District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NCS1629854256
District RP	3RP-364
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	Harvest Four Corners. LLC	OGRID	37388
Contact Name	Monica Smith	Contact Telephone	505-632-4625
Contact email	msmith@harvestmidstream.com	Incident # *(assigned by OCD)*	NCS1629854256
Contact mailing address	1755 Arroyo Drive, Bloomfield, New Mexico 87413		

Location of Release Source

Latitude 36.835162 Longitude -107.816092
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Florance Gas Com J#16A	Site Type	Pipeline, production pad, former BGT
Date Release Discovered	Historical	API# *(if applicable)*	30-045-21790

Unit Letter	Section	Township	Range	County
P	6	30N	9W	San Juan

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) Unknown	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls) Unknown	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Historical release(s) on location from potential multiple sources.

State of New Mexico
Oil Conservation Division

Incident ID	NCS1629854256
District RP	3RP-364
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Impacts to groundwater and LNAPL have been observed on location.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Previous C-141 forms have been submitted under the previous operator to the NMOCD on November 6, 2016 and May 8, 2017.

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Monica Smith Title: Environmental Specialist

Signature: MonicaSmith Date: 6/27/2019

email: msmith@harvestmidstream.com Telephone: 505-632-4625

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NCS1629854256
District RP	3RP-364
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	15 (ft bgs)
Did this release impact groundwater or surface water?	☒ Yes ☐ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☒ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	NCS1629854256
District RP	3RP-364
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Monica Smith Title: Environmental Specialist

Signature: MonicaSmith Date: 6/27/2019

email: msmith@harvestmidstream.com Telephone: 505-632-4625

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NCS1629854256
District RP	3RP-364
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Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Monica Smith Title: Environmental Specialist

Signature: MonicaSmith Date: 6/27/2019

email: msmith@harvestmidstream.com Telephone: 505-632-4625

OCD Only

Received by: Cory Via Email Date: 6/27/19

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Cory Via Email Date: 7/1/19

State of New Mexico
Oil Conservation Division

Incident ID	NCS1629854256
District RP	3RP-364
Facility ID	
Application ID	

Closure

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

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

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

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

Printed Name: Monica Smith Title: Environmental Specialist

Signature: _____ Date: _____

email: msmith@harvestmidstream.com Telephone: 505-632-4625

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

LT Environmental, Inc.
848 East Second Avenue
Durango, Colorado 81301
970.385.1096

April 30, 2019

Mr. Cory Smith
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

RE: Quarterly Remediation System Operation Report
Remediation Permit Number 3RP-364
Florance Gas Com J16A
Harvest Four Corners, LLC
San Juan County, New Mexico

Dear Mr. Smith:

The following report provides a quarterly summary of remediation system operation and monitoring (O&M) completed during the first quarter of 2019 at the Florance Gas Com J16A (Site) (Remediation Permit Number 3RP-364) located in San Juan County, New Mexico. The activity included in this report is for the period from December 22, 2018 through March 28, 2019. The report was prepared by LT Environmental, Inc. (LTE) on behalf of Harvest Four Corners, LLC (Harvest). Harvest assumed operation of the assets associated with the location from Williams Four Corners LLC (Williams) on October 1, 2018 and is continuing site remediation activities.

The report is provided in accordance with the conditions of approval from the New Mexico Oil Conservation Division (NMOCD) pertaining to the multi-phase extraction (MPE) remediation system described in the *Remedial Assessment Report* submitted by Aptim Environmental & Infrastructure, Inc. in November 2017. Per the requirements, this report includes the following:

- A summary of remediation activities during the quarter;
- The system run time summary (90% run time required);
- The petroleum mass removal and fluid product recovery from the remediation system;
- Amount of liquid captured from the concrete trap/secondary seep tank; and
- Quarterly gas sample analysis results.

The groundwater monitoring results for the project will be provided in a separate report published on an annual basis.

SYSTEM DESCRIPTION

The remediation system at the site includes an MPE system which uses high vacuum blowers to initiate vacuum in remediation wells connected to the blowers via subsurface conduits. The extracted air, petroleum vapors, and fluid enter a fluid/air separation tank. Air and petroleum vapors are passed through two extraction blowers and emitted out exhaust stacks. Separated fluid which includes light non-aqueous phase liquids (LNAPL) and groundwater is pumped to an above ground storage tank for storage and offsite disposal. Operation of the remediation wells is cycled through four zones, with four to six remediation wells per zone. The system layout is depicted on Figure 1. A report summarizing remediation system operation for the previous quarters of system operation have been submitted to the NMOCD by Harvest and Williams.

REMEDIATION SYSTEM OPERATION AND MONITORING

Routine biweekly system operations have been conducted from system startup through the first quarter 2019. The results of these efforts are summarized in tables attached to this report including the following information through the final biweekly site visit for the quarter conducted on March 28, 2019. No site visit was made in February due to weather related access issues to the site; however, there were site visits on January 31 and March 1, 2019.

Vapor Recovery

- The run time for the remediation system listed in Table 1 indicates an average run time for the first quarter of 88.5 percent (%), with a rolling quarterly run time of 95.9%. Temporary system operation interruptions occurred due to routine maintenance requirements, groundwater sampling activities, and temporary power interruption.
- Air/vapor samples from the MPE system inlet piping were collected following cycling of different extraction well zones, typically one sample per zone per quarter. Five samples were collected during this reporting period. Samples were collected using a high-vacuum sampling pump to fill a 1-Liter Tedlar® bag from the system inlet manifold and submitted for analysis for volatile organic compounds (VOCs) by United States Environmental Protection Agency Method 8260B, carbon dioxide, and oxygen, to Hall Environmental Analysis Laboratory of Albuquerque, New Mexico. The analytical results from the first quarter 2019 are summarized in Table 2. Copies of the laboratory analytical reports for the vapor samples are provided in Attachment 1.
- The calculated mass removal rate based on field and analytical results is provided in Table 3. Results indicate that since startup, the system has removed 2,381pounds of VOCs. In the first quarter 2019, the calculated mass removal rate based on VOC data varied from 0.2 lbs per day to 11.5 lbs per day. A total of 514.1 pounds of VOC's were removed during the first quarter of 2019

Fluid Recovery

- Fluid recovery efforts are summarized in Table 4. During the first quarter 2019 total fluid recovery was measured using a flow metering device and LNAPL recovery was calculated based on periodic measurement of recovered fluid in the storage tank. Since startup of the system through March 28, 2019, 84,825 gallons of groundwater have been recovered.
- Table 5 provides a summary of operational data for the SVE system including measurements of applied vacuum and measured flow rates for the individual recovery well lines for the first quarter 2019. The specific zones and period of operation are indicated in this table.

CONCRETE TRAP/SECONDARY SEEP MONITORING

During the first quarter of 2019, the collection sump associated with the seep areas and collection piping was examined for fluid recovery during scheduled O&M visits. No discharge was observed from the seep collection piping during the first four site visits. On March 8, 2019 the tank was inspected by LTE during a scheduled O&M visit and the tank was full. Approximately 1,00 gallons of fluid was removed from the seep collection tank on March 29, 2019.

PLAN FOR NEXT QUARTER OF OPERATION

System Operation

Operation of the remediation system will continue with the goal of optimizing vapor and liquid recovery. Remediation system operation indicates a decline in VOC concentrations for each zone sampled, as expected with this type of system. Based on these data, the frequency for air emission VOC sampling will remain the same in the second quarter 2019. Sampling will continue to comply with the NMOCD Conditions of Approval.

During the second quarter of 2019, the following will be completed:

- Bi-weekly system operation monitoring including cycling operations between the four zones;
- During bi-weekly site visits, temporary operation of wells where LNAPL has been observed will occur for approximately one hour, then the zone of operation will be changed.
- Periodic fluid elevation monitoring in selected remediation wells to evaluate the presence or absence of LNAPL;
- One influent air extraction sample per operational zone, per quarter will be analyzed for oxygen and carbon dioxide; and

- When influent air extraction samples are not collected, a photoionization detector will be used to measure MPE air/vapor exhaust concentrations.

Groundwater Monitoring

A groundwater monitoring event will be conducted on a quarterly basis and periodic fluid elevation measurements will be obtained throughout the quarter. The results of the fluid elevation measurements are reviewed, and system operational adjustments will be made based on these data. Groundwater monitoring results will be provided in an annual report.

Reporting

A quarterly system operation report will be prepared and submitted to NMOCD within 30 days following the end of the first quarter which will include:

- A summary of remediation activities during the quarter;
- The system run time summary;
- The petroleum mass removal and fluid product recovery from the remediation system;
- Amount of liquid captured from the concrete trap/secondary seep tank; and
- Quarterly gas sample analysis results.

Please contact Danny Burns with LTE at 970-385-1096 or Monica Sandoval (Harvest) at 505-632-4625 if you have any questions or concerns.

Sincerely,

LT ENVIRONMENTAL, INC.

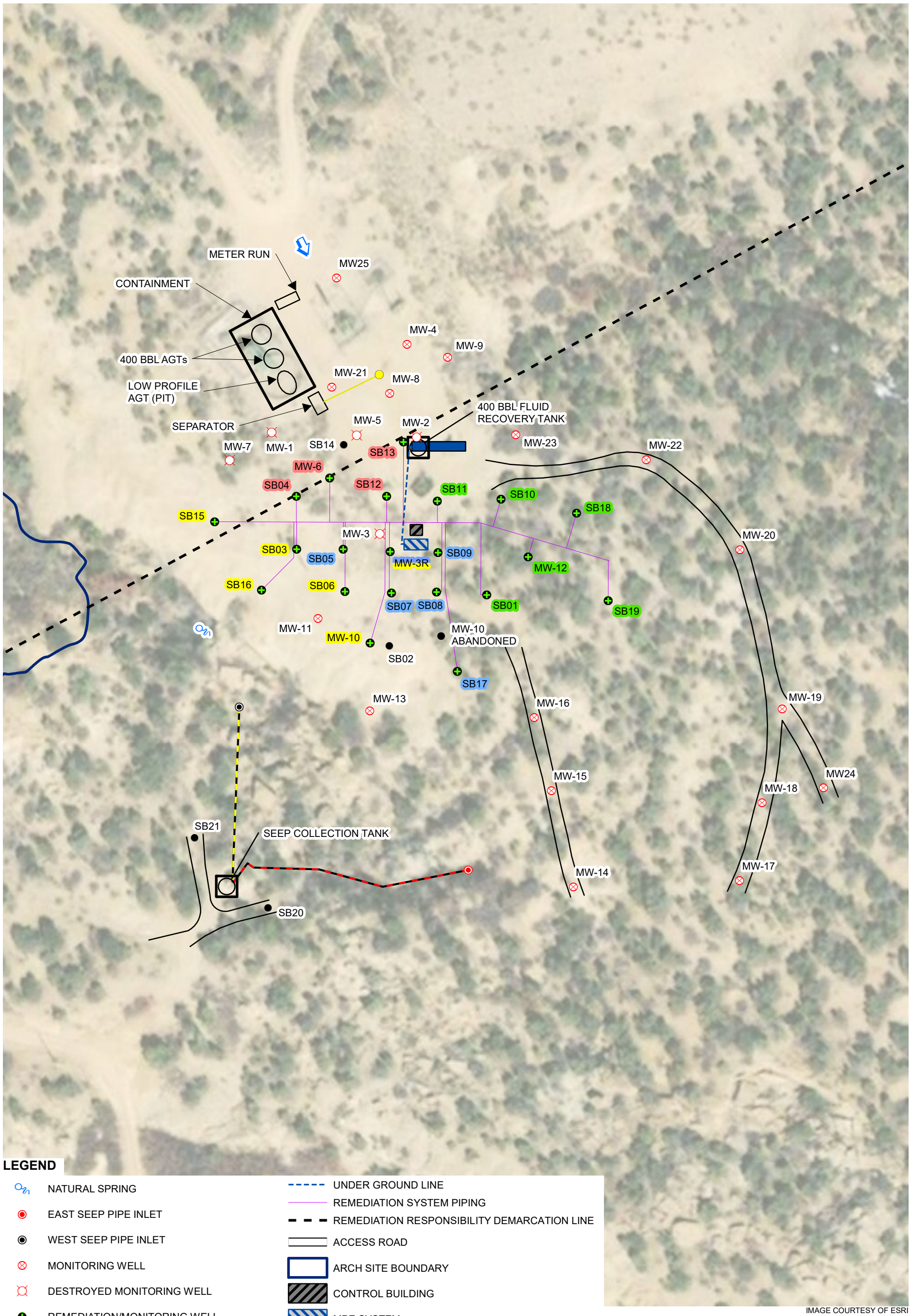
Daniel Burns
Project Geologist

Chris Shephard
Chief Engineer

cc: Monica Sandoval, Harvest Four Corners, LLC

Attachments:

Figure 1	Remediation System Well Layout
Table 1	Remediation System Operational Run Time
Table 2	Vapor Analytical Results
Table 3	Mass Removal
Table 4	Fluid Recovery
Table 5	System Operations 3rd Quarter 2018
Attachment 1	Laboratory Analytical Reports



LEGEND

- NATURAL SPRING
- EAST SEEP PIPE INLET
- WEST SEEP PIPE INLET
- MONITORING WELL
- DESTROYED MONITORING WELL
- REMEDIATION/MONITORING WELL
- SOIL BORING
- WELLHEAD
- ESTIMATED GROUNDWATER FLOW DIRECTION
- FLOWLINE
- EAST SEEP PIPE
- WEST SEEP PIPE
- UNDER GROUND LINE
- REMEDIATION SYSTEM PIPING
- REMEDIATION RESPONSIBILITY DEMARCATION LINE
- ACCESS ROAD
- ARCH SITE BOUNDARY
- CONTROL BUILDING
- MPE SYSTEM
- FLUID RECOVERY/STORAGE TANK
- BERM
- RED TEXT INDICATES ZONE 01
- GREEN TEXT INDICATES ZONE 02
- YELLOW TEXT INDICATES ZONE 03
- BLUE TEXT INDICATES ZONE 04

IMAGE COURTESY OF ESRI

0 80 160
Feet

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FIGURE 1
REMEDIATION SYSTEM LAYOUT
FLORANCE GCJ #16A
SAN JUAN COUNTY, NEW MEXICO

HARVEST FOUR CORNERS, LLC

P:\Harvest Four Corners\GIS\MXD\090318001_FLORANCE GCJ 16A\090318001_FIG01_REM_SYS_LAYOUT_2018.mxd

TABLE 1
REMEDIATION SYSTEMS OPERATIONAL RUN-TIME

FLORANCE GC J16A
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Date/Time of Reading	Blower Hour Meter Reading	Cumulative Run Time (%)	Rolling Quarterly Run Time (%)	Notes
5/4/18 9:00	42	START UP		
		Earlier Data Provided in Previous Quarterly Reports		
12/21/2018 13:20	5,271	94.2%	95.5%	Online after sampling
1/4/2019 11:40	5,468	92.2%	67.0%	Start of Q1 2019, system down, power failure
1/18/2019 10:00	5,780	92.3%	88.7%	VFD faults
1/31/2019 12:45	6,068	92.3%	89.9%	Monthly gauging
3/1/2019 10:00	6,761	93.0%	94.8%	Monthly gauging
3/14/2019 14:40	7,062	93.1%	94.9%	Repaired collection seep line
3/28/2019 10:30	7,398	93.4%	95.9%	Monthly gauging
		Average Q1 2019 Run Time	88.5%	

Notes:

% - percent

Dashed line indicates quarter change

TABLE 2
EXTRACTED AIR VOC DATA - FIRST QUARTER 2019

FLORANCE GC J16A
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Collection Date:	1/4/2019	1/18/2019	1/31/2019	3/1/2019	3/14/2019	3/28/2019
Collection Time:	13:45	10:00	16:45	10:00	15:00	15:00
Active Remediation Zone:	2	3	4	1	2	3
Benzene (µg/L)	35	No Sample Collected Due to O&M Repairs	22	<1.0	8.0	3.6
Toluene (µg/L)	75		110	1.7	15	14
Ethylbenzene (µg/L)	4.3		11	<1.0	<1.0	1.3
1,2,4-trimethylbenzene (µg/L)	2.8		11	<1.0	<1.0	<1.0
1,3,5-trimethylbenzene (µg/L)	3.5		11	<1.0	<1.0	1.5
Chloromethane (µg/L)	<2.0		<2.5	<1.0	<1.0	<1.0
Isoproplybenzene (µg/L)	<2.0		<2.5	<1.0	<1.0	<1.0
n-Proplybenzene (µg/L)	<2.0		<2.5	<1.0	<1.0	<1.0
Xylenes (µg/L)	61		210	6.7	9.2	35
Total VOCs (µg/L):	181.6		375	8.4	32.2	55.4
PID Reading (ppm)	738		740	563	604	373

Note:

µg/L - micrograms per liter

ppm - parts per million

PID - photo-ionizaton detector

VOCs - volatile organic compounds

TABLE 3
MASS REMOVAL VAPOR PHASE - FIRST QUARTER 2019

FLORANCE GC J16A
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Date/Time	Influent VOCs (mg/m^3)	Active Remediation Zone	Air Flow Rate (scfm)	Time Period (hr:min:sec)	Time Period (min)	Mass Removed (lbs)	Gal Removed (@0.755 g/cm^3)	Mass Removal Rate (lbs/day)	Mass Removal Rate (ton/yr)
12/21/18 14:30	13.2	1	240	335:00:00	20,100	242.4	45.5	17.4	3.2
1/4/19 13:45	181.6	2	364	335:15:00	20,115	4.0	38.5	0.3	0.1
1/18/19 10:00	No Samples Collected During Site Visit Due to O&M Repairs								
1/31/19 16:45	375.0	4	342	651:00:00	39,060	160.9	0.6	5.9	1.1
3/1/19 14:00	8.4	1	206	693:15:00	41,595	332.5	25.5	11.5	2.1
3/14/19 15:00	32.2	2	370	313:00:00	18,780	2.0	52.8	0.2	0.0
3/28/19 10:30	55.4	3	324	331:30:00	19,890	14.8	0.3	1.1	0.2

Total Quantity of Hydrocarbon Removed 1st quarter 2019	514 lbs	117.7 gal	2.8 bbl
Total Quantity of Hydrocarbon Removed Since Start-up May 2018	2,381 lbs	468.0 gal	11.1 bbl

Notes:

bbl - barrel
gal - gallons
g/cm^3 - grams per cubic centimeter
hr - hour
lbs - pounds
lbs/day - pounds per day
mg/m^3 - milligrams per cubic meter
min - minute
scfm - standard cubic foot per minute
sec - second
ton/yr - ton per year
VOCs - volatile organic compounds
yr - year
Dashed line indicates a quarter change

TABLE 4
FLUID RECOVERY - FIRST QUARTER 2019

FLORANCE GC J16A
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Date/Time	Hour Meter Reading	Tank Height		Gallons in Tank	Flow Meter Reading (gal)	Gallons Recovered this Period	Cumulative Volume Recovered (gal)	LNAPL Thickness (ft)	LNAPL Volume (gal)	Gallons Removed From Tank (Off-Site)	Time Period (hr:min:sec)	Time Period (min)	Recovery Rate		Notes
		(ft)	(in)										(gpm)	(gal/day)	
12/21/18 13:20	5,271	13	8	11,480	37,496	1,019	64,796	0.01	8		339:50:00	20,390	0.05	72	
1/4/19 11:40	5,468	9	11	8,330	47,192	9,696	74,492	0.02	16.92		334:20:00	20,060	0.48	696	
1/31/19 0:45	6,068	13	11	11,690	51,665	4,473	78,965	---	---	10,080	637:05:00	38,225	0.12	169	3 loads removed
3/1/19 10:00	6,761	1	11	1,610	53,893	2,228	81,193	---	---		705:15:00	42,315	0.05	76	
3/14/2019	356	3	8	3,080	55,343	1,450	82,643	0.02	16.92		316:40:00	19,000	0.08	110	
3/28/19 10:30	7,398	6	7	5,530	57,525	2,183	84,825	0.03	25.38		331:50:00	19,910	0.11	158	

Notes:

bbl - barrel
ft - feet
gal - gallon
gal/day - gallon per day
gpm - gallon per minute
hr - hour
in - inch
LNAPL - light non-aqueous phase liquid
min - minute
sec - second
Dashed line indicated quarter change

Total Quantity of Groundwater Removed:	84,825	Gal
	2,020	bbl

TABLE 5
MPE SYSTEM OPERATIONS - FOURTH QUARTER 2018

FLORANCE GC J16A
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Well ID		Unit	1/4/2019	1/18/2019	1/31/2019	3/1/2019	3/14/2019	3/28/2019
Active Zone			2	3	4	1	2	3
MW-06	WH Vac (Online)	inHg				15.0		
Zone 1	WH Vac (Offline)	inH2O						
	Mani Vac	inHg				18.5		
	PID	ppm				575.0		
	Flow	scfm				36.0		
SB-04	WH Vac (Online)	inHg				15.0		
Zone 1	WH Vac (Offline)	inH2O						
	Mani Vac	inHg				19.0		
	PID	ppm				613.0		
	Flow	scfm				68.0		
SB-12	WH Vac (Online)	inHg				16.0		
Zone 1	WH Vac (Offline)	inH2O						
	Mani Vac	inHg				18.5		
	PID	ppm				468.0		
	Flow	scfm				52.0		
SB-13	WH Vac (Online)	inHg				15.5		
Zone 1	WH Vac (Offline)	inH2O						
	Mani Vac	inHg				18.0		
	PID	ppm				107.0		
	Flow	scfm				50.0		

No readings taken, O&M repairs only after zone switch

TABLE 5
MPE SYSTEM OPERATIONS - FOURTH QUARTER 2018

FLORANCE GC J16A
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Well ID		Unit	1/4/2019	1/18/2019	1/31/2019	3/1/2019	3/14/2019	3/28/2019
Active Zone			2	3	4	1	2	3
MW-12	WH Vac (Online)	inHg	12.0				15.0	
Zone 2	WH Vac (Offline)	inH2O						
	Mani Vac	inHg	15.5				15.5	
	PID	ppm	355.0				337	
	Flow	scfm	58.0				48.0	
SB-01	WH Vac (Online)	inHg	15.0				15.0	
Zone 2	WH Vac (Offline)	inH2O						
	Mani Vac	inHg	15.0				16.0	
	PID	ppm	514.0				426	
	Flow	scfm	72.0				86.0	
SB-10	WH Vac (Online)	inHg	12.0				15.0	
Zone 2	WH Vac (Offline)	inH2O						
	Mani Vac	inHg	15.5				16.0	
	PID	ppm	173.0				64	
	Flow	scfm	56.0				68.0	
SB-11	WH Vac (Online)	inHg	14.5				14.0	
Zone 2	WH Vac (Offline)	inH2O						
	Mani Vac	inHg	15.0				15.5	
	PID	ppm	420.0				47	
	Flow	scfm	62.0				52.0	
SB-18	WH Vac (Online)	inHg	10.0				14.5	
Zone 2	WH Vac (Offline)	inH2O						
	Mani Vac	inHg	16.5				16.5	
	PID	ppm	105.0				132	
	Flow	scfm	36.0				34.0	
SB-19	WH Vac (Online)	inHg	14.5				15.0	
Zone 2	WH Vac (Offline)	inH2O						
	Mani Vac	inHg	15.5				16.0	
	PID	ppm	339.0				101	
	Flow	scfm	80.0				82.0	

No readings taken, O&M repairs only after zone switch

TABLE 5
MPE SYSTEM OPERATIONS - FOURTH QUARTER 2018

FLORANCE GC J16A
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Well ID		Unit	1/4/2019	1/18/2019	1/31/2019	3/1/2019	3/14/2019	3/28/2019
Active Zone			2	3	4	1	2	3
MW-3R	WH Vac (Online)	inHg						15.0
Zone 3	WH Vac (Offline)	inH2O						
	Mani Vac	inHg						17.0
	PID	ppm						376
	Flow	scfm						70.0
MW-10	WH Vac (Online)	inHg						17.5
Zone 3	WH Vac (Offline)	inH2O						
	Mani Vac	inHg						17.0
	PID	ppm						1
	Flow	scfm						0.0
SB-03	WH Vac (Online)	inHg						18.5
Zone 3	WH Vac (Offline)	inH2O						
	Mani Vac	inHg						17.0
	PID	ppm						403
	Flow	scfm						52.0
SB-06	WH Vac (Online)	inHg						17.0
Zone 3	WH Vac (Offline)	inH2O						
	Mani Vac	inHg						17.5
	PID	ppm						143
	Flow	scfm						64.0
SB-15	WH Vac (Online)	inHg						15.0
Zone 3	WH Vac (Offline)	inH2O						
	Mani Vac	inHg						17.0
	PID	ppm						42
	Flow	scfm						58.0
SB-16	WH Vac (Online)	inHg						17.0
Zone 3	WH Vac (Offline)	inH2O						
	Mani Vac	inHg						17.0
	PID	ppm						56
	Flow	scfm						80.0

No readings taken, O&M repairs only after zone switch

TABLE 5
MPE SYSTEM OPERATIONS - FOURTH QUARTER 2018

FLORANCE GC J16A
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Well ID		Unit	1/4/2019	1/18/2019	1/31/2019	3/1/2019	3/14/2019	3/28/2019
Active Zone			2	3	4	1	2	3
MW-3R	WH Vac (Online)	inHg			15.0			
Zone 4	WH Vac (Offline)	inH2O						
	Mani Vac	inHg			15.5			
	PID	ppm			614.0			
	Flow	scfm			50.0			
SB-05	WH Vac (Online)	inHg			11.5			
Zone 4	WH Vac (Offline)	inH2O						
	Mani Vac	inHg			15.0			
	PID	ppm			353.0			
	Flow	scfm			42.0			
SB-07	WH Vac (Online)	inHg			13.0			
Zone 4	WH Vac (Offline)	inH2O						
	Mani Vac	inHg			15.0			
	PID	ppm			910.0			
	Flow	scfm			40.0			
SB-08	WH Vac (Online)	inHg			11.5			
Zone 4	WH Vac (Offline)	inH2O						
	Mani Vac	inHg			16.0			
	PID	ppm			398.0			
	Flow	scfm			66.0			
SB-09	WH Vac (Online)	inHg			12.0			
Zone 4	WH Vac (Offline)	inH2O						
	Mani Vac	inHg			16.0			
	PID	ppm			890.0			
	Flow	scfm			80.0			
SB-17	WH Vac (Online)	inHg			14.0			
Zone 4	WH Vac (Offline)	inH2O						
	Mani Vac	inHg			16.0			
	PID	ppm			81.0			
	Flow	scfm			64.0			

No readings taken, O&M repairs only after zone switch

TABLE 5
MPE SYSTEM OPERATIONS - FOURTH QUARTER 2018

FLORANCE GC J16A
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Well ID		Unit	1/4/2019	1/18/2019	1/31/2019	3/1/2019	3/14/2019	3/28/2019
Active Zone			2	3	4	1	2	3
Well Field								
	Flow	scfm	364.0		342.0	206.0	370.0	324.0

Notes:

in HG - inches of mercury

inH2O - inches of water

ppm - parts per million

scfm - standard cubic feet per minute

% - percent

*** The flow sensor at the MS Inlet and for the dilution flow do not account for the density of the air or the water entrained, and are anticipated to read low.

ATTACHMENT 1: LABORATORY ANALYTICAL REPORTS

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

January 16, 2019

Monica Sandoval

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

RE: Florance OrderNo.: 1901163

Dear Monica Sandoval:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/5/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Zone 2 Influent
Project: Florance
Collection Date: 1/4/2019 1:45:00 PM
Lab ID: 1901163-001 **Matrix:** AIR **Received Date:** 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	35	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Toluene	75	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Ethylbenzene	4.3	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,2,4-Trimethylbenzene	2.8	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,3,5-Trimethylbenzene	3.5	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Naphthalene	ND	4.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1-Methylnaphthalene	ND	8.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
2-Methylnaphthalene	ND	8.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Acetone	ND	20		µg/L	20	1/8/2019 11:02:13 AM	R56845
Bromobenzene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Bromodichloromethane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Bromoform	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Bromomethane	ND	4.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
2-Butanone	ND	20		µg/L	20	1/8/2019 11:02:13 AM	R56845
Carbon disulfide	ND	20		µg/L	20	1/8/2019 11:02:13 AM	R56845
Carbon tetrachloride	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Chlorobenzene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Chloroethane	ND	4.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Chloroform	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Chloromethane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
2-Chlorotoluene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
4-Chlorotoluene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
cis-1,2-DCE	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
cis-1,3-Dichloropropene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Dibromochloromethane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Dibromomethane	ND	4.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,2-Dichlorobenzene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,3-Dichlorobenzene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,4-Dichlorobenzene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Dichlorodifluoromethane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,1-Dichloroethane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,1-Dichloroethene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,2-Dichloropropane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,3-Dichloropropane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
2,2-Dichloropropane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Zone 2 Influent
Project: Florance
Collection Date: 1/4/2019 1:45:00 PM
Lab ID: 1901163-001 **Matrix:** AIR **Received Date:** 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1-Dichloropropene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Hexachlorobutadiene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
2-Hexanone	ND	20		µg/L	20	1/8/2019 11:02:13 AM	R56845
Isopropylbenzene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
4-Isopropyltoluene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
4-Methyl-2-pentanone	ND	20		µg/L	20	1/8/2019 11:02:13 AM	R56845
Methylene chloride	ND	6.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
n-Butylbenzene	ND	6.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
n-Propylbenzene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
sec-Butylbenzene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Styrene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
tert-Butylbenzene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Tetrachloroethene (PCE)	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
trans-1,2-DCE	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
trans-1,3-Dichloropropene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,2,3-Trichlorobenzene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,2,4-Trichlorobenzene	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,1,1-Trichloroethane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,1,2-Trichloroethane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Trichloroethene (TCE)	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Trichlorofluoromethane	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
1,2,3-Trichloropropane	ND	4.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Vinyl chloride	ND	2.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Xylenes, Total	61	3.0		µg/L	20	1/8/2019 11:02:13 AM	R56845
Surr: Dibromofluoromethane	108	70-130		%Rec	20	1/8/2019 11:02:13 AM	R56845
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	20	1/8/2019 11:02:13 AM	R56845
Surr: Toluene-d8	105	70-130		%Rec	20	1/8/2019 11:02:13 AM	R56845
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	20	1/8/2019 11:02:13 AM	R56845

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 SUMMARY REPORT

January 15, 2019

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: G19010191

Project Name: Not Indicated

Energy Laboratories Inc. Gillette WY received the following 1 sample for Hall Environmental on 1/9/2019 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
G19010191-001	1901163-001A; Zone 2 Influent	01/04/19 13:45	01/09/19	Gas	Natural Gas Analysis - BTU Natural Gas Analysis - Compressibility Factor Natural Gas Analysis - GPM Natural Gas Analysis - Molecular Weight Natural Gas Analysis - Routine Natural Gas Analysis - Pressure Base Natural Gas Analysis - Psuedo-Critical Pressure Natural Gas Analysis - Psuedo-Critical Temperature Natural Gas Analysis - Specific Gravity Natural Gas Analysis - Temperature Base

The analyses presented in this report were performed by Energy Laboratories, Inc., 400 W. Boxelder Rd., Gillette, WY 82718, unless otherwise noted.

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these tests results, please call.

Report Approved By:

Julie Weisz
Gillette QA Officer

Digitally signed by Julie L. Weisz
Date: 2019.01.15 16:43:44 -07:00

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated
Client Sample ID: 1901163-001A; Zone 2 Influent
Location:
Lab ID: G19010191-001

Report Date: 01/15/19
Collection Date: 01/04/19 13:45
Date Received: 01/09/19
Sampled By: Not Provided

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
NATURAL GAS CHROMATOGRAPHIC ANALYSIS REPORT					
Oxygen	21.219	Mol %		GPA 2261	01/15/19 10:02 / blb
Nitrogen	78.054	Mol %		GPA 2261	01/15/19 10:02 / blb
Carbon Dioxide	0.602	Mol %		GPA 2261	01/15/19 10:02 / blb
Hydrogen Sulfide	< 0.001	Mol %		GPA 2261	01/15/19 10:02 / blb
Methane	< 0.001	Mol %		GPA 2261	01/15/19 10:02 / blb
Ethane	< 0.001	Mol %		GPA 2261	01/15/19 10:02 / blb
Propane	< 0.001	Mol %		GPA 2261	01/15/19 10:02 / blb
Isobutane	0.035	Mol %		GPA 2261	01/15/19 10:02 / blb
n-Butane	0.001	Mol %		GPA 2261	01/15/19 10:02 / blb
Isopentane	0.005	Mol %		GPA 2261	01/15/19 10:02 / blb
n-Pentane	0.006	Mol %		GPA 2261	01/15/19 10:02 / blb
Hexanes plus	0.078	Mol %		GPA 2261	01/15/19 10:02 / blb
GPM @ STD COND/1000 CU.FT., MOISTURE FREE GAS					
GPM Ethane	< 0.0003	gal/MCF		GPA 2261	01/15/19 10:02 / blb
GPM Propane	< 0.0003	gal/MCF		GPA 2261	01/15/19 10:02 / blb
GPM Isobutane	0.0110	gal/MCF		GPA 2261	01/15/19 10:02 / blb
GPM n-Butane	< 0.0003	gal/MCF		GPA 2261	01/15/19 10:02 / blb
GPM Isopentane	0.0020	gal/MCF		GPA 2261	01/15/19 10:02 / blb
GPM n-Pentane	0.0020	gal/MCF		GPA 2261	01/15/19 10:02 / blb
GPM Hexanes plus	0.0340	gal/MCF		GPA 2261	01/15/19 10:02 / blb
GPM Pentanes plus	0.0380	gal/MCF		GPA 2261	01/15/19 10:02 / blb
GPM Total	0.0500	gal/MCF		GPA 2261	01/15/19 10:02 / blb
CALCULATED PROPERTIES					
Calculation Pressure Base	14.730	psia		GPA 2261	01/15/19 10:02 / blb
Calculation Temperature Base	60	°F		GPA 2261	01/15/19 10:02 / blb
Compressibility Factor, Z	1.0000	unitless		GPA 2261	01/15/19 10:02 / blb
Molecular Weight	29.02	unitless		GPA 2261	01/15/19 10:02 / blb
Pseudo-critical Pressure, psia	548	psia		GPA 2261	01/15/19 10:02 / blb
Pseudo-critical Temperature, deg R	241	deg R		GPA 2261	01/15/19 10:02 / blb
Specific Gravity (air=1.000)	1.005	unitless		GPA 2261	01/15/19 10:02 / blb
Gross BTU per cu ft @ std cond, dry	5.62	BTU/cu ft		GPA 2261	01/15/19 10:02 / blb
Gross BTU per cu ft @ std cond, wet	5.52	BTU/cu ft		GPA 2261	01/15/19 10:02 / blb

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated

Report Date: 01/15/19
Work Order: G19010191

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261									Analytical Run: R248231
Lab ID: ICV-1901150940	Initial Calibration Verification Standard								01/15/19 09:40
Oxygen	0.400	Mol %	0.001	84	75	110			
Nitrogen	5.063	Mol %	0.001	100	90	110			
Carbon Dioxide	4.891	Mol %	0.001	98	90	110			
Hydrogen Sulfide	0.123	Mol %	0.001	122	100	136			
Methane	73.157	Mol %	0.001	100	90	110			
Ethane	4.999	Mol %	0.001	100	90	110			
Propane	5.117	Mol %	0.001	100	90	110			
Isobutane	2.005	Mol %	0.001	99	90	110			
n-Butane	1.981	Mol %	0.001	98	90	110			
Isopentane	0.985	Mol %	0.001	99	90	110			
n-Pentane	0.979	Mol %	0.001	98	90	110			
Hexanes plus	0.300	Mol %	0.001	99	90	110			
Lab ID: CCV-1901150948	Continuing Calibration Verification Standard								01/15/19 09:48
Oxygen	0.599	Mol %	0.001	100	90	110			
Nitrogen	1.339	Mol %	0.001	95	85	110			
Carbon Dioxide	0.962	Mol %	0.001	96	90	110			
Hydrogen Sulfide	0.021	Mol %	0.001	84	70	130			
Methane	93.508	Mol %	0.001	100	90	110			
Ethane	1.021	Mol %	0.001	102	90	110			
Propane	1.008	Mol %	0.001	101	90	110			
Isobutane	0.501	Mol %	0.001	100	90	110			
n-Butane	0.489	Mol %	0.001	98	90	110			
Isopentane	0.200	Mol %	0.001	100	90	110			
n-Pentane	0.198	Mol %	0.001	99	90	110			
Hexanes plus	0.154	Mol %	0.001	102	90	110			
Lab ID: CCV-1901151115	Continuing Calibration Verification Standard								01/15/19 11:16
Oxygen	0.581	Mol %	0.001	97	90	110			
Nitrogen	1.279	Mol %	0.001	91	85	110			
Carbon Dioxide	0.965	Mol %	0.001	96	90	110			
Hydrogen Sulfide	0.025	Mol %	0.001	100	70	130			
Methane	93.585	Mol %	0.001	100	90	110			
Ethane	1.021	Mol %	0.001	102	90	110			
Propane	1.007	Mol %	0.001	101	90	110			
Isobutane	0.500	Mol %	0.001	100	90	110			
n-Butane	0.488	Mol %	0.001	98	90	110			
Isopentane	0.199	Mol %	0.001	99	90	110			
n-Pentane	0.197	Mol %	0.001	98	90	110			
Hexanes plus	0.153	Mol %	0.001	101	90	110			
Method: GPA 2261									Batch: R248231

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated

Report Date: 01/15/19
Work Order: G19010191

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261									Batch: R248231
Lab ID: G19010191-001ADUP	Sample Duplicate				Run: Varian GC_190115A				01/15/19 10:06
Oxygen	21.217	Mol %	0.001				0.0	10	
Nitrogen	78.051	Mol %	0.001				0.0	10	
Carbon Dioxide	0.603	Mol %	0.001				0.2	10	
Hydrogen Sulfide	< 0.001	Mol %	0.001					10	
Methane	< 0.001	Mol %	0.001					10	
Ethane	< 0.001	Mol %	0.001					10	
Propane	< 0.001	Mol %	0.001					10	
Isobutane	0.037	Mol %	0.001				5.6	10	
n-Butane	0.001	Mol %	0.001				0.0	10	
Isopentane	0.005	Mol %	0.001				0.0	10	
n-Pentane	0.006	Mol %	0.001				0.0	10	
Hexanes plus	0.080	Mol %	0.001				2.5	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

Hall Environmental

G19010191

Login completed by: Misty Voegele
Reviewed by: BL2000\kvidick
Reviewed Date: 1/11/2019

Date Received: 1/9/2019
Received by: mav
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	°C		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

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

CHAIN OF CUSTODY RECORD

SUB CONTRATOR:	Gillette ENERGY	COMPANY: Energy Laboratories	PHONE: (866) 686-7175 FAX:
ADDRESS:	400 W Boxelder Rd		ACCOUNT #: EMAIL:
CITY, STATE, ZIP:	Gillette, WY 82718		

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	1901163-001A	Zone 2 Influent	TEDLAR	Air	1/4/2018 1:45:00 PM	1	NATURAL GAS ANALYSIS

1901191

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 1/7/2019	Time: 3:55 PM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 1/9/19	Time: 1150

TAT: Standard X RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples ___ °C Attempt to Cool ? ___
Comments:

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901163**

16-Jan-19

Client: Harvest
Project: Florance

Sample ID	**1901163-001a dup**	SampType:	**DUP**	TestCode:	**EPA Method 8260B: Volatiles**		
Client ID:	**Zone 2 Influent**	Batch ID:	**R56845**	RunNo:	**56845**		
Prep Date:		Analysis Date:	**1/8/2019**	SeqNo:	**1902464**	Units:	**µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	37	2.0						5.99	20	
Toluene	78	2.0						3.43	20	
Ethylbenzene	4.6	2.0						7.77	20	
Methyl tert-butyl ether (MTBE)	ND	2.0						0	20	
1,2,4-Trimethylbenzene	3.3	2.0						14.5	20	
1,3,5-Trimethylbenzene	3.8	2.0						8.92	20	
1,2-Dichloroethane (EDC)	ND	2.0						0	20	
1,2-Dibromoethane (EDB)	ND	2.0						0	20	
Naphthalene	ND	4.0						0	20	
1-Methylnaphthalene	ND	8.0						0	20	
2-Methylnaphthalene	ND	8.0						0	20	
Acetone	ND	20						0	20	
Bromobenzene	ND	2.0						0	20	
Bromodichloromethane	ND	2.0						0	20	
Bromoform	ND	2.0						0	20	
Bromomethane	ND	4.0						0	20	
2-Butanone	ND	20						0	20	
Carbon disulfide	ND	20						0	20	
Carbon tetrachloride	ND	2.0						0	20	
Chlorobenzene	ND	2.0						0	20	
Chloroethane	ND	4.0						0	20	
Chloroform	ND	2.0						0	20	
Chloromethane	ND	2.0						0	20	
2-Chlorotoluene	ND	2.0						0	20	
4-Chlorotoluene	ND	2.0						0	20	
cis-1,2-DCE	ND	2.0						0	20	
cis-1,3-Dichloropropene	ND	2.0						0	20	
1,2-Dibromo-3-chloropropane	ND	4.0						0	20	
Dibromochloromethane	ND	2.0						0	20	
Dibromomethane	ND	4.0						0	20	
1,2-Dichlorobenzene	ND	2.0						0	20	
1,3-Dichlorobenzene	ND	2.0						0	20	
1,4-Dichlorobenzene	ND	2.0						0	20	
Dichlorodifluoromethane	ND	2.0						0	20	
1,1-Dichloroethane	ND	2.0						0	20	
1,1-Dichloroethene	ND	2.0						0	20	
1,2-Dichloropropane	ND	2.0						0	20	
1,3-Dichloropropane	ND	2.0						0	20	
2,2-Dichloropropane	ND	2.0						0	20	

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#: **1901163**

16-Jan-19

Client: Harvest
Project: Florance

Sample ID	**1901163-001a dup**	SampType:	**DUP**	TestCode:	**EPA Method 8260B: Volatiles**
Client ID:	**Zone 2 Influent**	Batch ID:	**R56845**	RunNo:	**56845**
Prep Date:		Analysis Date:	**1/8/2019**	SeqNo:	**1902464** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	2.0						0	20	
Hexachlorobutadiene	ND	2.0						0	20	
2-Hexanone	ND	20						0	20	
Isopropylbenzene	ND	2.0						0	20	
4-Isopropyltoluene	ND	2.0						0	20	
4-Methyl-2-pentanone	ND	20						0	20	
Methylene chloride	ND	6.0						0	20	
n-Butylbenzene	ND	6.0						0	20	
n-Propylbenzene	ND	2.0						0	20	
sec-Butylbenzene	ND	2.0						0	20	
Styrene	ND	2.0						0	20	
tert-Butylbenzene	ND	2.0						0	20	
1,1,1,2-Tetrachloroethane	ND	2.0						0	20	
1,1,2,2-Tetrachloroethane	ND	2.0						0	20	
Tetrachloroethene (PCE)	ND	2.0						0	20	
trans-1,2-DCE	ND	2.0						0	20	
trans-1,3-Dichloropropene	ND	2.0						0	20	
1,2,3-Trichlorobenzene	ND	2.0						0	20	
1,2,4-Trichlorobenzene	ND	2.0						0	20	
1,1,1-Trichloroethane	ND	2.0						0	20	
1,1,2-Trichloroethane	ND	2.0						0	20	
Trichloroethene (TCE)	ND	2.0						0	20	
Trichlorofluoromethane	ND	2.0						0	20	
1,2,3-Trichloropropane	ND	4.0						0	20	
Vinyl chloride	ND	2.0						0	20	
Xylenes, Total	62	3.0						2.09	20	
Surr: Dibromofluoromethane	21		20.00		105	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	19		20.00		94.7	70	130	0	0	
Surr: Toluene-d8	22		20.00		109	70	130	0	0	
Surr: 4-Bromofluorobenzene	22		20.00		110	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 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: Harvest | Work Order Number: 1901163 | RcptNo: 1

Received By: **Anne Thorne** 1/5/2019 11:50:00 AM

Completed By: **Anne Thorne** 1/7/2019 1:12:14 PM

Reviewed By: JO 1/7/19

Labeled by: AT 01/07/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
4. Were all samples received at a temperature of >0° 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**

Chain-of-Custody Record

Client: Harvest Four Corners
Monica Sandoval
Mailing Address:

Phone #: 970-385-1096
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) PDF

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Florance
Project #:
Project Manager: Danny Burns-LTE
Monica Sandoval-Harvest
Sampler: Eric Carroll
On Ice: ☑ Yes ☐ No
Sample Temperature: 4.7 4.4 4.3

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. 1901163	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,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CO2	O2	8260 VOC's	Air Bubbles (Y or N)
1/4/19	1345	Air	Zone 2 Influent	2 Tedlar		001												X	X	X	

Analysis Request

Date: 1/4/19 Time: 1440 Relinquished by: Eric Carroll
Received by: Christy Walt Date: 1/4/19 Time: 1440

Date: 1/4/19 Time: 1811 Relinquished by: Christy Walt
Received by: Date: 01/05/19 Time: 1150

Remarks:
Please CC: dburns@ltenv.com
ecarroll@ltenv.com

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

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

February 12, 2019

Monica Sandoval

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

RE: Florance GC J 16A OrderNo.: 1902064

Dear Monica Sandoval:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/2/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Zone 04 Influent
Project: Florance GC J 16A
Collection Date: 1/31/2019 4:45:00 PM
Lab ID: 1902064-001 **Matrix:** AIR
Received Date: 2/2/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	22	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Toluene	110	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Ethylbenzene	11	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,2,4-Trimethylbenzene	11	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,3,5-Trimethylbenzene	11	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,2-Dichloroethane (EDC)	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,2-Dibromoethane (EDB)	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Naphthalene	ND	5.0		µg/L	25	2/11/2019 10:53:38 AM	A57627
1-Methylnaphthalene	ND	10		µg/L	25	2/11/2019 10:53:38 AM	A57627
2-Methylnaphthalene	ND	10		µg/L	25	2/11/2019 10:53:38 AM	A57627
Acetone	ND	25		µg/L	25	2/11/2019 10:53:38 AM	A57627
Bromobenzene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Bromodichloromethane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Bromoform	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Bromomethane	ND	5.0		µg/L	25	2/11/2019 10:53:38 AM	A57627
2-Butanone	ND	25		µg/L	25	2/11/2019 10:53:38 AM	A57627
Carbon disulfide	ND	25		µg/L	25	2/11/2019 10:53:38 AM	A57627
Carbon tetrachloride	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Chlorobenzene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Chloroethane	ND	5.0		µg/L	25	2/11/2019 10:53:38 AM	A57627
Chloroform	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Chloromethane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
2-Chlorotoluene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
4-Chlorotoluene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
cis-1,2-DCE	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
cis-1,3-Dichloropropene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	25	2/11/2019 10:53:38 AM	A57627
Dibromochloromethane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Dibromomethane	ND	5.0		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,2-Dichlorobenzene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,3-Dichlorobenzene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,4-Dichlorobenzene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Dichlorodifluoromethane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,1-Dichloroethane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,1-Dichloroethene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,2-Dichloropropane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,3-Dichloropropane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
2,2-Dichloropropane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Zone 04 Influent
Project: Florance GC J 16A
Collection Date: 1/31/2019 4:45:00 PM
Lab ID: 1902064-001 **Matrix:** AIR **Received Date:** 2/2/2019 10:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1-Dichloropropene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Hexachlorobutadiene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
2-Hexanone	ND	25		µg/L	25	2/11/2019 10:53:38 AM	A57627
Isopropylbenzene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
4-Isopropyltoluene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
4-Methyl-2-pentanone	ND	25		µg/L	25	2/11/2019 10:53:38 AM	A57627
Methylene chloride	ND	7.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
n-Butylbenzene	ND	7.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
n-Propylbenzene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
sec-Butylbenzene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Styrene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
tert-Butylbenzene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,1,1,2-Tetrachloroethane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,1,2,2-Tetrachloroethane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Tetrachloroethene (PCE)	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
trans-1,2-DCE	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
trans-1,3-Dichloropropene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,2,3-Trichlorobenzene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,2,4-Trichlorobenzene	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,1,1-Trichloroethane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,1,2-Trichloroethane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Trichloroethene (TCE)	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Trichlorofluoromethane	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
1,2,3-Trichloropropane	ND	5.0		µg/L	25	2/11/2019 10:53:38 AM	A57627
Vinyl chloride	ND	2.5		µg/L	25	2/11/2019 10:53:38 AM	A57627
Xylenes, Total	210	3.8		µg/L	25	2/11/2019 10:53:38 AM	A57627
Surr: Dibromofluoromethane	97.9	70-130		%Rec	25	2/11/2019 10:53:38 AM	A57627
Surr: 1,2-Dichloroethane-d4	88.0	70-130		%Rec	25	2/11/2019 10:53:38 AM	A57627
Surr: Toluene-d8	114	70-130		%Rec	25	2/11/2019 10:53:38 AM	A57627
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	25	2/11/2019 10:53:38 AM	A57627

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

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client:	Hall Environmental		
Project:	Not Indicated	**Report Date:**	02/08/19
Client Sample ID:	1902064-001B; Zone 04 Influent	**Collection Date:**	01/31/19 16:45
Location:		**Date Received:**	02/05/19
Lab ID:	G19020054-001	**Sampled By:**	Not Provided

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
NATURAL GAS CHROMATOGRAPHIC ANALYSIS REPORT					
Oxygen	21.357	Mol %		GPA 2261	02/08/19 10:57 / djb
Nitrogen	78.040	Mol %		GPA 2261	02/08/19 10:57 / djb
Carbon Dioxide	0.535	Mol %		GPA 2261	02/08/19 10:57 / djb
Hydrogen Sulfide	< 0.001	Mol %		GPA 2261	02/08/19 10:57 / djb
Methane	< 0.001	Mol %		GPA 2261	02/08/19 10:57 / djb
Ethane	< 0.001	Mol %		GPA 2261	02/08/19 10:57 / djb
Propane	< 0.001	Mol %		GPA 2261	02/08/19 10:57 / djb
Isobutane	< 0.001	Mol %		GPA 2261	02/08/19 10:57 / djb
n-Butane	< 0.001	Mol %		GPA 2261	02/08/19 10:57 / djb
Isopentane	0.002	Mol %		GPA 2261	02/08/19 10:57 / djb
n-Pentane	0.002	Mol %		GPA 2261	02/08/19 10:57 / djb
Hexanes plus	0.064	Mol %		GPA 2261	02/08/19 10:57 / djb
GPM @ STD COND/1000 CU.FT., MOISTURE FREE GAS					
GPM Ethane	< 0.0003	gal/MCF		GPA 2261	02/08/19 10:57 / djb
GPM Propane	< 0.0003	gal/MCF		GPA 2261	02/08/19 10:57 / djb
GPM Isobutane	< 0.0003	gal/MCF		GPA 2261	02/08/19 10:57 / djb
GPM n-Butane	< 0.0003	gal/MCF		GPA 2261	02/08/19 10:57 / djb
GPM Isopentane	0.0010	gal/MCF		GPA 2261	02/08/19 10:57 / djb
GPM n-Pentane	0.0010	gal/MCF		GPA 2261	02/08/19 10:57 / djb
GPM Hexanes plus	0.0280	gal/MCF		GPA 2261	02/08/19 10:57 / djb
GPM Pentanes plus	0.0290	gal/MCF		GPA 2261	02/08/19 10:57 / djb
GPM Total	0.0290	gal/MCF		GPA 2261	02/08/19 10:57 / djb
CALCULATED PROPERTIES					
Calculation Pressure Base	14.730	psia		GPA 2261	02/08/19 10:57 / djb
Calculation Temperature Base	60	°F		GPA 2261	02/08/19 10:57 / djb
Compressibility Factor, Z	1.0000	unitless		GPA 2261	02/08/19 10:57 / djb
Molecular Weight	28.99	unitless		GPA 2261	02/08/19 10:57 / djb
Pseudo-critical Pressure, psia	548	psia		GPA 2261	02/08/19 10:57 / djb
Pseudo-critical Temperature, deg R	241	deg R		GPA 2261	02/08/19 10:57 / djb
Specific Gravity (air=1.000)	1.004	unitless		GPA 2261	02/08/19 10:57 / djb
Gross BTU per cu ft @ std cond, dry	3.42	BTU/cu ft		GPA 2261	02/08/19 10:57 / djb
Gross BTU per cu ft @ std cond, wet	3.36	BTU/cu ft		GPA 2261	02/08/19 10:57 / djb

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated

Report Date: 02/08/19
Work Order: G19020054

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261									Analytical Run: R248658
Lab ID: ICV-1902080733	Initial Calibration Verification Standard								02/08/19 07:34
Oxygen	0.387	Mol %	0.001	81	75	110			
Nitrogen	4.997	Mol %	0.001	99	90	110			
Carbon Dioxide	4.921	Mol %	0.001	99	90	110			
Hydrogen Sulfide	0.128	Mol %	0.001	127	100	136			
Methane	73.094	Mol %	0.001	100	90	110			
Ethane	5.022	Mol %	0.001	101	90	110			
Propane	5.140	Mol %	0.001	101	90	110			
Isobutane	2.023	Mol %	0.001	100	90	110			
n-Butane	1.999	Mol %	0.001	99	90	110			
Isopentane	0.996	Mol %	0.001	100	90	110			
n-Pentane	0.988	Mol %	0.001	99	90	110			
Hexanes plus	0.305	Mol %	0.001	101	90	110			
Lab ID: CCV-1902080859	Continuing Calibration Verification Standard								02/08/19 09:00
Oxygen	0.569	Mol %	0.001	95	90	110			
Nitrogen	1.244	Mol %	0.001	89	85	110			
Carbon Dioxide	0.973	Mol %	0.001	97	90	110			
Hydrogen Sulfide	0.025	Mol %	0.001	100	70	130			
Methane	93.594	Mol %	0.001	100	90	110			
Ethane	1.028	Mol %	0.001	102	90	110			
Propane	1.014	Mol %	0.001	101	90	110			
Isobutane	0.505	Mol %	0.001	101	90	110			
n-Butane	0.492	Mol %	0.001	98	90	110			
Isopentane	0.202	Mol %	0.001	101	90	110			
n-Pentane	0.199	Mol %	0.001	99	90	110			
Hexanes plus	0.155	Mol %	0.001	102	90	110			
Lab ID: CCV-1902081149	Continuing Calibration Verification Standard								02/08/19 11:49
Oxygen	0.581	Mol %	0.001	97	90	110			
Nitrogen	1.284	Mol %	0.001	91	85	110			
Carbon Dioxide	0.972	Mol %	0.001	97	90	110			
Hydrogen Sulfide	0.026	Mol %	0.001	104	70	130			
Methane	93.557	Mol %	0.001	100	90	110			
Ethane	1.023	Mol %	0.001	102	90	110			
Propane	1.007	Mol %	0.001	101	90	110			
Isobutane	0.505	Mol %	0.001	101	90	110			
n-Butane	0.492	Mol %	0.001	98	90	110			
Isopentane	0.201	Mol %	0.001	100	90	110			
n-Pentane	0.198	Mol %	0.001	99	90	110			
Hexanes plus	0.154	Mol %	0.001	102	90	110			
Method: GPA 2261									Batch: R248658

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated

Report Date: 02/08/19
Work Order: G19020054

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261								Batch: R248658	
Lab ID: G19020054-001ADUP	Sample Duplicate				Run: Varian GC_190208A			02/08/19 11:02	
Oxygen	21.353	Mol %	0.001				0.0	10	
Nitrogen	78.041	Mol %	0.001				0.0	10	
Carbon Dioxide	0.536	Mol %	0.001				0.2	10	
Hydrogen Sulfide	< 0.001	Mol %	0.001					10	
Methane	< 0.001	Mol %	0.001					10	
Ethane	< 0.001	Mol %	0.001					10	
Propane	< 0.001	Mol %	0.001					10	
Isobutane	< 0.001	Mol %	0.001					10	
n-Butane	< 0.001	Mol %	0.001					10	
Isopentane	0.002	Mol %	0.001				0.0	10	
n-Pentane	0.002	Mol %	0.001				0.0	10	
Hexanes plus	0.066	Mol %	0.001				3.1	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902064**

12-Feb-19

Client: Harvest

Project: Florance GC J 16A

Sample ID	**1902064-001a dup**	SampType:	**DUP**	TestCode:	**EPA Method 8260B: Volatiles**
Client ID:	**Zone 04 Influent**	Batch ID:	**A57627**	RunNo:	**57627**
Prep Date:		Analysis Date:	**2/11/2019**	SeqNo:	**1928377** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	2.5						10.5	20	
Toluene	110	2.5						1.55	20	
Ethylbenzene	11	2.5						0.389	20	
Methyl tert-butyl ether (MTBE)	ND	2.5						0	20	
1,2,4-Trimethylbenzene	12	2.5						12.2	20	
1,3,5-Trimethylbenzene	12	2.5						12.0	20	
1,2-Dichloroethane (EDC)	ND	2.5						0	20	
1,2-Dibromoethane (EDB)	ND	2.5						0	20	
Naphthalene	ND	5.0						0	20	
1-Methylnaphthalene	ND	10						0	20	
2-Methylnaphthalene	ND	10						0	20	
Acetone	ND	25						0	20	
Bromobenzene	ND	2.5						0	20	
Bromodichloromethane	ND	2.5						0	20	
Bromoform	ND	2.5						0	20	
Bromomethane	ND	5.0						0	20	
2-Butanone	ND	25						0	20	
Carbon disulfide	ND	25						0	20	
Carbon tetrachloride	ND	2.5						0	20	
Chlorobenzene	ND	2.5						0	20	
Chloroethane	ND	5.0						0	20	
Chloroform	ND	2.5						0	20	
Chloromethane	ND	2.5						0	20	
2-Chlorotoluene	ND	2.5						0	20	
4-Chlorotoluene	ND	2.5						0	20	
cis-1,2-DCE	ND	2.5						0	20	
cis-1,3-Dichloropropene	ND	2.5						0	20	
1,2-Dibromo-3-chloropropane	ND	5.0						0	20	
Dibromochloromethane	ND	2.5						0	20	
Dibromomethane	ND	5.0						0	20	
1,2-Dichlorobenzene	ND	2.5						0	20	
1,3-Dichlorobenzene	ND	2.5						0	20	
1,4-Dichlorobenzene	ND	2.5						0	20	
Dichlorodifluoromethane	ND	2.5						0	20	
1,1-Dichloroethane	ND	2.5						0	20	
1,1-Dichloroethene	ND	2.5						0	20	
1,2-Dichloropropane	ND	2.5						0	20	
1,3-Dichloropropane	ND	2.5						0	20	
2,2-Dichloropropane	ND	2.5						0	20	

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#: **1902064**

12-Feb-19

Client: Harvest

Project: Florance GC J 16A

Sample ID	**1902064-001a dup**	SampType:	**DUP**	TestCode:	**EPA Method 8260B: Volatiles**
Client ID:	**Zone 04 Influent**	Batch ID:	**A57627**	RunNo:	**57627**
Prep Date:		Analysis Date:	**2/11/2019**	SeqNo:	**1928377** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	2.5						0	20	
Hexachlorobutadiene	ND	2.5						0	20	
2-Hexanone	ND	25						0	20	
Isopropylbenzene	ND	2.5						0	20	
4-Isopropyltoluene	ND	2.5						0	20	
4-Methyl-2-pentanone	ND	25						0	20	
Methylene chloride	ND	7.5						0	20	
n-Butylbenzene	ND	7.5						0	20	
n-Propylbenzene	ND	2.5						0	20	
sec-Butylbenzene	ND	2.5						0	20	
Styrene	ND	2.5						0	20	
tert-Butylbenzene	ND	2.5						0	20	
1,1,1,2-Tetrachloroethane	ND	2.5						0	20	
1,1,2,2-Tetrachloroethane	ND	2.5						0	20	
Tetrachloroethene (PCE)	ND	2.5						0	20	
trans-1,2-DCE	ND	2.5						0	20	
trans-1,3-Dichloropropene	ND	2.5						0	20	
1,2,3-Trichlorobenzene	ND	2.5						0	20	
1,2,4-Trichlorobenzene	ND	2.5						0	20	
1,1,1-Trichloroethane	ND	2.5						0	20	
1,1,2-Trichloroethane	ND	2.5						0	20	
Trichloroethene (TCE)	ND	2.5						0	20	
Trichlorofluoromethane	ND	2.5						0	20	
1,2,3-Trichloropropane	ND	5.0						0	20	
Vinyl chloride	ND	2.5						0	20	
Xylenes, Total	210	3.8						0.0890	20	
Surr: Dibromofluoromethane	24		25.00		94.1	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	21		25.00		83.2	70	130	0	0	
Surr: Toluene-d8	29		25.00		117	70	130	0	0	
Surr: 4-Bromofluorobenzene	26		25.00		105	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 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: **Harvest** Work Order Number: **1902064** RcptNo: **1**

Received By: **Victoria Zellar** **2/2/2019 10:55:00 AM** Victoria Zellar

Completed By: **Leah Baca** **2/4/2019 9:38:52 AM** Leah Baca

Reviewed By: VVZ 2/4/19

Labeled by DAD 2/4/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° 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: DAD 2/4/19

Special Handling (if applicable)

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

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

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

Chain-of-Custody Record

Client: Harvest Four Corners
Attn. Monica Sandoval
Mailing Address:

Phone #:
email or Fax#: msandoval@harvestmidstream.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) PDF

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Florance GC J16A
Project #:
Project Manager: Monica Sandoval LTE-Danny Burns
Sampler: D Burns
On Ice: ☒ Yes ☐ No
Sample Temperature 2.0-(-0.4)=1.6°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. 1902064	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)	CO_2	O_2	8260 Full List VOCs		Air Bubbles (Y or N)
1-31-19	1645	Air	Zone 04 Influent	2 Tedlar	—	-001												X	X	X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
2-1-19	1225			2/1/19	1225
2/1/19	1630		Courier VIZ 2/2/19	2/2/19	1055

Remarks: cc: dburns@ltenv.com ecarroll@ltenv.com

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

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

March 11, 2019

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

RE: Florance GC J 16A OrderNo.: 1903079

Dear Kijun Hong:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/2/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Zone 1 Influent
Project: Florance GC J 16A
Collection Date: 3/1/2019 2:30:00 PM
Lab ID: 1903079-001 **Matrix:** AIR
Received Date: 3/2/2019 9:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Toluene	1.7	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Ethylbenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,2,4-Trimethylbenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,3,5-Trimethylbenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Naphthalene	ND	2.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1-Methylnaphthalene	ND	4.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
2-Methylnaphthalene	ND	4.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Acetone	ND	10		µg/L	10	3/6/2019 11:43:11 AM	W58170
Bromobenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Bromodichloromethane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Bromoform	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Bromomethane	ND	2.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
2-Butanone	ND	10		µg/L	10	3/6/2019 11:43:11 AM	W58170
Carbon disulfide	ND	10		µg/L	10	3/6/2019 11:43:11 AM	W58170
Carbon tetrachloride	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Chlorobenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Chloroethane	ND	2.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Chloroform	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Chloromethane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
2-Chlorotoluene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
4-Chlorotoluene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
cis-1,2-DCE	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
cis-1,3-Dichloropropene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Dibromochloromethane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Dibromomethane	ND	2.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,2-Dichlorobenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,3-Dichlorobenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,4-Dichlorobenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Dichlorodifluoromethane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,1-Dichloroethane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,1-Dichloroethene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,2-Dichloropropane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,3-Dichloropropane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
2,2-Dichloropropane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Zone 1 Influent
Project: Florance GC J 16A
Collection Date: 3/1/2019 2:30:00 PM
Lab ID: 1903079-001 **Matrix:** AIR
Received Date: 3/2/2019 9:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1-Dichloropropene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Hexachlorobutadiene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
2-Hexanone	ND	10		µg/L	10	3/6/2019 11:43:11 AM	W58170
Isopropylbenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
4-Isopropyltoluene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
4-Methyl-2-pentanone	ND	10		µg/L	10	3/6/2019 11:43:11 AM	W58170
Methylene chloride	ND	3.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
n-Butylbenzene	ND	3.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
n-Propylbenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
sec-Butylbenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Styrene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
tert-Butylbenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Tetrachloroethene (PCE)	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
trans-1,2-DCE	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
trans-1,3-Dichloropropene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,2,3-Trichlorobenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,2,4-Trichlorobenzene	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,1,1-Trichloroethane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,1,2-Trichloroethane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Trichloroethene (TCE)	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Trichlorofluoromethane	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
1,2,3-Trichloropropane	ND	2.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Vinyl chloride	ND	1.0		µg/L	10	3/6/2019 11:43:11 AM	W58170
Xylenes, Total	6.7	1.5		µg/L	10	3/6/2019 11:43:11 AM	W58170
Surr: Dibromofluoromethane	99.7	70-130		%Rec	10	3/6/2019 11:43:11 AM	W58170
Surr: 1,2-Dichloroethane-d4	88.3	70-130		%Rec	10	3/6/2019 11:43:11 AM	W58170
Surr: Toluene-d8	113	70-130		%Rec	10	3/6/2019 11:43:11 AM	W58170
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	10	3/6/2019 11:43:11 AM	W58170

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

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client:	Hall Environmental		
Project:	Not Indicated	**Report Date:**	03/08/19
Client Sample ID:	1903079-001B; Zone1 Influent	**Collection Date:**	03/01/19 14:30
Location:		**Date Received:**	03/05/19
Lab ID:	G19030067-001	**Sampled By:**	Not Provided

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
NATURAL GAS CHROMATOGRAPHIC ANALYSIS REPORT					
Oxygen	20.821	Mol %		GPA 2261	03/08/19 09:55 / blb
Nitrogen	78.179	Mol %		GPA 2261	03/08/19 09:55 / blb
Carbon Dioxide	0.995	Mol %		GPA 2261	03/08/19 09:55 / blb
Hydrogen Sulfide	< 0.001	Mol %		GPA 2261	03/08/19 09:55 / blb
Methane	< 0.001	Mol %		GPA 2261	03/08/19 09:55 / blb
Ethane	< 0.001	Mol %		GPA 2261	03/08/19 09:55 / blb
Propane	< 0.001	Mol %		GPA 2261	03/08/19 09:55 / blb
Isobutane	< 0.001	Mol %		GPA 2261	03/08/19 09:55 / blb
n-Butane	< 0.001	Mol %		GPA 2261	03/08/19 09:55 / blb
Isopentane	< 0.001	Mol %		GPA 2261	03/08/19 09:55 / blb
n-Pentane	< 0.001	Mol %		GPA 2261	03/08/19 09:55 / blb
Hexanes plus	0.005	Mol %		GPA 2261	03/08/19 09:55 / blb
GPM @ STD COND/1000 CU.FT., MOISTURE FREE GAS					
GPM Ethane	< 0.0003	gal/MCF		GPA 2261	03/08/19 09:55 / blb
GPM Propane	< 0.0003	gal/MCF		GPA 2261	03/08/19 09:55 / blb
GPM Isobutane	< 0.0003	gal/MCF		GPA 2261	03/08/19 09:55 / blb
GPM n-Butane	< 0.0003	gal/MCF		GPA 2261	03/08/19 09:55 / blb
GPM Isopentane	< 0.0004	gal/MCF		GPA 2261	03/08/19 09:55 / blb
GPM n-Pentane	< 0.0004	gal/MCF		GPA 2261	03/08/19 09:55 / blb
GPM Hexanes plus	0.0020	gal/MCF		GPA 2261	03/08/19 09:55 / blb
GPM Pentanes plus	0.0020	gal/MCF		GPA 2261	03/08/19 09:55 / blb
GPM Total	0.0020	gal/MCF		GPA 2261	03/08/19 09:55 / blb
CALCULATED PROPERTIES					
Calculation Pressure Base	14.730	psia		GPA 2261	03/08/19 09:55 / blb
Calculation Temperature Base	60	°F		GPA 2261	03/08/19 09:55 / blb
Compressibility Factor, Z	1.0000	unitless		GPA 2261	03/08/19 09:55 / blb
Molecular Weight	29.00	unitless		GPA 2261	03/08/19 09:55 / blb
Pseudo-critical Pressure, psia	549	psia		GPA 2261	03/08/19 09:55 / blb
Pseudo-critical Temperature, deg R	242	deg R		GPA 2261	03/08/19 09:55 / blb
Specific Gravity (air=1.000)	1.004	unitless		GPA 2261	03/08/19 09:55 / blb
Gross BTU per cu ft @ std cond, dry	0.23	BTU/cu ft		GPA 2261	03/08/19 09:55 / blb
Gross BTU per cu ft @ std cond, wet	0.23	BTU/cu ft		GPA 2261	03/08/19 09:55 / blb

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated

Report Date: 03/08/19
Work Order: G19030067

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261									Analytical Run: R249091
Lab ID: ICV-1903080924	Initial Calibration Verification Standard								03/08/19 09:23
Oxygen	0.398	Mol %	0.001	83	75	110			
Nitrogen	5.059	Mol %	0.001	100	90	110			
Carbon Dioxide	4.919	Mol %	0.001	99	90	110			
Hydrogen Sulfide	0.125	Mol %	0.001	124	100	136			
Methane	73.057	Mol %	0.001	100	90	110			
Ethane	5.012	Mol %	0.001	101	90	110			
Propane	5.135	Mol %	0.001	101	90	110			
Isobutane	2.015	Mol %	0.001	100	90	110			
n-Butane	1.993	Mol %	0.001	99	90	110			
Isopentane	0.993	Mol %	0.001	99	90	110			
n-Pentane	0.987	Mol %	0.001	99	90	110			
Hexanes plus	0.307	Mol %	0.001	101	90	110			
Lab ID: CCV-1903080928	Continuing Calibration Verification Standard								03/08/19 09:29
Oxygen	0.603	Mol %	0.001	100	90	110			
Nitrogen	1.349	Mol %	0.001	96	85	110			
Carbon Dioxide	0.972	Mol %	0.001	97	90	110			
Hydrogen Sulfide	0.025	Mol %	0.001	100	70	130			
Methane	93.476	Mol %	0.001	100	90	110			
Ethane	1.024	Mol %	0.001	102	90	110			
Propane	1.009	Mol %	0.001	101	90	110			
Isobutane	0.502	Mol %	0.001	100	90	110			
n-Butane	0.489	Mol %	0.001	98	90	110			
Isopentane	0.200	Mol %	0.001	100	90	110			
n-Pentane	0.197	Mol %	0.001	98	90	110			
Hexanes plus	0.154	Mol %	0.001	102	90	110			
Lab ID: CCV-1903081540	Continuing Calibration Verification Standard								03/08/19 15:40
Oxygen	0.593	Mol %	0.001	99	90	110			
Nitrogen	1.316	Mol %	0.001	94	85	110			
Carbon Dioxide	0.970	Mol %	0.001	97	90	110			
Hydrogen Sulfide	0.025	Mol %	0.001	100	70	130			
Methane	93.497	Mol %	0.001	100	90	110			
Ethane	1.029	Mol %	0.001	102	90	110			
Propane	1.012	Mol %	0.001	101	90	110			
Isobutane	0.503	Mol %	0.001	100	90	110			
n-Butane	0.492	Mol %	0.001	98	90	110			
Isopentane	0.201	Mol %	0.001	100	90	110			
n-Pentane	0.199	Mol %	0.001	99	90	110			
Hexanes plus	0.163	Mol %	0.001	108	90	110			
Method: GPA 2261									Batch: R249091

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated

Report Date: 03/08/19
Work Order: G19030067

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261								Batch: R249091	
Lab ID: G19030067-001ADUP	Sample Duplicate				Run: Varian GC_190308A			03/08/19 10:00	
Oxygen	20.820	Mol %	0.001				0.0	10	
Nitrogen	78.179	Mol %	0.001				0.0	10	
Carbon Dioxide	0.996	Mol %	0.001				0.1	10	
Hydrogen Sulfide	< 0.001	Mol %	0.001					10	
Methane	< 0.001	Mol %	0.001					10	
Ethane	< 0.001	Mol %	0.001					10	
Propane	< 0.001	Mol %	0.001					10	
Isobutane	< 0.001	Mol %	0.001					10	
n-Butane	< 0.001	Mol %	0.001					10	
Isopentane	< 0.001	Mol %	0.001					10	
n-Pentane	< 0.001	Mol %	0.001					10	
Hexanes plus	0.005	Mol %	0.001				0.0	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903079**

11-Mar-19

Client: Harvest

Project: Florance GC J 16A

Sample ID: **1903079-001a dup** SampType: **DUP** TestCode: **EPA Method 8260B: Volatiles**

Client ID: **Zone 1 Influent** Batch ID: **W58170** RunNo: **58170**

Prep Date: Analysis Date: **3/6/2019** SeqNo: **1950779** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0						0	20	
Toluene	1.7	1.0						3.17	20	
Ethylbenzene	ND	1.0						0	20	
Methyl tert-butyl ether (MTBE)	ND	1.0						0	20	
1,2,4-Trimethylbenzene	ND	1.0						0	20	
1,3,5-Trimethylbenzene	ND	1.0						0	20	
1,2-Dichloroethane (EDC)	ND	1.0						0	20	
1,2-Dibromoethane (EDB)	ND	1.0						0	20	
Naphthalene	ND	2.0						0	20	
1-Methylnaphthalene	ND	4.0						0	20	
2-Methylnaphthalene	ND	4.0						0	20	
Acetone	ND	10						0	20	
Bromobenzene	ND	1.0						0	20	
Bromodichloromethane	ND	1.0						0	20	
Bromoform	ND	1.0						0	20	
Bromomethane	ND	2.0						0	20	
2-Butanone	ND	10						0	20	
Carbon disulfide	ND	10						0	20	
Carbon tetrachloride	ND	1.0						0	20	
Chlorobenzene	ND	1.0						0	20	
Chloroethane	ND	2.0						0	20	
Chloroform	ND	1.0						0	20	
Chloromethane	ND	1.0						0	20	
2-Chlorotoluene	ND	1.0						0	20	
4-Chlorotoluene	ND	1.0						0	20	
cis-1,2-DCE	ND	1.0						0	20	
cis-1,3-Dichloropropene	ND	1.0						0	20	
1,2-Dibromo-3-chloropropane	ND	2.0						0	20	
Dibromochloromethane	ND	1.0						0	20	
Dibromomethane	ND	2.0						0	20	
1,2-Dichlorobenzene	ND	1.0						0	20	
1,3-Dichlorobenzene	ND	1.0						0	20	
1,4-Dichlorobenzene	ND	1.0						0	20	
Dichlorodifluoromethane	ND	1.0						0	20	
1,1-Dichloroethane	ND	1.0						0	20	
1,1-Dichloroethene	ND	1.0						0	20	
1,2-Dichloropropane	ND	1.0						0	20	
1,3-Dichloropropane	ND	1.0						0	20	
2,2-Dichloropropane	ND	1.0						0	20	

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#: **1903079**

11-Mar-19

Client: Harvest

Project: Florance GC J 16A

Sample ID: **1903079-001a dup** SampType: **DUP** TestCode: **EPA Method 8260B: Volatiles**

Client ID: **Zone 1 Influent** Batch ID: **W58170** RunNo: **58170**

Prep Date: Analysis Date: **3/6/2019** SeqNo: **1950779** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0						0	20	
Hexachlorobutadiene	ND	1.0						0	20	
2-Hexanone	ND	10						0	20	
Isopropylbenzene	ND	1.0						0	20	
4-Isopropyltoluene	ND	1.0						0	20	
4-Methyl-2-pentanone	ND	10						0	20	
Methylene chloride	3.3	3.0						200	20	R
n-Butylbenzene	ND	3.0						0	20	
n-Propylbenzene	ND	1.0						0	20	
sec-Butylbenzene	ND	1.0						0	20	
Styrene	ND	1.0						0	20	
tert-Butylbenzene	ND	1.0						0	20	
1,1,1,2-Tetrachloroethane	ND	1.0						0	20	
1,1,2,2-Tetrachloroethane	ND	1.0						0	20	
Tetrachloroethene (PCE)	ND	1.0						0	20	
trans-1,2-DCE	ND	1.0						0	20	
trans-1,3-Dichloropropene	ND	1.0						0	20	
1,2,3-Trichlorobenzene	ND	1.0						0	20	
1,2,4-Trichlorobenzene	ND	1.0						0	20	
1,1,1-Trichloroethane	ND	1.0						0	20	
1,1,2-Trichloroethane	ND	1.0						0	20	
Trichloroethene (TCE)	ND	1.0						0	20	
Trichlorofluoromethane	ND	1.0						0	20	
1,2,3-Trichloropropane	ND	2.0						0	20	
Vinyl chloride	ND	1.0						0	20	
Xylenes, Total	6.8	1.5						0.350	20	
Surr: Dibromofluoromethane	9.5		10.00		94.8	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	8.6		10.00		85.5	70	130	0	0	
Surr: Toluene-d8	11		10.00		107	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		106	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 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: **Harvest** Work Order Number: **1903079** RcptNo: **1**

Received By: **Desiree Dominguez** **3/2/2019 9:25:00 AM** DD

Completed By: **Victoria Zellar** **3/4/2019 9:16:49 AM** Victoria Zellar labeled by YG 3/4/19

Reviewed By: JO 3/4/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° 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 ☑	YG 3/4/19
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	N/A	Good	Yes			

Chain-of-Custody Record

Client: Harvest Four corners
Clara Cardova
Mailing Address: 1755 Arroyo Dr.
Bloomfield, NM
Phone #: 505-632-4475
email or Fax#: ccardova@harvestmidstream.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☒ EDD (Type) PDF

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Florance GC J #16A
Project #:
Project Manager: Clara - Harvest
Danny Burns - LTE
Sampler: Eric Carroll
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): N/A

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 Name	Container Type and #	Preservative Type	HEAL No. 1903079
3/1/19	1430	Air	Zone 1 Influent	2 Tedlar		-001

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	8260 Full VOC's	CO_2	O_2			
										X	X	X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/1/19	1600				3/1/19	1600
3/1/19	1750			Courier	3/2/19	9:25

Remarks: Please cc: dburns@ltenv.com
ecarroll@ltenv.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: www.hallenvironmental.com

April 01, 2019

Monica Sandoval

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

RE: Florance GCJ 16A OrderNo.: 1903796

Dear Monica Sandoval:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/16/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Zone 2 Influent
Project: Florance GCJ 16A
Collection Date: 3/14/2019 3:00:00 PM
Lab ID: 1903796-001 **Matrix:** AIR
Received Date: 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	8.0	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Toluene	15	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Ethylbenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Methyl tert-butyl ether (MTBE)	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,2,4-Trimethylbenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,3,5-Trimethylbenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,2-Dichloroethane (EDC)	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,2-Dibromoethane (EDB)	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Naphthalene	ND	2.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1-Methylnaphthalene	ND	4.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
2-Methylnaphthalene	ND	4.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Acetone	ND	10	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Bromobenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Bromodichloromethane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Bromoform	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Bromomethane	ND	2.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
2-Butanone	ND	10	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Carbon disulfide	ND	10	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Carbon tetrachloride	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Chlorobenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Chloroethane	ND	2.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Chloroform	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Chloromethane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
2-Chlorotoluene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
4-Chlorotoluene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
cis-1,2-DCE	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
cis-1,3-Dichloropropene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,2-Dibromo-3-chloropropane	ND	2.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Dibromochloromethane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Dibromomethane	ND	2.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,2-Dichlorobenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,3-Dichlorobenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,4-Dichlorobenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Dichlorodifluoromethane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,1-Dichloroethane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,1-Dichloroethene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,2-Dichloropropane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,3-Dichloropropane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
2,2-Dichloropropane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Zone 2 Influent
Project: Florance GCJ 16A
Collection Date: 3/14/2019 3:00:00 PM
Lab ID: 1903796-001 **Matrix:** AIR
Received Date: 3/16/2019 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1-Dichloropropene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Hexachlorobutadiene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
2-Hexanone	ND	10	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Isopropylbenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
4-Isopropyltoluene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
4-Methyl-2-pentanone	79	10	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Methylene chloride	ND	3.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
n-Butylbenzene	ND	3.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
n-Propylbenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
sec-Butylbenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Styrene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
tert-Butylbenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,1,1,2-Tetrachloroethane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,1,2,2-Tetrachloroethane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Tetrachloroethene (PCE)	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
trans-1,2-DCE	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
trans-1,3-Dichloropropene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,2,3-Trichlorobenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,2,4-Trichlorobenzene	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,1,1-Trichloroethane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,1,2-Trichloroethane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Trichloroethene (TCE)	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Trichlorofluoromethane	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
1,2,3-Trichloropropane	ND	2.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Vinyl chloride	ND	1.0	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Xylenes, Total	9.2	1.5	D	µg/L	10	3/27/2019 11:01:15 AM	A58683
Surr: Dibromofluoromethane	106	70-130	D	%Rec	10	3/27/2019 11:01:15 AM	A58683
Surr: 1,2-Dichloroethane-d4	89.0	70-130	D	%Rec	10	3/27/2019 11:01:15 AM	A58683
Surr: Toluene-d8	108	70-130	D	%Rec	10	3/27/2019 11:01:15 AM	A58683
Surr: 4-Bromofluorobenzene	96.6	70-130	D	%Rec	10	3/27/2019 11:01:15 AM	A58683

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

Qualifiers:

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

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated
Client Sample ID: 1903796-001B; Zone 2 Influent
Location:
Lab ID: G19030271-001

Report Date: 03/26/19
Collection Date: 03/14/19 15:00
Date Received: 03/19/19
Sampled By: Not Provided

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
NATURAL GAS CHROMATOGRAPHIC ANALYSIS REPORT					
Oxygen	22.136	Mol %		GPA 2261	03/26/19 12:54 / blb
Nitrogen	77.610	Mol %		GPA 2261	03/26/19 12:54 / blb
Carbon Dioxide	0.232	Mol %		GPA 2261	03/26/19 12:54 / blb
Hydrogen Sulfide	< 0.001	Mol %		GPA 2261	03/26/19 12:54 / blb
Methane	< 0.001	Mol %		GPA 2261	03/26/19 12:54 / blb
Ethane	< 0.001	Mol %		GPA 2261	03/26/19 12:54 / blb
Propane	< 0.001	Mol %		GPA 2261	03/26/19 12:54 / blb
Isobutane	< 0.001	Mol %		GPA 2261	03/26/19 12:54 / blb
n-Butane	< 0.001	Mol %		GPA 2261	03/26/19 12:54 / blb
Isopentane	0.001	Mol %		GPA 2261	03/26/19 12:54 / blb
n-Pentane	0.002	Mol %		GPA 2261	03/26/19 12:54 / blb
Hexanes plus	0.019	Mol %		GPA 2261	03/26/19 12:54 / blb
GPM @ STD COND/1000 CU.FT., MOISTURE FREE GAS					
GPM Ethane	< 0.0003	gal/MCF		GPA 2261	03/26/19 12:54 / blb
GPM Propane	< 0.0003	gal/MCF		GPA 2261	03/26/19 12:54 / blb
GPM Isobutane	< 0.0003	gal/MCF		GPA 2261	03/26/19 12:54 / blb
GPM n-Butane	< 0.0003	gal/MCF		GPA 2261	03/26/19 12:54 / blb
GPM Isopentane	0.0010	gal/MCF		GPA 2261	03/26/19 12:54 / blb
GPM n-Pentane	0.0010	gal/MCF		GPA 2261	03/26/19 12:54 / blb
GPM Hexanes plus	0.0080	gal/MCF		GPA 2261	03/26/19 12:54 / blb
GPM Pentanes plus	0.0090	gal/MCF		GPA 2261	03/26/19 12:54 / blb
GPM Total	0.0090	gal/MCF		GPA 2261	03/26/19 12:54 / blb
CALCULATED PROPERTIES					
Calculation Pressure Base	14.730	psia		GPA 2261	03/26/19 12:54 / blb
Calculation Temperature Base	60	°F		GPA 2261	03/26/19 12:54 / blb
Compressibility Factor, Z	1.0000	unitless		GPA 2261	03/26/19 12:54 / blb
Molecular Weight	28.95	unitless		GPA 2261	03/26/19 12:54 / blb
Pseudo-critical Pressure, psia	548	psia		GPA 2261	03/26/19 12:54 / blb
Pseudo-critical Temperature, deg R	240	deg R		GPA 2261	03/26/19 12:54 / blb
Specific Gravity (air=1.000)	1.002	unitless		GPA 2261	03/26/19 12:54 / blb
Gross BTU per cu ft @ std cond, dry	1.09	BTU/cu ft		GPA 2261	03/26/19 12:54 / blb
Gross BTU per cu ft @ std cond, wet	1.07	BTU/cu ft		GPA 2261	03/26/19 12:54 / blb

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated

Report Date: 03/26/19
Work Order: G19030271

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261									Analytical Run: R249370
Lab ID: ICV-1903261230	Initial Calibration Verification Standard								03/26/19 12:31
Oxygen	0.393	Mol %	0.001	82	75	110			
Nitrogen	5.047	Mol %	0.001	100	90	110			
Carbon Dioxide	4.902	Mol %	0.001	99	90	110			
Hydrogen Sulfide	0.125	Mol %	0.001	124	100	136			
Methane	73.066	Mol %	0.001	100	90	110			
Ethane	5.015	Mol %	0.001	101	90	110			
Propane	5.139	Mol %	0.001	101	90	110			
Isobutane	2.022	Mol %	0.001	100	90	110			
n-Butane	1.999	Mol %	0.001	99	90	110			
Isopentane	0.996	Mol %	0.001	100	90	110			
n-Pentane	0.989	Mol %	0.001	99	90	110			
Hexanes plus	0.307	Mol %	0.001	101	90	110			
Lab ID: CCV-1903261235	Continuing Calibration Verification Standard								03/26/19 12:35
Oxygen	0.586	Mol %	0.001	97	90	110			
Nitrogen	1.305	Mol %	0.001	93	85	110			
Carbon Dioxide	0.964	Mol %	0.001	96	90	110			
Hydrogen Sulfide	0.022	Mol %	0.001	88	70	130			
Methane	93.565	Mol %	0.001	100	90	110			
Ethane	1.023	Mol %	0.001	102	90	110			
Propane	1.006	Mol %	0.001	101	90	110			
Isobutane	0.503	Mol %	0.001	100	90	110			
n-Butane	0.488	Mol %	0.001	98	90	110			
Isopentane	0.198	Mol %	0.001	99	90	110			
n-Pentane	0.193	Mol %	0.001	96	90	110			
Hexanes plus	0.147	Mol %	0.001	97	90	110			
Lab ID: CCV-1903261302	Continuing Calibration Verification Standard								03/26/19 13:03
Oxygen	0.595	Mol %	0.001	99	90	110			
Nitrogen	1.334	Mol %	0.001	95	85	110			
Carbon Dioxide	0.963	Mol %	0.001	96	90	110			
Hydrogen Sulfide	0.024	Mol %	0.001	96	70	130			
Methane	93.504	Mol %	0.001	100	90	110			
Ethane	1.023	Mol %	0.001	102	90	110			
Propane	1.010	Mol %	0.001	101	90	110			
Isobutane	0.504	Mol %	0.001	101	90	110			
n-Butane	0.491	Mol %	0.001	98	90	110			
Isopentane	0.201	Mol %	0.001	100	90	110			
n-Pentane	0.197	Mol %	0.001	98	90	110			
Hexanes plus	0.154	Mol %	0.001	102	90	110			
Method: GPA 2261									Batch: R249370

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated

Report Date: 03/26/19
Work Order: G19030271

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261								Batch: R249370	
Lab ID: G19030271-001ADUP	Sample Duplicate				Run: Varian GC_190326A			03/26/19 12:58	
Oxygen	22.139	Mol %	0.001				0.0	10	
Nitrogen	77.608	Mol %	0.001				0.0	10	
Carbon Dioxide	0.232	Mol %	0.001				0.0	10	
Hydrogen Sulfide	< 0.001	Mol %	0.001					10	
Methane	< 0.001	Mol %	0.001					10	
Ethane	< 0.001	Mol %	0.001					10	
Propane	< 0.001	Mol %	0.001					10	
Isobutane	< 0.001	Mol %	0.001					10	
n-Butane	< 0.001	Mol %	0.001					10	
Isopentane	0.001	Mol %	0.001				0.0	10	
n-Pentane	0.002	Mol %	0.001				0.0	10	
Hexanes plus	0.018	Mol %	0.001				5.4	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903796**

01-Apr-19

Client: Harvest

Project: Florance GCJ 16A

Sample ID: **1903796-001a dup** SampType: **DUP** TestCode: **EPA Method 8260B: Volatiles**

Client ID: **Zone 2 Influent** Batch ID: **A58683** RunNo: **58683**

Prep Date: Analysis Date: **3/27/2019** SeqNo: **1970772** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	7.3	1.0						9.41	20	D
Toluene	14	1.0						7.08	20	D
Ethylbenzene	ND	1.0						0	20	D
Methyl tert-butyl ether (MTBE)	ND	1.0						0	20	D
1,2,4-Trimethylbenzene	ND	1.0						0	20	D
1,3,5-Trimethylbenzene	ND	1.0						0	20	D
1,2-Dichloroethane (EDC)	ND	1.0						0	20	D
1,2-Dibromoethane (EDB)	ND	1.0						0	20	D
Naphthalene	ND	2.0						0	20	D
1-Methylnaphthalene	ND	4.0						0	20	D
2-Methylnaphthalene	ND	4.0						0	20	D
Acetone	ND	10						0	20	D
Bromobenzene	ND	1.0						0	20	D
Bromodichloromethane	ND	1.0						0	20	D
Bromoform	ND	1.0						0	20	D
Bromomethane	ND	2.0						0	20	D
2-Butanone	ND	10						0	20	D
Carbon disulfide	ND	10						0	20	D
Carbon tetrachloride	ND	1.0						0	20	D
Chlorobenzene	ND	1.0						0	20	D
Chloroethane	ND	2.0						0	20	D
Chloroform	ND	1.0						0	20	D
Chloromethane	ND	1.0						0	20	D
2-Chlorotoluene	ND	1.0						0	20	D
4-Chlorotoluene	ND	1.0						0	20	D
cis-1,2-DCE	ND	1.0						0	20	D
cis-1,3-Dichloropropene	ND	1.0						0	20	D
1,2-Dibromo-3-chloropropane	ND	2.0						0	20	D
Dibromochloromethane	ND	1.0						0	20	D
Dibromomethane	ND	2.0						0	20	D
1,2-Dichlorobenzene	ND	1.0						0	20	D
1,3-Dichlorobenzene	ND	1.0						0	20	D
1,4-Dichlorobenzene	ND	1.0						0	20	D
Dichlorodifluoromethane	ND	1.0						0	20	D
1,1-Dichloroethane	ND	1.0						0	20	D
1,1-Dichloroethene	ND	1.0						0	20	D
1,2-Dichloropropane	ND	1.0						0	20	D
1,3-Dichloropropane	ND	1.0						0	20	D
2,2-Dichloropropane	ND	1.0						0	20	D

Qualifiers:

- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- 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 at testcode

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903796**

01-Apr-19

Client: Harvest

Project: Florance GCJ 16A

Sample ID: **1903796-001a dup** SampType: **DUP** TestCode: **EPA Method 8260B: Volatiles**

Client ID: **Zone 2 Influent** Batch ID: **A58683** RunNo: **58683**

Prep Date: Analysis Date: **3/27/2019** SeqNo: **1970772** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0						0	20	D
Hexachlorobutadiene	ND	1.0						0	20	D
2-Hexanone	ND	10						0	20	D
Isopropylbenzene	ND	1.0						0	20	D
4-Isopropyltoluene	ND	1.0						0	20	D
4-Methyl-2-pentanone	ND	10						200	20	RD
Methylene chloride	ND	3.0						0	20	D
n-Butylbenzene	ND	3.0						0	20	D
n-Propylbenzene	ND	1.0						0	20	D
sec-Butylbenzene	ND	1.0						0	20	D
Styrene	ND	1.0						0	20	D
tert-Butylbenzene	ND	1.0						0	20	D
1,1,1,2-Tetrachloroethane	ND	1.0						0	20	D
1,1,2,2-Tetrachloroethane	ND	1.0						0	20	D
Tetrachloroethene (PCE)	ND	1.0						0	20	D
trans-1,2-DCE	ND	1.0						0	20	D
trans-1,3-Dichloropropene	ND	1.0						0	20	D
1,2,3-Trichlorobenzene	ND	1.0						0	20	D
1,2,4-Trichlorobenzene	ND	1.0						0	20	D
1,1,1-Trichloroethane	ND	1.0						0	20	D
1,1,2-Trichloroethane	ND	1.0						0	20	D
Trichloroethene (TCE)	ND	1.0						0	20	D
Trichlorofluoromethane	ND	1.0						0	20	D
1,2,3-Trichloropropane	ND	2.0						0	20	D
Vinyl chloride	ND	1.0						0	20	D
Xylenes, Total	8.8	1.5						5.07	20	D
Surr: Dibromofluoromethane	10		10.00		104	70	130	0	0	D
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.6	70	130	0	0	D
Surr: Toluene-d8	10		10.00		105	70	130	0	0	D
Surr: 4-Bromofluorobenzene	9.7		10.00		97.0	70	130	0	0	D

Qualifiers:

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

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: **Harvest** Work Order Number: **1903796** RcptNo: **1**

Received By: **Erin Melendrez** **3/16/2019 10:50:00 AM**

Completed By: **Leah Baca** **3/18/2019 9:39:37 AM**

Reviewed By: LB 3/18/19

Labeled by DAD 3/18/19

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: DAD 3/18/19

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

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

Chain-of-Custody Record

Client: Harvest Four Corners

Monica Sandaval

Mailing Address:

Phone #:

email or Fax#: mSandaval@harvest.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☒ EDD (Type) PDF

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Florance GCJ #16A

Project #:

Project Manager: Monica Sandaval - Harvest

Eric Carroll - LTE

Sampler: Eric Carroll

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): N/A

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 Name	Container Type and #	Preservative Type	HEAL No. 1903796	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)	8260 VOC	O_2	CO_2			
3/14/19	1500	Air	Zone 2 Influent	2 Tedlar		-001											X	X	X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/15/19	1500	Eric Carroll	Chad Walt		3/15/19	1560
3/15/19	1811	Christine Walters		Via: Courier	3/16/19	1050

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

April 08, 2019

Monica Sandoval

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

RE: Florance OrderNo.: 1904019

Dear Monica Sandoval:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/30/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Zone 3 Influent
Project: Florance
Collection Date: 3/28/2019 3:00:00 PM
Lab ID: 1904019-001 **Matrix:** AIR
Received Date: 3/30/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	3.6	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Toluene	14	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Ethylbenzene	1.3	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Methyl tert-butyl ether (MTBE)	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,2,4-Trimethylbenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,3,5-Trimethylbenzene	1.5	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,2-Dichloroethane (EDC)	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,2-Dibromoethane (EDB)	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Naphthalene	ND	2.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1-Methylnaphthalene	ND	4.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
2-Methylnaphthalene	ND	4.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Acetone	ND	10	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Bromobenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Bromodichloromethane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Bromoform	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Bromomethane	ND	2.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
2-Butanone	ND	10	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Carbon disulfide	ND	10	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Carbon tetrachloride	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Chlorobenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Chloroethane	ND	2.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Chloroform	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Chloromethane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
2-Chlorotoluene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
4-Chlorotoluene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
cis-1,2-DCE	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
cis-1,3-Dichloropropene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,2-Dibromo-3-chloropropane	ND	2.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Dibromochloromethane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Dibromomethane	ND	2.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,2-Dichlorobenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,3-Dichlorobenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,4-Dichlorobenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Dichlorodifluoromethane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,1-Dichloroethane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,1-Dichloroethene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,2-Dichloropropane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,3-Dichloropropane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
2,2-Dichloropropane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Zone 3 Influent
Project: Florance
Collection Date: 3/28/2019 3:00:00 PM
Lab ID: 1904019-001 **Matrix:** AIR
Received Date: 3/30/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1-Dichloropropene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Hexachlorobutadiene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
2-Hexanone	ND	10	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Isopropylbenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
4-Isopropyltoluene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
4-Methyl-2-pentanone	ND	10	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Methylene chloride	ND	3.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
n-Butylbenzene	ND	3.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
n-Propylbenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
sec-Butylbenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Styrene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
tert-Butylbenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,1,1,2-Tetrachloroethane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,1,2,2-Tetrachloroethane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Tetrachloroethene (PCE)	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
trans-1,2-DCE	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
trans-1,3-Dichloropropene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,2,3-Trichlorobenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,2,4-Trichlorobenzene	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,1,1-Trichloroethane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,1,2-Trichloroethane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Trichloroethene (TCE)	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Trichlorofluoromethane	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
1,2,3-Trichloropropane	ND	2.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Vinyl chloride	ND	1.0	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Xylenes, Total	35	1.5	D	µg/L	10	4/5/2019 11:48:01 AM	A58957
Surr: Dibromofluoromethane	107	70-130	D	%Rec	10	4/5/2019 11:48:01 AM	A58957
Surr: 1,2-Dichloroethane-d4	89.7	70-130	D	%Rec	10	4/5/2019 11:48:01 AM	A58957
Surr: Toluene-d8	104	70-130	D	%Rec	10	4/5/2019 11:48:01 AM	A58957
Surr: 4-Bromofluorobenzene	94.0	70-130	D	%Rec	10	4/5/2019 11:48:01 AM	A58957

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

Qualifiers:

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

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated
Client Sample ID: 1904019-001B; Zone 3 Influent
Location:
Lab ID: G19040074-001

Report Date: 04/05/19
Collection Date: 03/28/19 15:00
Date Received: 04/02/19
Sampled By: Not Provided

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
NATURAL GAS CHROMATOGRAPHIC ANALYSIS REPORT					
Oxygen	22.128	Mol %		GPA 2261	04/04/19 09:29 / djb
Nitrogen	77.641	Mol %		GPA 2261	04/04/19 09:29 / djb
Carbon Dioxide	0.226	Mol %		GPA 2261	04/04/19 09:29 / djb
Hydrogen Sulfide	< 0.001	Mol %		GPA 2261	04/04/19 09:29 / djb
Methane	< 0.001	Mol %		GPA 2261	04/04/19 09:29 / djb
Ethane	< 0.001	Mol %		GPA 2261	04/04/19 09:29 / djb
Propane	< 0.001	Mol %		GPA 2261	04/04/19 09:29 / djb
Isobutane	< 0.001	Mol %		GPA 2261	04/04/19 09:29 / djb
n-Butane	< 0.001	Mol %		GPA 2261	04/04/19 09:29 / djb
Isopentane	< 0.001	Mol %		GPA 2261	04/04/19 09:29 / djb
n-Pentane	< 0.001	Mol %		GPA 2261	04/04/19 09:29 / djb
Hexanes plus	0.005	Mol %		GPA 2261	04/04/19 09:29 / djb
GPM @ STD COND/1000 CU.FT., MOISTURE FREE GAS					
GPM Ethane	< 0.0003	gal/MCF		GPA 2261	04/04/19 09:29 / djb
GPM Propane	< 0.0003	gal/MCF		GPA 2261	04/04/19 09:29 / djb
GPM Isobutane	< 0.0003	gal/MCF		GPA 2261	04/04/19 09:29 / djb
GPM n-Butane	< 0.0003	gal/MCF		GPA 2261	04/04/19 09:29 / djb
GPM Isopentane	< 0.0004	gal/MCF		GPA 2261	04/04/19 09:29 / djb
GPM n-Pentane	< 0.0004	gal/MCF		GPA 2261	04/04/19 09:29 / djb
GPM Hexanes plus	0.0020	gal/MCF		GPA 2261	04/04/19 09:29 / djb
GPM Pentanes plus	0.0020	gal/MCF		GPA 2261	04/04/19 09:29 / djb
GPM Total	0.0020	gal/MCF		GPA 2261	04/04/19 09:29 / djb
CALCULATED PROPERTIES					
Calculation Pressure Base	14.730	psia		GPA 2261	04/04/19 09:29 / djb
Calculation Temperature Base	60	°F		GPA 2261	04/04/19 09:29 / djb
Compressibility Factor, Z	1.0000	unitless		GPA 2261	04/04/19 09:29 / djb
Molecular Weight	28.93	unitless		GPA 2261	04/04/19 09:29 / djb
Pseudo-critical Pressure, psia	548	psia		GPA 2261	04/04/19 09:29 / djb
Pseudo-critical Temperature, deg R	240	deg R		GPA 2261	04/04/19 09:29 / djb
Specific Gravity (air=1.000)	1.002	unitless		GPA 2261	04/04/19 09:29 / djb
Gross BTU per cu ft @ std cond, dry	0.26	BTU/cu ft		GPA 2261	04/04/19 09:29 / djb
Gross BTU per cu ft @ std cond, wet	0.26	BTU/cu ft		GPA 2261	04/04/19 09:29 / djb

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated

Report Date: 04/05/19
Work Order: G19040074

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261									Analytical Run: R249515
Lab ID: ICV-1904040838	Initial Calibration Verification Standard								04/04/19 08:39
Oxygen	0.397	Mol %	0.001	83	75	110			
Nitrogen	5.016	Mol %	0.001	100	90	110			
Carbon Dioxide	4.923	Mol %	0.001	99	90	110			
Hydrogen Sulfide	0.127	Mol %	0.001	126	100	136			
Methane	73.039	Mol %	0.001	100	90	110			
Ethane	5.023	Mol %	0.001	101	90	110			
Propane	5.140	Mol %	0.001	101	90	110			
Isobutane	2.027	Mol %	0.001	100	90	110			
n-Butane	2.006	Mol %	0.001	99	90	110			
Isopentane	0.999	Mol %	0.001	100	90	110			
n-Pentane	0.994	Mol %	0.001	99	90	110			
Hexanes plus	0.309	Mol %	0.001	102	90	110			
Lab ID: CCV-1904040855	Continuing Calibration Verification Standard								04/04/19 08:56
Oxygen	0.598	Mol %	0.001	99	90	110			
Nitrogen	1.322	Mol %	0.001	94	85	110			
Carbon Dioxide	0.970	Mol %	0.001	97	90	110			
Hydrogen Sulfide	0.025	Mol %	0.001	100	70	130			
Methane	93.485	Mol %	0.001	100	90	110			
Ethane	1.028	Mol %	0.001	102	90	110			
Propane	1.014	Mol %	0.001	101	90	110			
Isobutane	0.507	Mol %	0.001	101	90	110			
n-Butane	0.494	Mol %	0.001	99	90	110			
Isopentane	0.202	Mol %	0.001	101	90	110			
n-Pentane	0.199	Mol %	0.001	99	90	110			
Hexanes plus	0.156	Mol %	0.001	103	90	110			
Lab ID: CCV-1904041101	Continuing Calibration Verification Standard								04/04/19 11:01
Oxygen	0.595	Mol %	0.001	99	90	110			
Nitrogen	1.307	Mol %	0.001	93	85	110			
Carbon Dioxide	0.971	Mol %	0.001	97	90	110			
Hydrogen Sulfide	0.026	Mol %	0.001	104	70	130			
Methane	93.514	Mol %	0.001	100	90	110			
Ethane	1.026	Mol %	0.001	102	90	110			
Propane	1.010	Mol %	0.001	101	90	110			
Isobutane	0.504	Mol %	0.001	101	90	110			
n-Butane	0.492	Mol %	0.001	98	90	110			
Isopentane	0.201	Mol %	0.001	100	90	110			
n-Pentane	0.198	Mol %	0.001	99	90	110			
Hexanes plus	0.156	Mol %	0.001	103	90	110			
Method: GPA 2261									Batch: R249515

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated

Report Date: 04/05/19
Work Order: G19040074

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261									Batch: R249515
Lab ID: G19040074-001ADUP	Sample Duplicate				Run: Varian GC_190404A				04/04/19 09:34
Oxygen	22.126	Mol %	0.001				0.0	10	
Nitrogen	77.642	Mol %	0.001				0.0	10	
Carbon Dioxide	0.227	Mol %	0.001				0.4	10	
Hydrogen Sulfide	< 0.001	Mol %	0.001					10	
Methane	< 0.001	Mol %	0.001					10	
Ethane	< 0.001	Mol %	0.001					10	
Propane	< 0.001	Mol %	0.001					10	
Isobutane	< 0.001	Mol %	0.001					10	
n-Butane	< 0.001	Mol %	0.001					10	
Isopentane	< 0.001	Mol %	0.001					10	
n-Pentane	< 0.001	Mol %	0.001					10	
Hexanes plus	0.005	Mol %	0.001				0.0	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904019**

08-Apr-19

Client: Harvest

Project: Florance

Sample ID: **1904019-001a dup** SampType: **DUP** TestCode: **EPA Method 8260B: Volatiles**

Client ID: **Zone 3 Influent** Batch ID: **A58957** RunNo: **58957**

Prep Date: Analysis Date: **4/5/2019** SeqNo: **1982999** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.1	1.0						15.7	20	D
Toluene	15	1.0						3.36	20	D
Ethylbenzene	1.5	1.0						12.6	20	D
Methyl tert-butyl ether (MTBE)	ND	1.0						0	20	D
1,2,4-Trimethylbenzene	ND	1.0						0	20	D
1,3,5-Trimethylbenzene	1.8	1.0						16.3	20	D
1,2-Dichloroethane (EDC)	ND	1.0						0	20	D
1,2-Dibromoethane (EDB)	ND	1.0						0	20	D
Naphthalene	ND	2.0						0	20	D
1-Methylnaphthalene	ND	4.0						0	20	D
2-Methylnaphthalene	ND	4.0						0	20	D
Acetone	ND	10						0	20	D
Bromobenzene	ND	1.0						0	20	D
Bromodichloromethane	ND	1.0						0	20	D
Bromoform	ND	1.0						0	20	D
Bromomethane	ND	2.0						0	20	D
2-Butanone	ND	10						0	20	D
Carbon disulfide	ND	10						0	20	D
Carbon tetrachloride	ND	1.0						0	20	D
Chlorobenzene	ND	1.0						0	20	D
Chloroethane	ND	2.0						0	20	D
Chloroform	ND	1.0						0	20	D
Chloromethane	ND	1.0						0	20	D
2-Chlorotoluene	ND	1.0						0	20	D
4-Chlorotoluene	ND	1.0						0	20	D
cis-1,2-DCE	ND	1.0						0	20	D
cis-1,3-Dichloropropene	ND	1.0						0	20	D
1,2-Dibromo-3-chloropropane	ND	2.0						0	20	D
Dibromochloromethane	ND	1.0						0	20	D
Dibromomethane	ND	2.0						0	20	D
1,2-Dichlorobenzene	ND	1.0						0	20	D
1,3-Dichlorobenzene	ND	1.0						0	20	D
1,4-Dichlorobenzene	ND	1.0						0	20	D
Dichlorodifluoromethane	ND	1.0						0	20	D
1,1-Dichloroethane	ND	1.0						0	20	D
1,1-Dichloroethene	ND	1.0						0	20	D
1,2-Dichloropropane	ND	1.0						0	20	D
1,3-Dichloropropane	ND	1.0						0	20	D
2,2-Dichloropropane	ND	1.0						0	20	D

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904019**

08-Apr-19

Client: Harvest

Project: Florance

Sample ID: **1904019-001a dup** SampType: **DUP** TestCode: **EPA Method 8260B: Volatiles**

Client ID: **Zone 3 Influent** Batch ID: **A58957** RunNo: **58957**

Prep Date: Analysis Date: **4/5/2019** SeqNo: **1982999** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0						0	20	D
Hexachlorobutadiene	ND	1.0						0	20	D
2-Hexanone	ND	10						0	20	D
Isopropylbenzene	ND	1.0						0	20	D
4-Isopropyltoluene	ND	1.0						0	20	D
4-Methyl-2-pentanone	ND	10						0	20	D
Methylene chloride	ND	3.0						0	20	D
n-Butylbenzene	ND	3.0						0	20	D
n-Propylbenzene	ND	1.0						0	20	D
sec-Butylbenzene	ND	1.0						0	20	D
Styrene	ND	1.0						0	20	D
tert-Butylbenzene	ND	1.0						0	20	D
1,1,1,2-Tetrachloroethane	ND	1.0						0	20	D
1,1,2,2-Tetrachloroethane	ND	1.0						0	20	D
Tetrachloroethene (PCE)	ND	1.0						0	20	D
trans-1,2-DCE	ND	1.0						0	20	D
trans-1,3-Dichloropropene	ND	1.0						0	20	D
1,2,3-Trichlorobenzene	ND	1.0						0	20	D
1,2,4-Trichlorobenzene	ND	1.0						0	20	D
1,1,1-Trichloroethane	ND	1.0						0	20	D
1,1,2-Trichloroethane	ND	1.0						0	20	D
Trichloroethene (TCE)	ND	1.0						0	20	D
Trichlorofluoromethane	ND	1.0						0	20	D
1,2,3-Trichloropropane	ND	2.0						0	20	D
Vinyl chloride	ND	1.0						0	20	D
Xylenes, Total	38	1.5						9.02	20	D
Surr: Dibromofluoromethane	11		10.00		109	70	130	0	0	D
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.5	70	130	0	0	D
Surr: Toluene-d8	11		10.00		106	70	130	0	0	D
Surr: 4-Bromofluorobenzene	9.2		10.00		92.4	70	130	0	0	D

Qualifiers:

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

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: Harvest | Work Order Number: 1904019 | RcptNo: 1

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

Completed By: **Victoria Zellar** 4/1/2019 10:25:42 AM Victoria Zellar

Reviewed By: ENM 4/1/19 labeled by DAD 4/1/19

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: DAD 4/1/19

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			
2	1.0	Good	Yes			
3	1.0	Good	Yes			

Chain-of-Custody Record

Client: Harvest Four Corners

Monica Sandaval

Mailing Address:

Phone #: 970-385-1096

email or Fax#: MSandaval@harvest.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☒ EDD (Type)

Turn-Around Time:

☒ Standard ☐ **Rush**

Project Name: Florance

Project #:

Project Manager: Monica - Harvest

Danny Burns - LTE

Sampler: Eric Carroll

On Ice: ☒ Yes ☐ No

# of Coolers: 3

Cooler Temp(including CF): 1.0°C ea

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. 1904019	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)	8260 Full	CO_2	O_2			
3/28/19	1500	Air	Zone 3 Influent	2 Tedlar		-001											X	X	X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/29/19	1500	Eric Carroll	Chad Walls		3/29/19	1580
3/29/19	1840	Chad Walls			03/30/19	0920

Remarks:

Please cc: dburns@ltenv.com

ecarroll@ltenv.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.