

4Q 2019

SVE/MPE  
Report

**From:** [Smith, Cory, EMNRD](#)  
**To:** [Monica Smith](#); [Kijun Hong](#)  
**Cc:** [Brooke Herb](#); ["Daniel Burns"](#)  
**Subject:** RE: Harvest Midstream - Florance GC J 16A - 2019 4th Qtr Remediation Report  
**Date:** Monday, March 2, 2020 1:52:00 PM  
**Attachments:** [image002.png](#)  
[image003.png](#)  
[image004.png](#)

---

Monica/Kijun

OCD Has reviewed the 4Q 2019 SVE/MPE Report

Harvest is not complying with the Following previous Condition of Approval;

- "Williams will maintain a SVE runtime greater than or equal to 90% per quarter."
- "Williams will submit to OCD District III a quarterly update report detailing remediation operations the report will include at a minimum.
  - a. Summary of remediation activity for the quarter
  - b. SVE run time
  - c. SVE mass removal and product recovery
  - d. DPE volume removal and product recovery**
  - e. Amount of Liquids captured from the concrete trap/Secondary Seep tank
  - f. Gas sample Analysis"

Please perform any repairs/Replacement of equipment to maintain the required run time. Please Email Me when repairs/replacement has been completed. The replacement needs to be completed no later than Q1 2020.

Please ensure that DPE and product recovery are measured for Q1 2020 and going forward.

All other conditions of approval remain the same, the Q4 report will be uploaded to the online incident#.

Cory Smith  
Environmental Specialist  
Oil Conservation Division  
Energy, Minerals, & Natural Resources  
1000 Rio Brazos, Aztec, NM 87410  
(505)334-6178 ext 115  
[cory.smith@state.nm.us](mailto:cory.smith@state.nm.us)

---

**From:** Daniel Burns <[dburns@ltenv.com](mailto:dburns@ltenv.com)>  
**Sent:** Friday, January 31, 2020 1:43 PM  
**To:** Smith, Cory, EMNRD <[Cory.Smith@state.nm.us](mailto:Cory.Smith@state.nm.us)>

**Cc:** Kijun Hong <khong@harvestmidstream.com>; Monica Smith <msmith@harvestmidstream.com>;  
Brooke Herb <bherb@ltenv.com>

**Subject:** [EXT] Harvest Midstream - Florance GC J 16A - 2019 4th Qtr Remediation Report

Cory,

Please see the attached report regarding remediation operations at the Florance GC J 16A during the 4<sup>th</sup> quarter of 2019. Let us know if you have any questions or comments.

Florance Gas Com J16A  
4th Quarter 2019 Remediation System Operation Report  
Incident# NCS1629854256  
Remediation Permit Number 3RP-364

Thank you,



Danny Burns  
Project Geologist  
701.570.4727 *cell*  
970.385.1096 *office*  
848 East Second Avenue Durango, CO 81301  
[www.ltenv.com](http://www.ltenv.com)



Think before you print. [Click for our email disclosure.](#)

January 30, 2020

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

**RE: Quarterly Remediation System Operation and Monitoring Report**  
**Remediation Permit Number 3RP-364**  
**Florance Gas Com J No. 16A**  
**API # 30-045-21790**  
**Incident # NCS1629854256**  
**Harvest Four Corners, LLC**  
**San Juan County, New Mexico**

Reviewed 3/2/2020

Cory  
Operator Not Follow Previous Conditions  
of Approval, See Email at Front



Dear Mr. Smith:

The following report provides a quarterly summary of remediation system operation and monitoring (O&M) completed during the fourth quarter of 2019 at the Florance Gas Com J No. 16A (GC J#16A) (Site) (Remediation Permit Number 3RP-364) located in San Juan County, New Mexico. The activity included in this report is for the period from October 1, 2019 through December 18, 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.

As stated in the *2018 Annual Groundwater and Remediation Update Report* submitted in June 2019, the quarterly remediation summary reports also include the quarterly groundwater sampling events data and summaries.





## 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 bi-weekly system monitoring has been conducted from system startup through the fourth quarter 2019. The results of these efforts are summarized in tables attached to this report including the following information through the final site visit for the quarter conducted on December 18, 2019.

### Vapor Recovery

- The run time for the remediation system listed in Table 1 indicates an average run time for the fourth quarter of 65 percent (%), with a cumulative overall run time of 90%. Temporary system operation interruptions occurred due to routine maintenance requirements, monthly LNAPL gauging, and groundwater sampling activities. One of the two high vacuum blowers seized up and required several days of system down time to diagnose, contributing to the decreased quarterly run time. The blower has been removed and returned to the manufacturer for repair. However, the maintenance issue has been addressed and average run time is expected to return to above 90% in the next quarter.
- 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. Four 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 benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United States Environmental Protection Agency (EPA) Method 8021B, and total petroleum hydrocarbons (TPH) by EPA Method 8015D, to Hall Environmental Analysis Laboratory (Hall) of Albuquerque, New Mexico. The analytical results from the fourth quarter of 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 2,487 pounds (lbs) of regulated VOCs. In the fourth quarter 2019, the calculated mass removal rate based on VOC data varied from 0.2 lbs per day to 1.0 lbs per day. A total of 40 lbs of regulated VOCs were removed during the fourth quarter of 2019 through December 18, 2019.

### **Fluid Recovery**

- Fluid recovery efforts are summarized in Table 4. During the fourth quarter of 2019 total fluid recovery was measured using a flow metering device. Since startup of the system through December 18, 2019, approximately 138,709 gallons of impacted groundwater and free product have been recovered. Recovered product and groundwater are mixed during extraction and the resulting product volume within the recovery tank is not measurable and has been removed from Table 4.
- 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 fourth quarter of 2019. The specific zones and period of operation are indicated in this table.

### **CONCRETE TRAP/SECONDARY SEEP MONITORING**

During the fourth quarter of 2019, the collection sump associated with the seep areas and collection piping were examined for fluid recovery during scheduled O&M visits. Approximately 750 gallons of fluid were removed from the seep collection tank in December 2019. The increase of accumulating liquids in the seep recovery tank are likely a result from recent precipitation events and stormwater runoff in the concrete trap. No measurable phase separated hydrocarbons (PSH) were observed in the seep collection tank, but a sheen was observed on top of the fluids inside of the seep collection tank.

### **GROUNDWATER MONITORING**

Groundwater monitoring activities were conducted at the Site on December 5 and 6, 2019. LTE measured groundwater elevations and investigated the presence of PSH in all monitoring wells. Groundwater samples were collected from all monitoring wells that did not contain PSH and had sufficient water to sample.

### **Water and PSH Level Measurements**

Prior to collecting any groundwater measurements, the MPE system was shutdown 48 hours in advance to allow groundwater elevations to stabilize. Groundwater level monitoring included recording depth to groundwater and/or PSH in all existing monitoring wells with an oil/water interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with





de-ionized water prior to each measurement. Groundwater elevations are summarized in Table 6.

### Groundwater Contour Maps

LTE used existing top-of-casing well elevations and measured groundwater elevations to draft groundwater elevation contours and determine groundwater flow direction in December 2019 (Figure 2). Contours were inferred based on groundwater elevations obtained and observations of physical characteristics at the Site (topography, proximity to springs, etc.).

### Groundwater Sampling

Groundwater samples were collected from monitoring wells that did not contain PSH. Groundwater samples were submitted under strict chain-of-custody protocol to Hall for analysis of BTEX by EPA Method 8021B. Groundwater samples were collected using the volume of water in the monitoring wells to calculate a minimum of three well casing volumes of groundwater and were purged from each well using a new disposable polyethylene bailer, or until the well was purged dry. LTE used a YSI 556 hand-held multi-probe water quality field meter to record pH, electric conductivity (EC), and temperature of the groundwater during purging. Monitoring wells were purged until these properties stabilized, or until the well was purged dry.

### Results

Groundwater elevations measured during site monitoring event in December 2019 indicated a general southeast trending gradient toward the natural seeps and an unnamed, second-order tributary of the San Juan River. However, localized topography and geology, including previously excavated and backfill material may contribute to variations in groundwater elevations and flow. Figure 2 depicts groundwater elevations and estimated groundwater flow direction. Figure 3 depicts groundwater analytical results and PSH thickness for the December 2019 monitoring events. A summary of measured depths to groundwater and PSH thickness is presented in Table 6. During the fourth quarter 2019 monitoring event, PSH was measurable in seven monitoring wells and PSH was observed in two additional monitoring wells during purging. Measurable product thickness ranged from 0.02 feet in MW-15 to 0.81 feet in MW19.

A total of 22 groundwater samples were collected from the following monitoring wells: SB03, SB04, SB13, SB15, SB16, SB19, MW-4, MW-6, MW-8, MW-9, MW-10, MW-11, MW-13, MW-14, MW-17, MW-18, MW-20, MW-21, MW-22, MW-23, MW-24, and MW-25. Results for monitoring wells SB04, SB13, SB15, SB16, MW-4, MW-6, MW-8, MW-9, MW-11, MW-14, MW-17, MW-18, MW-20, MW-21, MW-22, MW-23, MW-24 and MW-25 did not exceed the NMWQQC standards for any constituent of BETX during the December 2019 sampling event. Benzene concentrations exceeding the NMWQQC standards ranged from 44 micrograms per liter ( $\mu\text{g/L}$ ) in SB03 to 4,200  $\mu\text{g/L}$  in SB19. A toluene concentration of 1,700  $\mu\text{g/L}$  in SB19 exceeded the NMWQQC





standard. Ethylbenzene concentrations did not exceed the NMWQQC standard in December 2019. Total xylene concentrations exceeding the NMWQQC standards ranged from 730 µg/L in MW-13 to 2,500 µg/L in SB19.

Table 7 summarizes groundwater analytical results and Figure 3 depicts groundwater analytical results for the December 2019 monitoring events. Laboratory analytical reports are included as Attachment 1.

## **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 first quarter of 2020. Sampling will continue to comply with the NMOCD Conditions of Approval.

During the first quarter of 2020, the following will be completed:

- Bi-weekly (every other week) system operation monitoring including cycling operations between the four zones;
- During bi-weekly O&M 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;
- LNAPL will be bailed out of MW-19 during site visits and free product recovery socks will be placed in the well in the interim;
- One influent air extraction sample per operational zone, per quarter will be analyzed for BTEX and TPH; and
- When influent air extraction samples are not collected, a photoionization detector (PID) 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 made based on these data. Groundwater monitoring results will be provided in the upcoming first quarterly 2020 report.

LTE recommends the following reduced groundwater monitoring schedule with the semi-annual events scheduled for second and fourth quarters and annual events during the fourth quarter:

- Reduce to annual sampling: SB04, SB15, SB16, MW-4, MW-8, MW-11, MW-14, and MW-17;
- Reduce to semi-annual sampling: SB19, MW-18, MW-22, and MW-24.

### Reporting

Quarterly system operation reports will continue to be prepared and submitted to NMOCD within 30 days following the end of each quarter and will continue to 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.
- Groundwater monitoring 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.

A blue ink signature of Daniel Burns.

Daniel Burns  
Project Geologist

A black ink signature of Chris Shephard.

Chris Shephard  
Chief Engineer

cc: Monica Sandoval, Harvest Four Corners, LLC





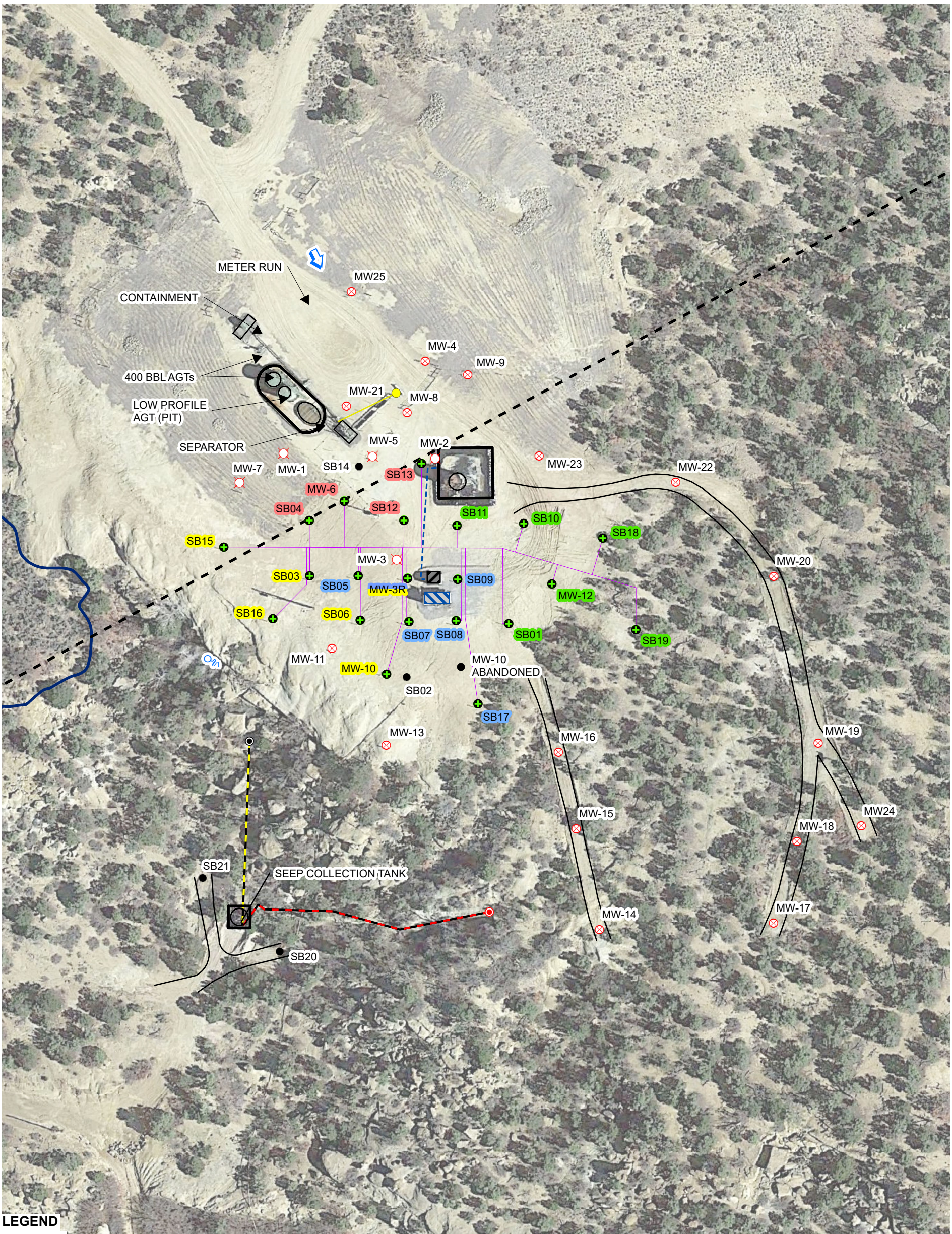
Attachments:

Figure 1	Remediation System Well Layout
Figure 2	December 2019 Groundwater Potentiometric Map
Figure 3	December 2019 Groundwater Analytical Results
Table 1	Remediation System Operational Run Time
Table 2	Extracted Air VOC Data - Fourth Quarter 2019
Table 3	Mass Removal Vapor Phase – Fourth Quarter 2019
Table 4	Fluid Recovery - Fourth Quarter 2019
Table 5	MPE System Operations – Fourth Quarter 2019
Table 6	Groundwater Elevation Summary
Table 7	Groundwater Analytical Results

Attachment 1 Laboratory Analytical Reports







LEGEND

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

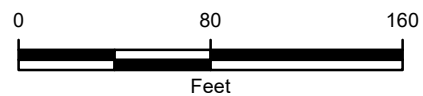


FIGURE 1  
REMEDATION SYSTEM LAYOUT  
FLORANCE GC J#16A  
UNIT P SEC 6 T30N R9W  
SAN JUAN COUNTY, NEW MEXICO  
HARVEST FOUR CORNERS, LLC





WELL ID  
GROUNDWATER ELEVATION SURVEY DATE  
ELEV: GROUNDWATER ELEVATION MEASURED IN FEET  
ABOVE MEAN SEA LEVEL  
PSH: PHASE-SEPARATED HYDROCARBON THICKNESS  
MEASURED IN FEET  
NM: NOT MEASURED  
NP: NO PRODUCT

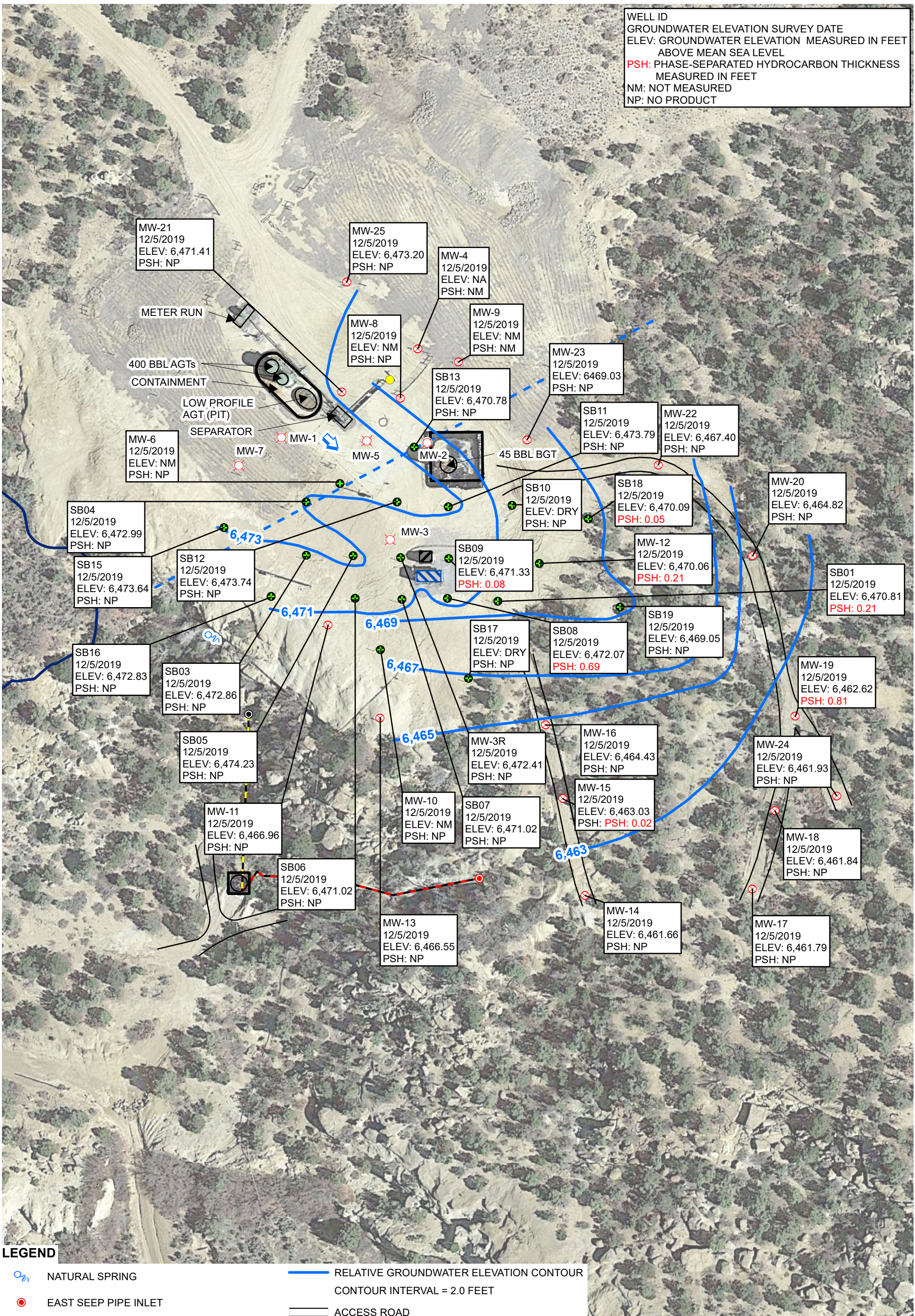
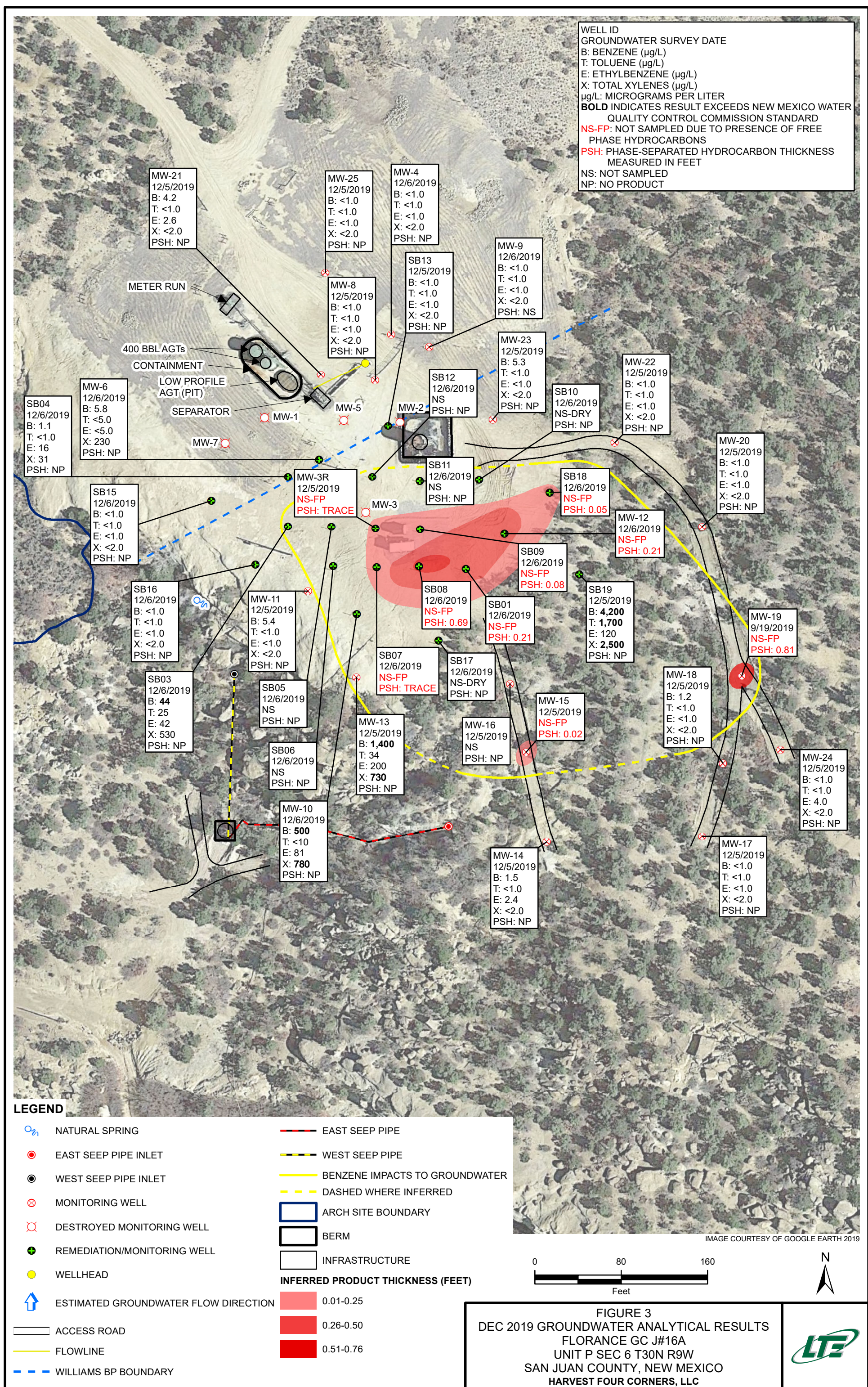


FIGURE 2  
DEC 2019 GROUNDWATER POTENTIOMETRIC MAP  
FLORANCE GC J#16A  
UNIT P SEC 6 T30N R9W  
SAN JUAN COUNTY, NEW MEXICO  
HARVEST FOUR CORNERS, LLC











**TABLE 1**  
**REMEDIATION SYSTEMS OPERATIONAL RUN-TIME**

**FLORANCE GCJ #16A**  
**SAN JUAN COUNTY, NEW MEXICO**  
**HARVEST FOUR CORNERS, LLC**

Date/Time of Reading	Blower Hour Meter Reading	Cumulative Run Time (%)	Quarterly Run Time (%)	Notes
5/4/18 9:00	42	START UP		
		Earlier Data Provided in Previous Quarterly Reports		
8/29/2019 11:15	10,884	94%	100%	Monthly Gauging
9/20/2019 13:45	11,347	93%	97%	Quarterly GW Monitoring for Q3 2019
10/2/2019 13:00	11,614	93%	100%	Blower oil changed, required quarterly O&M
10/31/2019 11:10	12,179	93%	82%	Shutdown system for depth to product/water gauging
11/14/2019 12:45	12,281	91%	66%	One blower shut down, system down diagnosis and potential repair options
11/22/2019 11:05	12,452	91%	69%	Shutdown system for depth to product/water gauging
12/6/2019 13:15	12,544	90%	61%	Quarterly GW Monitoring Q4 2019
12/18/2019 12:00	12,799	90%	65%	Shutdown system, prepare blower for removal for repair
<b>Average Q4 2019 Run Time</b>			<b>65%</b>	

**Notes:**

% - percent

Dashed line indicates quarter change

**TABLE 2**  
**EXTRACTED AIR VOC DATA - FOURTH QUARTER 2019**

**FLORANCE GCJ #16A**  
**SAN JUAN COUNTY, NEW MEXICO**  
**HARVEST FOUR CORNERS, LLC**

<b>Collection Date:</b>	<b>10/31/2019</b>	<b>11/14/2019</b>	<b>11/22/2019</b>	<b>12/6/2019</b>
<b>Collection Time:</b>	13:30	15:00	13:30	13:30
<b>Active Remediation Zone:</b>	1	2	3	4
<b>Benzene (µg/L)</b>	<0.10	4.9	0.31	1.8
<b>Toluene (µg/L)</b>	0.14	16	0.59	4.2
<b>Ethylbenzene (µg/L)</b>	<0.10	<0.50	<0.50	<0.50
<b>Xylenes, Total (µg/L)</b>	0.65	19	5.9	24
<b>Gasoline Range Organics (GRO)</b>	99	2,600	790	2,000
<b>Total VOCs (µg/L):</b>	0.79	39.9	6.8	30
<b>PID Reading (ppm)</b>	165	686	2,003	738

**Note:**

GRO - gasoline range organics

µg/L - micrograms per liter

ppm - parts per million

PID - photo-ionization detector

VOCs - volatile organic compounds

**TABLE 3**  
**MASS REMOVAL VAPOR PHASE - FOURTH QUARTER 2019**

**FLORANCE GCJ #16A**  
**SAN JUAN COUNTY, NEW MEXICO**  
**HARVEST FOUR CORNERS, LLC**

Date/Time	Influent VOCs (mg/m <sup>3</sup> )	Active Remediation Zone	Air Flow Rate (scfm)	Time Period (hr:min:sec)	Time Period (min)	VOC Mass Removed (lbs)	Gal Removed (@0.755 g/cm <sup>3</sup> )	Mass Removal Rate (lbs/day)	Mass Removal Rate (ton/yr)
9/20/19 13:45	31.23	4	261	527:15:00	31,635	17.9	2.8	0.8	0.1
10/31/19 13:10	0.79	1	220	983:25:00	59,005	30.0	4.8	0.7	0.1
11/14/19 14:30	39.9	2	268	337:20:00	20,240	0.2	0.0	0.02	0.0
11/22/19 13:30	6.8	3	272	191:00:00	11,460	7.6	1.2	1.0	0.2
12/6/19 13:20	30.0	4	306	335:50:00	20,150	2.3	0.4	0.2	0.0
<b>Total Quantity of Hydrocarbon VOC Removed 4th Quarter 2019</b>						40 lbs	6.4 gal	0.2 bbl	
<b>Total Quantity of Hydrocarbon VOC Removed Since Start-up May 2018</b>						2,487 lbs	484.9 gal	11.5 bbl	

**Notes:**

bbl - barrel

gal - gallons

g/cm<sup>3</sup> - grams per cubic centimeter

hr - hour

lbs - pounds

lbs/day - pounds per day

mg/m<sup>3</sup> - 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 - FOURTH QUARTER 2019**

**FLORANCE GCJ #16A  
SAN JUAN COUNTY, NEW MEXICO  
HARVEST FOUR CORNERS, LLC**

Date/Time	Hour Meter Reading	Flow Meter Reading (gal)	Gallons Recovered this Period	Cumulative Volume Recovered (gal)	Gallons Removed From Tank (Off-Site)	Time Period (hr:min:sec)	Time Period (min)	Recovery Rate		Notes
								(gpm)	(gal/day)	
9/20/19 13:45	11,347	100,546	6,333	127,846		531:45:00	31,905	0.20	286	
10/31/19 11:10	12,179	105,171	4,625	132,471		981:25:00	58,885	0.08	113	
11/14/19 12:45	12,281	108,781	3,610	136,081	6,720	337:35:00	20,255	0.18	257	2 loads removed
11/22/19 11:05	12,452	110,086	1,305	137,386		190:20:00	11,420	0.11	165	
12/6/19 13:15	12,544	111,409	1,323	138,709		338:10:00	20,290	0.07	94	

**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

<b>Total Quantity of Groundwater Removed:</b>	138,709 Gal
	3,303 bbl

**TABLE 5**  
**MPE SYSTEM OPERATIONS - FOURTH QUARTER 2019**

**FLORANCE GCJ #16A**  
**SAN JUAN COUNTY, NEW MEXICO**  
**HARVEST FOUR CORNERS, LLC**

Well ID	Unit	10/31/2019	11/14/2019	11/22/2019	12/6/2019
Active Zone		1	2	3	4
MW-06	WH Vac (Online)	inHg	10.5		
Zone 1	WH Vac (Offline)	inH2O			
	Mani Vac	inHg	16.5		
	PID	ppm	65.0		
	Flow	scfm	42.0		
SB-04	WH Vac (Online)	inHg	14.0		
Zone 1	WH Vac (Offline)	inH2O			
	Mani Vac	inHg	17.0		
	PID	ppm	80.0		
	Flow	scfm	68.0		
SB-12	WH Vac (Online)	inHg	13.5		
Zone 1	WH Vac (Offline)	inH2O			
	Mani Vac	inHg	16.5		
	PID	ppm	115.0		
	Flow	scfm	48.0		
SB-13	WH Vac (Online)	inHg	15.0		
Zone 1	WH Vac (Offline)	inH2O			
	Mani Vac	inHg	17.0		
	PID	ppm	98.0		
	Flow	scfm	62.0		



**TABLE 5**  
**MPE SYSTEM OPERATIONS - FOURTH QUARTER 2019**

**FLORANCE GCJ #16A**  
**SAN JUAN COUNTY, NEW MEXICO**  
**HARVEST FOUR CORNERS, LLC**

Well ID	Unit	10/31/2019	11/14/2019	11/22/2019	12/6/2019
Active Zone		1	2	3	4
MW-12	WH Vac (Online)	inHg	11.5		
Zone 2	WH Vac (Offline)	inH2O			
	Mani Vac	inHg	6.0		
	PID	ppm	417.0		
	Flow	scfm	40.0		
SB-01	WH Vac (Online)	inHg	15.0		
Zone 2	WH Vac (Offline)	inH2O			
	Mani Vac	inHg	13.5		
	PID	ppm	1,606		
	Flow	scfm	24.0		
SB-10	WH Vac (Online)	inHg	10.5		
Zone 2	WH Vac (Offline)	inH2O			
	Mani Vac	inHg	13.0		
	PID	ppm	285.0		
	Flow	scfm	46.0		
SB-11	WH Vac (Online)	inHg	14.0		
Zone 2	WH Vac (Offline)	inH2O			
	Mani Vac	inHg	12.5		
	PID	ppm	68.5		
	Flow	scfm	52.0		
SB-18	WH Vac (Online)	inHg	4.5		
Zone 2	WH Vac (Offline)	inH2O			
	Mani Vac	inHg	13.5		
	PID	ppm	479.0		
	Flow	scfm	44.0		
SB-19	WH Vac (Online)	inHg	11.5		
Zone 2	WH Vac (Offline)	inH2O			
	Mani Vac	inHg	13.0		
	PID	ppm	161.0		
	Flow	scfm	62.0		

**TABLE 5**  
**MPE SYSTEM OPERATIONS - FOURTH QUARTER 2019**

**FLORANCE GCJ #16A**  
**SAN JUAN COUNTY, NEW MEXICO**  
**HARVEST FOUR CORNERS, LLC**

Well ID	Unit	10/31/2019	11/14/2019	11/22/2019	12/6/2019
Active Zone		1	2	3	4
MW-3R	WH Vac (Online)	inHg		13.0	
Zone 3	WH Vac (Offline)	inH2O			
	Mani Vac	inHg		11.5	
	PID	ppm		416.0	
	Flow	scfm		58.0	
MW-10	WH Vac (Online)	inHg		13.5	
Zone 3	WH Vac (Offline)	inH2O			
	Mani Vac	inHg		13.0	
	PID	ppm		112.0	
	Flow	scfm		20.0	
SB-03	WH Vac (Online)	inHg		14.5	
Zone 3	WH Vac (Offline)	inH2O			
	Mani Vac	inHg		14.0	
	PID	ppm		716.0	
	Flow	scfm		42.0	
SB-06	WH Vac (Online)	inHg		12.0	
Zone 3	WH Vac (Offline)	inH2O			
	Mani Vac	inHg		12.0	
	PID	ppm		177.0	
	Flow	scfm		24.0	
SB-15	WH Vac (Online)	inHg		14.0	
Zone 3	WH Vac (Offline)	inH2O			
	Mani Vac	inHg		14.0	
	PID	ppm		77.0	
	Flow	scfm		60.0	
SB-16	WH Vac (Online)	inHg		15.0	
Zone 3	WH Vac (Offline)	inH2O			
	Mani Vac	inHg		14.5	
	PID	ppm		64.0	
	Flow	scfm		68.0	

**TABLE 5**  
**MPE SYSTEM OPERATIONS - FOURTH QUARTER 2019**

**FLORANCE GCJ #16A**  
**SAN JUAN COUNTY, NEW MEXICO**  
**HARVEST FOUR CORNERS, LLC**

Well ID	Unit	10/31/2019	11/14/2019	11/22/2019	12/6/2019
Active Zone		1	2	3	4
MW-3R	WH Vac (Online)	inHg			11.5
Zone 4	WH Vac (Offline)	inH2O			
	Mani Vac	inHg			11.5
	PID	ppm			213.0
	Flow	scfm			52.0
SB-05	WH Vac (Online)	inHg			9.0
Zone 4	WH Vac (Offline)	inH2O			
	Mani Vac	inHg			11.5
	PID	ppm			186.0
	Flow	scfm			38.0
SB-07	WH Vac (Online)	inHg			10.5
Zone 4	WH Vac (Offline)	inH2O			
	Mani Vac	inHg			12.0
	PID	ppm			256.0
	Flow	scfm			44.0
SB-08	WH Vac (Online)	inHg			9.5
Zone 4	WH Vac (Offline)	inH2O			
	Mani Vac	inHg			5.0
	PID	ppm			312.0
	Flow	scfm			56.0
SB-09	WH Vac (Online)	inHg			10.0
Zone 4	WH Vac (Offline)	inH2O			
	Mani Vac	inHg			4.5
	PID	ppm			372.0
	Flow	scfm			76.0
SB-17	WH Vac (Online)	inHg			11.0
Zone 4	WH Vac (Offline)	inH2O			
	Mani Vac	inHg			12.0
	PID	ppm			79.0
	Flow	scfm			40.0

**TABLE 5**  
**MPE SYSTEM OPERATIONS - FOURTH QUARTER 2019**

**FLORANCE GCJ #16A**  
**SAN JUAN COUNTY, NEW MEXICO**  
**HARVEST FOUR CORNERS, LLC**

Well ID	Unit	10/31/2019	11/14/2019	11/22/2019	12/6/2019
Active Zone		1	2	3	4
Well Field					
Total Flow in Active Zone	scfm	220.0	268.0	272.0	306.0

**Notes:**

in HG - inches of mercury

inH<sub>2</sub>O - inches of water

Mani Vac - vacuum gauge reading on remediation well manifold

PID - photoionization detector

ppm - parts per million

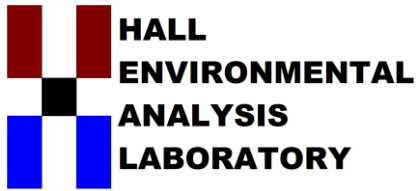
scfm - standard cubic feet per minute

% - percent

WH Vac - vacuum gauge reading on remediation well head

\*\*\* 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.





*Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)*

November 07, 2019

Monica Sandoval

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Florance GC J 16A

OrderNo.: 1911054

Dear Monica Sandoval:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/2/2019 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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1911054**

Date Reported: **11/7/2019**

**CLIENT:** Harvest

**Client Sample ID:** Zone 1 Influent

**Project:** Florance GC J 16A

**Collection Date:** 10/31/2019 1:30:00 PM

**Lab ID:** 1911054-001

**Matrix:** AIR

**Received Date:** 11/2/2019 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	99	5.0		µg/L	1	11/5/2019 1:24:04 PM	G64245
Surr: BFB	338	53-256	S	%Rec	1	11/5/2019 1:24:04 PM	G64245
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.10		µg/L	1	11/5/2019 1:24:04 PM	B64245
Toluene	0.14	0.10		µg/L	1	11/5/2019 1:24:04 PM	B64245
Ethylbenzene	ND	0.10		µg/L	1	11/5/2019 1:24:04 PM	B64245
Xylenes, Total	0.65	0.20		µg/L	1	11/5/2019 1:24:04 PM	B64245
Surr: 4-Bromofluorobenzene	103	81.6-133		%Rec	1	11/5/2019 1:24:04 PM	B64245

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1911054

07-Nov-19

**Client:** Harvest  
**Project:** Florance GC J 16A

Sample ID: <b>1911054-001ADUP</b>		SampType: <b>DUP</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>Zone 1 Influent</b>		Batch ID: <b>G64245</b>		RunNo: <b>64245</b>						
Prep Date:		Analysis Date: <b>11/5/2019</b>		SeqNo: <b>2198605</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	97	5.0						1.16	20	
Surr: BFB	6600		2000		329	53	256	0	0	S

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1911054

07-Nov-19

**Client:** Harvest  
**Project:** Florance GC J 16A

Sample ID: 1911054-001ADUP		SampType: DUP		TestCode: EPA Method 8021B: Volatiles						
Client ID: Zone 1 Influent		Batch ID: B64245		RunNo: 64245						
Prep Date:		Analysis Date: 11/5/2019		SeqNo: 2198615		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.10						0	20	
Toluene	0.14	0.10						0.394	20	
Ethylbenzene	ND	0.10						0	20	
Xylenes, Total	0.64	0.20						0.515	20	
Surr: 4-Bromofluorobenzene	1.9		2.000		96.8	81.6	133	0	0	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

# Sample Log-In Check List

Client Name: **Harvest**

Work Order Number: **1911054**

RcptNo: 1

Received By: **Erin Melendrez**

11/2/2019 9:50:00 AM

*UAG*

Completed By: **Erin Melendrez**

11/4/2019 8:07:14 AM

*UAG*

Reviewed By: **DAD 11/4/19**

## Chain of Custody

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

## Log In

3. Was an attempt made to cool the samples? Yes ☐ No ☐ NA ☒
4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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: *Or*

*11/4/19*

## 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







*Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)*

November 18, 2019

Monica Sandoval

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX

RE: Florance GC J16A

OrderNo.: 1911676

Dear Monica Sandoval:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/15/2019 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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1911676**

Date Reported: **11/18/2019**

**CLIENT:** Harvest

**Client Sample ID:** Zone 2 Influent

**Project:** Florance GC J16A

**Collection Date:** 11/14/2019 3:00:00 PM

**Lab ID:** 1911676-001

**Matrix:** AIR

**Received Date:** 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	2600	25		µg/L	5	11/15/2019 10:29:26 AM	G64557
Surr: BFB	315	53-256	S	%Rec	5	11/15/2019 10:29:26 AM	G64557
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	4.9	0.50		µg/L	5	11/15/2019 10:29:26 AM	B64557
Toluene	16	0.50		µg/L	5	11/15/2019 10:29:26 AM	B64557
Ethylbenzene	ND	0.50		µg/L	5	11/15/2019 10:29:26 AM	B64557
Xylenes, Total	19	1.0		µg/L	5	11/15/2019 10:29:26 AM	B64557
Surr: 4-Bromofluorobenzene	99.1	81.6-133		%Rec	5	11/15/2019 10:29:26 AM	B64557

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1911676

18-Nov-19

**Client:** Harvest  
**Project:** Florance GC J16A

Sample ID: <b>1911676-001ADUP</b>		SampType: <b>DUP</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>Zone 2 Influent</b>		Batch ID: <b>G64557</b>		RunNo: <b>64557</b>						
Prep Date:		Analysis Date: <b>11/15/2019</b>		SeqNo: <b>2210568</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	2600	25						1.05	20	
Surr: BFB	24000		10000		243	53	256	0	0	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1911676

18-Nov-19

Client: Harvest

Project: Florance GC J16A

Sample ID: 1911676-001ADUP		SampType: DUP		TestCode: EPA Method 8021B: Volatiles						
Client ID:	Zone 2 Influent	Batch ID: B64557		RunNo: 64557						
Prep Date:		Analysis Date: 11/15/2019		SeqNo: 2210610		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	5.0	0.50						1.82	20	
Toluene	16	0.50						1.47	20	
Ethylbenzene	ND	0.50						0	20	
Xylenes, Total	19	1.0						0.354	20	
Surr: 4-Bromofluorobenzene	10		10.00		104	81.6	133	0	0	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

# Sample Log-In Check List

Client Name: **Harvest**

Work Order Number: **1911676**

RcptNo: 1

Received By: **Juan Rojas**

11/15/2019 8:00:00 AM

Completed By: **Erin Melendrez**

11/15/2019 8:31:35 AM

Reviewed By: **DM 11/15/19**


## Chain of Custody

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

## Log In

3. Was an attempt made to cool the samples? Yes ☐ No ☐ NA ☒
4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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: **ENM 11/15/19**

## Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

## 17. Cooler Information

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



[illegible]

Turn-Around Time:			
<input checked="" type="checkbox"/> Standard		<input type="checkbox"/> Rush	
Project Name:			
Florence GC JIGA			
Project #:			
Project Manager:			
Danny Burns			
Sampler: E. Carroll			
On Ice:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
# of Coolers:		1	
Cooler Temp (including CF):		0.8-0.2=0.6	
Container Type and #	Preservative Type	HEAL No.	
2 Tedlar	none	1916076	
		-001	
Received by:	Via:	Date	Time
<i>[Signature]</i>		11/4/15	1550
Received by:	Via:	Date	Time
<i>[Signature]</i>		11/5/15	8:00



**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

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

## Analysis Request

[illegible]

marks: \_\_\_\_\_

Please cc: [ecarroll@ltenv.com](mailto: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](http://www.hallenvironmental.com)*

December 02, 2019

Danny Burns

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX:

RE: Florance GC J 16A

OrderNo.: 1911B29

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/23/2019 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1911B29**

Date Reported: **12/2/2019**

**CLIENT:** Harvest

**Client Sample ID:** Zone 3 Influent

**Project:** Florance GC J 16A

**Collection Date:** 11/22/2019 1:30:00 PM

**Lab ID:** 1911B29-001

**Matrix:** AIR

**Received Date:** 11/23/2019 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	790	25		µg/L	5	11/27/2019 9:32:00 AM	G64831
Surr: BFB	517	53-256	S	%Rec	5	11/27/2019 9:32:00 AM	G64831
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.31	0.25		µg/L	5	11/27/2019 9:32:00 AM	B64831
Toluene	0.59	0.50		µg/L	5	11/27/2019 9:32:00 AM	B64831
Ethylbenzene	ND	0.50		µg/L	5	11/27/2019 9:32:00 AM	B64831
Xylenes, Total	5.9	1.0		µg/L	5	11/27/2019 9:32:00 AM	B64831
Surr: 4-Bromofluorobenzene	111	81.6-133		%Rec	5	11/27/2019 9:32:00 AM	B64831

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911B29

02-Dec-19

Client: Harvest

Project: Florance GC J 16A

Sample ID: 1911B29-001ADUP		SampType: DUP		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: Zone 3 Influent		Batch ID: G64831		RunNo: 64831						
Prep Date:		Analysis Date: 11/27/2019		SeqNo: 2222514		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	790	25						0.519	20	
Surr: BFB	50000		10000		498	53	256	0	0	S

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1911B29

02-Dec-19

**Client:** Harvest  
**Project:** Florance GC J 16A

Sample ID: <b>1911B29-001ADUP</b>		SampType: <b>DUP</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>Zone 3 Influent</b>		Batch ID: <b>B64831</b>		RunNo: <b>64831</b>						
Prep Date:		Analysis Date: <b>11/27/2019</b>		SeqNo: <b>2222523</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.31	0.25						0.163	20	
Toluene	0.66	0.50						12.3	20	
Ethylbenzene	ND	0.50						0	20	
Xylenes, Total	6.0	1.0						2.42	20	
Surr: 4-Bromofluorobenzene	11		10.00		105	81.6	133	0	0	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



# Sample Log-In Check List

Client Name: **Harvest**

Work Order Number: **1911B29**

RcptNo: 1

Received By: **Yazmine Garduno** 11/23/2019 9:30:00 AM

*Yazmine Garduno*

Completed By: **Yazmine Garduno** 11/23/2019 12:44:07 PM

*Yazmine Garduno*

Reviewed By:

*ENM 11/25/19*

## 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 ☐

Not required

5. Sample(s) in proper container(s)? Yes ☒ No ☐

6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐

7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐

8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐

9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒

10. Were any sample containers received broken? Yes ☐ No ☒

11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐

13. Is it clear what analyses were requested? Yes ☒ No ☐

14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

# of preserved bottles checked for pH:

(<2 or >12 unless noted)

Adjusted? */*

Checked by: *ENM 11/25/19*

## 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	Good				



# HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

Chain-of-Custody Record					
Client:		Harvest Four Corners			
		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush			
Project Name:		Flourance GCJ 16A			
Project #:					
Project Manager:		Danny Burns			
Sampler:		Eric Carroll			
On Ice:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
# of Coolers:		1			
Cooler Temp (including CF):		-25 to -27 °F			
	Container Type and #	Preservative Type	HEAL No.		
11/22	Zone 3 influent	none	1011 BZG		
			-001		
Date:	Time:	Relinquished by:	Via:	Date	Time
11/22	1440	Eric Carroll	Cat Whet	11/22/19	1440
Date:	Time:	Relinquished by:	Via:	Date	Time
11/22/19	1800	Danita Montez	you canner	11/23/19	0930

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](http://www.hallenvironmental.com)*

December 13, 2019

Danny Burns

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX:

RE: Florance GCJ 16A

OrderNo.: 1912327

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 23 sample(s) on 12/7/2019 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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** SB-03

**Project:** Florance GCJ 16A

**Collection Date:** 12/6/2019 11:15:00 AM

**Lab ID:** 1912327-001

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	44	5.0		µg/L	5	12/10/2019 10:42:27 AM	B65076
Toluene	25	5.0		µg/L	5	12/10/2019 10:42:27 AM	B65076
Ethylbenzene	42	5.0		µg/L	5	12/10/2019 10:42:27 AM	B65076
Xylenes, Total	530	10		µg/L	5	12/10/2019 10:42:27 AM	B65076
Surr: 4-Bromofluorobenzene	119	80-120		%Rec	5	12/10/2019 10:42:27 AM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** SB-04

**Project:** Florance GCJ 16A

**Collection Date:** 12/6/2019 10:45:00 AM

**Lab ID:** 1912327-002

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	1.1	1.0		µg/L	1	12/10/2019 11:05:24 AM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 11:05:24 AM	B65076
Ethylbenzene	16	1.0		µg/L	1	12/10/2019 11:05:24 AM	B65076
Xylenes, Total	31	2.0		µg/L	1	12/10/2019 11:05:24 AM	B65076
Surr: 4-Bromofluorobenzene	137	80-120	S	%Rec	1	12/10/2019 11:05:24 AM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** SB-13

**Project:** Florance GCJ 16A

**Collection Date:** 12/6/2019 10:25:00 AM

**Lab ID:** 1912327-003

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 11:28:19 AM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 11:28:19 AM	B65076
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 11:28:19 AM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 11:28:19 AM	B65076
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	12/10/2019 11:28:19 AM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** SB-15

**Project:** Florance GCJ 16A

**Collection Date:** 12/6/2019 10:40:00 AM

**Lab ID:** 1912327-004

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 11:51:12 AM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 11:51:12 AM	B65076
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 11:51:12 AM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 11:51:12 AM	B65076
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/10/2019 11:51:12 AM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** SB-16

**Project:** Florance GCJ 16A

**Collection Date:** 12/6/2019 10:50:00 AM

**Lab ID:** 1912327-005

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 12:14:08 PM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 12:14:08 PM	B65076
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 12:14:08 PM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 12:14:08 PM	B65076
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	12/10/2019 12:14:08 PM	B65076

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** SB-19

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 1:50:00 PM

**Lab ID:** 1912327-006

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	4200	100		µg/L	100	12/10/2019 12:37:03 PM	B65076
Toluene	1700	100		µg/L	100	12/10/2019 12:37:03 PM	B65076
Ethylbenzene	120	100		µg/L	100	12/10/2019 12:37:03 PM	B65076
Xylenes, Total	2500	200		µg/L	100	12/10/2019 12:37:03 PM	B65076
Surr: 4-Bromofluorobenzene	99.8	80-120		%Rec	100	12/10/2019 12:37:03 PM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-4

**Project:** Florance GCJ 16A

**Collection Date:** 12/6/2019 12:25:00 PM

**Lab ID:** 1912327-007

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 12:59:45 PM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 12:59:45 PM	B65076
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 12:59:45 PM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 12:59:45 PM	B65076
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	12/10/2019 12:59:45 PM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-6

**Project:** Florance GCJ 16A

**Collection Date:** 12/6/2019 10:20:00 AM

**Lab ID:** 1912327-008

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	5.8	5.0		µg/L	5	12/10/2019 1:22:41 PM	B65076
Toluene	ND	5.0		µg/L	5	12/10/2019 1:22:41 PM	B65076
Ethylbenzene	ND	5.0		µg/L	5	12/10/2019 1:22:41 PM	B65076
Xylenes, Total	320	10		µg/L	5	12/10/2019 1:22:41 PM	B65076
Surr: 4-Bromofluorobenzene	132	80-120	S	%Rec	5	12/10/2019 1:22:41 PM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-8

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 12:25:00 PM

**Lab ID:** 1912327-009

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 3:39:30 PM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 3:39:30 PM	B65076
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 3:39:30 PM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 3:39:30 PM	B65076
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	12/10/2019 3:39:30 PM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-9

**Project:** Florance GCJ 16A

**Collection Date:** 12/6/2019 11:50:00 AM

**Lab ID:** 1912327-010

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 4:02:12 PM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 4:02:12 PM	B65076
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 4:02:12 PM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 4:02:12 PM	B65076
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/10/2019 4:02:12 PM	B65076

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-10

**Project:** Florance GCJ 16A

**Collection Date:** 12/6/2019 11:15:00 AM

**Lab ID:** 1912327-011

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	500	10		µg/L	10	12/10/2019 4:25:04 PM	B65076
Toluene	ND	10		µg/L	10	12/10/2019 4:25:04 PM	B65076
Ethylbenzene	81	10		µg/L	10	12/10/2019 4:25:04 PM	B65076
Xylenes, Total	780	20		µg/L	10	12/10/2019 4:25:04 PM	B65076
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	10	12/10/2019 4:25:04 PM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-11

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 1:15:00 PM

**Lab ID:** 1912327-012

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 4:47:55 PM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 4:47:55 PM	B65076
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 4:47:55 PM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 4:47:55 PM	B65076
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	12/10/2019 4:47:55 PM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-13

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 1:06:00 PM

**Lab ID:** 1912327-013

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	1400	50		µg/L	50	12/11/2019 2:13:24 PM	D65102
Toluene	34	10		µg/L	10	12/10/2019 5:10:51 PM	B65076
Ethylbenzene	200	10		µg/L	10	12/10/2019 5:10:51 PM	B65076
Xylenes, Total	730	20		µg/L	10	12/10/2019 5:10:51 PM	B65076
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	10	12/10/2019 5:10:51 PM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-14

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 12:45:00 PM

**Lab ID:** 1912327-014

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	1.5	1.0		µg/L	1	12/10/2019 5:33:44 PM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 5:33:44 PM	B65076
Ethylbenzene	2.4	1.0		µg/L	1	12/10/2019 5:33:44 PM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 5:33:44 PM	B65076
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	12/10/2019 5:33:44 PM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-17

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 10:30:00 AM

**Lab ID:** 1912327-015

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 5:56:20 PM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 5:56:20 PM	B65076
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 5:56:20 PM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 5:56:20 PM	B65076
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	12/10/2019 5:56:20 PM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-18

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 10:44:00 AM

**Lab ID:** 1912327-016

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	1.2	1.0		µg/L	1	12/10/2019 6:19:13 PM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 6:19:13 PM	B65076
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 6:19:13 PM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 6:19:13 PM	B65076
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	12/10/2019 6:19:13 PM	B65076

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-20

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 11:15:00 AM

**Lab ID:** 1912327-017

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 6:42:03 PM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 6:42:03 PM	B65076
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 6:42:03 PM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 6:42:03 PM	B65076
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	12/10/2019 6:42:03 PM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-21

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 12:20:00 PM

**Lab ID:** 1912327-018

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	4.2	1.0		µg/L	1	12/10/2019 7:04:57 PM	B65076
Toluene	ND	1.0		µg/L	1	12/10/2019 7:04:57 PM	B65076
Ethylbenzene	2.6	1.0		µg/L	1	12/10/2019 7:04:57 PM	B65076
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 7:04:57 PM	B65076
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/10/2019 7:04:57 PM	B65076

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-22

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 11:10:00 AM

**Lab ID:** 1912327-019

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 1:04:53 PM	B65075
Toluene	ND	1.0		µg/L	1	12/10/2019 1:04:53 PM	B65075
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 1:04:53 PM	B65075
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 1:04:53 PM	B65075
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	12/10/2019 1:04:53 PM	B65075

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-23

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 11:45:00 AM

**Lab ID:** 1912327-020

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	5.3	1.0		µg/L	1	12/10/2019 1:28:16 PM	B65075
Toluene	ND	1.0		µg/L	1	12/10/2019 1:28:16 PM	B65075
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 1:28:16 PM	B65075
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 1:28:16 PM	B65075
Surr: 4-Bromofluorobenzene	97.3	80-120		%Rec	1	12/10/2019 1:28:16 PM	B65075

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-24

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 10:55:00 AM

**Lab ID:** 1912327-021

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 1:51:54 PM	B65075
Toluene	ND	1.0		µg/L	1	12/10/2019 1:51:54 PM	B65075
Ethylbenzene	4.0	1.0		µg/L	1	12/10/2019 1:51:54 PM	B65075
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 1:51:54 PM	B65075
Surr: 4-Bromofluorobenzene	139	80-120	S	%Rec	1	12/10/2019 1:51:54 PM	B65075

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** MW-25

**Project:** Florance GCJ 16A

**Collection Date:** 12/5/2019 11:25:00 AM

**Lab ID:** 1912327-022

**Matrix:** AQUEOUS

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	1.0		µg/L	1	12/10/2019 2:15:32 PM	B65075
Toluene	ND	1.0		µg/L	1	12/10/2019 2:15:32 PM	B65075
Ethylbenzene	ND	1.0		µg/L	1	12/10/2019 2:15:32 PM	B65075
Xylenes, Total	ND	2.0		µg/L	1	12/10/2019 2:15:32 PM	B65075
Surr: 4-Bromofluorobenzene	94.6	80-120		%Rec	1	12/10/2019 2:15:32 PM	B65075

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1912327**

Date Reported: **12/13/2019**

**CLIENT:** Harvest

**Client Sample ID:** Zone 4 Influent

**Project:** Florance GCJ 16A

**Collection Date:** 12/6/2019 1:30:00 PM

**Lab ID:** 1912327-023

**Matrix:** AIR

**Received Date:** 12/7/2019 9:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	2000	25		µg/L	5	12/10/2019 9:56:36 AM	G65076
Surr: BFB	604	53-256	S	%Rec	5	12/10/2019 9:56:36 AM	G65076
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	1.8	0.50		µg/L	5	12/10/2019 9:56:36 AM	B65076
Toluene	4.2	0.50		µg/L	5	12/10/2019 9:56:36 AM	B65076
Ethylbenzene	ND	0.50		µg/L	5	12/10/2019 9:56:36 AM	B65076
Xylenes, Total	24	1.0		µg/L	5	12/10/2019 9:56:36 AM	B65076
Surr: 4-Bromofluorobenzene	117	81.6-133		%Rec	5	12/10/2019 9:56:36 AM	B65076

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1912327

13-Dec-19

**Client:** Harvest  
**Project:** Florance GCJ 16A

Sample ID: 1912327-023adup		SampType: DUP		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: Zone 4 Influent		Batch ID: G65076		RunNo: 65076						
Prep Date:		Analysis Date: 12/10/2019		SeqNo: 2232790		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	2100	25						6.71	20	
Surr: BFB	73000		10000		730	53	256	0	0	S

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1912327

13-Dec-19

Client: Harvest

Project: Florance GCJ 16A

Sample ID: 1912327-023adup		SampType: DUP		TestCode: EPA Method 8021B: Volatiles						
Client ID: Zone 4 Influent	Batch ID: B65076			RunNo: 65076						
Prep Date:	Analysis Date: 12/10/2019			SeqNo: 2232797		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.8	0.50						1.72	20	
Toluene	4.3	0.50						1.85	20	
Ethylbenzene	ND	0.50						0	20	
Xylenes, Total	24	1.0						0.677	20	
Surr: 4-Bromofluorobenzene	12		10.00		120	81.6	133	0	0	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1912327

13-Dec-19

**Client:** Harvest  
**Project:** Florance GCJ 16A

Sample ID: <b>b2</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBW</b>	Batch ID: <b>B65075</b>	RunNo: <b>65075</b>								
Prep Date:	Analysis Date: <b>12/10/2019</b>	SeqNo: <b>2232776</b>		Units: <b>µg/L</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	20		20.00		99.6	80	120			

Sample ID: <b>100ng btex lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>B65075</b>	RunNo: <b>65075</b>								
Prep Date:	Analysis Date: <b>12/10/2019</b>	SeqNo: <b>2232777</b>		Units: <b>µg/L</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.2	80	120			
Toluene	19	1.0	20.00	0	94.8	80	120			
Ethylbenzene	19	1.0	20.00	0	94.3	80	120			
Xylenes, Total	57	2.0	60.00	0	95.2	80	119			
Surr: 4-Bromofluorobenzene	20		20.00		99.8	80	120			

Sample ID: <b>1912327-019ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>MW-22</b>	Batch ID: <b>B65075</b>	RunNo: <b>65075</b>								
Prep Date:	Analysis Date: <b>12/10/2019</b>	SeqNo: <b>2232779</b>		Units: <b>µg/L</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.9	80	120			
Toluene	19	1.0	20.00	0	97.0	75.5	120			
Ethylbenzene	20	1.0	20.00	0.4340	96.6	80	120			
Xylenes, Total	59	2.0	60.00	0	98.5	77.3	119			
Surr: 4-Bromofluorobenzene	19		20.00		94.8	80	120			

Sample ID: <b>1912327-019amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>MW-22</b>	Batch ID: <b>B65075</b>	RunNo: <b>65075</b>								
Prep Date:	Analysis Date: <b>12/10/2019</b>	SeqNo: <b>2232780</b>		Units: <b>µg/L</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	80	120	3.95	20	
Toluene	21	1.0	20.00	0	104	75.5	120	6.48	20	
Ethylbenzene	21	1.0	20.00	0.4340	105	80	120	7.68	20	
Xylenes, Total	64	2.0	60.00	0	106	77.3	119	7.26	20	
Surr: 4-Bromofluorobenzene	22		20.00		108	80	120	0	0	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1912327

13-Dec-19

Client: Harvest

Project: Florance GCJ 16A

Sample ID: <b>rb</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBW</b>	Batch ID: <b>B65076</b>		RunNo: <b>65076</b>							
Prep Date:	Analysis Date: <b>12/10/2019</b>		SeqNo: <b>2232794</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	21		20.00		105	80	120			

Sample ID: <b>100ng btex lcsb</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>B65076</b>		RunNo: <b>65076</b>							
Prep Date:	Analysis Date: <b>12/10/2019</b>		SeqNo: <b>2232795</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.6	80	120			
Toluene	19	1.0	20.00	0	94.2	80	120			
Ethylbenzene	19	1.0	20.00	0	95.4	80	120			
Xylenes, Total	57	2.0	60.00	0	95.3	80	119			
1,2,4-Trimethylbenzene	20	1.0	20.00	0	97.5	80	120			
1,3,5-Trimethylbenzene	19	1.0	20.00	0	95.9	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		102	80	120			

Sample ID: <b>1912327-001ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>SB-03</b>	Batch ID: <b>B65076</b>		RunNo: <b>65076</b>							
Prep Date:	Analysis Date: <b>12/10/2019</b>		SeqNo: <b>2232799</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	140	5.0	100.0	44.39	97.2	80	120			
Toluene	120	5.0	100.0	25.36	98.0	75.5	120			
Ethylbenzene	140	5.0	100.0	41.63	94.5	80	120			
Xylenes, Total	780	10	300.0	532.7	81.7	77.3	119			
1,2,4-Trimethylbenzene	180	5.0	100.0	92.05	86.7	72.6	125			
1,3,5-Trimethylbenzene	150	5.0	100.0	64.94	82.5	68.3	127			
Surr: 4-Bromofluorobenzene	110		100.0		112	80	120			

Sample ID: <b>1912327-001amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>SB-03</b>	Batch ID: <b>B65076</b>		RunNo: <b>65076</b>							
Prep Date:	Analysis Date: <b>12/10/2019</b>		SeqNo: <b>2232800</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	160	5.0	100.0	44.39	114	80	120	10.9	20	

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1912327

13-Dec-19

**Client:** Harvest  
**Project:** Florance GCJ 16A

Sample ID: <b>1912327-001amsd</b>		SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>SB-03</b>		Batch ID: <b>B65076</b>		RunNo: <b>65076</b>						
Prep Date:		Analysis Date: <b>12/10/2019</b>		SeqNo: <b>2232800</b>			Units: <b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	140	5.0	100.0	25.36	116	75.5	120	13.7	20	
Ethylbenzene	150	5.0	100.0	41.63	113	80	120	12.5	20	
Xylenes, Total	790	10	300.0	532.7	85.6	77.3	119	1.49	20	
1,2,4-Trimethylbenzene	200	5.0	100.0	92.05	103	72.6	125	8.77	20	
1,3,5-Trimethylbenzene	170	5.0	100.0	64.94	102	68.3	127	12.2	20	
Surr: 4-Bromofluorobenzene	110		100.0		106	80	120	0	0	

Sample ID: <b>rb</b>		SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBW</b>		Batch ID: <b>D65102</b>		RunNo: <b>65102</b>						
Prep Date:		Analysis Date: <b>12/11/2019</b>		SeqNo: <b>2234082</b>			Units: <b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Surr: 4-Bromofluorobenzene	22		20.00		109	80	120			

Sample ID: 100ng btex lcs		SampType: LCS			TestCode: EPA Method 8021B: Volatiles					
Client ID: LCSW		Batch ID: D65102			RunNo: 65102					
Prep Date:		Analysis Date: 12/11/2019			SeqNo: 2234083		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.3	80	120			
Surr: 4-Bromofluorobenzene	22		20.00		110	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

# Sample Log-In Check List

Client Name: **Harvest**

Work Order Number: **1912327**

RcptNo: 1

Received By: **Desiree Dominguez** 12/7/2019 9:40:00 AM

Completed By: **Desiree Dominguez** 12/7/2019 10:33:11 AM

Reviewed By: **YG 12/9/19**

*DD*

*DD*

## Chain of Custody

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

## Log In

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

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

Adjusted? \_\_\_\_\_

Checked by: **DAD 12/9/19**

## Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks:

## 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes			



# Chain-of-Custody Record

Client: Harvest Four corners  
Maria Sandoval  
 Mailing Address: 1755 Arroyo Drive  
Bloomfield NM, 87413  
 Phone #: 505-632-4475  
 email or Fax#: msandoval@harvestmidstream.com

QA/QC Package: ☒ Standard ☐ Level 4 (Full Validation)  
 Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other  
☐ EDD (Type)

Date	Time	Matrix	Sample Name
12/16	1115	GW	SB03
12/16	1045		SB04
12/16	1025		SB13
12/16	1040		SB-15
12/16	1050		SB-16
12/15	1350		SB-19
12/16	1225		MW-4
12/16	1020		MW-6
12/15	1225		MW-8
12/16	1150		MW-9
12/16	1115		MW-10
12/15	1315		MW-11

Relinquished by: Eric Carro  
 Date: 12/16 Time: 1507  
 Relinquished by: Christa Waelen  
 Date: 12/19 Time: 1807

Turn-Around Time: ☒ Standard ☐ Rush  
 Project Name: Florence GCJ 16A  
 Project #: \_\_\_\_\_

Project Manager: Danny Burns  
 Sampler: E. Carroil / Kit Barton  
 On Ice: ☒ Yes ☐ No  
 # of Coolers: 1  
 Cooler Temp (including CF): 3.6-0.3=3.3°C

Container Type and #	Preservative Type	HEAL No.
3 VOA	HCl	1912327
		-001
		-002
		-003
		-004
		-005
		-006
		-007
		-008
		-009
		-010
		-011
		-012

Received by: Christa Waelen  
 Date: 12/19 Time: 1507  
 Received by: Christa Waelen  
 Date: 12/19 Time: 9:40



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

### Analysis Request

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

Remarks: Please cc: ecarroil@hallenv.com



