983691		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.1	63.9	124			
Surr: DNOP	4.3		5.000		86.0	70	130			

Sample ID: MB-44189	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 44189			RunNo: 58966						
Prep Date: 4/8/2019	Analysis Date: 4/8/2019			SeqNo: 1983692		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		95.6	70	130			

Qualifiers:

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1904417

09-Apr-19

Client: Harvest
Project: Lateral H-21

Sample ID: RB	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: G58972			RunNo: 58972						
Prep Date:	Analysis Date: 4/8/2019			SeqNo: 1984132		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		87.1	73.8	119			

Sample ID: 2.5UG GRO LCS	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: G58972			RunNo: 58972						
Prep Date:	Analysis Date: 4/8/2019			SeqNo: 1984133		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	80.1	123			
Surr: BFB	1000		1000		102	73.8	119			

Sample ID: MB-44115	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 44115			RunNo: 58972						
Prep Date: 4/4/2019	Analysis Date: 4/8/2019			SeqNo: 1984136		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	890		1000		89.4	73.8	119			

Sample ID: LCS-44115	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 44115			RunNo: 58972						
Prep Date: 4/4/2019	Analysis Date: 4/8/2019			SeqNo: 1984137		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		101	73.8	119			

Qualifiers:

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1904417

09-Apr-19

Client: Harvest
Project: Lateral H-21

Sample ID: RB	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: B58972	RunNo: 58972								
Prep Date:	Analysis Date: 4/8/2019	SeqNo: 1984171 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.87		1.000		87.4	80	120			

Sample ID: 100NG BTEX LCS	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: B58972	RunNo: 58972								
Prep Date:	Analysis Date: 4/8/2019	SeqNo: 1984172 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.6	80	120			
Toluene	0.95	0.050	1.000	0	94.7	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.2	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.3	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.9	80	120			

Sample ID: MB-44115	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 44115	RunNo: 58972								
Prep Date: 4/4/2019	Analysis Date: 4/8/2019	SeqNo: 1984175 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		90.6	80	120			

Sample ID: LCS-44115	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 44115	RunNo: 58972								
Prep Date: 4/4/2019	Analysis Date: 4/8/2019	SeqNo: 1984176 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		91.0	80	120			

Qualifiers:

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode



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

Sample Log-In Check List

Client Name: Harvest

Work Order Number: 1904417

RcptNo: 1

Received By: Isaiah Ortiz 4/6/2019 10:45:00 AM

Completed By: Isaiah Ortiz 4/6/2019 11:32:51 AM

Reviewed By: JC 4/8/19
LB: TO 4/8/19I-OX
I-OX

Chain of Custody

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

Log In

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

of preserved bottles checked for pH: 4/8/19
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Yes			
2	3.2	Good	Yes			
3	2.8	Good	Yes			

Chain-of-Custody Record

Client: Harvest midstream

Turn-Around Time: same day

☐ Standard ☒ Rush 4-8-19

Project Name: lateral H-21

Project #:

Mailing Address: 1755 ARROYO DR

Bloomfield NM 87413

Phone #: 505-632-4475

email or Fax#: Khong@harvestmidstream.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Project Manager: K'JON HONG

Sampler: Morgan Killion

On Ice: ☒ Yes ☐ No

of Coolers: 3

Cooler Temp (including CF): 59°C, 32°C, 28°C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
4/5/19	1040	soil	west - 02	1-402		1904417
4/5/19	1050	soil	west - 03	1-402		-002
4/5/19	1100	soil	west - 04	1-402		-003

Analysis Request

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

Remarks:

Received by: Khong Date: 4/5/19 Time: 1557

Relinquished by: Morgan Killion

Date: 4/5/19 Time: 1819

Relinquished by: Khong

Date: 4/5/19 Time: 1819

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



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

April 08, 2019

Kijun Hong

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Lat H21

OrderNo.: 1904246

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/4/2019 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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1904246

Date Reported: 4/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: WS01

Project: Lat H21

Collection Date: 4/3/2019 8:00:00 AM

Lab ID: 1904246-001

Matrix: AQUEOUS

Received Date: 4/4/2019 8:14:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: RAA
Benzene	310	10		µg/L	10	4/5/2019 1:47:16 AM	SLW588
Toluene	330	10		µg/L	10	4/5/2019 1:47:16 AM	SLW588
Ethylbenzene	8.3	1.0		µg/L	1	4/4/2019 12:56:45 PM	SLW588
Xylenes, Total	41	1.5		µg/L	1	4/4/2019 12:56:45 PM	SLW588
Surr: 1,2-Dichloroethane-d4	90.6	70-130		%Rec	1	4/4/2019 12:56:45 PM	SLW588
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	4/4/2019 12:56:45 PM	SLW588
Surr: Dibromofluoromethane	90.5	70-130		%Rec	1	4/4/2019 12:56:45 PM	SLW588
Surr: Toluene-d8	94.6	70-130		%Rec	1	4/4/2019 12:56:45 PM	SLW588

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

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit	PQL	Practical Quantitative Limit
	RL	Reporting Detection Limit	S	% Recovery outside of range due to dilution or matrix
	W	Sample container temperature is out of limit as specified at testcode		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1904246

08-Apr-19

Client: Harvest**Project:** Lat H21

Sample ID: 100ng lcs	SampType: LCS			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: LCSW	Batch ID: SLW58893			RunNo: 58893						
Prep Date:	Analysis Date: 4/4/2019			SeqNo: 1979907		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	80.6	70	130			
Toluene	20	1.0	20.00	0	98.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		85.4	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	8.2		10.00		82.4	70	130			
Surr: Toluene-d8	9.6		10.00		96.5	70	130			

Sample ID: rb	SampType: MBLK			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: PBW	Batch ID: SLW58893			RunNo: 58893						
Prep Date:	Analysis Date: 4/4/2019			SeqNo: 1979909		Units: µg/L				
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	8.3		10.00		83.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	8.4		10.00		83.6	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

Sample ID: 1904246-001a ms	SampType: MS			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: WS01	Batch ID: SLW58893			RunNo: 58893						
Prep Date:	Analysis Date: 4/4/2019			SeqNo: 1982717		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	240	1.0	20.00	224.7	75.4	70	130			E
Toluene	220	1.0	20.00	203.3	97.2	70	130			E
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	9.1		10.00		90.7	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Sample ID: 1904246-001a msd	SampType: MSD			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: WS01	Batch ID: SLW58893			RunNo: 58893						
Prep Date:	Analysis Date: 4/4/2019			SeqNo: 1982718		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	230	1.0	20.00	224.7	20.1	70	130	4.72	20	ES
Toluene	210	1.0	20.00	203.3	40.4	70	130	5.24	20	ES

Qualifiers:

E Value above quantitation range
 ND Not Detected at the Reporting Limit
 RL Reporting Detection Limit
 W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
 PQL Practical Quantitative Limit
 S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904246

08-Apr-19

Client: Harvest

Project: Lat H21

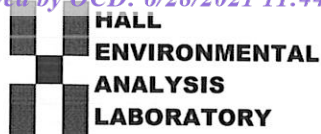
Sample ID: 1904246-001a msd		SampType: MSD		TestCode: EPA Method 8260: Volatiles Short List						
Client ID: WS01		Batch ID: SLW58893		RunNo: 58893						
Prep Date:		Analysis Date: 4/4/2019		SeqNo: 1982718		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130	0	0	
Surr: Dibromofluoromethane	9.2		10.00		92.5	70	130	0	0	
Surr: Toluene-d8	9.4		10.00		93.9	70	130	0	0	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

Page 3 of 3



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

Sample Log-In Check List

Client Name: **Harvest**Work Order Number: **1904246**

RcptNo: 1

Received By: **Yazmine Garduno** 4/4/2019 8:14:00 AMCompleted By: **Leah Baca** 4/4/2019 8:41:38 AMReviewed By: **ENM** 4/4/19

Labeled by **LB** 4/4/19

Yazmine Garduno

Leah Baca

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐5. Sample(s) in proper container(s)? Yes ☒ No ☐6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐9. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐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: *LB 4/4/19*

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

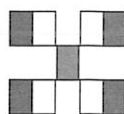
16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			

Chain-of-Custody Record							
Client: Harvest Four Corners		Turn-Around Time: Same Day					
Mailing Address: Kijun Hong		<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush 4/4/19					
Phone #: 970-385-1096		Project Name: Lat. H21					
email or Fax#: Khong@harvest.com		Project #:					
QA/QC Package: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		Project Manager: Kijun Hong - Harvest Brook Herb - LTE					
Accreditation: <input type="checkbox"/> Az Compliance <input type="checkbox"/> NELAC <input checked="" type="checkbox"/> EDD (Type) PDF		Sampler: Epic Carroll					
		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
		# of Coolers: 1					
		Cooler Temp (including CF) 23° 32° 100° 104° 104°					
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	
4/3/19	0800	GW	WSOI	3104A	HCl	1904246	-001
Date: 4/3/19	Time: 1320	Relinquished by: Eric Carroll		Received by: Matt Dault		Date: 4/3/19	Time: 1320
Date: 4/3/19	Time: 1810	Relinquished by: Matt Dault		Received by: Matt Dault		Date: 4/4/19	Time: 8:19

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

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

Remarks:

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/13	1320	Eric Carroll	Ant Watt		4/3/19	1320
4/13/16	1810	Ant Watt	Chuo	over	4/14/16	8:14



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

April 16, 2019

Brooke Herb

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Lateral H 21

OrderNo.: 1904615

Dear Brooke Herb:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/11/2019 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

Analytical Report

Lab Order 1904615

Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: Lat H-21

Project: Lateral H 21

Collection Date: 4/10/2019 9:10:00 AM

Lab ID: 1904615-001

Matrix: GROUNDWA

Received Date: 4/11/2019 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: RAA
Benzene	140	10		µg/L	10	4/11/2019 3:00:00 PM	SL59071
Toluene	89	1.0		µg/L	1	4/11/2019 9:33:00 AM	B59035
Ethylbenzene	2.7	1.0		µg/L	1	4/11/2019 9:33:00 AM	B59035
Xylenes, Total	20	1.5		µg/L	1	4/11/2019 9:33:00 AM	B59035
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%Rec	1	4/11/2019 9:33:00 AM	B59035
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	4/11/2019 9:33:00 AM	B59035
Surr: Dibromofluoromethane	92.2	70-130		%Rec	1	4/11/2019 9:33:00 AM	B59035
Surr: Toluene-d8	98.0	70-130		%Rec	1	4/11/2019 9:33:00 AM	B59035

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

Qualifiers:	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1904615

16-Apr-19

Client: Harvest
Project: Lateral H 21

Sample ID: 100ng lcs2	SampType: LCS	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: LCSW	Batch ID: B59035	RunNo: 59035								
Prep Date:	Analysis Date: 4/11/2019	SeqNo: 1988561 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.5	70	130			
Surr: Dibromofluoromethane	10		10.00		99.7	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Sample ID: rb2	SampType: MBLK	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: PBW	Batch ID: B59035	RunNo: 59035								
Prep Date:	Analysis Date: 4/11/2019	SeqNo: 1988562 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.9	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	9.3		10.00		93.2	70	130			

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: LCSW	Batch ID: SL59071	RunNo: 59071								
Prep Date:	Analysis Date: 4/11/2019	SeqNo: 1988870 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.5	70	130			
Surr: Toluene-d8	9.4		10.00		94.2	70	130			

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: PBW	Batch ID: SL59071	RunNo: 59071								
Prep Date:	Analysis Date: 4/11/2019	SeqNo: 1988871 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.0	70	130			
Surr: Toluene-d8	9.3		10.00		92.9	70	130			

Qualifiers:

H Holding times for preparation or analysis exceeded
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode



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

Sample Log-In Check List

Client Name: Harvest

Work Order Number: 1904615

RcptNo: 1

Received By: Desiree Dominguez 4/11/2019 8:05:00 AM

Completed By: Anne Thorne 4/11/2019 8:18:21 AM

Reviewed By: ENM 4/11/19

Labeled by: AT 04/11/19

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Yes			



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

April 24, 2019

Brooke Herb

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Lateral H-21

OrderNo.: 1904A83

Dear Brooke Herb:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/23/2019 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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1904A83

Date Reported: 4/24/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: Lateral H-21

Project: Lateral H-21

Collection Date: 4/22/2019 1:30:00 PM

Lab ID: 1904A83-001

Matrix: GROUNDWA

Received Date: 4/23/2019 8:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA	
Benzene	31	2.0		µg/L	2	4/23/2019 11:09:34 AM	R59354
Toluene	36	2.0		µg/L	2	4/23/2019 11:09:34 AM	R59354
Ethylbenzene	ND	2.0		µg/L	2	4/23/2019 11:09:34 AM	R59354
Xylenes, Total	5.5	3.0		µg/L	2	4/23/2019 11:09:34 AM	R59354
Surr: 1,2-Dichloroethane-d4	96.2	70-130		%Rec	2	4/23/2019 11:09:34 AM	R59354
Surr: 4-Bromofluorobenzene	96.1	70-130		%Rec	2	4/23/2019 11:09:34 AM	R59354
Surr: Dibromofluoromethane	104	70-130		%Rec	2	4/23/2019 11:09:34 AM	R59354
Surr: Toluene-d8	97.6	70-130		%Rec	2	4/23/2019 11:09:34 AM	R59354

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	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		

Page 1 of 2

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1904A83

24-Apr-19

Client: Harvest
Project: Lateral H-21

Sample ID: 100ng lcs	SampType: LCS			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: LCSW	Batch ID: R59354			RunNo: 59354						
Prep Date:	Analysis Date: 4/23/2019			SeqNo: 1999097		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.6	70	130			
Toluene	19	1.0	20.00	0	95.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.9	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Sample ID: rb	SampType: MBLK			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: PBW	Batch ID: R59354			RunNo: 59354						
Prep Date:	Analysis Date: 4/23/2019			SeqNo: 1999099		Units: µg/L				
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	9.6		10.00		95.9	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.8	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.5		10.00		94.8	70	130			

Qualifiers:

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

Page 2 of 2



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

Sample Log-In Check List

Client Name: Harvest

Work Order Number: 1904A83

RcptNo: 1

Received By: Erin Melendrez 4/23/2019 8:05:00 AM

Completed By: Anne Thorne 4/23/2019 8:59:50 AM

Reviewed By: ENM

4/23/19

Labeled by: AT 04/23/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? See size bubbles Yes ☐ No ☒ No VOA Vials ☐
10. Were any sample containers received broken? AT Yes ☐ No ☒ 04/23/19
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: _____

Special Handling (if applicable)

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

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

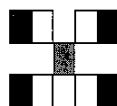
16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

[illegible]

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

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Project Manager:

Brooke Herb

TS 1122
Sampler: ~~Mary~~ ^{Travis} ~~Ardenovich~~ ^{Shurt}

On Ice: ☒ Yes ☐ No

Sample Temperature: $15 \pm 0.1^\circ\text{C}$ $\Delta T = 1.6^\circ\text{C}$

Downloaded from <http://ajph.org/> on November 14, 2014

Container Preservative

Type and #	Type	HEAL No.

904A83

115770	115770	115770
--------	--------	--------

100	77	3) VOA's
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[illegible]

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Received by: _____
Date: _____
Time: _____

Mr. + Mrs. T. J. West
4/22/1915

Received by: Courier Date 11/11/01 Time 11:00

00-261

9/1/2019 11:23:19 0805

Contracted to other accredited laboratories. This serves as notice of this



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

May 15, 2019

Kijun Hong

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Lat H21

OrderNo.: 1905528

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/10/2019 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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1905528

Date Reported: 5/15/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: WS-5919

Project: Lat H21

Collection Date: 5/9/2019 12:15:00 PM

Lab ID: 1905528-001

Matrix: AQUEOUS

Received Date: 5/10/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: RAA
Benzene	220	10		µg/L	10	5/14/2019 12:08:00 PM	SL59875
Toluene	160	10		µg/L	10	5/14/2019 12:08:00 PM	SL59875
Ethylbenzene	3.8	1.0		µg/L	1	5/13/2019 4:47:00 PM	SL59839
Xylenes, Total	24	1.5		µg/L	1	5/13/2019 4:47:00 PM	SL59839
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%Rec	1	5/13/2019 4:47:00 PM	SL59839
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/13/2019 4:47:00 PM	SL59839
Surr: Dibromofluoromethane	98.0	70-130		%Rec	1	5/13/2019 4:47:00 PM	SL59839
Surr: Toluene-d8	99.7	70-130		%Rec	1	5/13/2019 4:47:00 PM	SL59839

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	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		

Page 1 of 2

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1905528

15-May-19

Client: Harvest**Project:** Lat H21

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: LCSW	Batch ID: SL59839	RunNo: 59839								
Prep Date:	Analysis Date: 5/13/2019	SeqNo: 2018195	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.9	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID: RB	SampType: MBLK	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: PBW	Batch ID: SL59839	RunNo: 59839								
Prep Date:	Analysis Date: 5/13/2019	SeqNo: 2018197	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.1	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

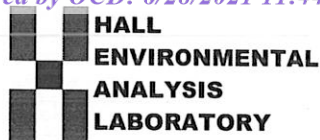
Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: LCSW	Batch ID: SL59875	RunNo: 59875								
Prep Date:	Analysis Date: 5/14/2019	SeqNo: 2020132	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.9	70	130			
Toluene	20	1.0	20.00	0	99.1	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	10		10.00		99.8	70	130			
Surr: Toluene-d8	9.7		10.00		96.8	70	130			

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: PBW	Batch ID: SL59875	RunNo: 59875								
Prep Date:	Analysis Date: 5/14/2019	SeqNo: 2020133	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.6		10.00		95.8	70	130			

Qualifiers:

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

Sample Log-In Check List

Client Name: **Harvest**Work Order Number: **1905528**

RcptNo: 1

Received By: **Jevon Campisi** 5/10/2019 8:00:00 AMCompleted By: **Isaiah Ortiz** 5/10/2019 9:31:01 AMReviewed By: **ENM** 5/10/19

CB: JJC 5-10-19

Jevon Campisi

I-OK

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☒ *my 5/15*
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: JJC 5-10-19

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

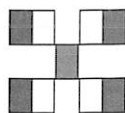
17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record		Turn-Around Time: <u>5/13/2019</u>
Client: <u>Harvest Four Corners</u>	<input checked="" type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	<u>2 day</u>
<u>Kidun Hong</u>	Project Name: <u>Lot H21</u>	
Mailing Address: <u>1755 Arroyo Dr.</u>	Project #: _____	
Phone #: <u>505-632-4472</u>	Project Manager: <u>Kidun Hong - Harvest</u>	
email or Fax#: <u>khong@harvestmidstern.com</u>	<u>Brooke Herb - LIE</u>	
QA/QC Package: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)	Sampler: <u>Eric Carroll</u>	
Accreditation: <input type="checkbox"/> Az Compliance <input type="checkbox"/> NELAC <input type="checkbox"/> Other _____	On Ice: <input type="checkbox"/> Yes <input type="checkbox"/> No	
<input checked="" type="checkbox"/> EDD (Type) <u>PDF</u>	# of Coolers: <u>1</u>	

Turn-Around Time:	5/13/2019
<input checked="" type="checkbox"/> Standard	<input checked="" type="checkbox"/> Rush
Project Name:	Lot H21
Project #:	
Project Manager:	KIDUN HONG - HARVEST BROOKE HERB - LITE
Sampler:	Eric Carroll
On Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
# of Coolers:	1

Chain-of-Custody Record	
Client:	Harvest Four Corners
	Kijun Hong
Mailing Address:	1755 Arroyo Dr. Bloomfield, NM 87418
Phone #:	505-632-4472
email or Fax#:	Khong@harvestmidstream.com
QA/QC Package:	
<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Level 4 (Full Validation)
Accreditation:	<input type="checkbox"/> Az Compliance
<input type="checkbox"/> NELAC	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> EDD (Type)	PDF



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

email or Fax#: <u>khong@hardestmidstream.com</u>				Project Manager: <u>KIDUN HONG - Harvest</u> <u>BROOKE HERB - LTF</u>			
QA/QC Package:				Total Coliform (Present/Absent)			
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)				8270 (Semi-VOA)			
Accreditation: <input type="checkbox"/> Az Compliance <input type="checkbox"/> NELAC <input type="checkbox"/> Other				8260 (VOA)			
<input checked="" type="checkbox"/> EDD (Type) <u>PDF</u>				Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄			
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	TPH:8015D(GRO / DRO / MRO)
5/9/19	12:15	Aqueous	WS-5919	3VOA	HCL	1905528	8081 Pesticides/8082 PCB's
							EDB (Method 504.1)
							PAHs by 8310 or 8270SIMS
							RCRA 8 Metals
							BTX: MTBE / TMB's (8021)
							8081 Pesticides/8082 PCB's
							EDB (Method 504.1)
							PAHs by 8310 or 8270SIMS
							RCRA 8 Metals
							Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄
							8260 (VOA)
							8270 (Semi-VOA)
							Total Coliform (Present/Absent)

Remarks:

Please cc: bherb@itenv.com
ecarroll@itenv.com

Date:	Time:	Relinquished by:	Received by:	Via:	Date:	Time:
5/6/19	1400	Edie Brown	Christa Wack		5/9/19	1406
5/9/19	1940	Christa Wack	Edie Brown		5/10/19	8:00

Any sub-contracted data will be clearly notated on the analytical report. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

June 06, 2019

Brooke Herb

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Lateral H 21

OrderNo.: 1906063

Dear Brooke Herb:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/4/2019 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 light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1906063

Date Reported: 6/6/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: Lateral H-21

Project: Lateral H 21

Collection Date: 6/3/2019 11:15:00 AM

Lab ID: 1906063-001

Matrix: GROUNDWA

Received Date: 6/4/2019 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: DJF
Benzene	39	1.0		µg/L	1	6/4/2019 11:42:02 AM	SL60366
Toluene	5.4	1.0		µg/L	1	6/4/2019 11:42:02 AM	SL60366
Ethylbenzene	ND	1.0		µg/L	1	6/4/2019 11:42:02 AM	SL60366
Xylenes, Total	ND	1.5		µg/L	1	6/4/2019 11:42:02 AM	SL60366
Surr: 1,2-Dichloroethane-d4	89.6	70-130		%Rec	1	6/4/2019 11:42:02 AM	SL60366
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	6/4/2019 11:42:02 AM	SL60366
Surr: Dibromofluoromethane	82.6	70-130		%Rec	1	6/4/2019 11:42:02 AM	SL60366
Surr: Toluene-d8	99.5	70-130		%Rec	1	6/4/2019 11:42:02 AM	SL60366

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	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		

Page 1 of 3

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1906063

06-Jun-19

Client: Harvest
Project: Lateral H 21

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: PBW	Batch ID: SL60366	RunNo: 60366								
Prep Date:	Analysis Date: 6/4/2019	SeqNo: 2041311 Units: µg/L								
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	9.0		10.00		90.5	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.0	70	130			
Surr: Dibromofluoromethane	7.7		10.00		76.9	70	130			
Surr: Toluene-d8	9.6		10.00		95.8	70	130			

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: LCSW	Batch ID: SL60366	RunNo: 60366								
Prep Date:	Analysis Date: 6/4/2019	SeqNo: 2041312 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.7	70	130			
Toluene	18	1.0	20.00	0	92.2	70	130			
Surr: 1,2-Dichloroethane-d4	8.1		10.00		81.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	7.5		10.00		75.5	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID: 1906063-001a ms	SampType: MS	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: Lateral H-21	Batch ID: SL60366	RunNo: 60366								
Prep Date:	Analysis Date: 6/4/2019	SeqNo: 2042254 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	56	1.0	20.00	38.56	86.6	70	130			
Toluene	23	1.0	20.00	5.383	88.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	8.0		10.00		80.4	70	130			
Surr: Toluene-d8	9.5		10.00		95.0	70	130			

Sample ID: 1906063-001a msd	SampType: MSD	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: Lateral H-21	Batch ID: SL60366	RunNo: 60366								
Prep Date:	Analysis Date: 6/4/2019	SeqNo: 2042255 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	54	1.0	20.00	38.56	79.6	70	130	2.52	20	
Toluene	24	1.0	20.00	5.383	94.0	70	130	4.81	20	

Qualifiers:

* Value exceeds Maximum Contaminant 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#: 1906063

06-Jun-19

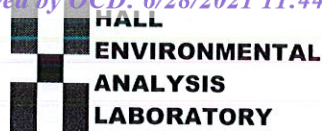
Client: Harvest
Project: Lateral H 21

Sample ID: 1906063-001a msd		SampType: MSD		TestCode: EPA Method 8260: Volatiles Short List						
Client ID: Lateral H-21		Batch ID: SL60366		RunNo: 60366						
Prep Date:		Analysis Date: 6/4/2019		SeqNo: 2042255		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.1	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130	0	0	
Surr: Dibromofluoromethane	7.8		10.00		78.0	70	130	0	0	
Surr: Toluene-d8	10		10.00		101	70	130	0	0	

Qualifiers:

*	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		

Page 3 of 3



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

Sample Log-In Check List

Client Name: Harvest

Work Order Number: 1906063

RcptNo: 1

Received By: Jevon Campisi

6/4/2019 8:10:00 AM

Jevon Campisi

Completed By: Leah Baca

6/4/2019 8:15:54 AM

Leah Baca

Reviewed By: YU 4/4/19

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: LB 6/4/19

Special Handling (if applicable)

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

Person Notified:

Date

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Yes			



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

July 31, 2019

Kijun Hong

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Lateral H 21

OrderNo.: 1907883

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/18/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 19, 2019.

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. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: 1907883

Date Reported: 7/31/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Lab Order: 1907883

Project: Lateral H 21

Lab ID: 1907883-001

Collection Date: 7/17/2019 11:45:00 AM

Client Sample ID: TMW01

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0	P	µg/L	1	7/18/2019 10:39:13 AM	B61481
Toluene	ND	1.0	P	µg/L	1	7/18/2019 10:39:13 AM	B61481
Ethylbenzene	ND	1.0	P	µg/L	1	7/18/2019 10:39:13 AM	B61481
Xylenes, Total	ND	2.0	P	µg/L	1	7/18/2019 10:39:13 AM	B61481
Surr: 4-Bromofluorobenzene	94.9	80-120	P	%Rec	1	7/18/2019 10:39:13 AM	B61481

Lab ID: 1907883-002

Collection Date: 7/17/2019 12:00:00 PM

Client Sample ID: TMW02

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	49	1.0		µg/L	1	7/18/2019 11:01:55 AM	B61481
Toluene	ND	1.0		µg/L	1	7/18/2019 11:01:55 AM	B61481
Ethylbenzene	ND	1.0		µg/L	1	7/18/2019 11:01:55 AM	B61481
Xylenes, Total	ND	2.0		µg/L	1	7/18/2019 11:01:55 AM	B61481
Surr: 4-Bromofluorobenzene	91.5	80-120		%Rec	1	7/18/2019 11:01:55 AM	B61481

Lab ID: 1907883-003

Collection Date: 7/17/2019 12:15:00 PM

Client Sample ID: TMW03

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0	P	µg/L	1	7/18/2019 11:24:37 AM	B61481
Toluene	ND	1.0	P	µg/L	1	7/18/2019 11:24:37 AM	B61481
Ethylbenzene	ND	1.0	P	µg/L	1	7/18/2019 11:24:37 AM	B61481
Xylenes, Total	ND	2.0	P	µg/L	1	7/18/2019 11:24:37 AM	B61481
Surr: 4-Bromofluorobenzene	93.2	80-120	P	%Rec	1	7/18/2019 11:24:37 AM	B61481

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	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: 1907883

Date Reported: 7/31/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Lab Order: 1907883

Project: Lateral H 21

Lab ID: 1907883-004

Collection Date: 7/17/2019 12:30:00 PM

Client Sample ID: TMW04

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0	P	µg/L	1	7/18/2019 11:47:17 AM	B61481
Toluene	ND	1.0	P	µg/L	1	7/18/2019 11:47:17 AM	B61481
Ethylbenzene	ND	1.0	P	µg/L	1	7/18/2019 11:47:17 AM	B61481
Xylenes, Total	ND	2.0	P	µg/L	1	7/18/2019 11:47:17 AM	B61481
Surr: 4-Bromofluorobenzene	90.7	80-120	P	%Rec	1	7/18/2019 11:47:17 AM	B61481

Lab ID: 1907883-005

Collection Date: 7/17/2019 12:45:00 PM

Client Sample ID: TMW05

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0	P	µg/L	1	7/18/2019 12:09:59 PM	B61481
Toluene	ND	1.0	P	µg/L	1	7/18/2019 12:09:59 PM	B61481
Ethylbenzene	ND	1.0	P	µg/L	1	7/18/2019 12:09:59 PM	B61481
Xylenes, Total	ND	2.0	P	µg/L	1	7/18/2019 12:09:59 PM	B61481
Surr: 4-Bromofluorobenzene	91.7	80-120	P	%Rec	1	7/18/2019 12:09:59 PM	B61481

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	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#: 1907883

31-Jul-19

Client: Harvest
Project: Lateral H 21

Sample ID: RB	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBW	Batch ID: B61481	RunNo: 61481								
Prep Date:	Analysis Date: 7/18/2019	SeqNo: 2084479		Units: µg/L						
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	19		20.00		93.8	80	120			

Sample ID: 100NG BTEX LCS	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSW	Batch ID: B61481	RunNo: 61481								
Prep Date:	Analysis Date: 7/18/2019	SeqNo: 2084480		Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.7	80	120			
Toluene	18	1.0	20.00	0	90.5	80	120			
Ethylbenzene	18	1.0	20.00	0	89.8	80	120			
Xylenes, Total	54	2.0	60.00	0	90.6	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		97.6	80	120			

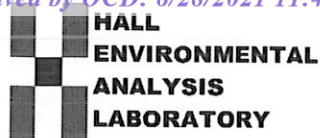
Sample ID: 1907883-001AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: TMW01	Batch ID: B61481	RunNo: 61481								
Prep Date:	Analysis Date: 7/18/2019	SeqNo: 2084488		Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	2.9	1.0	20.00	0	14.3	80	120			S
Toluene	3.5	1.0	20.00	0	17.6	80	120			S
Ethylbenzene	ND	1.0	20.00	0	1.50	80	120			S
Xylenes, Total	44	2.0	60.00	1.204	72.1	80	120			S
Surr: 4-Bromofluorobenzene	20		20.00		97.5	80	120			

Sample ID: 1907883-001AMSD	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: TMW01	Batch ID: B61481	RunNo: 61481								
Prep Date:	Analysis Date: 7/18/2019	SeqNo: 2084489		Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	2.8	1.0	20.00	0	13.9	80	120	2.54	20	S
Toluene	3.4	1.0	20.00	0	17.0	80	120	3.31	20	S
Ethylbenzene	ND	1.0	20.00	0	1.40	80	120	0	20	S
Xylenes, Total	43	2.0	60.00	1.204	69.4	80	120	3.80	20	S
Surr: 4-Bromofluorobenzene	19		20.00		96.0	80	120	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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Harvest

Work Order Number: 1907883

RcptNo: 1

Received By: Desiree Dominguez 7/18/2019 8:05:00 AM

Completed By: Anne Thorne 7/18/2019 8:39:43 AM

Reviewed By: DAD 7/18/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐5. Sample(s) in proper container(s)? Yes ☒ No ☐6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐9. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐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: ENM 7/18/19

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

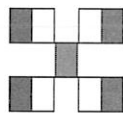
17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good	Yes			

Chain-of-Custody Record		Turn-Around Time: <u>1 day TAT</u>
Client: <u>Harvest Four Corners</u>	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	<u>7/19/19</u>
<u>Kiwan Hong</u>	Project Name: <u>Lateral H-21</u>	
Mailing Address: <u>1755 Arroyo Dr.</u>	Project #: _____	
Phone #: <u>505-632-4475</u>	Project Manager: <u>thetec Brooke Herb</u>	
email or Fax#: <u>Khong@harvestmidstream.com</u>	Sampler: <u>Eric Carroll</u>	
QA/QC Package: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)	On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Accreditation: <input type="checkbox"/> Az Compliance <input type="checkbox"/> NELAC <input type="checkbox"/> Other _____	# of Coolers: <u>1</u>	
<input checked="" type="checkbox"/> EDD (Type) <u>PDF</u>		

Turn-Around Time:	1 day TAT 7/19/19
<input type="checkbox"/> Standard	<input checked="" type="checkbox"/> Rush
Project Name:	Lateral H-21
Project #:	
Project Manager:	theodore ^{ec} Brooke Herb
Sampler:	Eric Carroll
On Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
# of Coolers:	1

Chain-of-Custody Record	
Client:	Harvest Four Corners
	Kiwan Hong
Mailing Address:	1755 Alroyo Dr.
	Bloomfield, NM 87413
Phone #:	505-632-4475
email or Fax#:	Khong.Chen@midstream.com
QA/QC Package:	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)
Accreditation:	<input type="checkbox"/> Az Compliance
<input type="checkbox"/> NELAC	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> EDD (Type)	PDF



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

Remarks:

Please cc: jadams@ltenv.com
ecarroll@ltenv.com

Date:	Time:	Relinquished by:	Received by:	Via:	Date:	Time:
7/17/19	1450	Eddie Carroll	[Signature]	Air Mail	7/17/19	1450
7/17/19	1824	[Signature]	[Signature]	Courier	7/18/19	8:05



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

July 31, 2019

Josh Adams

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Lateral H 21

OrderNo.: 1907C39

Dear Josh Adams:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/24/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 25, 2019.

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. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1907C39

Date Reported: 7/31/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: TMW-06

Project: Lateral H 21

Collection Date: 7/23/2019 12:30:00 PM

Lab ID: 1907C39-001

Matrix: AQUEOUS

Received Date: 7/24/2019 11:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/24/2019 2:50:00 PM	R61627
Toluene	ND	1.0		µg/L	1	7/24/2019 2:50:00 PM	R61627
Ethylbenzene	ND	1.0		µg/L	1	7/24/2019 2:50:00 PM	R61627
Xylenes, Total	ND	1.5		µg/L	1	7/24/2019 2:50:00 PM	R61627
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	7/24/2019 2:50:00 PM	R61627
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	7/24/2019 2:50:00 PM	R61627
Surr: Dibromofluoromethane	97.0	70-130		%Rec	1	7/24/2019 2:50:00 PM	R61627
Surr: Toluene-d8	96.9	70-130		%Rec	1	7/24/2019 2:50:00 PM	R61627

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	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		

Page 1 of 3

Analytical Report

Lab Order 1907C39

Date Reported: 7/31/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: TMW-07

Project: Lateral H 21

Collection Date: 7/23/2019 1:00:00 PM

Lab ID: 1907C39-002

Matrix: AQUEOUS

Received Date: 7/24/2019 11:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/24/2019 3:15:00 PM	R61627
Toluene	ND	1.0		µg/L	1	7/24/2019 3:15:00 PM	R61627
Ethylbenzene	ND	1.0		µg/L	1	7/24/2019 3:15:00 PM	R61627
Xylenes, Total	ND	1.5		µg/L	1	7/24/2019 3:15:00 PM	R61627
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	7/24/2019 3:15:00 PM	R61627
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	7/24/2019 3:15:00 PM	R61627
Surr: Dibromofluoromethane	99.1	70-130		%Rec	1	7/24/2019 3:15:00 PM	R61627
Surr: Toluene-d8	98.0	70-130		%Rec	1	7/24/2019 3:15:00 PM	R61627

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	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		

Page 2 of 3

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1907C39

31-Jul-19

Client: Harvest
Project: Lateral H 21

Sample ID: 100ng lcs	SampType: LCS			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: LCSW	Batch ID: R61627			RunNo: 61627						
Prep Date:	Analysis Date: 7/24/2019			SeqNo: 2088804		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	89.1	70	130			
Toluene	20	1.0	20.00	0	98.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.9	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.4	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.1	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	70	130			

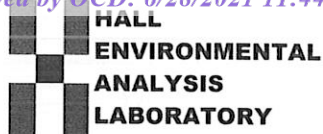
Sample ID: rb	SampType: MBLK			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: PBW	Batch ID: R61627			RunNo: 61627						
Prep Date:	Analysis Date: 7/24/2019			SeqNo: 2088805		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.3	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.6	70	130			
Surr: Toluene-d8	9.8		10.00		98.1	70	130			

Qualifiers:

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

Page 3 of 3



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

Sample Log-In Check List

Client Name: **Harvest**Work Order Number: **1907C39**RcptNo: **1**Received By: **Leah Baca**

7/24/2019 11:15:00 AM

Completed By: **Erin Melendrez**

7/24/2019 11:31:33 AM

Reviewed By: *LB*

7/24/19

Leah Baca
EM

Chain of Custody

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

Log In

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

of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: **DAD 7/24/19**

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Not Present			



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

July 31, 2019

Brooke Herb

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Lateral H 21

OrderNo.: 1907D53

Dear Brooke Herb:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/26/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 29, 2019.

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. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1907D53

Date Reported: 7/31/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: TMW08

Project: Lateral H 21

Collection Date: 7/25/2019 2:30:00 PM

Lab ID: 1907D53-001

Matrix: GROUNDWA

Received Date: 7/26/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	2.2	2.0	D	µg/L	2	7/26/2019 1:28:14 PM	W61677
Toluene	ND	2.0	D	µg/L	2	7/26/2019 1:28:14 PM	W61677
Ethylbenzene	ND	2.0	D	µg/L	2	7/26/2019 1:28:14 PM	W61677
Xylenes, Total	ND	4.0	D	µg/L	2	7/26/2019 1:28:14 PM	W61677
Surr: 4-Bromofluorobenzene	92.2	80-120	D	%Rec	2	7/26/2019 1:28:14 PM	W61677

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	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		

Page 1 of 2

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **1907D53****31-Jul-19**

Client: Harvest
Project: Lateral H 21

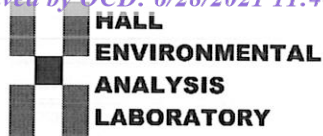
Sample ID: RB	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBW	Batch ID: W61677	RunNo: 61677								
Prep Date:	Analysis Date: 7/26/2019	SeqNo: 2091159	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	19		20.00		93.6	80	120			

Sample ID: 100NG BTEX LCS	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSW	Batch ID: W61677	RunNo: 61677								
Prep Date:	Analysis Date: 7/26/2019	SeqNo: 2091160	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.1	80	120			
Toluene	20	1.0	20.00	0	100	80	120			
Ethylbenzene	20	1.0	20.00	0	102	80	120			
Xylenes, Total	61	2.0	60.00	0	102	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		94.9	80	120			

Qualifiers:

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

Sample Log-In Check List

Client Name: Harvest

Work Order Number: 1907D53

RcptNo: 1

Received By: Anne Thorne

7/26/2019 8:00:00 AM

Completed By: Anne Thorne

7/26/2019 9:13:32 AM

Reviewed By: DAD 7/26/19

Chain of Custody1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐2. How was the sample delivered? ClientLog In3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐5. Sample(s) in proper container(s)? Yes ☒ No ☐6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐9. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐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: _____

Special Handling (if applicable)15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

Chain-of-Custody Record

Client: Harvest Midstream

Kijun Hong

Mailing Address: 1755 Arroyo Dr.

Bloomfield, NM 87413

Phone #: 505-632-4475

email or Fax#: khong@harvestmidstream.com

QA/QC Package:

☐ Standard☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Turn-Around Time:

☐ Standard☒ Rush

Project Name:

Lateral K-21

Project #:

Project Manager:

Brook Herp

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including CFI): 1.5 + 0.1 CF = 1.6

Container Type and #

(3) VAS

Preservative Type

HgCl₂

HEAL No.

1907053

201

BTEX / MTBE / TMBs (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, NO₃, NO₂, 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: Via: Date Time

7-25-19 1610

7-25-19 1820

Remarks:

cc: dherbel@env.com

j.adams@env.com

Change to same day RAT per Josh & 7/26

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

August 19, 2020

Kijun Hong

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Lateral H 21

OrderNo.: 2008431

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 8 sample(s) on 8/8/2020 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".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2008431

Date Reported: 8/19/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: TMW01

Project: Lateral H 21

Collection Date: 8/7/2020 11:30:00 AM

Lab ID: 2008431-001

Matrix: GROUNDWA

Received Date: 8/8/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: CCM
Benzene	3.3	1.0	P	µg/L	1	8/17/2020 3:04:00 PM	SL71123
Toluene	ND	1.0	P	µg/L	1	8/17/2020 3:04:00 PM	SL71123
Ethylbenzene	6.0	1.0	P	µg/L	1	8/17/2020 3:04:00 PM	SL71123
Methyl tert-butyl ether (MTBE)	ND	1.0	P	µg/L	1	8/17/2020 3:04:00 PM	SL71123
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 3:04:00 PM	SL71123
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 3:04:00 PM	SL71123
Xylenes, Total	ND	1.5	P	µg/L	1	8/17/2020 3:04:00 PM	SL71123
Surr: 1,2-Dichloroethane-d4	93.6	70-130	P	%Rec	1	8/17/2020 3:04:00 PM	SL71123
Surr: 4-Bromofluorobenzene	94.2	70-130	P	%Rec	1	8/17/2020 3:04:00 PM	SL71123
Surr: Dibromofluoromethane	96.5	70-130	P	%Rec	1	8/17/2020 3:04:00 PM	SL71123
Surr: Toluene-d8	103	70-130	P	%Rec	1	8/17/2020 3:04:00 PM	SL71123

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	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		

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Analytical Report

Lab Order 2008431

Date Reported: 8/19/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: TMW03

Project: Lateral H 21

Collection Date: 8/7/2020 12:30:00 PM

Lab ID: 2008431-002

Matrix: GROUNDWA

Received Date: 8/8/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: CCM
Benzene	16	1.0	P	µg/L	1	8/17/2020 4:16:00 PM	SL71123
Toluene	ND	1.0	P	µg/L	1	8/17/2020 4:16:00 PM	SL71123
Ethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 4:16:00 PM	SL71123
Methyl tert-butyl ether (MTBE)	ND	1.0	P	µg/L	1	8/17/2020 4:16:00 PM	SL71123
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 4:16:00 PM	SL71123
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 4:16:00 PM	SL71123
Xylenes, Total	ND	1.5	P	µg/L	1	8/17/2020 4:16:00 PM	SL71123
Surr: 1,2-Dichloroethane-d4	96.4	70-130	P	%Rec	1	8/17/2020 4:16:00 PM	SL71123
Surr: 4-Bromofluorobenzene	92.9	70-130	P	%Rec	1	8/17/2020 4:16:00 PM	SL71123
Surr: Dibromofluoromethane	99.7	70-130	P	%Rec	1	8/17/2020 4:16:00 PM	SL71123
Surr: Toluene-d8	99.9	70-130	P	%Rec	1	8/17/2020 4:16:00 PM	SL71123

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	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		

Page 2 of 10

Analytical Report

Lab Order 2008431

Date Reported: 8/19/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: TMW04

Project: Lateral H 21

Collection Date: 8/7/2020 12:50:00 PM

Lab ID: 2008431-003

Matrix: GROUNDWA

Received Date: 8/8/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: CCM
Benzene	ND	1.0	P	µg/L	1	8/17/2020 4:40:00 PM	SL71123
Toluene	ND	1.0	P	µg/L	1	8/17/2020 4:40:00 PM	SL71123
Ethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 4:40:00 PM	SL71123
Methyl tert-butyl ether (MTBE)	ND	1.0	P	µg/L	1	8/17/2020 4:40:00 PM	SL71123
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 4:40:00 PM	SL71123
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 4:40:00 PM	SL71123
Xylenes, Total	ND	1.5	P	µg/L	1	8/17/2020 4:40:00 PM	SL71123
Surr: 1,2-Dichloroethane-d4	94.7	70-130	P	%Rec	1	8/17/2020 4:40:00 PM	SL71123
Surr: 4-Bromofluorobenzene	93.6	70-130	P	%Rec	1	8/17/2020 4:40:00 PM	SL71123
Surr: Dibromofluoromethane	97.9	70-130	P	%Rec	1	8/17/2020 4:40:00 PM	SL71123
Surr: Toluene-d8	101	70-130	P	%Rec	1	8/17/2020 4:40:00 PM	SL71123

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	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		

Page 3 of 10

Analytical Report

Lab Order 2008431

Date Reported: 8/19/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: TMW07

Project: Lateral H 21

Collection Date: 8/7/2020 1:20:00 PM

Lab ID: 2008431-004

Matrix: GROUNDWA

Received Date: 8/8/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: CCM
Benzene	ND	1.0	P	µg/L	1	8/17/2020 5:04:00 PM	SL71123
Toluene	ND	1.0	P	µg/L	1	8/17/2020 5:04:00 PM	SL71123
Ethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 5:04:00 PM	SL71123
Methyl tert-butyl ether (MTBE)	ND	1.0	P	µg/L	1	8/17/2020 5:04:00 PM	SL71123
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 5:04:00 PM	SL71123
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 5:04:00 PM	SL71123
Xylenes, Total	ND	1.5	P	µg/L	1	8/17/2020 5:04:00 PM	SL71123
Surr: 1,2-Dichloroethane-d4	92.4	70-130	P	%Rec	1	8/17/2020 5:04:00 PM	SL71123
Surr: 4-Bromofluorobenzene	93.7	70-130	P	%Rec	1	8/17/2020 5:04:00 PM	SL71123
Surr: Dibromofluoromethane	97.7	70-130	P	%Rec	1	8/17/2020 5:04:00 PM	SL71123
Surr: Toluene-d8	102	70-130	P	%Rec	1	8/17/2020 5:04:00 PM	SL71123

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	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		

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Analytical Report

Lab Order 2008431

Date Reported: 8/19/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: TMW08

Project: Lateral H 21

Collection Date: 8/7/2020 1:50:00 PM

Lab ID: 2008431-005

Matrix: GROUNDWA

Received Date: 8/8/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: CCM
Benzene	ND	1.0		µg/L	1	8/17/2020 5:28:00 PM	SL71123
Toluene	ND	1.0		µg/L	1	8/17/2020 5:28:00 PM	SL71123
Ethylbenzene	ND	1.0		µg/L	1	8/17/2020 5:28:00 PM	SL71123
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/17/2020 5:28:00 PM	SL71123
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/17/2020 5:28:00 PM	SL71123
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/17/2020 5:28:00 PM	SL71123
Xylenes, Total	ND	1.5		µg/L	1	8/17/2020 5:28:00 PM	SL71123
Surr: 1,2-Dichloroethane-d4	93.9	70-130		%Rec	1	8/17/2020 5:28:00 PM	SL71123
Surr: 4-Bromofluorobenzene	93.6	70-130		%Rec	1	8/17/2020 5:28:00 PM	SL71123
Surr: Dibromofluoromethane	99.3	70-130		%Rec	1	8/17/2020 5:28:00 PM	SL71123
Surr: Toluene-d8	99.9	70-130		%Rec	1	8/17/2020 5:28:00 PM	SL71123

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	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		

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Analytical Report

Lab Order 2008431

Date Reported: 8/19/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: TMW06

Project: Lateral H 21

Collection Date: 8/7/2020 2:15:00 PM

Lab ID: 2008431-006

Matrix: GROUNDWA

Received Date: 8/8/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: CCM
Benzene	ND	1.0	P	µg/L	1	8/17/2020 5:52:00 PM	SL71123
Toluene	ND	1.0	P	µg/L	1	8/17/2020 5:52:00 PM	SL71123
Ethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 5:52:00 PM	SL71123
Methyl tert-butyl ether (MTBE)	ND	1.0	P	µg/L	1	8/17/2020 5:52:00 PM	SL71123
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 5:52:00 PM	SL71123
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 5:52:00 PM	SL71123
Xylenes, Total	ND	1.5	P	µg/L	1	8/17/2020 5:52:00 PM	SL71123
Surr: 1,2-Dichloroethane-d4	95.9	70-130	P	%Rec	1	8/17/2020 5:52:00 PM	SL71123
Surr: 4-Bromofluorobenzene	94.4	70-130	P	%Rec	1	8/17/2020 5:52:00 PM	SL71123
Surr: Dibromofluoromethane	98.8	70-130	P	%Rec	1	8/17/2020 5:52:00 PM	SL71123
Surr: Toluene-d8	101	70-130	P	%Rec	1	8/17/2020 5:52:00 PM	SL71123

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	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		

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Analytical Report

Lab Order 2008431

Date Reported: 8/19/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: TMW02

Project: Lateral H 21

Collection Date: 8/7/2020 2:50:00 PM

Lab ID: 2008431-007

Matrix: GROUNDWA

Received Date: 8/8/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: CCM
Benzene	8.5	1.0	P	µg/L	1	8/17/2020 6:16:00 PM	SL71123
Toluene	ND	1.0	P	µg/L	1	8/17/2020 6:16:00 PM	SL71123
Ethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 6:16:00 PM	SL71123
Methyl tert-butyl ether (MTBE)	ND	1.0	P	µg/L	1	8/17/2020 6:16:00 PM	SL71123
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 6:16:00 PM	SL71123
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	8/17/2020 6:16:00 PM	SL71123
Xylenes, Total	ND	1.5	P	µg/L	1	8/17/2020 6:16:00 PM	SL71123
Surr: 1,2-Dichloroethane-d4	95.3	70-130	P	%Rec	1	8/17/2020 6:16:00 PM	SL71123
Surr: 4-Bromofluorobenzene	94.2	70-130	P	%Rec	1	8/17/2020 6:16:00 PM	SL71123
Surr: Dibromofluoromethane	98.4	70-130	P	%Rec	1	8/17/2020 6:16:00 PM	SL71123
Surr: Toluene-d8	102	70-130	P	%Rec	1	8/17/2020 6:16:00 PM	SL71123

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	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		

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Analytical Report

Lab Order 2008431

Date Reported: 8/19/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest

Client Sample ID: Trip Blank

Project: Lateral H 21

Collection Date:

Lab ID: 2008431-008

Matrix: GROUNDWA

Received Date: 8/8/2020 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: CCM
Benzene	ND	1.0		µg/L	1	8/17/2020 6:41:00 PM	SL71123
Toluene	ND	1.0		µg/L	1	8/17/2020 6:41:00 PM	SL71123
Ethylbenzene	ND	1.0		µg/L	1	8/17/2020 6:41:00 PM	SL71123
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/17/2020 6:41:00 PM	SL71123
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/17/2020 6:41:00 PM	SL71123
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/17/2020 6:41:00 PM	SL71123
Xylenes, Total	ND	1.5		µg/L	1	8/17/2020 6:41:00 PM	SL71123
Surr: 1,2-Dichloroethane-d4	94.1	70-130		%Rec	1	8/17/2020 6:41:00 PM	SL71123
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	8/17/2020 6:41:00 PM	SL71123
Surr: Dibromofluoromethane	96.0	70-130		%Rec	1	8/17/2020 6:41:00 PM	SL71123
Surr: Toluene-d8	101	70-130		%Rec	1	8/17/2020 6:41:00 PM	SL71123

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	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		

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2008431

19-Aug-20

Client: Harvest
Project: Lateral H 21

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: LCSW	Batch ID: SL71123		RunNo: 71123							
Prep Date:	Analysis Date: 8/17/2020		SeqNo: 2482257		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.2	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.2	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.1	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.6	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: MB	SampType: MBLK		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: PBW	Batch ID: SL71123		RunNo: 71123							
Prep Date:	Analysis Date: 8/17/2020		SeqNo: 2482258		Units: µg/L					
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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.4	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.5	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.8	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: 2008431-001ams	SampType: MS		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: TMW01	Batch ID: SL71123		RunNo: 71123							
Prep Date:	Analysis Date: 8/17/2020		SeqNo: 2482262		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	3.252	92.7	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.3	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.6	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.8	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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2008431

19-Aug-20

Client: Harvest
Project: Lateral H 21

Sample ID: 2008431-001amsd	SampType: MSD	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: TMW01	Batch ID: SL71123	RunNo: 71123								
Prep Date:	Analysis Date: 8/17/2020	SeqNo: 2482263	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	3.252	89.8	70	130	2.66	20	
Toluene	20	1.0	20.00	0	102	70	130	1.51	20	
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.4		10.00		93.5	70	130	0	0	
Surr: Dibromofluoromethane	9.6		10.00		96.5	70	130	0	0	
Surr: Toluene-d8	10		10.00		101	70	130	0	0	

Qualifiers:

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

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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: **2008431**

RcptNo: 1

Received By: **Isaiah Ortiz** 8/8/2020 9:20:00 AMCompleted By: **Isaiah Ortiz** 8/8/2020 9:56:31 AMReviewed By: **DAD 8/10/20**

I-OK

I-OK

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: gm 8/10/20

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Not Present			



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 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".

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
EPA METHOD 8021B: VOLATILES							Analyst: NSB
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.

Qualifiers:	*	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		

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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
EPA METHOD 8021B: VOLATILES							Analyst: NSB
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.

Qualifiers:	*	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		

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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
EPA METHOD 8021B: VOLATILES							Analyst: NSB
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.

Qualifiers:	*	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		

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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
EPA METHOD 8021B: VOLATILES							Analyst: NSB
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.

Qualifiers:	*	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		

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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
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: BRM
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.

Qualifiers:	*	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		

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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
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: BRM
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.

Qualifiers:	*	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		

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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
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: BRM
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.

Qualifiers:	*	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		

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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
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: BRM
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.

Qualifiers:	*	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		

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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
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: BRM
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.

Qualifiers:	*	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		

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2104D17

07-May-21

Client: Harvest
Project: Lateral H21

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBW	Batch ID: B77139		RunNo: 77139							
Prep Date:	Analysis Date: 5/4/2021		SeqNo: 2735291		Units: µg/L					
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: 100ng btex lcs	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSW	Batch ID: B77139		RunNo: 77139							
Prep Date:	Analysis Date: 5/4/2021		SeqNo: 2735292		Units: µg/L					
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

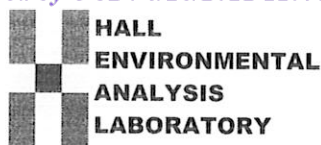
Sample ID: 100ng lcs	SampType: LCS			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: LCSW	Batch ID: B77212			RunNo: 77212						
Prep Date:	Analysis Date: 5/6/2021			SeqNo: 2737949		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	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: mb	SampType: MBLK			TestCode: EPA Method 8260: Volatiles Short List						
Client ID: PBW	Batch ID: B77212			RunNo: 77212						
Prep Date:	Analysis Date: 5/6/2021			SeqNo: 2737955		Units: µg/L				
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

Juan Rojas

Completed By: Desiree Dominguez

4/30/2021 8:51:00 AM

*Desiree*Reviewed By: *JR 4/30/21*Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *JR 4/30/21*

Special Handling (if applicable)

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

Person Notified: Date: By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In PersonRegarding: Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good	Yes			

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 34046

CONDITIONS

Operator: Harvest Four Corners, LLC 1111 Travis Street Houston, TX 77002	OGRID:
	373888
	Action Number:
	34046
Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)	

CONDITIONS

Created By	Condition	Condition Date
nvelez	Review of the Revised Stage 1 Abatement Plan & Proposed Public Notice and Participation: Content satisfactory 1. OCD approves this current revised Stage 1 Abatement Plan & Proposed Public Notice and Participation 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. OCD approves the public notice and participation draft associated with a Stage 1 Abatement Plan to address groundwater impacts identified at the Lateral H-21 pipeline release per 19.15.30.15 NMAC 5. Submit the Annual Monitoring Report to the OCD no later than March 31, 2022	1/3/2022