HARVEST FOUR CORNERS, LLC

REVISED STAGE 1 ABATEMENT PLAN

LATERAL L - 2 PIPELINE RELEASE
INCIDENT # NVF1724832528
REMEDIATION PERMIT 3RP - 1061

MARCH 21, 2022

wsp

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HARVEST FOUR CORNERS, LLC

PROJECT NO.: TE090321009
DATE: MARCH 21, 2022

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March 21, 2022

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 L - 2 Pipeline Release
Incident # NVF1724832528
Remediation Permit 3RP - 1061

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 (Plan) associated with subsurface hydrocarbon impacts encountered at the Lateral L -2 pipeline release (Site) with Incident # NVF1724832528 and Remediation Permit (RP) # 3RP-1061. This Plan details the site description and background, initial response and assessment activities, site geologic and hydrologic characteristics, excavation activities, and monitoring well installation and sampling activities to-date. 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 December 28, 2018. Due to changing site conditions and a lack of response from the NMOCD regarding acknowledgement of receipt or approval of the preceding Plan, Harvest respectfully requests this current revised Plan replace the previous submittal that has yet to be approved.

Yours sincerely,

Eric Carroll
Consultant, Geologist

Brooke Herb
Senior Consultant, Geologist

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1 SITE DESCRIPTION AND BACKGROUND

The Lateral L -2 pipeline release (Site) is located adjacent to Armenta Canyon in the northeast quarter of the southeast quarter of Section 14 of Township 28 North, Range 10 West in San Juan County, New Mexico, approximately 4.8 miles southwest of Blanco (Figure 1). The Site is an active natural gas pipeline operated by Harvest Four Corners, LLC (Harvest), which acquired the pipeline from Williams Four Corners LLC (Williams). On July 20, 2017, a pipeline leak was detected by Williams during a leak survey on the Lateral L-2 pipeline leg adjacent to Armenta Canyon. The pipeline was immediately shut-in and repaired. The release was reported to the New Mexico Oil Conservation Division (NMOCD) by Williams on a Form C-141 *Release Notification and Corrective Action Form* on August 2, 2017.

1.1 REGIONAL GEOLOGY AND HYDROLOGY

The Nacimiento Formation of Tertiary age is exposed in the region, along with Quaternary alluvial and aeolian sands within dry washes and arroyos. Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits, serve as the primary aquifers in the San Juan Basin. In most of the area, the Nacimiento Formation lies at the surface. Thickness of the Nacimiento Formation ranges from 418 feet to 2,232 feet, aquifers within the coarser and continuous sandstone bodies are between 0 feet and 1,000 feet deep in this section of the San Juan Basin (Stone et al., 1983). Groundwater within these aquifers generally flows toward the nearby San Juan River and its tributaries. The Site is approximately 150 feet west of the main channel of Armenta Canyon, a first-order tributary of the San Juan River. Groundwater close to the San Juan River and its major tributaries is shallow, as the Quaternary deposits associated with the San Juan River form shallow aquifers. Groundwater was identified at approximately 6 feet below ground surface (bgs) at the Site.

1.2 LOCAL GEOLOGY AND HYDROLOGY

Based on information obtained during previous subsurface investigations, soil at the Site is characterized as alluvial sand from ground surface to approximately 6 feet bgs. In general, grain size increases with depth. Near the pipeline release (MW-1 and MW-2), organic content in the sand increases, resulting in a black color and decomposed organic odor. The organic deposit was not observed in the other boreholes. Near Armenta Canyon at monitoring wells MW-6 and MW-7, the sand appears to pinch out over a lean, organic-rich clay at approximately 8 feet bgs. The clay was observed in MW-7 and resulted in auger refusal in MW-6. Field screening results from borehole samples and laboratory analysis of a soil sample collected from the sand following excavation indicate impacted soil was removed during pipeline repairs. Borelogs are included as Appendix A.

Groundwater was encountered in the excavation at approximately 6 feet bgs. Once temporary monitoring wells were installed and surveyed, depth to groundwater was measured in all temporary monitoring wells. Groundwater elevations measured during all of the sampling events are included in Table 1. Depth to groundwater ranges from 6.63 feet below top of casing (btoc) (MW-1) to 7.91 feet btoc (MW-2). No free product was detected with the oil-water interface probe during any sampling event. Based on topography, initial data, and regional groundwater trends, the generalized groundwater flow direction appears to be to the northeast, towards Armenta Canyon (Figure 2).

Based on soil texture, the Natural Resources Conservation Service (NRCS) assigns a saturated hydraulic conductivity of 0.004 centimeters per second (cm/sec) to greater than 0.014 cm/sec for sands and coarse sands, which appears to be in alignment with soil conditions near Armenta Canyon. The groundwater flow gradient calculated from the potentiometric surface contours is approximately 0.010 feet per foot (ft/ft).

1.3 LAND AND WATER USE

Land use surrounding the Site consists of natural gas development and undeveloped Bureau of Land Management (BLM) pasture and range land. There are no residences or buildings within 1-mile of the Site. There are no water wells within 1-mile of the Site. The closest permitted water well is SJ 03743, located approximately 1.80 miles to the northwest of the Site with a depth to water of 140 feet and a total depth of 490 feet bgs. The nearest significant watercourse is a first-order tributary to Armenta Canyon approximately 35 feet north of the Site. Armenta Canyon is approximately 150 feet east of the Site (Figure 3). No impact to surface water has been identified.

1.4 INITIAL RESPONSE

Approximately 2,700 cubic feet of soil was excavated during pipeline repairs, which were conducted immediately following release identification in June 2017. The soil surrounding the leak area was suspected of petroleum hydrocarbon impacts due to its dark color and organic odor, but analytical results from initial soil sampling indicated no presence of benzene, toluene, ethylbenzene, and total xylenes (BTEX), total petroleum hydrocarbons (TPH), or chloride. The dark color and organic odor were likely a result of the rich organic material decomposing in the shallow saturated soil on the banks of Armenta Canyon. Analytical results from the initial soil sample are included in Appendix A.

Shallow groundwater infiltrated the repair excavation at approximately 6 feet bgs and the NMOCD requested a groundwater sample be collected. Prior to backfilling the excavated area, a section of 0.01-inch slotted 2-inch diameter polyvinyl chloride (PVC) pipe was installed using a backhoe into the native saturated soil at approximately 7 feet bgs as a temporary groundwater collection point (MW-1). The temporary monitoring well was installed to a total depth beneath the depth of the pipeline at approximately 4 feet bgs. The native soil surrounding the temporary monitoring well consisted of a fine, silty sand that allows for groundwater infiltration into the slotted PVC pipe. The location of the excavation and MW-1 are depicted on Figure 2.

1.5 INITIAL REMEDIATION ACTIVITIES

On October 20, 2017, WSP (formerly LT Environmental, Inc.) personnel were on site to collect a grab sample of the groundwater from MW-1, (sample name Lat L-2) in the presence of NMOCD personnel. Laboratory analytical results indicated the groundwater sample contained a concentration of 39 micrograms per liter (µg/L) of benzene and 4.3 µg/L of toluene. Ethylbenzene or total xylenes were not detected in groundwater at concentrations above the laboratory reporting limits. Due to the elevated benzene concentration, which exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard of 10 µg/L (and currently standard of 5 µg/L), the NMOCD requested Williams conduct additional groundwater sampling to laterally define the extent of impact to groundwater. Williams proposed installing additional temporary groundwater monitoring wells within the existing pipeline right-of-way prior to requesting additional surface access from the BLM in an effort to expedite the groundwater delineation events.

2 GROUNDWATER SITE INVESTIGATION

2.1 TEMPORARY MONITORING WELL INSTALLATION

On January 31, 2018, a subsurface soil investigation was conducted via hand auger and four additional temporary monitoring wells (MW-2, MW-3, MW-4, and MW-5) were installed into the exploratory boreholes for further groundwater investigation. A WSP geologist observed an unconsolidated medium-grained light brown sand from the ground surface to approximately 4 feet bgs. Dark, organic material was encountered in the soil vadose zone at approximately 4 feet to 7 feet bgs. Samples collected from this material were field screened with a photo-ionization detector (PID) every 2 feet. Field screening results indicated subsurface soil samples did not exceed 100 parts per million (ppm) for volatile aromatic hydrocarbons; therefore, no soil samples were submitted for laboratory analysis. The boreholes were completed as temporary groundwater monitoring points by clearing any remaining soil cuttings and advancing the hand auger as deep into the groundwater table as possible before the saturated sidewalls composed of sand collapsed. A 1-inch diameter 0.01-inch slotted PVC pipe with a silica sand pre-pack filter around the screened interval was installed in the open borehole. The annulus between the riser and borehole was backfilled with native material. Groundwater was observed at approximately 6 feet bgs. Soil boring and temporary monitoring well installation/completion boring logs are included as Appendix B.

On February 7, 2018, WSP personnel were on site to develop and purge the four new temporary monitoring wells prior to sampling. Depth to groundwater was measured in each well and a total purge volume of 10 well casing volumes was calculated. Purge water was collected using a peristaltic pump and dedicated tubing until 10 well casing volumes were removed or the well ran dry. Purge water was collected and disposed of at a nearby Williams gathering facility.

2.2 GROUNDWATER SAMPLING

On March 8, 2018, WSP personnel were on site to sample groundwater from temporary monitoring wells MW-1 through MW-5. Prior to sampling, depth to groundwater and the total depth of the monitoring wells were measured using a Keck oil/water interface probe. The depth to water and the total depth of each monitoring well were used to calculate three well casing volumes to be purged from each monitoring well. The Keck oil/water interface probe was decontaminated with Alconox™ soap and rinsed with distilled water prior to each measurement to prevent cross contamination.

As groundwater was purged from the monitoring wells, field parameters including pH, electrical conductivity (EC), and temperature were recorded. Purging continued until three well casing volumes were removed or the parameters stabilized indicating the purge water was representative of existing aquifer conditions, or the well flowed dry. Stabilization was defined as three consecutive stable readings for each water parameter (plus or minus [±] 0.4 units for pH, ±10 percent (%) for EC, and ±2 degrees [º] Celsius for temperature). Once each monitoring well was properly purged, groundwater samples were collected in the appropriate sample bottles.

Groundwater samples were labeled with the date and time of sample collection, well designation, project name, collector's name, and parameters to be analyzed and were immediately sealed and stored on ice. The samples were hand delivered to Hall Environmental Analysis Laboratory (Hall) of Albuquerque, New Mexico, for analysis volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260. Samples were maintained under strict chain-of-custody (COC) protocol documenting the date and time of sample collection, time and date of sample transfer, sample designation, type of sample, sampler's name, applicable preservative, and analyses required. Signatures of the sampler, courier, and laboratory are included to document the custody transfer. A blind field duplicate sample, MW-A, was collected from monitoring well MW-5.

2.3 ADDITIONAL MONITORING WELL INSTALLATION

On April 27, 2018, WSP personnel returned to the Site to conduct groundwater monitoring on existing temporary monitoring wells and to install two additional temporary monitoring wells (MW-6 and MW-7) via hand auger into exploratory boreholes for further groundwater investigation. Light brown sand and the presence of an underlying

lean clay were encountered in the soil vadose zone and samples collected from this material were screened with a PID. No field screening results of volatile aromatic hydrocarbons exceeded 100 ppm, therefore no soil samples were submitted for laboratory analysis. The open boreholes were completed as temporary groundwater monitoring points in the same manner as previously described. A self-leveling laser level was used on the top of casing and a Trimble global positioning system (GPS) to survey each temporary monitoring well. Soil boring and temporary monitoring well installation completion logs are included in Appendix B. The location of all temporary monitoring wells is shown on Figure 2.

2.4 ADDITIONAL DELINEATION

On December 9, 2021, the BLM – Farmington Field Office sent an email approval for installing and sampling four hydropunch points, which are manually driven temporary stainless-steel piezometers used in shallow groundwater zones, located outside of the existing Harvest pipeline right-of-way, per casual use as defined in Part 43 of the Code of Federal Regulations (CFR) 2804.9. On January 12, 2022, WSP personnel returned to the Site for additional delineation of groundwater impacts outside of the pipeline right-of-way. The hydropunch points were used to collect samples. The hydropunch points were installed using a hollow stem auger (HSA) with a 14-inch mesh screen attached that is driven from ground surface to the shallow groundwater table. Groundwater is then sampled with a peristaltic pump and disposable poly tubing through the HSA and screen assembly. The hydropunch is removed after sampling and decontaminated thoroughly between borehole locations. Hydropunch boring locations HP01 and HP04 were collected adjacent to MW-1 and MW-4, respectively. The four hydropunch boring locations were collected outside of the pipeline right-of-way to delineate previous impacts identified in monitoring wells MW-2 and MW-5. Hydropunch locations are depicted on Figure 2.

Groundwater samples were collected by low-flow sampling methods with a peristaltic pump. As water was removed from the monitoring well groundwater was monitored for pH, EC, and temperature. Monitoring wells were purged until groundwater parameters in each well stabilized as described in prior sections or until the well bailed dry. Groundwater samples were collected and sent to Hall as described in previous sections.

2.5 ANALYTICAL RESULTS

Laboratory analytical results from the initial groundwater sampling event in October 2017 from monitoring well MW-01 indicated elevated benzene concentration of 39 µg/L in groundwater within the excavation. Subsequent sampling events had elevated concentrations of benzene in monitoring wells MW-1 and MW-5 in March 2018, and monitoring wells MW-1, MW-2, and MW-5 in April 2018 and December 2019. Laboratory analytical data is presented in Table 2.

Laboratory analytical results from the sampling event conducted in March 2018 indicated benzene concentrations of 18 µg/L and 210 µg/L in monitoring wells MW-1 and MW-5, respectively. No other analytes or monitoring wells exceeded the NMWQCC standards. Due to benzene concentrations exceeding the NMWQCC standard, the NMOCD requested Williams conduct additional monitoring well installation and groundwater sampling to laterally define the extent of impact to groundwater. Williams proposed additional temporary monitoring wells be installed within the existing pipeline right-of-way due to issues getting surface access from the BLM.

Laboratory analytical results from April 27, 2018, indicated all VOC concentrations in temporary monitoring wells MW-3, MW-4, MW-6, and MW-7 were below laboratory detection limits or compliant with the NMWQCC groundwater standards. The benzene concentration in temporary monitoring wells MW-1, MW-2, and MW-5 exceeded the NMWQCC standard of 5 µg/L of benzene with concentrations of 200 µg/L, 170 µg/L, and 190 µg/L, respectively. Sample MW-A had a concentration of 200 µg/L as a blind field duplicate for temporary monitoring well MW-5, which is within 5 % error.

The groundwater sampling events were submitted to the NMOCD in a Stage 1 Abatement Plan on December 28, 2018; however, no response was received from the NMOCD to approve or acknowledge the Stage 1 Abatement Plan within 60 days of submittal per Title 19, Chapter 15, Part 30, Section 16 (19.15.30.16) of the New Mexico Administrative Code (NMAC).

A subsequent groundwater sampling event in December 2021 was conducted to monitor groundwater impact concentrations and determine if impacts were migrating. Laboratory analytical results during the December 2021 groundwater sampling event indicated benzene concentrations in MW-2, MW-3, MW-5, MW-6, and MW-7 did not

exceed the NMWQCC standard. All samples collected during the December 2021 sampling event were below laboratory reporting limits. Samples were not collected from MW-1 and MW-4 during the December 2021 sampling event due to damage to the wells.

Harvest received approval per casual use from the BLM 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 January 2022, groundwater samples HP01 through HP06 were collected with hydropunch points. Laboratory analytical results for all samples were below the laboratory detection limit and in compliance with NMWQCC standards. The groundwater analytical results for the December 2021 and January 2022 sampling events as compared to the NMWQCC standards are presented on Figure 2 and summarized in Table 2. The laboratory analytical reports are included in Appendix A.

2.6 CONCLUSIONS

Soil excavated from the area of the July 20217 release remediated the majority of impacts to soil and minimized additional vertical migration of petroleum hydrocarbons to impact groundwater to a greater extent. This is evident by the initial excavation soil analytical results and no PID readings above 100 ppm all boreholes during the installation of temporary monitoring wells. Previously observed elevated benzene concentrations in groundwater have since diminished to below NMWQCC standards. Therefore, continued quarterly groundwater monitoring until eight consecutive quarters of compliance with NMWQCC standards are achieved in lieu of submitting a Stage 2 Abatement Plan appears to be the appropriate path toward Site closure. As no impacts to groundwater currently exist, a remediation proposal does not appear necessary at this time. 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.

2.7 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 %), 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 Ms. Brooke Herb at (970) 385-1096 or via email at brooke.herb@WSP.com or Ms. Monica Smith at (505)-632-4475 or via email at msmith@harvestmidstream.com.

BIBLIOGRAPHY

— 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.

FIGURES

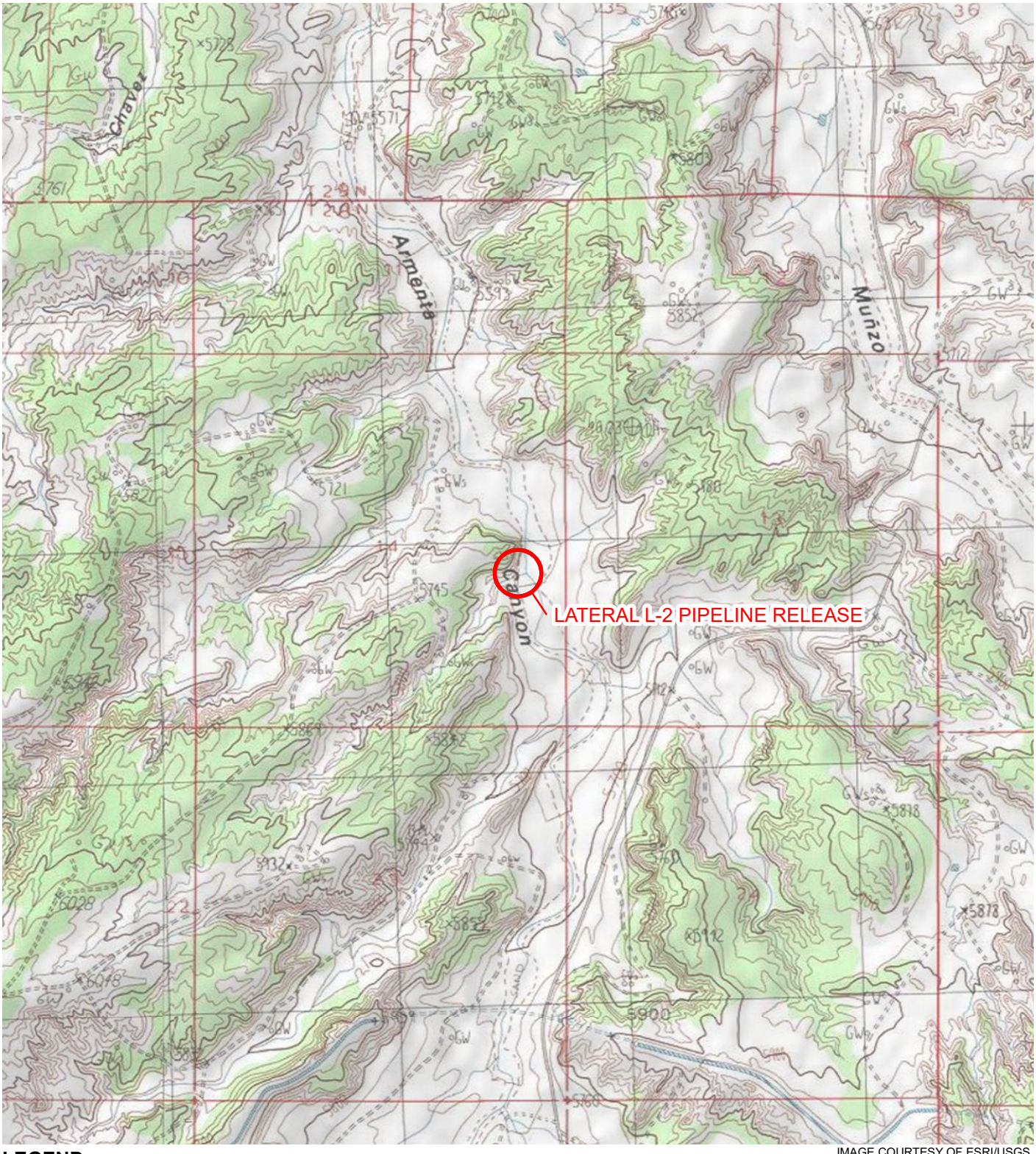

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

FIGURE 1
SITE LOCATION MAP
LATERAL L-2 PIPELINE RELEASE
NESE SEC 14 T28N R10W
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

wsp

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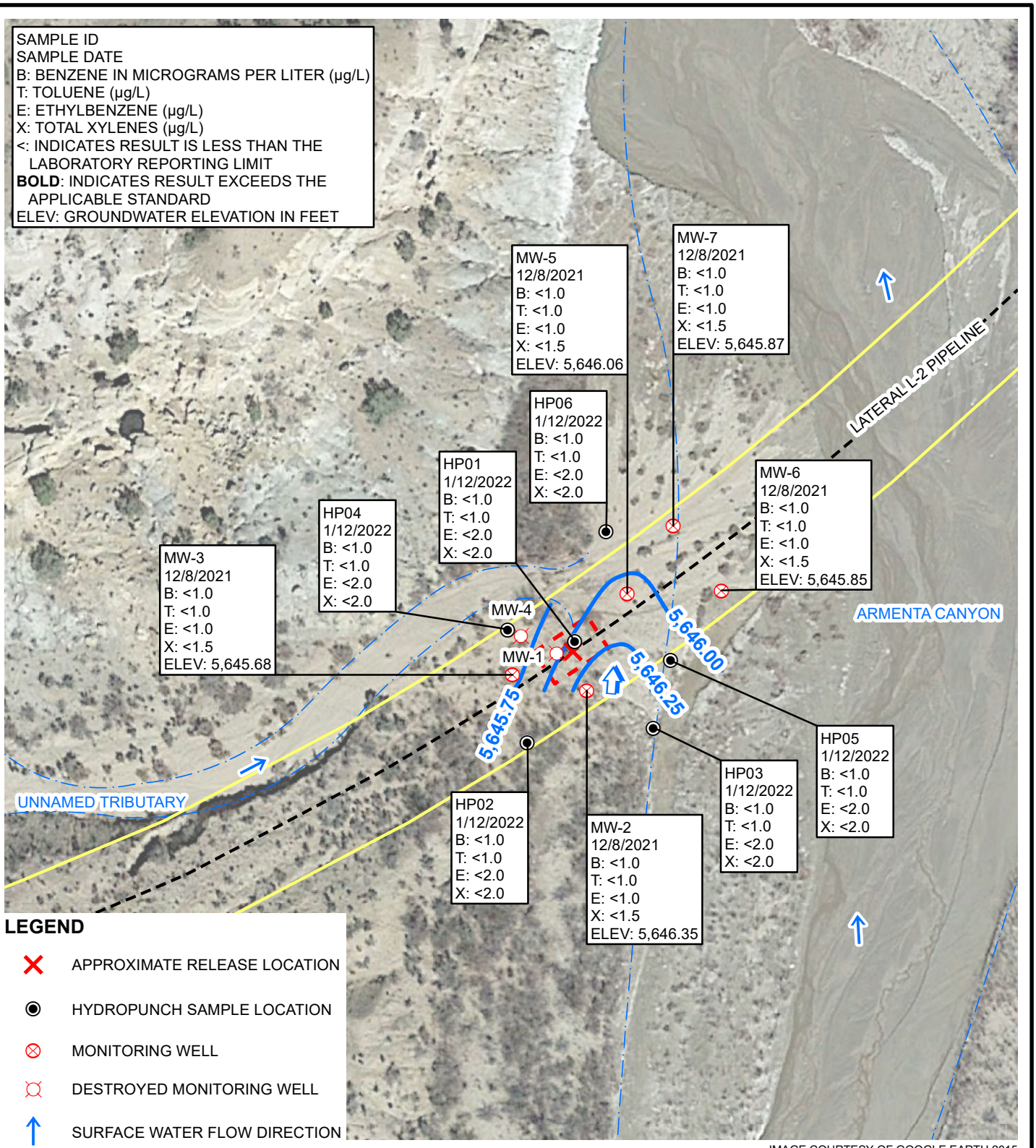

FIGURE 2
GROUNDWATER ANALYTICAL RESULTS
LATERAL L-2 PIPELINE RELEASE
NESE SEC 14 T28N R10W
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

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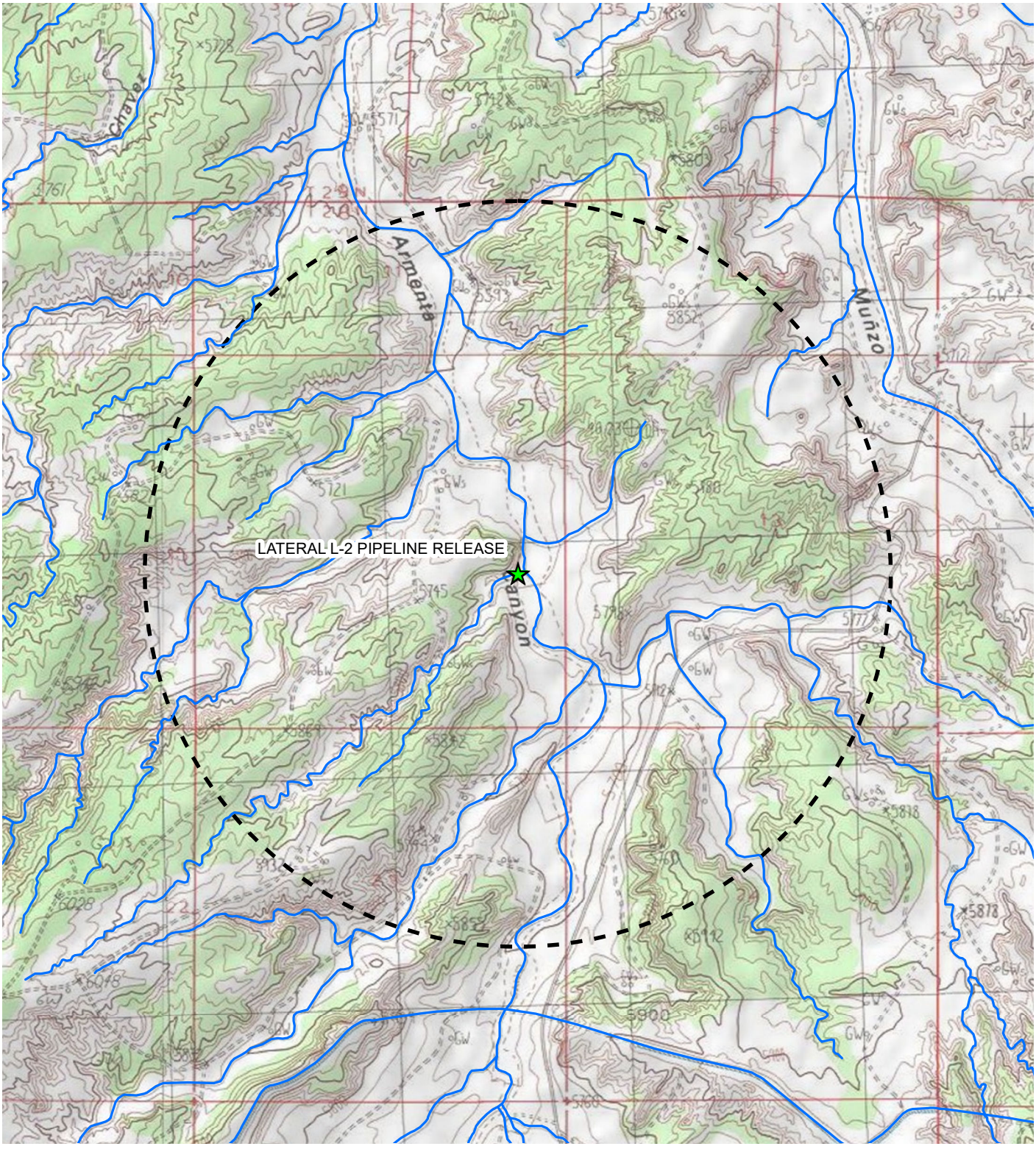

IMAGE COURTESY OF ESRI/USGS

LEGEND

- SITE LOCATION
- NATIONAL HYDROGRAPHY DATASET SURFACE WATER FEATURE
- 1-MILE RADIUS

0 2,000 4,000

Feet

N

FIGURE 3
RECEPTOR MAP
LATERAL L-2 PIPELINE RELEASE
NESE SEC 14 T28N R10W
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

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TABLES

TABLE 1
GROUNDWATER ELEVATION SUMMARY

LATERAL L-2 PIPELINE RELEASE
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Well Name	Date	Top of Casing Elevation (feet)	Total Depth (feet BTOC)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet)
MW-1	10/20/2017	5,653.32	9.08	7.10	5,646.22
	1/31/2018		9.08	6.65	5,646.67
	3/8/2018		9.05	6.60	5,646.72
	4/27/2018		9.05	6.63	5,646.69
	12/17/2019		9.00	7.85	5,645.47
	12/8/2021		Dest.	Dest.	Dest.
MW-2	1/31/2017	5,654.53	10.18	7.00	5,647.53
	3/8/2018		10.18	7.00	5,647.53
	4/27/2018		10.19	7.91	5,646.62
	12/17/2019		10.19	8.97	5,645.56
	12/8/2021		10.15	8.18	5,646.35
MW-3	3/8/2018	5,653.81	10.18	7.71	5,646.10
	4/27/2018		10.19	7.09	5,646.72
	12/17/2019		10.19	8.22	5,645.59
	12/8/2021		10.15	8.13	5,645.68
MW-4	3/8/2018	5,654.42	10.15	7.58	5,646.84
	4/27/2018		10.18	7.81	5,646.61
	12/17/2019		10.15	8.90	5,645.52
	12/8/2021		Dest.	Dest.	Dest.
MW-5	3/8/2018	5,654.02	10.15	7.70	5,646.32
	4/27/2018		10.17	7.75	5,646.27
	12/17/2019		10.15	8.65	5,645.37
	12/8/2021		10.15	7.96	5,646.06
MW-6	4/27/2018	5,653.53	10.18	7.42	5,646.11
	12/17/2019		10.17	8.35	5,645.18
	12/8/2021		10.15	7.68	5,645.85
MW-7	4/27/2018	5,653.53	10.18	7.42	5,646.11
	12/17/2019		10.15	8.35	5,645.18
	12/8/2021		10.15	7.66	5,645.87

Notes:
BTOC - below top of casing
Dest. - Destroyed

TABLE 2
GROUNDWATER LABORATORY ANALYTICAL RESULTS

LATERAL L-2 PIPELINE RELEASE
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS LLC

Well Name	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)
MW-1	10/20/2017	**39**	4.3	<2.5	<5.0	43.3
	3/8/2018	**18**	<1.0	<1.0	<1.5	18
	4/27/2018	**200**	<1.0	5.2	8.7	213.9
	12/17/2019	**260**	12	12	87	371
HP01	1/12/2022	<1.0	<1.0	<1..0	<2.0	<2.0
MW-2	3/8/2018	<1.0	<1.0	<1.0	<1.5	<1.5
	4/27/2018	**170**	33	11	76	290
	12/17/2019	**230**	<1.0	1.4	11	242.4
	12/8/2021	<1.0	<1.0	<1.0	<1.5	<1.5
MW-3	3/8/2018	<1.0	<1.0	<1.0	<1.5	<1.5
	4/27/2018	<1.0	<1.0	<1.0	<1.5	<1.5
	12/17/2019	<1.0	<1.0	<1.0	<2.0	<2.0
	12/8/2021	<1.0	<1.0	<1.0	<1.5	<1.5
MW-4	3/8/2018	1.6	<1.0	<1.0	5.4	7.0
	4/27/2018	<1.0	<1.0	<1.0	<1.5	<1.5
	12/17/2019	3.6	<1.0	<1.0	<2.0	3.6
HP04	1/12/2022	<1.0	<1.0	<1.0	<2.0	<2.0
MW-5	3/8/2018	**210**	110	2.7	70	392.7
	4/27/2018	**190**	<1.0	5.7	9.1	204.8
	12/17/2019	**140**	1.1	<1.0	7.7	148.8
	12/8/2021	<1.0	<1.0	<1.0	<1.5	<1.5
MW-6	4/27/2018	<1.0	<1.0	<1.0	<1.5	<1.5
	12/17/2019	<1.0	<1.0	<1.0	<2.0	<2.0
	12/8/2021	<1.0	<1.0	<1.0	<1.5	<1.5
MW-7	4/27/2018	<1.0	<1.0	<1.0	<1.5	<1.5
	12/17/2019	<1.0	<1.0	<1.0	<2.0	<2.0
	12/8/2021	<1.0	<1.0	<1.0	<1.5	<1.5
MW-A	3/8/2018	**210**	120	3.7	69	402.7
	4/27/2018	**200**	<1.0	6.0	9.4	215.4

TABLE 2
GROUNDWATER LABORATORY ANALYTICAL RESULTS

LATERAL L-2 PIPELINE RELEASE
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS LLC

Well Name	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)
HP02	1/12/2022	<1.0	<1.0	<1.0	<2.0	<2.0
HP03	1/12/2022	<1.0	<1.0	<1.0	<2.0	<2.0
HP05	1/12/2022	<1.0	<1.0	<1.0	<2.0	<2.0
HP06	1/12/2022	<1.0	<1.0	<1.0	<2.0	<2.0
NMWQCC Standard		**5**	**1,000**	**700**	**620**	**NA**

Notes:

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes

µg/L - microgram per liter

NA - Not applicable

NMWQCC - New Mexico Water Quality Control Commission

< - indicates result is below laboratory reporting limit

BOLD indicates result exceeds applicable standard

"MW-A" used as blind field duplicate for monitoring well MW-5

APPENDIX A: LABORATORY ANALYTICAL REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 01, 2017

Kijun Hong
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Lat L-2 OrderNo.: 1707E89

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/29/2017 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1707E89**
Date Reported: **8/1/2017**

CLIENT: Williams Four Corners
Client Sample ID: Lat L-2 Sidewalls
Project: Lat L-2
Collection Date: 7/27/2017 3:45:00 PM
Lab ID: 1707E89-001
Matrix: MEOH (SOIL)
Received Date: 7/29/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	7/31/2017 12:02:02 PM	33090
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/31/2017 10:12:15 AM	33085
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/31/2017 10:12:15 AM	33085
Surr: DNOP	92.5	70-130		%Rec	1	7/31/2017 10:12:15 AM	33085
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	7/31/2017 11:57:11 AM	G44614
Surr: BFB	104	54-150		%Rec	1	7/31/2017 11:57:11 AM	G44614
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.016		mg/Kg	1	7/31/2017 11:57:11 AM	B44614
Toluene	ND	0.033		mg/Kg	1	7/31/2017 11:57:11 AM	B44614
Ethylbenzene	ND	0.033		mg/Kg	1	7/31/2017 11:57:11 AM	B44614
Xylenes, Total	ND	0.066		mg/Kg	1	7/31/2017 11:57:11 AM	B44614
Surr: 4-Bromofluorobenzene	113	66.6-132		%Rec	1	7/31/2017 11:57:11 AM	B44614

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 Quanitative 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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E89**
01-Aug-17

Client: Williams Four Corners
Project: Lat L-2

Sample ID	**MB-33090**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**33090**	RunNo:	**44609**					
Prep Date:	**7/31/2017**	Analysis Date:	**7/31/2017**	SeqNo:	**1411294**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-33090**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**33090**	RunNo:	**44609**					
Prep Date:	**7/31/2017**	Analysis Date:	**7/31/2017**	SeqNo:	**1411295**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

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 Quanitative 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E89**

01-Aug-17

Client: Williams Four Corners

Project: Lat L-2

Sample ID	**LCS-33085**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**33085**		RunNo:	**44603**				
Prep Date:	**7/31/2017**	Analysis Date:	**7/31/2017**		SeqNo:	**1409986**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	10	50.00	0	78.5	73.2	114			
Surr: DNOP	3.6		5.000		73.0	70	130			

Sample ID	**MB-33085**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**33085**		RunNo:	**44603**				
Prep Date:	**7/31/2017**	Analysis Date:	**7/31/2017**		SeqNo:	**1409987**	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	7.6		10.00		76.4	70	130			

Sample ID	**LCS-33075**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**33075**		RunNo:	**44604**				
Prep Date:	**7/28/2017**	Analysis Date:	**7/31/2017**		SeqNo:	**1410830**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		87.2	70	130			

Sample ID	**MB-33075**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**33075**		RunNo:	**44604**				
Prep Date:	**7/28/2017**	Analysis Date:	**7/31/2017**		SeqNo:	**1410831**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.5		10.00		85.3	70	130			

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 Quanitative 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E89**

01-Aug-17

Client: Williams Four Corners

Project: Lat L-2

Sample ID	**RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**G44614**	RunNo:	**44614**					
Prep Date:		Analysis Date:	**7/31/2017**	SeqNo:	**1410728**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		104	54	150			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**G44614**	RunNo:	**44614**					
Prep Date:		Analysis Date:	**7/31/2017**	SeqNo:	**1410729**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.2	76.4	125			
Surr: BFB	1100		1000		113	54	150			

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 Quanitative 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E89**

01-Aug-17

Client: Williams Four Corners

Project: Lat L-2

Sample ID	**RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**B44614**	RunNo:	**44614**					
Prep Date:		Analysis Date:	**7/31/2017**	SeqNo:	**1410736**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		115	66.6	132			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**B44614**	RunNo:	**44614**					
Prep Date:		Analysis Date:	**7/31/2017**	SeqNo:	**1410737**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.3	80	120			
Toluene	0.90	0.050	1.000	0	90.0	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.6	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		120	66.6	132			

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 Quanitative 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1707E89 RcptNo: 1

Received By: Ashley Gallegos 7/29/2017 9:35:00 AM

Completed By: Ashley Gallegos 7/30/2017 2:49:47 PM

Reviewed By: IO 7/31/17

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. 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)

16. 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: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	Good	Yes			

Released to Imaging: 11/5/2024 1:18:12 PM

Received by OCD: 3/23/2022 11:04:47 AM

Chain-of-Custody Record

Client: WFS

Mailing Address: 188 CR 4900
Bloomfield NM 87401

Phone #: 505-632-4475

email or Fax#: Kijun.Hong@williams.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time: same day
☐ Standard ☑ Rush _____

Project Name: Lat. L-2

Project #:

Project Manager: Kijun Hong

Sampler: Rusty Ford

On Ice: ☑ Yes ☐ No

Sample Temperature: 3.5+0.2(CF)=3.8

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1707E89	BTEX + ~~MTBE~~ + ~~TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride				Air Bubbles (Y or N)
7/27/17	3:45	Soil	Lat L-2 Sidewalls	1-402		-001	X		X									X				

Date	Time	Relinquished by:	Received by:	Date	Time
7/28/17	7:00	Rusty Ford	Mary Kellison	7/28/17	7:00 AM
7/28/17	1820	Mary Kellison		7/28/17	1820

Remarks:

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.

7/28/17 1833

07/29/17 0935

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

November 01, 2017

Danny Burns
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Lateral L 2 OrderNo.: 1710B82

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/21/2017 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1710B82**
Date Reported: **11/1/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners
Client Sample ID: Lat L-2
Project: Lateral L 2
Collection Date: 10/20/2017 10:00:00 AM
Lab ID: 1710B82-001
Matrix: AQUEOUS
Received Date: 10/21/2017 11:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **RAA**	
Benzene	39	2.5	D	µg/L	5	10/30/2017 1:01:00 PM	SL46753
Toluene	4.3	2.5	D	µg/L	5	10/30/2017 1:01:00 PM	SL46753
Ethylbenzene	ND	2.5	D	µg/L	5	10/30/2017 1:01:00 PM	SL46753
Xylenes, Total	ND	5.0	D	µg/L	5	10/30/2017 1:01:00 PM	SL46753
Surr: 1,2-Dichloroethane-d4	103	70-130	D	%Rec	5	10/30/2017 1:01:00 PM	SL46753
Surr: 4-Bromofluorobenzene	101	70-130	D	%Rec	5	10/30/2017 1:01:00 PM	SL46753
Surr: Dibromofluoromethane	103	70-130	D	%Rec	5	10/30/2017 1:01:00 PM	SL46753
Surr: Toluene-d8	99.7	70-130	D	%Rec	5	10/30/2017 1:01:00 PM	SL46753

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 Quanitative 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1710B82**

01-Nov-17

Client: Williams Four Corners

Project: Lateral L 2

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL46694**	RunNo: **46694**
Prep Date:	Analysis Date: **10/27/2017**	SeqNo: **1487911** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL46753**	RunNo: **46753**
Prep Date:	Analysis Date: **10/30/2017**	SeqNo: **1489945** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.8	70	130			
Toluene	19	1.0	20.00	0	92.6	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.9	70	130			
Surr: Dibromofluoromethane	10		10.00		103	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: **SL46753**	RunNo: **46753**
Prep Date:	Analysis Date: **10/30/2017**	SeqNo: **1490338** 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		101	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.5	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

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 Quanitative 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1710B82 RcptNo: 1

Received By: John Caldwell 10/21/2017 11:15:00 AM

Completed By: Erin Melendrez 10/23/2017 9:56:47 AM

Reviewed By: JC 10.23.17 @ 1342

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. 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)

16. 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: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Not Present			

Released to Imaging: 11/5/2024 1:18:12 PM

Received by OCD: 3/23/2022 11:04:47 AM

Chain-of-Custody Record

Client: Kijun Hong
Williams Four Corners
Mailing Address: 1755 Abeyo Drive
Bloomfield, NM 87413
Phone #:
email or Fax#: Kijun.Hong@williams.com
QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____
Project Name: Lateral L-2
Project #:
Project Manager: Danny Burns
Sampler: Josh Adams
On Ice: ☒ Yes ☐ No
Sample Temperature: 3.6 C

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1710B82	Analysis Request: (BTEX + MTBE + TMB's (8021))	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
10-20-17	1000	GW	Lat. L-2	3 VOA's	HgCl	-001	X															

Remarks: cc: dburns@eltenv.com jadams@eltenv.com Kijun.Hong@williams.com direct bill williams

Date	Time	Relinquished by:	Received by:	Date	Time
10-20-17	1330			10-20-17	1330
10-20-17	1700			10/20/17	1700
10/20/17	2047			10-21-17	1115

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

March 15, 2018

Danny Burns
LTE
848 East 2nd Avenue
Durango, CO 81301
TEL: (970) 946-1093
FAX

RE: Lateral L2 OrderNo.: 1803516

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/9/2018 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1803516**
Date Reported: **3/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE **Client Sample ID:** MW-1
Project: Lateral L2 **Collection Date:** 3/8/2018 1:05:00 PM
Lab ID: 1803516-001 **Matrix:** AQUEOUS **Received Date:** 3/9/2018 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	18	1.0		µg/L	1	3/13/2018 12:05:10 PM
Toluene	ND	1.0		µg/L	1	3/13/2018 12:05:10 PM
Ethylbenzene	ND	1.0		µg/L	1	3/13/2018 12:05:10 PM
Xylenes, Total	ND	1.5		µg/L	1	3/13/2018 12:05:10 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	3/13/2018 12:05:10 PM
Surr: Toluene-d8	91.8	70-130		%Rec	1	3/13/2018 12:05:10 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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 Quanitative 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

Analytical Report
Lab Order **1803516**
Date Reported: **3/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE **Client Sample ID:** MW-2
Project: Lateral L2 **Collection Date:** 3/8/2018 11:35:00 AM
Lab ID: 1803516-002 **Matrix:** AQUEOUS **Received Date:** 3/9/2018 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	1.0		µg/L	1	3/13/2018 8:52:50 PM
Toluene	ND	1.0		µg/L	1	3/13/2018 8:52:50 PM
Ethylbenzene	ND	1.0		µg/L	1	3/13/2018 8:52:50 PM
Xylenes, Total	ND	1.5		µg/L	1	3/13/2018 8:52:50 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	3/13/2018 8:52:50 PM
Surr: Toluene-d8	93.5	70-130		%Rec	1	3/13/2018 8:52:50 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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 Quanitative 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

Analytical Report
Lab Order **1803516**
Date Reported: **3/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE **Client Sample ID:** MW-3
Project: Lateral L2 **Collection Date:** 3/8/2018 12:25:00 PM
Lab ID: 1803516-003 **Matrix:** AQUEOUS **Received Date:** 3/9/2018 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	ND	1.0		µg/L	1	3/13/2018 9:15:45 PM
Toluene	ND	1.0		µg/L	1	3/13/2018 9:15:45 PM
Ethylbenzene	ND	1.0		µg/L	1	3/13/2018 9:15:45 PM
Xylenes, Total	ND	1.5		µg/L	1	3/13/2018 9:15:45 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	3/13/2018 9:15:45 PM
Surr: Toluene-d8	92.7	70-130		%Rec	1	3/13/2018 9:15:45 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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 Quanitative 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

Analytical Report
Lab Order **1803516**
Date Reported: **3/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE **Client Sample ID:** MW-4
Project: Lateral L2 **Collection Date:** 3/8/2018 2:00:00 PM
Lab ID: 1803516-004 **Matrix:** AQUEOUS **Received Date:** 3/9/2018 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	1.6	1.0		µg/L	1	3/13/2018 9:38:40 PM
Toluene	ND	1.0		µg/L	1	3/13/2018 9:38:40 PM
Ethylbenzene	ND	1.0		µg/L	1	3/13/2018 9:38:40 PM
Xylenes, Total	5.4	1.5		µg/L	1	3/13/2018 9:38:40 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	3/13/2018 9:38:40 PM
Surr: Toluene-d8	92.9	70-130		%Rec	1	3/13/2018 9:38:40 PM

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 Quanitative 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

Analytical Report
Lab Order **1803516**
Date Reported: **3/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE **Client Sample ID:** MW-5
Project: Lateral L2 **Collection Date:** 3/8/2018 1:30:00 PM
Lab ID: 1803516-005 **Matrix:** AQUEOUS **Received Date:** 3/9/2018 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	210	10		µg/L	10	3/14/2018 12:52:06 PM
Toluene	110	10		µg/L	10	3/14/2018 12:52:06 PM
Ethylbenzene	2.7	1.0		µg/L	1	3/13/2018 10:01:32 PM
Xylenes, Total	70	1.5		µg/L	1	3/13/2018 10:01:32 PM
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	3/13/2018 10:01:32 PM
Surr: Toluene-d8	94.6	70-130		%Rec	1	3/13/2018 10:01:32 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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 Quanitative 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

Analytical Report
Lab Order **1803516**
Date Reported: **3/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: LTE **Client Sample ID:** MW-A
Project: Lateral L2 **Collection Date:** 3/8/2018 1:40:00 PM
Lab ID: 1803516-006 **Matrix:** AQUEOUS **Received Date:** 3/9/2018 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **AG**
Benzene	210	10		µg/L	10	3/14/2018 1:15:05 PM
Toluene	120	10		µg/L	10	3/14/2018 1:15:05 PM
Ethylbenzene	3.7	1.0		µg/L	1	3/13/2018 10:24:29 PM
Xylenes, Total	69	1.5		µg/L	1	3/13/2018 10:24:29 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	3/13/2018 10:24:29 PM
Surr: Toluene-d8	92.3	70-130		%Rec	1	3/13/2018 10:24:29 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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 Quanitative 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803516**

15-Mar-18

Client: LTE

Project: Lateral L2

Sample ID	**100ng lcs**	SampType:	**LCS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**BatchQC**	Batch ID:	**W49754**	RunNo:	**49754**					
Prep Date:		Analysis Date:	**3/13/2018**	SeqNo:	**1610246**	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	80	120			
Toluene	19	1.0	20.00	0	97.4	80	120			
Ethylbenzene	19	1.0	20.00	0	96.2	80	120			
Xylenes, Total	60	1.5	60.00	0	99.6	80	120			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.1	70	130			
Surr: Toluene-d8	9.2		10.00		92.4	70	130			

Sample ID	**1803516-001ams**	SampType:	**MS4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**MW-1**	Batch ID:	**W49754**	RunNo:	**49754**					
Prep Date:		Analysis Date:	**3/13/2018**	SeqNo:	**1610248**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	34	1.0	20.00	18.07	78.0	80	120			S
Toluene	19	1.0	20.00	0.1932	93.7	80	120			
Ethylbenzene	18	1.0	20.00	0.3064	90.5	80	120			
Xylenes, Total	56	1.5	60.00	0.9892	90.9	80	120			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.1	70	130			
Surr: Toluene-d8	9.1		10.00		91.3	70	130			

Sample ID	**1803516-001amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**MW-1**	Batch ID:	**W49754**	RunNo:	**49754**					
Prep Date:		Analysis Date:	**3/13/2018**	SeqNo:	**1610249**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	34	1.0	20.00	18.07	77.4	80	120	0.395	20	S
Toluene	19	1.0	20.00	0.1932	92.0	80	120	1.80	20	
Ethylbenzene	18	1.0	20.00	0.3064	90.0	80	120	0.551	20	
Xylenes, Total	53	1.5	60.00	0.9892	87.4	80	120	3.77	20	
Surr: 4-Bromofluorobenzene	9.0		10.00		90.4	70	130	0	0	
Surr: Toluene-d8	9.4		10.00		93.6	70	130	0	0	

Sample ID	**rb**	SampType:	**MBLK**	TestCode:	**EPA Method 8260: Volatiles Short List**					
Client ID:	**PBW**	Batch ID:	**W49754**	RunNo:	**49754**					
Prep Date:		Analysis Date:	**3/13/2018**	SeqNo:	**1610255**	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								

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 Quanitative 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803516**

15-Mar-18

Client: LTE

Project: Lateral L2

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **W49754**	RunNo: **49754**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610255** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

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 Quanitative 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: LTE Work Order Number: 1803516 RcptNo: 1

Received By: Isaiah Ortiz 3/9/2018 IO

Completed By: Isaiah Ortiz 3/9/2018 7:52:26 AM IO

Reviewed By: ENM 3/9/18

MW 3/9/18

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? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: ____ (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? ____
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 ☐	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
1	1.0	Good	Yes			

Released to Imaging: 11/5/2024 1:18:12 PM
Received by OCD: 3/23/2022 11:04:47 AM

Chain-of-Custody Record

Client: LT Environmental

Mailing Address: 848 E 2nd Ave

Phone #: 970-385-1096

email or Fax#: dburns@ltenv.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: Lateral L2

Project #:

Project Manager: Danny Burns

Sampler: Alex Cooks

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803516	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	BTEX 8260				Air Bubbles (Y or N)
3/8	1305	GW	MW-1	3 VOA	0001	001												X				
	1135		MW-2			002																
	1225		MW-3			003																
	1400		MW-4			004																
	1330		MW-5			005																
	1340		MW-A			006																

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/8	1515			3/8/18	1515
3/8/18	1827			3/8/18	735

Remarks:

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

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

May 08, 2018

Danny Burns
Williams Four Corners
188 CR 4900
Bloomfield, NM 87413
TEL: (505) 632-4442
FAX

RE: Lateral L 2 OrderNo.: 1804E35

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 9 sample(s) on 4/28/2018 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-2
Project: Lateral L 2 **Collection Date:** 4/27/2018 11:30:00 AM
Lab ID: 1804E35-001 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	170	10		µg/L	10	5/7/2018 6:12:00 PM	R51091
Toluene	33	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Ethylbenzene	11	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,2,4-Trimethylbenzene	3.7	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,3,5-Trimethylbenzene	3.0	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Naphthalene	ND	2.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
2-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Acetone	36	10		µg/L	1	5/4/2018 7:26:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
2-Butanone	ND	10		µg/L	1	5/4/2018 7:26:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 7:26:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 7:26:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-2
Project: Lateral L 2 **Collection Date:** 4/27/2018 11:30:00 AM
Lab ID: 1804E35-001 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 7:26:00 PM	R51047
Isopropylbenzene	1.3	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
4-Isopropyltoluene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 7:26:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
n-Butylbenzene	ND	3.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
n-Propylbenzene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
sec-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 7:26:00 PM	R51047
Xylenes, Total	76	1.5		µg/L	1	5/4/2018 7:26:00 PM	R51047
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	5/4/2018 7:26:00 PM	R51047
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	5/4/2018 7:26:00 PM	R51047
Surr: Dibromofluoromethane	110	70-130		%Rec	1	5/4/2018 7:26:00 PM	R51047
Surr: Toluene-d8	113	70-130		%Rec	1	5/4/2018 7:26:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-7
Project: Lateral L 2 **Collection Date:** 4/27/2018 12:15:00 PM
Lab ID: 1804E35-002 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Toluene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Ethylbenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Naphthalene	ND	2.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1-Methylnaphthalene	ND	4.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
2-Methylnaphthalene	ND	4.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Acetone	ND	10		µg/L	1	5/7/2018 6:36:00 PM	R51091
Bromobenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Bromodichloromethane	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Bromoform	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Bromomethane	ND	3.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
2-Butanone	ND	10		µg/L	1	5/7/2018 6:36:00 PM	R51091
Carbon disulfide	ND	10		µg/L	1	5/7/2018 6:36:00 PM	R51091
Carbon Tetrachloride	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Chlorobenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Chloroethane	ND	2.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Chloroform	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Chloromethane	ND	3.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
2-Chlorotoluene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
4-Chlorotoluene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
cis-1,2-DCE	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Dibromochloromethane	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Dibromomethane	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,1-Dichloroethane	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,1-Dichloroethene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,2-Dichloropropane	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,3-Dichloropropane	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
2,2-Dichloropropane	ND	2.0		µg/L	1	5/7/2018 6:36:00 PM	R51091

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-7
Project: Lateral L 2 **Collection Date:** 4/27/2018 12:15:00 PM
Lab ID: 1804E35-002 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Hexachlorobutadiene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
2-Hexanone	ND	10		µg/L	1	5/7/2018 6:36:00 PM	R51091
Isopropylbenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
4-Isopropyltoluene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
4-Methyl-2-pentanone	ND	10		µg/L	1	5/7/2018 6:36:00 PM	R51091
Methylene Chloride	ND	3.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
n-Butylbenzene	ND	3.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
n-Propylbenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
sec-Butylbenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Styrene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
tert-Butylbenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
trans-1,2-DCE	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Trichlorofluoromethane	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Vinyl chloride	ND	1.0		µg/L	1	5/7/2018 6:36:00 PM	R51091
Xylenes, Total	ND	1.5		µg/L	1	5/7/2018 6:36:00 PM	R51091
Surr: 1,2-Dichloroethane-d4	118	70-130		%Rec	1	5/7/2018 6:36:00 PM	R51091
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	5/7/2018 6:36:00 PM	R51091
Surr: Dibromofluoromethane	116	70-130		%Rec	1	5/7/2018 6:36:00 PM	R51091
Surr: Toluene-d8	113	70-130		%Rec	1	5/7/2018 6:36:00 PM	R51091

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-6
Project: Lateral L 2 **Collection Date:** 4/27/2018 1:15:00 PM
Lab ID: 1804E35-003 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Toluene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Ethylbenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Naphthalene	ND	2.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
2-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Acetone	ND	10		µg/L	1	5/4/2018 8:14:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
2-Butanone	ND	10		µg/L	1	5/4/2018 8:14:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 8:14:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 8:14:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-6
Project: Lateral L 2 **Collection Date:** 4/27/2018 1:15:00 PM
Lab ID: 1804E35-003 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 8:14:00 PM	R51047
Isopropylbenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
4-Isopropyltoluene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 8:14:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
n-Butylbenzene	ND	3.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
n-Propylbenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
sec-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 8:14:00 PM	R51047
Xylenes, Total	ND	1.5		µg/L	1	5/4/2018 8:14:00 PM	R51047
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	5/4/2018 8:14:00 PM	R51047
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	5/4/2018 8:14:00 PM	R51047
Surr: Dibromofluoromethane	111	70-130		%Rec	1	5/4/2018 8:14:00 PM	R51047
Surr: Toluene-d8	113	70-130		%Rec	1	5/4/2018 8:14:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-3
Project: Lateral L 2 **Collection Date:** 4/27/2018 1:50:00 PM
Lab ID: 1804E35-004 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Toluene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Ethylbenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Naphthalene	ND	2.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
2-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Acetone	ND	10		µg/L	1	5/4/2018 8:38:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
2-Butanone	ND	10		µg/L	1	5/4/2018 8:38:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 8:38:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 8:38:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-3
Project: Lateral L 2 **Collection Date:** 4/27/2018 1:50:00 PM
Lab ID: 1804E35-004 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 8:38:00 PM	R51047
Isopropylbenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
4-Isopropyltoluene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 8:38:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
n-Butylbenzene	ND	3.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
n-Propylbenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
sec-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 8:38:00 PM	R51047
Xylenes, Total	ND	1.5		µg/L	1	5/4/2018 8:38:00 PM	R51047
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	5/4/2018 8:38:00 PM	R51047
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	5/4/2018 8:38:00 PM	R51047
Surr: Dibromofluoromethane	108	70-130		%Rec	1	5/4/2018 8:38:00 PM	R51047
Surr: Toluene-d8	113	70-130		%Rec	1	5/4/2018 8:38:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-4
Project: Lateral L 2 **Collection Date:** 4/27/2018 2:25:00 PM
Lab ID: 1804E35-005 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Toluene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Ethylbenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Naphthalene	ND	2.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
2-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Acetone	ND	10		µg/L	1	5/4/2018 9:02:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
2-Butanone	ND	10		µg/L	1	5/4/2018 9:02:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 9:02:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 9:02:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-4
Project: Lateral L 2 **Collection Date:** 4/27/2018 2:25:00 PM
Lab ID: 1804E35-005 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 9:02:00 PM	R51047
Isopropylbenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
4-Isopropyltoluene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 9:02:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
n-Butylbenzene	ND	3.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
n-Propylbenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
sec-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 9:02:00 PM	R51047
Xylenes, Total	ND	1.5		µg/L	1	5/4/2018 9:02:00 PM	R51047
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	5/4/2018 9:02:00 PM	R51047
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	5/4/2018 9:02:00 PM	R51047
Surr: Dibromofluoromethane	110	70-130		%Rec	1	5/4/2018 9:02:00 PM	R51047
Surr: Toluene-d8	114	70-130		%Rec	1	5/4/2018 9:02:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-5
Project: Lateral L 2 **Collection Date:** 4/27/2018 3:25:00 PM
Lab ID: 1804E35-006 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	190	10		µg/L	10	5/7/2018 7:00:00 PM	R51091
Toluene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Ethylbenzene	5.7	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,2,4-Trimethylbenzene	1.5	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,3,5-Trimethylbenzene	1.6	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Naphthalene	ND	2.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
2-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Acetone	20	10		µg/L	1	5/4/2018 9:26:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
2-Butanone	ND	10		µg/L	1	5/4/2018 9:26:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 9:26:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 9:26:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-5
Project: Lateral L 2 **Collection Date:** 4/27/2018 3:25:00 PM
Lab ID: 1804E35-006 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 9:26:00 PM	R51047
Isopropylbenzene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
4-Isopropyltoluene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 9:26:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
n-Butylbenzene	ND	3.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
n-Propylbenzene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
sec-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 9:26:00 PM	R51047
Xylenes, Total	9.1	1.5		µg/L	1	5/4/2018 9:26:00 PM	R51047
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	5/4/2018 9:26:00 PM	R51047
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	5/4/2018 9:26:00 PM	R51047
Surr: Dibromofluoromethane	109	70-130		%Rec	1	5/4/2018 9:26:00 PM	R51047
Surr: Toluene-d8	112	70-130		%Rec	1	5/4/2018 9:26:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-1
Project: Lateral L 2 **Collection Date:** 4/27/2018 3:00:00 PM
Lab ID: 1804E35-007 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	200	10		µg/L	10	5/7/2018 7:24:00 PM	R51091
Toluene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Ethylbenzene	5.2	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,2,4-Trimethylbenzene	2.2	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,3,5-Trimethylbenzene	2.1	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Naphthalene	ND	2.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
2-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Acetone	15	10		µg/L	1	5/4/2018 9:50:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
2-Butanone	ND	10		µg/L	1	5/4/2018 9:50:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 9:50:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 9:50:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-1
Project: Lateral L 2 **Collection Date:** 4/27/2018 3:00:00 PM
Lab ID: 1804E35-007 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 9:50:00 PM	R51047
Isopropylbenzene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
4-Isopropyltoluene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 9:50:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
n-Butylbenzene	ND	3.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
n-Propylbenzene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
sec-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 9:50:00 PM	R51047
Xylenes, Total	8.7	1.5		µg/L	1	5/4/2018 9:50:00 PM	R51047
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	5/4/2018 9:50:00 PM	R51047
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	5/4/2018 9:50:00 PM	R51047
Surr: Dibromofluoromethane	111	70-130		%Rec	1	5/4/2018 9:50:00 PM	R51047
Surr: Toluene-d8	111	70-130		%Rec	1	5/4/2018 9:50:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-A
Project: Lateral L 2 **Collection Date:** 4/27/2018 3:30:00 PM
Lab ID: 1804E35-008 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	200	10		µg/L	10	5/7/2018 7:48:00 PM	R51091
Toluene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Ethylbenzene	6.0	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,2,4-Trimethylbenzene	1.6	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,3,5-Trimethylbenzene	1.7	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Naphthalene	ND	2.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
2-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Acetone	25	10		µg/L	1	5/4/2018 10:14:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
2-Butanone	ND	10		µg/L	1	5/4/2018 10:14:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 10:14:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 10:14:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** MW-A
Project: Lateral L 2 **Collection Date:** 4/27/2018 3:30:00 PM
Lab ID: 1804E35-008 **Matrix:** GROUNDWA **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 10:14:00 PM	R51047
Isopropylbenzene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
4-Isopropyltoluene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 10:14:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
n-Butylbenzene	ND	3.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
n-Propylbenzene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
sec-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 10:14:00 PM	R51047
Xylenes, Total	9.4	1.5		µg/L	1	5/4/2018 10:14:00 PM	R51047
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	5/4/2018 10:14:00 PM	R51047
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	5/4/2018 10:14:00 PM	R51047
Surr: Dibromofluoromethane	110	70-130		%Rec	1	5/4/2018 10:14:00 PM	R51047
Surr: Toluene-d8	113	70-130		%Rec	1	5/4/2018 10:14:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** Trip Blank
Project: Lateral L 2 **Collection Date:**
Lab ID: 1804E35-009 **Matrix:** AQUEOUS **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Toluene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Ethylbenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Naphthalene	ND	2.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
2-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Acetone	ND	10		µg/L	1	5/4/2018 10:38:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
2-Butanone	ND	10		µg/L	1	5/4/2018 10:38:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 10:38:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 10:38:00 PM	R51047

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 Quanitative 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

Analytical Report
Lab Order **1804E35**
Date Reported: **5/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Williams Four Corners **Client Sample ID:** Trip Blank
Project: Lateral L 2 **Collection Date:**
Lab ID: 1804E35-009 **Matrix:** AQUEOUS **Received Date:** 4/28/2018 10:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 10:38:00 PM	R51047
Isopropylbenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
4-Isopropyltoluene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 10:38:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
n-Butylbenzene	ND	3.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
n-Propylbenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
sec-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 10:38:00 PM	R51047
Xylenes, Total	ND	1.5		µg/L	1	5/4/2018 10:38:00 PM	R51047
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	5/4/2018 10:38:00 PM	R51047
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	5/4/2018 10:38:00 PM	R51047
Surr: Dibromofluoromethane	111	70-130		%Rec	1	5/4/2018 10:38:00 PM	R51047
Surr: Toluene-d8	115	70-130		%Rec	1	5/4/2018 10:38:00 PM	R51047

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 Quanitative 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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1804E35**
08-May-18

Client: Williams Four Corners
Project: Lateral L 2

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R51047** RunNo: **51047**
Prep Date: Analysis Date: **5/4/2018** SeqNo: **1657986** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	23	1.0	20.00	0	114	70	130			
Chlorobenzene	23	1.0	20.00	0	115	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R51047** RunNo: **51047**
Prep Date: Analysis Date: **5/4/2018** SeqNo: **1658053** 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								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

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 Quanitative 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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1804E35**
08-May-18

Client: Williams Four Corners
Project: Lateral L 2

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51047**	RunNo: **51047**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658053** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

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 Quanitative 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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1804E35**
08-May-18

Client: Williams Four Corners
Project: Lateral L 2

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51047**	RunNo: **51047**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658053** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		115	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	11		10.00		115	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51091**	RunNo: **51091**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659460** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	23	1.0	20.00	0	116	70	130			
Chlorobenzene	24	1.0	20.00	0	118	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	112	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51091**	RunNo: **51091**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659463** 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								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

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 Quanitative 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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1804E35**
08-May-18

Client: Williams Four Corners
Project: Lateral L 2

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51091**	RunNo: **51091**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659463** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

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 Quanitative 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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1804E35**
08-May-18

Client: Williams Four Corners
Project: Lateral L 2

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51091**	RunNo: **51091**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659463** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	12		10.00		116	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	12		10.00		115	70	130			
Surr: Toluene-d8	11		10.00		113	70	130			

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 Quanitative 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: WILLIAMS FOUR CORN Work Order Number: 1804E35 RcptNo: 1

Received By: Andy Freeman 4/28/2018 10:40:00 AM

Completed By: Anne Thorne 4/30/2018 12:37:01 PM

Reviewed By: ENM 4/30/18

Labeled by 04/30/18

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? (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: ☐ 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	3.1	Good	Yes			

Released to Imaging: 11/5/2024 1:18:12 PM

Received by OCD: 3/23/2022 11:04:47 AM

Chain-of-Custody Record

Client: Williams Four Corners

Aaron Galer

Mailing Address:

Phone #:

email or Fax#: aaron.galer@williams.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Lateral L-2

Project #: 034018012

Project Manager: Danny Burns

Sampler: Josh Adams

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.1 °C 3.1 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804E35	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
4-27-18	1130	GW	MW-2	3 VOA's	HgCl	001	X									X		
	1215		MW-7			002	X									X		
	1315		MW-6			003	X									X		
	1350		MW-3			004	X									X		
	1425		MW-4			005	X									X		
	~~1500~~	1525	MW-5			006	X									X		
	~~1525~~	1900	MW-1			007	X									X		
	1530		MW-A			008	X											
																X		
			Trip Blank			009										X		

Date	Time	Relinquished by:	Received by:	Date	Time
4/27/18	1614			4/27/18	1614
4/27/18	1850			4/28/18	1040

Remarks: please run 8260B

cc: dburns@henv.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 22, 2021

Brooke Herb

Harvest
1755 Arroyo Dr.
Bloomfield, NM 87413
TEL: (505) 632-4475
FAX:

RE: Lateral L2 OrderNo.: 2112746

Dear Brooke Herb:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/10/2021 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2112746**
Date Reported: **12/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: MW-2
Project: Lateral L2
Collection Date: 12/8/2021 2:25:00 PM
Lab ID: 2112746-001 **Matrix:** GROUNDWA **Received Date:** 12/10/2021 7:30:00 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	12/15/2021 7:25:00 PM	R84549
Toluene	ND	1.0		µg/L	1	12/15/2021 7:25:00 PM	R84549
Ethylbenzene	ND	1.0		µg/L	1	12/15/2021 7:25:00 PM	R84549
Xylenes, Total	ND	1.5		µg/L	1	12/15/2021 7:25:00 PM	R84549
Surr: 1,2-Dichloroethane-d4	98.7	70-130		%Rec	1	12/15/2021 7:25:00 PM	R84549
Surr: Dibromofluoromethane	103	70-130		%Rec	1	12/15/2021 7:25:00 PM	R84549
Surr: Toluene-d8	98.0	70-130		%Rec	1	12/15/2021 7:25:00 PM	R84549

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2112746**
Date Reported: **12/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest **Client Sample ID:** MW-3
Project: Lateral L2 **Collection Date:** 12/8/2021 2:35:00 PM
Lab ID: 2112746-002 **Matrix:** GROUNDWA **Received Date:** 12/10/2021 7:30:00 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	12/15/2021 7:49:00 PM	R84549
Toluene	ND	1.0		µg/L	1	12/15/2021 7:49:00 PM	R84549
Ethylbenzene	ND	1.0		µg/L	1	12/15/2021 7:49:00 PM	R84549
Xylenes, Total	ND	1.5		µg/L	1	12/15/2021 7:49:00 PM	R84549
Surr: 1,2-Dichloroethane-d4	99.3	70-130		%Rec	1	12/15/2021 7:49:00 PM	R84549
Surr: Dibromofluoromethane	102	70-130		%Rec	1	12/15/2021 7:49:00 PM	R84549
Surr: Toluene-d8	95.8	70-130		%Rec	1	12/15/2021 7:49:00 PM	R84549

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2112746**
Date Reported: **12/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest **Client Sample ID:** MW-5
Project: Lateral L2 **Collection Date:** 12/8/2021 2:45:00 PM
Lab ID: 2112746-003 **Matrix:** GROUNDWA **Received Date:** 12/10/2021 7:30:00 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	12/15/2021 9:22:00 PM	R84549
Toluene	ND	1.0		µg/L	1	12/15/2021 9:22:00 PM	R84549
Ethylbenzene	ND	1.0		µg/L	1	12/15/2021 9:22:00 PM	R84549
Xylenes, Total	ND	1.5		µg/L	1	12/15/2021 9:22:00 PM	R84549
Surr: 1,2-Dichloroethane-d4	99.0	70-130		%Rec	1	12/15/2021 9:22:00 PM	R84549
Surr: Dibromofluoromethane	101	70-130		%Rec	1	12/15/2021 9:22:00 PM	R84549
Surr: Toluene-d8	97.9	70-130		%Rec	1	12/15/2021 9:22:00 PM	R84549

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2112746**
Date Reported: **12/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest **Client Sample ID:** MW-6
Project: Lateral L2 **Collection Date:** 12/8/2021 2:15:00 PM
Lab ID: 2112746-004 **Matrix:** GROUNDWA **Received Date:** 12/10/2021 7:30:00 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	12/15/2021 9:45:00 PM	R84549
Toluene	ND	1.0		µg/L	1	12/15/2021 9:45:00 PM	R84549
Ethylbenzene	ND	1.0		µg/L	1	12/15/2021 9:45:00 PM	R84549
Xylenes, Total	ND	1.5		µg/L	1	12/15/2021 9:45:00 PM	R84549
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	12/15/2021 9:45:00 PM	R84549
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/15/2021 9:45:00 PM	R84549
Surr: Toluene-d8	96.3	70-130		%Rec	1	12/15/2021 9:45:00 PM	R84549

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report
Lab Order **2112746**
Date Reported: **12/22/2021**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest **Client Sample ID:** MW-7
Project: Lateral L2 **Collection Date:** 12/8/2021 2:00:00 PM
Lab ID: 2112746-005 **Matrix:** GROUNDWA **Received Date:** 12/10/2021 7:30:00 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	12/15/2021 10:09:00 PM	R84549
Toluene	ND	1.0		µg/L	1	12/15/2021 10:09:00 PM	R84549
Ethylbenzene	ND	1.0		µg/L	1	12/15/2021 10:09:00 PM	R84549
Xylenes, Total	ND	1.5		µg/L	1	12/15/2021 10:09:00 PM	R84549
Surr: 1,2-Dichloroethane-d4	98.5	70-130		%Rec	1	12/15/2021 10:09:00 PM	R84549
Surr: Dibromofluoromethane	102	70-130		%Rec	1	12/15/2021 10:09:00 PM	R84549
Surr: Toluene-d8	97.2	70-130		%Rec	1	12/15/2021 10:09:00 PM	R84549

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112746**
22-Dec-21

Client: Harvest
Project: Lateral L2

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **R84549**	RunNo: **84549**
Prep Date:	Analysis Date: **12/15/2021**	SeqNo: **2973445** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.3	70	130			
Toluene	20	1.0	20.00	0	98.6	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.4	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.4	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R84549**	RunNo: **84549**
Prep Date:	Analysis Date: **12/15/2021**	SeqNo: **2973446** 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	9.8		10.00		98.0	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.7		10.00		96.7	70	130			

Sample ID: **2112746-002AMS**	SampType: **MS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **MW-3**	Batch ID: **R84549**	RunNo: **84549**
Prep Date:	Analysis Date: **12/15/2021**	SeqNo: **2973914** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.8		10.00		97.8	70	130			

Sample ID: **2112746-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **MW-3**	Batch ID: **R84549**	RunNo: **84549**
Prep Date:	Analysis Date: **12/15/2021**	SeqNo: **2973915** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.2	70	130	2.63	20	
Toluene	19	1.0	20.00	0	96.2	70	130	4.55	20	
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.4	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	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#: **2112746**

22-Dec-21

Client: Harvest

Project: Lateral L2

Sample ID: **2112746-002AMSD** SampType: **MSD** TestCode: **EPA Method 8260: Volatiles Short List**

Client ID: **MW-3** Batch ID: **R84549** RunNo: **84549**

Prep Date: Analysis Date: **12/15/2021** SeqNo: **2973915** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		102	70	130	0	0	
Surr: Toluene-d8	9.7		10.00		96.7	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 2112746 | RcptNo: 1

Received By: **Tracy Casarrubias** 12/10/2021 7:30:00 AM

Completed By: **Sean Livingston** 12/10/2021 9:50:47 AM S Livingston

Reviewed By: ~~JN HC~~ 12/10/21 JN 12/10/21

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° 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: CM 12/10/21

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 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				

Released to Imaging: 11/5/2024 1:18:12 PM
Received by OCD: 3/23/2022 11:04:47 AM

Chain-of-Custody Record

Client: Harvest Four Corners
Oakley Hayes
Mailing Address:
Phone #:
email or Fax#: Oakley.Hayes@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 L2
Project #:
Project Manager: Brooke Herb - WSP
Sampler: E. Carroll
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 2.3-0=2.3 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2112746	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12-8	14:25	GW	MW-2	3 VOA	HCl	001	X									
	14:35		MW-3			002	X									
	14:45		MW-5			003	X									
	14:15		MW-6			004	X									
	14:00		MW-7			005										

Date	Time	Relinquished by	Received by	Via	Date	Time
12-9	1545	Eric Carroll				
12/9/21	1756			Courier	12/10/21	7:30

Remarks:
cc: eric.carroll@wsp.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 20, 2022

Brooke Herb

Harvest
1755 Arroyo Dr.
Bloomfield, NM 87413
TEL: (505) 632-4475
FAX

RE: Lateral L2 OrderNo.: 2201617

Dear Brooke Herb:

Hall Environmental Analysis Laboratory received 6 sample(s) on 1/15/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2201617**
Date Reported: **1/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest **Client Sample ID:** HP01
Project: Lateral L2 **Collection Date:** 1/12/2022 11:30:00 AM
Lab ID: 2201617-001 **Matrix:** GROUNDWA **Received Date:** 1/15/2022 8:11:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	1.4		mg/L	1	1/19/2022 2:24:31 PM	65057
Motor Oil Range Organics (MRO)	ND	7.0		mg/L	1	1/19/2022 2:24:31 PM	65057
Surr: DNOP	84.6	64.8-167		%Rec	1	1/19/2022 2:24:31 PM	65057
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	1/18/2022 10:03:39 AM	G85236
Surr: BFB	94.8	68.5-136		%Rec	1	1/18/2022 10:03:39 AM	G85236
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/18/2022 10:03:39 AM	B85236
Toluene	ND	1.0		µg/L	1	1/18/2022 10:03:39 AM	B85236
Ethylbenzene	ND	1.0		µg/L	1	1/18/2022 10:03:39 AM	B85236
Xylenes, Total	ND	2.0		µg/L	1	1/18/2022 10:03:39 AM	B85236
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	1/18/2022 10:03:39 AM	B85236

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

Qualifiers:

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

Analytical Report
Lab Order **2201617**
Date Reported: **1/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest **Client Sample ID:** HP02
Project: Lateral L2 **Collection Date:** 1/12/2022 12:00:00 PM
Lab ID: 2201617-002 **Matrix:** GROUNDWA **Received Date:** 1/15/2022 8:11:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	1.4		mg/L	1	1/19/2022 2:48:21 PM	65057
Motor Oil Range Organics (MRO)	ND	7.0		mg/L	1	1/19/2022 2:48:21 PM	65057
Surr: DNOP	79.4	64.8-167		%Rec	1	1/19/2022 2:48:21 PM	65057
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	1/18/2022 10:27:05 AM	G85236
Surr: BFB	97.1	68.5-136		%Rec	1	1/18/2022 10:27:05 AM	G85236
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/18/2022 10:27:05 AM	B85236
Toluene	ND	1.0		µg/L	1	1/18/2022 10:27:05 AM	B85236
Ethylbenzene	ND	1.0		µg/L	1	1/18/2022 10:27:05 AM	B85236
Xylenes, Total	ND	2.0		µg/L	1	1/18/2022 10:27:05 AM	B85236
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	1/18/2022 10:27:05 AM	B85236

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

Qualifiers:

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

Analytical Report
Lab Order **2201617**
Date Reported: **1/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: HP03
Project: Lateral L2
Collection Date: 1/12/2022 12:20:00 PM
Lab ID: 2201617-003 **Matrix:** GROUNDWA **Received Date:** 1/15/2022 8:11:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	1.4		mg/L	1	1/19/2022 3:12:10 PM	65057
Motor Oil Range Organics (MRO)	ND	7.0		mg/L	1	1/19/2022 3:12:10 PM	65057
Surr: DNOP	91.7	64.8-167		%Rec	1	1/19/2022 3:12:10 PM	65057
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	1/18/2022 10:50:37 AM	G85236
Surr: BFB	95.5	68.5-136		%Rec	1	1/18/2022 10:50:37 AM	G85236
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/18/2022 10:50:37 AM	B85236
Toluene	ND	1.0		µg/L	1	1/18/2022 10:50:37 AM	B85236
Ethylbenzene	ND	1.0		µg/L	1	1/18/2022 10:50:37 AM	B85236
Xylenes, Total	ND	2.0		µg/L	1	1/18/2022 10:50:37 AM	B85236
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	1/18/2022 10:50:37 AM	B85236

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

Qualifiers:

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

Analytical Report
Lab Order **2201617**
Date Reported: **1/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest **Client Sample ID:** HP04
Project: Lateral L2 **Collection Date:** 1/12/2022 12:45:00 PM
Lab ID: 2201617-004 **Matrix:** GROUNDWA **Received Date:** 1/15/2022 8:11:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	1.4		mg/L	1	1/19/2022 3:36:00 PM	65057
Motor Oil Range Organics (MRO)	ND	7.0		mg/L	1	1/19/2022 3:36:00 PM	65057
Surr: DNOP	89.6	64.8-167		%Rec	1	1/19/2022 3:36:00 PM	65057
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	1/18/2022 11:14:10 AM	G85236
Surr: BFB	97.1	68.5-136		%Rec	1	1/18/2022 11:14:10 AM	G85236
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/18/2022 11:14:10 AM	B85236
Toluene	ND	1.0		µg/L	1	1/18/2022 11:14:10 AM	B85236
Ethylbenzene	ND	1.0		µg/L	1	1/18/2022 11:14:10 AM	B85236
Xylenes, Total	ND	2.0		µg/L	1	1/18/2022 11:14:10 AM	B85236
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	1/18/2022 11:14:10 AM	B85236

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

Qualifiers:

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

Analytical Report
Lab Order **2201617**
Date Reported: **1/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest **Client Sample ID:** HP05
Project: Lateral L2 **Collection Date:** 1/12/2022 1:10:00 PM
Lab ID: 2201617-005 **Matrix:** GROUNDWA **Received Date:** 1/15/2022 8:11:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	1.4		mg/L	1	1/19/2022 3:59:49 PM	65057
Motor Oil Range Organics (MRO)	ND	7.0		mg/L	1	1/19/2022 3:59:49 PM	65057
Surr: DNOP	89.0	64.8-167		%Rec	1	1/19/2022 3:59:49 PM	65057
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	1/18/2022 11:37:43 AM	G85236
Surr: BFB	97.9	68.5-136		%Rec	1	1/18/2022 11:37:43 AM	G85236
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/18/2022 11:37:43 AM	B85236
Toluene	ND	1.0		µg/L	1	1/18/2022 11:37:43 AM	B85236
Ethylbenzene	ND	1.0		µg/L	1	1/18/2022 11:37:43 AM	B85236
Xylenes, Total	ND	2.0		µg/L	1	1/18/2022 11:37:43 AM	B85236
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	1/18/2022 11:37:43 AM	B85236

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

Qualifiers:

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

Analytical Report
Lab Order **2201617**
Date Reported: **1/20/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: HP06
Project: Lateral L2
Collection Date: 1/12/2022 1:30:00 PM
Lab ID: 2201617-006 **Matrix:** GROUNDWA **Received Date:** 1/15/2022 8:11:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **SB**	
Diesel Range Organics (DRO)	ND	1.4		mg/L	1	1/19/2022 4:23:38 PM	65057
Motor Oil Range Organics (MRO)	ND	7.0		mg/L	1	1/19/2022 4:23:38 PM	65057
Surr: DNOP	83.4	64.8-167		%Rec	1	1/19/2022 4:23:38 PM	65057
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	1/18/2022 12:01:11 PM	G85236
Surr: BFB	99.3	68.5-136		%Rec	1	1/18/2022 12:01:11 PM	G85236
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	1/18/2022 12:01:11 PM	B85236
Toluene	ND	1.0		µg/L	1	1/18/2022 12:01:11 PM	B85236
Ethylbenzene	ND	1.0		µg/L	1	1/18/2022 12:01:11 PM	B85236
Xylenes, Total	ND	2.0		µg/L	1	1/18/2022 12:01:11 PM	B85236
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	1/18/2022 12:01:11 PM	B85236

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201617**

20-Jan-22

Client: Harvest

Project: Lateral L2

Sample ID: **MB-65057**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **65057**	RunNo: **85257**
Prep Date: **1/18/2022**	Analysis Date: **1/19/2022**	SeqNo: **3000145** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.51		0.5000		103	64.8	167			

Sample ID: **LCS-65057**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **65057**	RunNo: **85257**
Prep Date: **1/18/2022**	Analysis Date: **1/19/2022**	SeqNo: **3000146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	2.1	1.0	2.500	0	82.2	70	130			
Surr: DNOP	0.22		0.2500		89.4	64.8	167			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201617**

20-Jan-22

Client: Harvest

Project: Lateral L2

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G85236**	RunNo: **85236**
Prep Date:	Analysis Date: **1/18/2022**	SeqNo: **2998585** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		95.0	68.5	136			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G85236**	RunNo: **85236**
Prep Date:	Analysis Date: **1/18/2022**	SeqNo: **2998586** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	96.1	80	120			
Surr: BFB	21		20.00		107	68.5	136			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201617**

20-Jan-22

Client: Harvest

Project: Lateral L2

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **B85236**	RunNo: **85236**
Prep Date:	Analysis Date: **1/18/2022**	SeqNo: **2998610** 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	22		20.00		108	70	130			

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **B85236**	RunNo: **85236**
Prep Date:	Analysis Date: **1/18/2022**	SeqNo: **2998611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.6	80	120			
Toluene	20	1.0	20.00	0	98.2	80	120			
Ethylbenzene	19	1.0	20.00	0	97.0	80	120			
Xylenes, Total	58	2.0	60.00	0	96.7	80	120			
Surr: 4-Bromofluorobenzene	22		20.00		111	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: **2201617** RcptNo: 1

Received By: **Cheyenne Cason** 1/15/2022 8:11:00 AM

Completed By: **Cheyenne Cason** 1/15/2022 8:52:22 AM

Reviewed By: JA 1.17.22

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
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 ☐	Checked by: JA 1/17/22

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: DRO Analyzed From HCL - 40mL VOA - Samples will be extracted at a dilution JC 1.17.22

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.2	Good	Yes			

Released to Imaging: 11/5/2024 1:18:12 PM

Received by OCD: 3/23/2022 11:04:47 AM

Chain-of-Custody Record

Client: Harvest Four corners
Oakley Hays
Mailing Address:
Phone #:
email or Fax#: Oakley.Hays@harvest.com
QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Lateral L2
Project #:
Project Manager: Brooke Herb - WSP
Sampler: E. Carroll - WSP
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 0.1+0.1=0.2 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2201617	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
1/12	11:30	GW	HP01	3 VOA	HCl	001	X	X								
	12:06		HP02			002	X	X								
	12:30		HP03			003	X	X								
	12:45		HP04			004	X	X								
	13:10		HP05			005	X	X								
	13:30		HP06			006	X	X								

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
1/14	13:20	Eric Carroll	[illegible]	VIA	1/14/22	1320
1/14/22	1802	Mustafa Walker	Eric Carroll		1/15/22	0811 cmc 0800

Remarks:

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.

APPENDIX B: BORE LOGS

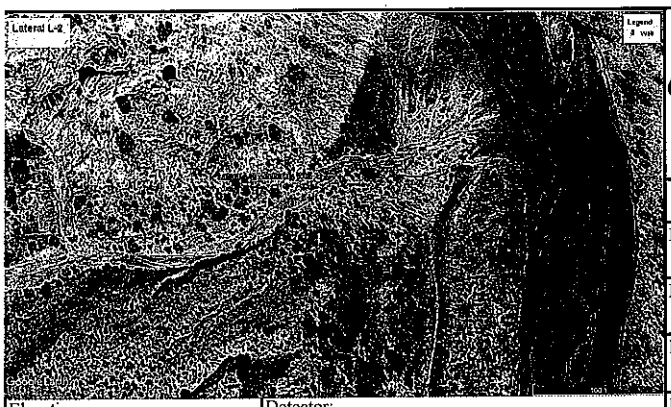
Advancing Opportunity

848 E. 2nd Ave
Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-1	Project: Lateral L-2
Date: 10-3-17	Project Number: 034018012
Logged By: Danny Burns	Drilled By: Danny Burns
Elevation:	Detector: PID
Drilling Method: Excavation	Sampling Method: NA
Gravel Pack: ~~10-20 Silica Sand~~ Native backfill, silty sand	Seal: NA
	Grout: NA
Casing Type: Schedule 40 PVC	Diameter: 2" Length: 5'
	Hole Diameter: NA
	Depth to Liquid: ~~[illegible]~~
Screen Type: Schedule 40 PVC	Slot: 0.010"
	Diameter: 2" Length: 5'
	Total Depth: 7'
	Depth to Water: 6'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	NA	NO		0				Backfill med grain sand lt. brown moist loose no staining/odor	2" PVC Well stick up
					1					
					2					
					3					
					4					
					5				med sand black loose w/organic material, Organic odor	
	wet	NA	NO		6					
					7				TD ≈ 7'	native material backfill, silty Sand
					8				Well casing placed in excavation clean sand backfilled excavation around well	
					9					
					10					
					11					
					12					
					13					
					14					
					15					



Advancing Opportunity

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-2	Project: Lateral L-2
Date: 1/31/2018	Project Number: 034018012
Logged By: E. Carroll	Drilled By: LTE
Drilling Method: Hand Auger	Sampling Method: NA
Elevation: 5660' / Detector: PID	
Gravel Pack: ~~10-20 Silica Sand~~ 20x40 Silica Sand Pre-Pack	Seal: NA / Grout: NA
Casing Type: Schedule 40 PVC — Diameter: 1" — Length:	Hole Diameter: 4" / Depth to Liquid: NA
Screen Type: Schedule 40 PVC — Slot: 0.010" — Diameter: 1" — Length:	Total Depth: ~7.5' / Depth to Water: 6'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	60.1	No	—	0	—	—		Backfill med grain sand, lt. brown moist, loose no stain/odor	
					1					
					2				SAA w/ white sandstone cobbles	
					3					
	moist	63.0	ND	—	4				Black sand w/organic matter loose moist. slight organic odor no stain	
					5					
	~~moist~~ wet	3.7	ND	—	6				SAA above ↓ Increasing H_2O Saturation	
					7					
	wet	0.6	ND	—	8					
					9					
					10				TD ≈ 7.5'	
					11					
					12				DTW ≈ 6'	
					13					
					14					
					15					

Slot
Sand Pack
Back Fill

Advancing Opportunity

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-3	Project: Lateral L-2
Date: 1/31/2018	Project Number: 034018012
Logged By: E. Carroll	Drilled By: LTE
Drilling Method: Hand Auger	Sampling Method: NA
Seal: NA	Grout: NA
Elevation: 5660'	Detector: PID
Gravel Pack: ~~10-20 Silica Sand~~ 30x40 Silica Sand Pre-Pack	
Casing Type: Schedule 40 PVC — Diameter: 1" — Length: 5'	Hole Diameter: 4" — Depth to Liquid: NA
Screen Type: Schedule 40 PVC — Slot: 0.010" — Diameter: 1" — Length: 5'	Total Depth: 8' — Depth to Water: 5'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	1.1	NO	NA	0	NA			loose lt. brown med grain sand	
					1				NO Stain/Odor	
	moist	1.0	NO	NA	2	NA			SAA	
					3					
	moist	0.8	NO	NA	4	NA			SAA	
					5					
	wet	0.6	NO	NA	6	NA			loose lt brown med grain sand	
					7				w/ lt grey mottles H_2O saturated	
	wet	0.6	NO	NA	8	NA			SAA	
					9					
					10				TD ≈ 8'	
					11				DTW ≈ 5'	
					12					
					13					
					14					
					15					

Advancing Opportunity

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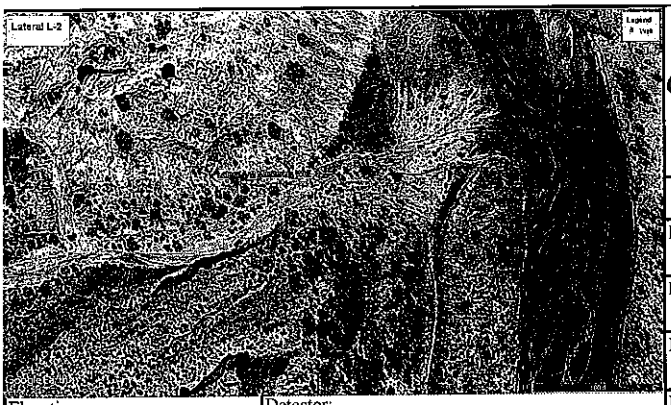
BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-4	Project: Lateral L-2
Date: 1/31/2018	Project Number: 034018012
Logged By: E. Carroll	Drilled By: LTE
Drilling Method: Hand Auger	Sampling Method: NA
Seal: NA	Grout: NA
Elevation: 5660'	Detector: PID
Gravel Pack: ~~10-20 Silica Sand~~ 30x40 Silica Sand Pre-Pack	
Casing Type: Schedule 40 PVC — Diameter: 1" — Length: 5'	Hole Diameter: 4' — Depth to Liquid: NA
Screen Type: Schedule 40 PVC — Slot: 0.010" — Diameter: 1" — Length: 5'	Total Depth: 8.5' — Depth to Water: 6'

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	moist	1.8	NO		0				loose, lt. brown med grain sand moist no stain/odor	
	moist	2.1	NO		1					
	moist	2.2	NO		2					
					3					
					4				SAA	
					5					
	wet	1.1	NO		6				SAA	
					7					
	wet	1.2	NO		8				loose lt. grey coarse sand H2O saturated No Stain/odor	
					9					
					10					
					11				TD ≈ 8.5'	
					12				DTW ≈ 6'	
					13					
					14					
					15					



LTE Advancing Opportunity

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Durango, Colorado 81301

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-#5	Project: Lateral L-2
Date: 1/31/2018	Project Number: 034018012
Logged By: E. Carroll	Drilled By: LTE
Drilling Method: Hand Auger	Sampling Method: NA
Seal: NA	Grout: NA
Elevation: 5660'	Detector: PID
Gravel Pack: ~~10-20 Silica Sand~~ 20 x 40 silica sand pre-pack	
Casing Type: Schedule 40 PVC	Diameter: 1" Length: 5'
Screen Type: Schedule 40 PVC	Slot: 0.010" Diameter: 1" Length: 5'
Hole Diameter: 4"	Depth to Liquid: NA
Total Depth: 7.5'	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	13.5	NO	NA	0	NA			loose lt brown med sand moist No Stain	
					1					
					2					
					3					
	moist	10.6	NO	NA	4	NA			SAA	
					5					
	wet	1.8	NO	NA	6	NA			loose lt grey coarse sand	
					7				H_2O Saturated	
					8				No Stain	
					9					
					10					
					11				TD ≈ 7.5'	
					12					
					13				DTW ≈ 4.5'	
					14					
					15					

LTE Advancing Opportunity

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-6	Project: Lateral L-2
Date: ~~MW-6~~ 4/24/19	Project Number: 034018012
Logged By: Danny Burns	Drilled By: Enviro Drill
Elevation:	Detector: PID
Drilling Method: Hand auger ~~Hollow Stem~~	Sampling Method: Hand Auger ~~Split Spoon~~
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: 5'
Hole Diameter:	Depth to Liquid: NA
Screen Type: Schedule 40 PVC	Slot: 0.010"
Diameter: 2" Length: 5'	Total Depth: 8'
Depth to Water: ~5'	

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	NO		0			SP	Loose, dry, lt. brown, med-coarse sand	
					1					
	moist	0.0	NO		2			SP	Loose, moist, lt. brown, med-coarse sand	
					3					
	wet	0.0	NO		4			SP	SAA	
					5					
	wet	1.4	NO		6			SC	Loose, saturated, grey, coarse sand some clay < 30%	
					7					
	wet	58.0	NO		8			SC	SAA	
					9					
					10				Refusal @ 8'	
					11					
					12					
					13					
					14					
					15					

LTE Advancing Opportunity

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BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-7	Project: Lateral L-2
Date: 4/24/19	Project Number: 034018012
Logged By: Eric Carroll ~~Danny Burns~~	Drilled By: Enviro Drill
Elevation:	Detector: PID
Drilling Method: Hollow Stem	Sampling Method: Split Spoon
Gravel Pack: 10-20 Silica Sand	Seal: NA
Grout: NA	
Casing Type: Schedule 40 PVC	Diameter: 2" Length: 5'
Hole Diameter:	Depth to Liquid:
Screen Type: Schedule 40 PVC Slot: 0.010"	Diameter: 2" Length: 5'
Total Depth:	Depth to Water:

Penetration Resistance	Moisture Content	Vapor (ppm)	HC Staining?	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion
	Dry	0.0	NO		0			SP	loose, lt. brown, med-coarse Sand	
					1					
	moist	3.0	NO		2			SP	loose, moist, lt. brown, med-coarse Sand	
					3					
	wet	3.2	NO		4			SP	SAA	
					5					
	wet	656.0	NO		6			SC	loose, Saturated, grey, Sand some clay >15%	
					7					
	wet	0.1	NO		8			CL	compact, Saturated, grey, Sandy lean clay >30% Sand	
					9					
					10					
					11					
					12					
					13					
					14					
					15					

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 92435

CONDITIONS

Operator: Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	OGRID: 373888
	Action Number: 92435
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Revised Stage 1 Abatement Plan has been accepted as part of the incident record. App ID: 92435	11/5/2024