Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

API No.

### **Release Notification and Corrective Action**

	OPERATOR	Initial Report	X Final Report
Name of Company: Lucid Energy Delaware	Contact Kerry Egan		1
Address 326 West Quay Artesia, NM 88210	Telephone No. 575 513-8988		
Facility Name: Grace 8" Poly Line	Facility Type: Pipeline ROW		
Facility Name: Grace 8" Poly Line	Facility Type: Pipeline ROW		

Surface Owner:

# LOCATION OF RELEASE

Mineral Owner

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	29	228	32E					Lea

Latitude 32.368724 Longitude -103.696726

### NATURE OF RELEASE Type of Release: Natural Gas Volume of Release: Unknown Volume Recovered: None MCF of gas Source of Release: Pinhole leak on 8" Poly line Date and Hour of Occurrence: Date and Hour of Discovery: 1-11-2017 Unknown 9:00AM Was Immediate Notice Given? If YES, To Whom? Yes No Not Required APPROVED By Whom? Date and Hour Was a Watercourse Reached? If YES, Volur By Olivia Yu at 12:51 pm, Mar 07, 2017 Yes No If a Watercourse was Impacted, Describe Fully.\* Describe Cause of Problem and Remedial Action Taken.\* The release was caused by a small leak in an 8" poly gas gathering line. Upon identification, the line was shut in and blown down to prevent further release. Lucid personnel excavated the line as soon as possible to verify the cause of the leak, and to ensure that no further release of gas or liquids occurred. Describe Area Affected and Cleanup Action Taken.\* There are signs of surface contamination within an area approximately 30' W x 45' L along the ROW. After exposing the line, it appears that the contamination is primarily isolated to the top 18-24" of the soil. This further indicates a gas leak, with little to no liquids contamination. Lucid personnel have begun to excavate the apparently contaminated material and stockpile it on site. Depending on the results of the soil sampling conducted on 1/12/17, Lucid may propose remediation on site or disposal at an NMOCD landfill. Update: The soil samples collected from the location show the contamination levels to be below the Recommended Remediation Action Levels (RRAL) for this location. The minimal discoloration in the top 18"-24" of the soil profile does not show to represent significant hydrocarbon contamination. Given that contamination levels are below the RRAL for this location, Lucid requests closure of this release without any further remediation work. Lucid will backfill the excavation and return the area to natural grade. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by Environmental Specialist: Printed Name: Kerry Egan

 Title: Environmental Tech
 Approval Date:
 3/7/2017
 Expiration Date:
 XX/XX/XXXX

 E-mail Address: KEgan@agaveenergy.com
 Conditions of Approval:
 Attached
 \_\_\_\_\_\_

 Date:
 //3//17
 Phone: 575 810-6021
 Attached
 \_\_\_\_\_\_

\* Attach Additional Sheets If Necessary

1RP-4627 is approved for closure.



Lucid Energy Delaware

Grace 8" Poly Line

Sec 29, T22S, R32E

Lea County, New Mexico

January 16, 2017

Updated: January 31, 2017

## Location

The leak occurred on an 8" Poly gas line in the north half of Sec 29, T22S, R32E. The leak is located along the pipeline ROW and is not associated with any individual facility. The nearest facility to the leak is the Grace Federal #1 Well (EOG-Y owned). From the Grace Fed #1 you must access the leak by traveling south along the ROW for 34 of a mile.

## Introduction

On January 11, 2017, Lucid Energy Delaware, L.L.C. (Lucid) personnel were conducting a leak survey of the "Bootleg Ridge" gas system. During the survey, they became aware of a release of hydrocarbons along the 8" poly line south of the Grace Fed #1. The suspected cause of the release was the buried 8" poly gas line. This line was immediately shut in, and blown down to prevent further release of gas and/or liquids. As soon as we could, Lucid had contractors on site to excavate the line to verify the cause of the release and to ensure that no residual material was being lost to the soil. Upon excavation, it was discovered that a pinhole leak in the 8" line was the source of the release. The responsible section of line was replaced.

During the excavation of the line it appeared that the resulting contamination was localized to the top 18"-24" of the soil profile. Below this depth, including around and below the pipe itself, there was no indication of contamination (i.e. no free liquids, no staining, no detectable odor). We take this as evidence that the release was primarily gas, with little to no liquids. Otherwise we would expect to see contamination below the pipe as the liquids migrated through the soil profile. The leak occurred in a depression along the ROW that apparently kept the contamination from migrating horizontally by following site topography. This depression is free of vegetation, but we believe this was naturally occurring and not a case where the leak killed off vegetation. There is no dead grass, no dead shrub brush, no dead mesquite or any other plants that indicate vegetation had been growing and was killed by the leak.

Samples have been collected at the point of the rupture to characterize the level and type of contamination.

## **Site Ranking**

Based on the *Guidelines for Remediation of Leaks, Spills and Releases* (NMOCD, August 13, 1993), hereafter referred to as "the Guidelines", the site ranking criteria are as follows.

**Depth to Ground Water:** The nearest well on record is C-02939 does not record any information regarding the depth to groundwater. Well records for this township show an

average depth to groundwater of 350'. Exhibiting a depth to groundwater of greater than 100' results in a site ranking of 0.

*Wellhead Protection Area:* The nearest water well is C-02939, is located 8,600' to the northwest of the site. According to the *Guidelines,* not being within 1000 feet of a water source results in a site ranking of 0.

*Distance to Surface Water Body:* The nearest surface water body is the Salt Lake, located 17 miles to the west of the site, resulting in a site ranking of 0.

### **Total Site Ranking:**

Depth to Ground water		0
Wellhead Protection Area		0
Distance to Surface Water Bo	ody	0
	Total:	0

### **Recommended Remediation Action Level**

According to the *Guidelines*, a location with a site ranking of 0 is subject to the following Recommended Remediation Action Level (RRAL).

Benzene	10 ppm
BTEX	50 ppm

TPH 5000 ppm

There are no standards set for chloride contamination set within the *Guidelines*. If chlorides are determined to be present, Lucid will work with the District I Oil Conservation office to determine an appropriate action level, and will attempt to delineate to 1000 ppm chlorides in accordance with standard Bureau of Land Management work practice.

## **Proposed Remediation Work**

Given the nature of the release, and the inaccessibility of the location, Lucid believes excavation and disposal of the soil may prove unnecessary. If soil samples show contamination levels to be below the RRAL for this site, no further work will be conducted at this site. If the samples show levels greater than the RRAL, Lucid is requesting approval to remediate in place by excavating and aerating the top 2' of soil affected by contamination. Being allowed to remediate in place would negate the need to bring dump trucks into the location to be loaded and unloaded. Being in the sand hills east of Carlsbad, the location can be very difficult to get to with any motorized vehicle without tracks. A fully loaded dump truck would not be able to get from the location to a drivable road, and trying to do so would result in greater damage to existing vegetation. Given that the leak does not pose a threat to either ground or surface waters, remediation on site would be the least detrimental strategy to the surrounding vegetation and wildlife.

The proposed means of remediation on site would be to have a single backhoe aerate the affected material onsite once every 2-4 weeks. Soil samples would be collected to determine the effectiveness of this strategy. If after three months no discernable effect on contamination levels is documented, Lucid may accept excavation and disposal as the necessary route to remediate this site.

Lucid will inform the NMOCD and BLM offices of the results of the soil samples as soon as is practicable, and will confirm with them our plan for remediation at the location.

### Updated 1/31/2017

Based on the results of the subsequent soil sampling mentioned above, contamination levels are below the RRAL for the site. As such Lucid is requesting closure of this release. Lucid will backfill the excavation opened to repair the line and return the area to the pre-existing grade. No further remediation work is proposed.

Any questions regarding this notification and proposed remediation plan can be directed to:

Kerry Egan Environmental Technician Lucid Energy Delaware Office: (575) 810-6021 Cell: (575) 513-8988 Kegan@agaveenergy.com

Analytical Report 1701976	Sample Date	Depth	BTEX	GRO	DRO	Cl-	Comments
		_					Collected from the north end of the
1701976-001	1/20/2017	Surface	ND	ND	ND	ND	affected area.
							Collected from the north end of the
1701976-002	1/20/2017	2'	ND	ND	ND	ND	affected area.
							Collected from the north end of the
1701976-003	1/20/2017	4'	ND	ND	ND	ND	affected area.
							Collected from the east side of the affected
1701976-004	1/20/2017	Surface	ND	ND	14	1 ND	area.
							Collected from the east side of the affected
1701976-005	1/20/2017	2'	ND	ND	ND	ND	area.
							Collected from the east side of the affected
1701976-006	1/20/2017	4'	ND	ND	ND	ND	area.
1701076 007	4 /20 /2017						Collected from the south end of the
1701976-007	1/20/2017	Surface	ND	ND	2	l ND	affected area.
							Collected from the south end of the
1701976-008	1/20/2017	2'	ND	ND	15	5 ND	affected area.
1701076 000	4 /20 /2017						Collected from the south end of the
1701976-009	1/20/2017	4.	ND	ND	ND	ND	affected area.
1701076 010	4 /20 /2017		0.700				Collected from the west side of the
1701976-010	1/20/2017	Surface	0.782	15	25	5 ND	affected area.
1701076 011	4 /20 /2017						Collected from the west side of the
1701976-011	1/20/2017	2.	0.32	6.8	ND	ND	affected area.
1701076 012	4/20/2017						Collected from the west side of the
1701976-012	1/20/2017	4	ND	ND	ND	ND	affected area.
1701589-001	1/12/2017	Surface	1.88	32	ND	ND	Collected from the point of release.
1701589-002	1/12/2017	2'	ND	ND	ND	ND	Collected from the point of release.
1701589-003	1/12/2017	4'	ND	ND	ND	ND	Collected from the point of release.

# Sampling Summary for Grace 8" Remediation Project



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

January 17, 2017

Kerry Egan Agave Energy Company P.O. Box 158 Artesia, NM 88211 TEL: (575) 513-8988 FAX

OrderNo.: 1701589

RE: Grace 8"

Dear Kerry Egan:

Hall Environmental Analysis Laboratory received 3 sample(s) on 1/14/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/17/2017

CLIENT: Agave Energy Company Project: Grace 8"		Client Sample ID: Grace #1 Collection Date: 1/12/2017 9:00:00 AM						
Lab ID: 1701589-001	Matrix:	Matrix: SOIL		Received Date: 1/12/2017 9:00:00 AM				
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analysi	: LGT		
Chloride	ND	30	mg/Kg	20	1/16/2017 12:02:21 PN	1 29704		
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analysi	TOM		
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	1/16/2017 11:14:49 AM	29698		
Surr: DNOP	98.2	70-130	%Rec	1	1/16/2017 11:14:49 AN	29698		
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	32	5.0	mg/Kg	1	1/15/2017 10:38:12 AN	29695		
Surr: BFB	132	68.3-144	%Rec	1	1/15/2017 10:38:12 AN	29695		
EPA METHOD 8021B: VOLATILES					Analyst	: NSB		
Benzene	0.21	0.025	mg/Kg	1	1/15/2017 10:38:12 AN	29695		
Toluene	0.12	0.050	mg/Kg	1	1/15/2017 10:38:12 AN	29695		
Ethylbenzene	0.15	0.050	mg/Kg	1	1/15/2017 10:38:12 AN	29695		
Xylenes, Total	1.4	0.099	mg/Kg	1	1/15/2017 10:38:12 AN	29695		
Surr: 4-Bromofluorobenzene	105	80-120	%Rec	1	1/15/2017 10:38:12 AN	29695		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
D		Sample Diluted Due to Matrix
	Н	Holding times for preparation or analysis exceeded

- ıg prep ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 7 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/17/2017

CLIENT: Agave Energy Company	Client Sample ID: Grace #2							
Project: Grace 8"	Collection Date: 1/12/2017 9:00:00 AM							
Lab ID: 1701589-002	Matrix:	SOIL	Received I	Date: 1/1	4/2017 9:00:00 AM			
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	LGT		
Chloride	ND	30	mg/Kg	20	1/16/2017 12:14:45 PM	29704		
EPA METHOD 8015M/D: DIESEL RANG		5			Analyst	том		
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	1/16/2017 11:36:31 AM	29698		
Surr: DNOP	105	70-130	%Rec	1	1/16/2017 11:36:31 AM	29698		
EPA METHOD 8015D: GASOLINE RANG	GE				Analyst	NSB		
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	1/15/2017 11:48:40 AM	29695		
Surr: BFB	90.7	68.3-144	%Rec	1	1/15/2017 11:48:40 AM	29695		
EPA METHOD 8021B: VOLATILES					Analyst	NSB		
Benzene	ND	0.025	mg/Kg	1	1/15/2017 11:48:40 AM	29695		
Toluene	ND	0.050	mg/Kg	1	1/15/2017 11:48:40 AM	29695		
Ethylbenzene	ND	0.050	mg/Kg	1	1/15/2017 11:48:40 AM	29695		
Xylenes, Total	ND	0.10	mg/Kg	1	1/15/2017 11:48:40 AM	29695		
Surr: 4-Bromofluorobenzene	93.6	80-120	%Rec	1	1/15/2017 11:48:40 AM	29695		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associa

- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 7 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/17/2017

CLIENT: Agave Energy Company Project: Grace 8"	Client Sample ID: Grace #3 Collection Date: 1/12/2017 9:00:00 AM						
Lab ID: 1701589-003	Matrix:	SOIL	<b>Received</b>	Date: 1/1	4/2017 9:00:00 AM		
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS					Analyst	LGT	
Chloride	ND	30	mg/Kg	20	1/16/2017 12:51:59 PM	29704	
EPA METHOD 8015M/D: DIESEL RANG		S			Analyst	том	
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	1/16/2017 11:57:59 AM	29698	
Surr: DNOP	102	70-130	%Rec	1	1/16/2017 11:57:59 AM	29698	
EPA METHOD 8015D: GASOLINE RANG	θE				Analyst	NSB	
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	1/15/2017 12:58:50 PM	29695	
Surr: BFB	85.3	68.3-144	%Rec	1	1/15/2017 12:58:50 PM	29695	
EPA METHOD 8021B: VOLATILES					Analyst	NSB	
Benzene	ND	0.025	mg/Kg	1	1/15/2017 12:58:50 PM	29695	
Toluene	ND	0.050	mg/Kg	1	1/15/2017 12:58:50 PM	29695	
Ethylbenzene	ND	0.050	mg/Kg	1	1/15/2017 12:58:50 PM	29695	
Xylenes, Total	ND	0.099	mg/Kg	1	1/15/2017 12:58:50 PM	29695	
Surr: 4-Bromofluorobenzene	92.1	80-120	%Rec	1	1/15/2017 12:58:50 PM	29695	

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В
	D	Sample Diluted Due to Matrix	Е
	Н	Holding times for preparation or analysis exceeded	J

- H Holding times for preparation or analysis excee
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Client: Project:	Agave E Grace 8"	nergy Com	ipany								
Sample ID	MB-29704	BLK	Tes	tCode: El	PA Method	300.0: Anion	s				
Client ID:	PBS	PBS Batch ID: 29704					0057				
Prep Date:	1/16/2017	Analysis D	Date: 1/	16/2017	S	SeqNo: 12	255351	Units: mg/K	ģ		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-29704	SampT	Type: LC	s	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID:	LCSS	Batch	h ID: 29	704	F	RunNo: 4	0057				
Prep Date:	1/16/2017	Analysis D	Date: 1/	16/2017	S	SeqNo: 12	255352	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	95.3	90	110			

### 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
- R RPD outside accepted recovery limits
- 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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 4 of 7

WO#:	1701589

Page 5 of 7

Client: Project:	Agave En Grace 8"	ergy Com	pany								
Sample ID LCS	5-29698	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015M/D: Die	sel Rang	e Organics	
Client ID: LCS	SS	Batch	ID: 29	698	R	RunNo: 4	0028				
Prep Date: 1/	16/2017	Analysis D	ate: 1/	16/2017	S	SeqNo: 1	254640	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organ	ics (DRO)	47	10	50.00	0	94.3	63.8	116			
Surr: DNOP		4.6		5.000		91.2	70	130			
Sample ID MB	-29698	SampT	ype: MI	BLK	Tes	tCode: E	PA Method	8015M/D: Die	sel Rang	e Organics	
Client ID: PBS	6	Batch	ID: 29	698	R	aunNo: 4	0028				
Prep Date: 1/	16/2017	Analysis D	ate: 1/	16/2017	S	SeqNo: 1	254641	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organ	ics (DRO)	ND	10								
Surr: DNOP		9.5		10.00		95.0	70	130			
Sample ID MB	-29674	SampT	ype: MI	BLK	Tes	tCode: E	PA Method	8015M/D: Die	sel Rang	e Organics	
Client ID: PBS	6	Batch	ID: 29	674	R	RunNo: 4	0030				
Prep Date: 1/	13/2017	Analysis D	ate: 1/	16/2017	S	SeqNo: 1	254788	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		10		10.00		105	70	130			
Sample ID LCS	6-29674	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015M/D: Die	sel Rang	e Organics	
Client ID: LCS	SS	Batch	ID: 29	674	R	RunNo: 4	0030				
Prep Date: 1/	13/2017	Analysis D	ate: 1/	16/2017	S	SeqNo: 1	254824	Units: %Rec			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		5.5		5.000		109	70	130			

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 Detection Limit
- W Sample container temperature is out of limit as specified

Client:	Agave En	ergy Compar	ıy								
Project:	Grace 8"										
Sample ID	MB-29695	SampType	MBLK		Tes	tCode: E	PA Method	8015D: Gaso	line Rang	e	
Client ID:	PBS	Batch ID	29695		R	unNo: 4	0013				
Prep Date:	1/14/2017	Analysis Date	1/15/20	17	S	eqNo: 1	253868	Units: mg/K	g		
Analyte		Result P	QL SPK	value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
,	e Organics (GRO)	ND	5.0	Value	0	/01/20	201121111		, or a 2		
Surr: BFB		870		1000		87.2	68.3	144			
Sample ID	LCS-29695	SampType	LCS		Tes	tCode: E	PA Method	8015D: Gaso	line Rang	e	
Client ID:	LCSS	Batch ID	29695		R	unNo: 4	0013				
Prep Date:	1/14/2017	Analysis Date	1/15/20	17	S	eqNo: 1	253869	Units: mg/K	g		
Analyte		Result P	QL SPK	value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	27	5.0	25.00	0	110	74.6	123			
Surr: BFB		970		1000		96.8	68.3	144			
Sample ID	1701589-001AMS	SampType	MS		Tes	tCode: E	PA Method	8015D: Gaso	line Rang	e	
Client ID:	Grace #1	Batch ID	29695		R	unNo: 4	0013				
Prep Date:	1/14/2017	Analysis Date	1/15/20	17	S	eqNo: 1	253871	Units: mg/K	g		
Analyte		Result P	QL SPK	value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	57	4.9	24.32	31.84	104	61.3	150			
Surr: BFB		1400		972.8		143	68.3	144			
Sample ID	1701589-001AMS	D SampType	MSD		Tes	tCode: E	PA Method	8015D: Gaso	line Rang	e	
Client ID:	Grace #1	Batch ID	29695		R	unNo: 4	0013				
Prep Date:	1/14/2017	Analysis Date	1/15/20	17	S	eqNo: 1	253872	Units: mg/K	g		
Analyte		Result P	QL SPK	value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

24.46

978.5

31.84

58

1400

4.9

#### **Qualifiers:**

- Value exceeds Maximum Contaminant Level. \*
- Sample Diluted Due to Matrix D

Gasoline Range Organics (GRO)

Surr: BFB

- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range

106

145

61.3

68.3

1.25

0

20

0

S

150

144

- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

WO#:

1701589

Page 6 of 7

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	1
	17

Client: Project:	Agave Er Grace 8"	nergy Com	ipany								
Sample ID	MB-29695	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batcl	h ID: 29	695	F	RunNo: 4	0013				
Prep Date:	1/14/2017	Analysis D	Date: 1/	15/2017	S	SeqNo: 1	253911	Units: mg/k	۲g		
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	- %RPD	RPDLimit	Qual
Benzene		ND	0.025			JUICEO	LowEmm	r lightainne	7011111		Quui
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
<b>,</b>	nofluorobenzene	0.94		1.000		93.8	80	120			
Sample ID	LCS-29695	SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batcl	h ID: 29	695	F	RunNo: 4	0013				
Prep Date:	1/14/2017	Analysis D	Date: 1/	15/2017	S	SeqNo: 1	253912	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.025	1.000	0	106	75.2	115			
Foluene		0.95	0.050	1.000	0	95.5	80.7	112			
Ethylbenzene		0.92	0.050	1.000	0	91.5	78.9	117			
Xylenes, Total		2.7	0.10	3.000	0	91.0	79.2	115			
Surr: 4-Brom	nofluorobenzene	1.0		1.000		99.8	80	120			
Sample ID	1701589-002AMS	SampT	туре: <b>М</b>	6	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	Grace #2	Batcl	h ID: 29	695	F	RunNo: 4	0013				
Prep Date:	1/14/2017	Analysis D	Date: 1/	15/2017	S	SeqNo: 1	253915	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.025	0.9843	0	111	61.5	138			
Foluene		1.0	0.049	0.9843	0.01776	101	71.4	127			
Ethylbenzene		1.0	0.049	0.9843	0	102	70.9	132			
Kylenes, Total		3.0	0.098	2.953	0.05637	100	76.2	123			
Surr: 4-Brom	nofluorobenzene	0.95		0.9843		96.5	80	120			
Sample ID	1701589-002AMSI	D Samp1	уре: <b>М</b>	SD	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	Grace #2	Batcl	h ID: 29	695	F	RunNo: 4	0013				
Prep Date:	1/14/2017	Analysis D	Date: 1/	15/2017	S	SeqNo: 1	253916	Units: mg/k	٢g		
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.024	0.9737	0	113	61.5	138	0.939	20	
Toluene		1.0	0.049	0.9737	0.01776	103	71.4	127	1.04	20	
Ethylbenzene		0.99	0.049	0.9737	0	102	70.9	132	0.819	20	
Kylenes, Total		3.0	0.097	2.921	0.05637	101	76.2	123	0.232	20	
	nofluorobenzene	3.0 0.95	0.097	2.921 0.9737	0.05637	101 97.2	76.2 80	123 120	0.232 0	20 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
- R RPD outside accepted recovery limits
- 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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 7 of 7



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

# Sample Log-In Check List

and the second second

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Client Name:	AGAVE ENERGY COMP	Work Order Number:	1701				RcptNo: 1
Received by/dat Logged By: Completed By: Reviewed By:	te: Lindsay Mangin Lindsay Mangin <i>J</i> UB	OU 128 17 1/14/2017 9:00:00 AM 1/14/2017 9:53:59 AM 1/14/207			Jundy/A Jundy/A	lago lago	· · · · · · · · · · · · · · · · · · ·
Chain of Cus	<u>stody</u>						
1. Custody sea	als intact on sample bottles?		Yes	[]]	No		Not Present
2. Is Chain of (	Custody complete?		Yes		No		Not Present
3. How was the	e sample delivered?		<u>Cour</u>	ier			
<u>Log In</u>							
4. Was an atte	empt made to cool the sample	s?	Yes	<b>[v</b> ]	No	1	NA
5. Were all sar	nples received at a temperati	re of ≥0° C to 6.0°C	Yes		No		<b>NA</b> []]
6. Sample(s) i	n proper container(s)?		Yes		No	]	
7. Sufficient sa	mple volume for indicated tes	it(s)?	Yes	$\checkmark$	No	. ]	
8. Are samples	e (except VOA and ONG) prop	erly preserved?	Yes	$\checkmark$	No		
9. Was preserv	vative added to bottles?		Yes		No		NA []
10.VOA vials ha	ave zero headspace?		Yes	E.I	No		No VOA Vials 🖌
11. Were any sa	ample containers received bro	ken?	Yes		No		# of preserved bottles checked
	vork match bottle labels? pancies on chain of custody)		Yes	<b>v</b>	No		for pH: (<2 or >12 unless noted)
	correctly identified on Chain	of Custody?	Yes	$\checkmark$	No	3	Adjusted?
	at analyses were requested?	·	Yes		No		
	ding times able to be met? customer for authorization.)		Yes	<	No		Checked by:

### Special Handling (if applicable)

16.V	as client notified of all discre	pancies with this order?	Yes	.] No []]	NA 🔽
	Person Notified:		Date:	:	
	By Whom:		Via: 🗍 eMail	Phone Fax	In Person
	Regarding:				
	Client Instructions:				and an a set of the second of the second
7. ¢	Additional remarks:				
8. <u>c</u>	Cooler Information		,	le a sia	

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

January 31, 2017

Kerry Egan Agave Energy Company P.O. Box 158 Artesia, NM 88211 TEL: (575) 513-8988 FAX

RE: Grace

OrderNo.: 1701976

Dear Kerry Egan:

Hall Environmental Analysis Laboratory received 12 sample(s) on 1/24/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> 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 qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/31/2017

<b>CLIENT:</b>	Agave Energy Company			Client Sample	e ID: Gra	ace #1	
Project:	Grace			Collection I	Date: 1/2	0/2017 10:30:00 AM	
Lab ID:	1701976-001	Matrix: S	SOIL	Received I	<b>Date:</b> 1/2	4/2017 9:40:00 AM	
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METH	HOD 300.0: ANIONS					Analyst	MRA
Chloride		ND	30	mg/Kg	20	1/27/2017 11:51:53 AM	29934
EPA METH	HOD 8015D MOD: GASOLINE	ERANGE				Analyst	DJF
Gasoline I	Range Organics (GRO)	ND	4.7	mg/Kg	1	1/25/2017 8:58:31 PM	29849
Surr: Bl	FB	78.0	70-130	%Rec	1	1/25/2017 8:58:31 PM	29849
EPA METH	HOD 8015M/D: DIESEL RANG	GE ORGANICS				Analyst	MAB
Diesel Ra	nge Organics (DRO)	ND	9.7	mg/Kg	1	1/25/2017 5:40:12 PM	29850
Surr: D	NOP	98.8	70-130	%Rec	1	1/25/2017 5:40:12 PM	29850
EPA METH	HOD 8260B: VOLATILES SH	ORT LIST				Analyst	DJF
Benzene		ND	0.023	mg/Kg	1	1/25/2017 8:58:31 PM	29849
Toluene		ND	0.047	mg/Kg	1	1/25/2017 8:58:31 PM	29849
Ethylbenz	ene	ND	0.047	mg/Kg	1	1/25/2017 8:58:31 PM	29849
Xylenes, 7	Total	ND	0.094	mg/Kg	1	1/25/2017 8:58:31 PM	29849
Surr: 1,	,2-Dichloroethane-d4	91.7	70-130	%Rec	1	1/25/2017 8:58:31 PM	29849
Surr: 4-	Bromofluorobenzene	82.8	70-130	%Rec	1	1/25/2017 8:58:31 PM	29849
Surr: Di	ibromofluoromethane	94.0	70-130	%Rec	1	1/25/2017 8:58:31 PM	29849
Surr: To	oluene-d8	103	70-130	%Rec	1	1/25/2017 8:58:31 PM	29849

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matein

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 Page 1 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Agave Energy Company

Project: Grace

Client Sample ID: Grace #2 Collection Date: 1/20/2017 10:30:00 AM

Lab ID: 1701976-002	Matrix:	Received 1	<b>Received Date:</b> 1/24/2017 9:40:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	ND	30	mg/Kg	20	1/27/2017 12:29:08 PM	1 29934
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	1/26/2017 1:21:22 AM	29849
Surr: BFB	74.9	70-130	%Rec	1	1/26/2017 1:21:22 AM	29849
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	5			Analyst	: MAB
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	1/25/2017 5:12:55 PM	29850
Surr: DNOP	87.5	70-130	%Rec	1	1/25/2017 5:12:55 PM	29850
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.024	mg/Kg	1	1/26/2017 1:21:22 AM	29849
Toluene	ND	0.048	mg/Kg	1	1/26/2017 1:21:22 AM	29849
Ethylbenzene	ND	0.048	mg/Kg	1	1/26/2017 1:21:22 AM	29849
Xylenes, Total	ND	0.096	mg/Kg	1	1/26/2017 1:21:22 AM	29849
Surr: 1,2-Dichloroethane-d4	94.2	70-130	%Rec	1	1/26/2017 1:21:22 AM	29849
Surr: 4-Bromofluorobenzene	80.2	70-130	%Rec	1	1/26/2017 1:21:22 AM	29849
Surr: Dibromofluoromethane	92.8	70-130	%Rec	1	1/26/2017 1:21:22 AM	29849
Surr: Toluene-d8	101	70-130	%Rec	1	1/26/2017 1:21:22 AM	29849

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 Page 2 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Agave Energy Company

Project: Grace

Client Sample ID: Grace #3 Collection Date: 1/20/2017 10:30:00 AM Pageiyad Date: 1/24/2017 0:40:00 AM

Lab ID: 1701976-003	Matrix:	<b>Received</b>	<b>Received Date:</b> 1/24/2017 9:40:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	ND	30	mg/Kg	20	1/27/2017 1:06:21 PM	29934
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	1/26/2017 1:51:03 AM	29849
Surr: BFB	77.3	70-130	%Rec	1	1/26/2017 1:51:03 AM	29849
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	5			Analyst	: MAB
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	1/25/2017 4:45:37 PM	29850
Surr: DNOP	89.6	70-130	%Rec	1	1/25/2017 4:45:37 PM	29850
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.025	mg/Kg	1	1/26/2017 1:51:03 AM	29849
Toluene	ND	0.050	mg/Kg	1	1/26/2017 1:51:03 AM	29849
Ethylbenzene	ND	0.050	mg/Kg	1	1/26/2017 1:51:03 AM	29849
Xylenes, Total	ND	0.10	mg/Kg	1	1/26/2017 1:51:03 AM	29849
Surr: 1,2-Dichloroethane-d4	95.1	70-130	%Rec	1	1/26/2017 1:51:03 AM	29849
Surr: 4-Bromofluorobenzene	79.2	70-130	%Rec	1	1/26/2017 1:51:03 AM	29849
Surr: Dibromofluoromethane	98.7	70-130	%Rec	1	1/26/2017 1:51:03 AM	29849
Surr: Toluene-d8	99.9	70-130	%Rec	1	1/26/2017 1:51:03 AM	29849

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Anal

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 Page 3 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/31/2017

CLIENT: Agave Energy Company	Client Sample ID: Grace #4						
Project: Grace			Collection D	ate: 1/2	0/2017 10:30:00 AM		
Lab ID: 1701976-004	Matrix:	SOIL	<b>Received</b> D	ate: 1/2	4/2017 9:40:00 AM		
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS					Analyst	MRA	
Chloride	ND	30	mg/Kg	20	1/27/2017 1:18:46 PM	29934	
EPA METHOD 8015D MOD: GASOLINE F	RANGE				Analyst	DJF	
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/26/2017 2:20:09 AM	29849	
Surr: BFB	74.7	70-130	%Rec	1	1/26/2017 2:20:09 AM	29849	
EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	s			Analyst	MAB	
Diesel Range Organics (DRO)	14	9.4	mg/Kg	1	1/25/2017 4:18:41 PM	29850	
Surr: DNOP	90.3	70-130	%Rec	1	1/25/2017 4:18:41 PM	29850	
EPA METHOD 8260B: VOLATILES SHOP	RT LIST				Analyst	DJF	
Benzene	ND	0.024	mg/Kg	1	1/26/2017 2:20:09 AM	29849	
Toluene	ND	0.049	mg/Kg	1	1/26/2017 2:20:09 AM	29849	
Ethylbenzene	ND	0.049	mg/Kg	1	1/26/2017 2:20:09 AM	29849	
Xylenes, Total	ND	0.098	mg/Kg	1	1/26/2017 2:20:09 AM	29849	
Surr: 1,2-Dichloroethane-d4	93.4	70-130	%Rec	1	1/26/2017 2:20:09 AM	29849	
Surr: 4-Bromofluorobenzene	79.6	70-130	%Rec	1	1/26/2017 2:20:09 AM	29849	
Surr: Dibromofluoromethane	98.0	70-130	%Rec	1	1/26/2017 2:20:09 AM	29849	
Surr: Toluene-d8	98.2	70-130	%Rec	1	1/26/2017 2:20:09 AM	29849	

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 Page 4 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Agave Energy Company

Date Reported: 1/31/2017 Client Sample ID: Grace #5 Collection Date: 1/20/2017 10:30:00 AM

Project:	Grace			<b>Collection</b> I	Date: 1/2	0/2017 10:30:00 AM				
Lab ID:	1701976-005	Matrix: S	Matrix: SOIL			Received Date: 1/24/2017 9:40:00 AM				
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch			
EPA MET	HOD 300.0: ANIONS					Analyst	MRA			
Chloride		ND	30	mg/Kg	20	1/27/2017 1:31:10 PM	29934			
EPA MET	HOD 8015D MOD: GASOL	INE RANGE				Analyst	DJF			
Gasoline	Range Organics (GRO)	ND	4.9	mg/Kg	1	1/26/2017 2:49:33 AM	29849			
Surr: E	BFB	74.3	70-130	%Rec	1	1/26/2017 2:49:33 AM	29849			
EPA MET	HOD 8015M/D: DIESEL RA	ANGE ORGANICS				Analyst	MAB			
Diesel Ra	ange Organics (DRO)	ND	9.3	mg/Kg	1	1/25/2017 3:51:41 PM	29850			
Surr: D	DNOP	88.5	70-130	%Rec	1	1/25/2017 3:51:41 PM	29850			
EPA MET	HOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF			
Benzene		ND	0.025	mg/Kg	1	1/26/2017 2:49:33 AM	29849			
Toluene		ND	0.049	mg/Kg	1	1/26/2017 2:49:33 AM	29849			
Ethylben	zene	ND	0.049	mg/Kg	1	1/26/2017 2:49:33 AM	29849			
Xylenes,	Total	ND	0.099	mg/Kg	1	1/26/2017 2:49:33 AM	29849			
Surr: 1	1,2-Dichloroethane-d4	96.1	70-130	%Rec	1	1/26/2017 2:49:33 AM	29849			
Surr: 4	1-Bromofluorobenzene	77.9	70-130	%Rec	1	1/26/2017 2:49:33 AM	29849			
Surr: E	Dibromofluoromethane	95.0	70-130	%Rec	1	1/26/2017 2:49:33 AM	29849			
Surr: T	Foluene-d8	98.9	70-130	%Rec	1	1/26/2017 2:49:33 AM	29849			

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

Teres to the QC Summary report and sample login enceknist for hugged QC data and preserve

- 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
  - R RPD outside accepted recovery limits
  - 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 Page 5 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Agave Energy Company

Project: Grace

Client Sample ID: Grace #6 Collection Date: 1/20/2017 10:30:00 AM

Lab ID: 1701976-006	Matrix: S	Received 1	<b>Received Date:</b> 1/24/2017 9:40:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	1/27/2017 1:43:35 PM	29934
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	DJF
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	1/26/2017 3:18:46 AM	29849
Surr: BFB	79.6	70-130	%Rec	1	1/26/2017 3:18:46 AM	29849
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	;			Analyst	MAB
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	1/25/2017 11:19:58 AM	29856
Surr: DNOP	89.2	70-130	%Rec	1	1/25/2017 11:19:58 AM	29856
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF
Benzene	ND	0.025	mg/Kg	1	1/26/2017 3:18:46 AM	29849
Toluene	ND	0.050	mg/Kg	1	1/26/2017 3:18:46 AM	29849
Ethylbenzene	ND	0.050	mg/Kg	1	1/26/2017 3:18:46 AM	29849
Xylenes, Total	ND	0.10	mg/Kg	1	1/26/2017 3:18:46 AM	29849
Surr: 1,2-Dichloroethane-d4	99.8	70-130	%Rec	1	1/26/2017 3:18:46 AM	29849
Surr: 4-Bromofluorobenzene	84.0	70-130	%Rec	1	1/26/2017 3:18:46 AM	29849
Surr: Dibromofluoromethane	100	70-130	%Rec	1	1/26/2017 3:18:46 AM	29849
Surr: Toluene-d8	102	70-130	%Rec	1	1/26/2017 3:18:46 AM	29849

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
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- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 Page 6 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Agave Energy Company

Project: Grace

Client Sample ID: Grace #7 Collection Date: 1/20/2017 10:30:00 AM

Lab ID: 1701976-007	Matrix:	Received 1	Received Date: 1/24/2017 9:40:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	1/27/2017 1:55:59 PM	29934
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	DJF
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	1/26/2017 3:47:40 AM	29849
Surr: BFB	72.9	70-130	%Rec	1	1/26/2017 3:47:40 AM	29849
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	5			Analyst	: MAB
Diesel Range Organics (DRO)	21	9.5	mg/Kg	1	1/25/2017 12:41:35 PM	29856
Surr: DNOP	90.7	70-130	%Rec	1	1/25/2017 12:41:35 PM	29856
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF
Benzene	ND	0.024	mg/Kg	1	1/26/2017 3:47:40 AM	29849
Toluene	ND	0.048	mg/Kg	1	1/26/2017 3:47:40 AM	29849
Ethylbenzene	ND	0.048	mg/Kg	1	1/26/2017 3:47:40 AM	29849
Xylenes, Total	ND	0.097	mg/Kg	1	1/26/2017 3:47:40 AM	29849
Surr: 1,2-Dichloroethane-d4	98.2	70-130	%Rec	1	1/26/2017 3:47:40 AM	29849
Surr: 4-Bromofluorobenzene	74.4	70-130	%Rec	1	1/26/2017 3:47:40 AM	29849
Surr: Dibromofluoromethane	96.3	70-130	%Rec	1	1/26/2017 3:47:40 AM	29849
Surr: Toluene-d8	102	70-130	%Rec	1	1/26/2017 3:47:40 AM	29849

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 Page 7 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/31/2017

<b>CLIENT:</b> Agave Energy Company		Client Sample ID: Grace #8							
Project: Grace		Collection Date: 1/20/2017 10:30:00 AM							
Lab ID: 1701976-008	Matrix:	SOIL	Received 1	Received Date: 1/24/2017 9:40:00 AM					
Analyses	Result	PQL Qu	ual Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS					Analyst	MRA			
Chloride	ND	30	mg/Kg	20	1/27/2017 2:08:23 PM	29934			
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst	DJF			
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	1/25/2017 3:07:51 PM	29854			
Surr: BFB	80.7	70-130	%Rec	1	1/25/2017 3:07:51 PM	29854			
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	5			Analyst	MAB			
Diesel Range Organics (DRO)	15	9.9	mg/Kg	1	1/25/2017 1:08:42 PM	29856			
Surr: DNOP	90.7	70-130	%Rec	1	1/25/2017 1:08:42 PM	29856			
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	DJF			
Benzene	ND	0.024	mg/Kg	1	1/25/2017 3:07:51 PM	29854			
Toluene	ND	0.047	mg/Kg	1	1/25/2017 3:07:51 PM	29854			
Ethylbenzene	ND	0.047	mg/Kg	1	1/25/2017 3:07:51 PM	29854			
Xylenes, Total	ND	0.095	mg/Kg	1	1/25/2017 3:07:51 PM	29854			
Surr: 1,2-Dichloroethane-d4	96.7	70-130	%Rec	1	1/25/2017 3:07:51 PM	29854			
Surr: 4-Bromofluorobenzene	81.8	70-130	%Rec	1	1/25/2017 3:07:51 PM	29854			
Surr: Dibromofluoromethane	95.9	70-130	%Rec	1	1/25/2017 3:07:51 PM	29854			
Surr: Toluene-d8	100	70-130	%Rec	1	1/25/2017 3:07:51 PM	29854			

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	Н	Holding times for preparation or analysis exceeded

- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 Page 8 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Agave Energy Company

Project: Grace

Date Reported: 1/31/2017 Client Sample ID: Grace #9 Collection Date: 1/20/2017 10:30:00 AM

110jeen Glace			concerton	Dutt: 1/2	10/2017 10:50:00 Thi	
Lab ID: 1701976-009	Matrix:	SOIL	Received 1	Date: 1/2	24/2017 9:40:00 AM	
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	1/27/2017 2:20:47 PM	29934
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	DJF
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	1/25/2017 3:37:07 PM	29854
Surr: BFB	75.9	70-130	%Rec	1	1/25/2017 3:37:07 PM	29854
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	;			Analyst	MAB
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	1/25/2017 1:35:39 PM	29856
Surr: DNOP	92.2	70-130	%Rec	1	1/25/2017 1:35:39 PM	29856
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF
Benzene	ND	0.023	mg/Kg	1	1/25/2017 3:37:07 PM	29854
Toluene	ND	0.047	mg/Kg	1	1/25/2017 3:37:07 PM	29854
Ethylbenzene	ND	0.047	mg/Kg	1	1/25/2017 3:37:07 PM	29854
Xylenes, Total	ND	0.094	mg/Kg	1	1/25/2017 3:37:07 PM	29854
Surr: 1,2-Dichloroethane-d4	94.7	70-130	%Rec	1	1/25/2017 3:37:07 PM	29854
Surr: 4-Bromofluorobenzene	78.7	70-130	%Rec	1	1/25/2017 3:37:07 PM	29854
Surr: Dibromofluoromethane	91.3	70-130	%Rec	1	1/25/2017 3:37:07 PM	29854
Surr: Toluene-d8	101	70-130	%Rec	1	1/25/2017 3:37:07 PM	29854

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

Qualifiers: \* Value exceeds Maximum Contaminant Level. B Ana

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Agave Energy Company

**Project:** Grace

Client Sample ID: Grace #10 Collection Date: 1/20/2017 10:30:00 AM Received Date: 1/24/2017 9:40:00 AM

Lab ID: 1701976-010	Matrix: S	SOIL	<b>Received</b>	Date: 1/2	24/2017 9:40:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	1/27/2017 2:33:11 PM	29934
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	DJF
Gasoline Range Organics (GRO)	15	4.8	mg/Kg	1	1/25/2017 4:06:15 PM	29854
Surr: BFB	79.4	70-130	%Rec	1	1/25/2017 4:06:15 PM	29854
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	;			Analyst	MAB
Diesel Range Organics (DRO)	25	9.8	mg/Kg	1	1/25/2017 2:29:56 PM	29856
Surr: DNOP	81.8	70-130	%Rec	1	1/25/2017 2:29:56 PM	29856
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF
Benzene	0.29	0.024	mg/Kg	1	1/25/2017 4:06:15 PM	29854
Toluene	ND	0.048	mg/Kg	1	1/25/2017 4:06:15 PM	29854
Ethylbenzene	0.052	0.048	mg/Kg	1	1/25/2017 4:06:15 PM	29854
Xylenes, Total	0.44	0.095	mg/Kg	1	1/25/2017 4:06:15 PM	29854
Surr: 1,2-Dichloroethane-d4	94.3	70-130	%Rec	1	1/25/2017 4:06:15 PM	29854
Surr: 4-Bromofluorobenzene	81.5	70-130	%Rec	1	1/25/2017 4:06:15 PM	29854
Surr: Dibromofluoromethane	91.4	70-130	%Rec	1	1/25/2017 4:06:15 PM	29854
Surr: Toluene-d8	102	70-130	%Rec	1	1/25/2017 4:06:15 PM	29854

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

Qualifiers: \* Value exceeds Maximum Contaminant Level.

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 limit Page 10 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Agave Energy Company

Project: Grace

Client Sample ID: Grace #11 Collection Date: 1/20/2017 10:30:00 AM

Lab ID: 1701976-011	Matrix:	SOIL	Received 1	Date: 1/2	24/2017 9:40:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	MRA
Chloride	ND	30	mg/Kg	20	1/27/2017 2:45:37 PM	29934
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	DJF
Gasoline Range Organics (GRO)	6.8	5.0	mg/Kg	1	1/25/2017 4:35:30 PM	29854
Surr: BFB	80.0	70-130	%Rec	1	1/25/2017 4:35:30 PM	29854
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	;			Analys	: MAB
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	1/25/2017 2:57:18 PM	29856
Surr: DNOP	93.1	70-130	%Rec	1	1/25/2017 2:57:18 PM	29856
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	DJF
Benzene	ND	0.025	mg/Kg	1	1/25/2017 4:35:30 PM	29854
Toluene	0.14	0.050	mg/Kg	1	1/25/2017 4:35:30 PM	29854
Ethylbenzene	ND	0.050	mg/Kg	1	1/25/2017 4:35:30 PM	29854
Xylenes, Total	0.18	0.099	mg/Kg	1	1/25/2017 4:35:30 PM	29854
Surr: 1,2-Dichloroethane-d4	93.8	70-130	%Rec	1	1/25/2017 4:35:30 PM	29854
Surr: 4-Bromofluorobenzene	80.8	70-130	%Rec	1	1/25/2017 4:35:30 PM	29854
Surr: Dibromofluoromethane	92.8	70-130	%Rec	1	1/25/2017 4:35:30 PM	29854
Surr: Toluene-d8	105	70-130	%Rec	1	1/25/2017 4:35:30 PM	29854

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

- R RPD outside accepted recovery limits
- 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 Page 11 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Agave Energy Company

Grace

Project:

Client Sample ID: Grace #12 Collection Date: 1/20/2017 10:30:00 AM Received Date: 1/24/2017 9:40:00 AM

Lab ID: 1701976-012	Matrix:	SOIL	<b>Received</b>	Date: 1/2	24/2017 9:40:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	1/27/2017 2:58:01 PM	29934
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	DJF
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	1/25/2017 5:04:39 PM	29854
Surr: BFB	77.3	70-130	%Rec	1	1/25/2017 5:04:39 PM	29854
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	;			Analyst	MAB
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	1/25/2017 3:24:29 PM	29856
Surr: DNOP	95.4	70-130	%Rec	1	1/25/2017 3:24:29 PM	29856
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF
Benzene	ND	0.024	mg/Kg	1	1/25/2017 5:04:39 PM	29854
Toluene	ND	0.048	mg/Kg	1	1/25/2017 5:04:39 PM	29854
Ethylbenzene	ND	0.048	mg/Kg	1	1/25/2017 5:04:39 PM	29854
Xylenes, Total	ND	0.097	mg/Kg	1	1/25/2017 5:04:39 PM	29854
Surr: 1,2-Dichloroethane-d4	96.6	70-130	%Rec	1	1/25/2017 5:04:39 PM	29854
Surr: 4-Bromofluorobenzene	77.8	70-130	%Rec	1	1/25/2017 5:04:39 PM	29854
Surr: Dibromofluoromethane	93.8	70-130	%Rec	1	1/25/2017 5:04:39 PM	29854
Surr: Toluene-d8	102	70-130	%Rec	1	1/25/2017 5:04:39 PM	29854

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	0 + D' + D + M'

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 limit Page 12 of 20
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Client: Project:	Agave I Grace	Energy Comp	oany								
Sample ID	MB-29934	SampTy	/pe: <b>mł</b>	olk	Tes	tCode: EF	PA Method	300.0: Anion	s		
Client ID:	PBS	Batch	ID: 29	934	F	RunNo: 40	0365				
Prep Date:	1/27/2017	Analysis Da	ate: 1/	27/2017	S	SeqNo: 12	265328	Units: <b>mg/K</b>	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-29934	SampTy	/pe: <b>Ics</b>	6	Tes	tCode: EF	PA Method	300.0: Anion	s		
Client ID:	LCSS	Batch	ID: 29	934	F	RunNo: 4	0365				
Prep Date:	1/27/2017	Analysis Da	ate: 1/	27/2017	S	SeqNo: 12	265329	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	94.9	90	110			

### 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
- R RPD outside accepted recovery limits
- 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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 13 of 20

Client:Agave EProject:Grace	nergy Company								
Sample ID MB-29856	SampType: M	BLK	Tes	tCode: EF	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: PBS	Batch ID: 29	9856	F	RunNo: 40	0259				
Prep Date: 1/24/2017	Analysis Date: 1	/25/2017	S	SeqNo: 12	262378	Units: <b>mg/k</b>	٢g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	ND 10 8.9	10.00		88.9	70	130			
Sample ID LCS-29850	SampType: L	cs	Tes	tCode: EF	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch ID: 29			RunNo: 4		001011,2121		organice	
Prep Date: 1/24/2017	Analysis Date: 1			SeqNo: 12		Units: mg/k	۲g		
Analyte	Result PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46 10		0	92.6	63.8	116	, or a D		Quui
Surr: DNOP	5.0	5.000		100	70	130			
Sample ID MB-29850	SampType: <b>M</b>	BLK	Tes	tCode: EF	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: PBS	Batch ID: 29	9850	F	RunNo: 40	0260				
Prep Date: 1/24/2017	Analysis Date: 1	/25/2017	S	SeqNo: 12	262382	Units: mg/k	٢g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	ND 10 10	10.00		102	70	130			
Sample ID LCS-29856	SampType: L	CS.	Tos	tCode: <b>F</b>	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch ID: 29			RunNo: 40		0013M/D. DI	coer range	e organics	
Prep Date: 1/24/2017	Analysis Date: 1			SeqNo: 12		Units: <b>mg/k</b>	Ka		
Analyte	Result PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51 10		0	103	63.8	116	701CT D		Quui
Surr: DNOP	4.8	5.000		96.0	70	130			
Sample ID 1701976-006AMS	SampType: M	S	Tes	tCode: EF	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: Grace #6	Batch ID: 29	9856	F	RunNo: 40	0259				
Prep Date: 1/24/2017	Analysis Date: 1	/25/2017	S	SeqNo: 12	262495	Units: mg/k	٢g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51 9.5		0	107	51.6	130			
Surr: DNOP	4.7	4.748		98.7	70	130			
Sample ID 1701976-006AMS	D SampType: M	SD	Tes	tCode: EF	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: Grace #6	Batch ID: 29	9856	F	RunNo: 40	0259				
Prep Date: 1/24/2017	Analysis Date: 1	/25/2017	5	SeqNo: 12	262496	Units: mg/k	٢g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

### **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
- R RPD outside accepted recovery limits
- 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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 14 of 20

4.8

WO#: 1701976 31-Jan-17

Qual

0

Client:	Agave En	ergy Com	pany							
Project:	Grace									
Sample ID	1701976-006AMSE	D SampT	ype: <b>M</b> \$	SD	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics
Client ID:	Grace #6	Batch	ID: 29	856	R	RunNo: 4	0259			
Prep Date:	1/24/2017	Analysis D	ate: 1/	25/2017	S	SeqNo: 1	262496	Units: <b>mg/k</b>	٢g	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit
Diesel Range (	Organics (DRO)	53	9.9	49.31	0	108	51.6	130	4.85	20

4.931

97.4

70

130

0

#### **Qualifiers:**

Surr: DNOP

- \* Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 15 of 20

WO#:	1701976
	21.1.17

Client: Agave E	Energy Com	npany								
Project: Grace										
Sample ID mb-29849	Samp	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8260B: Vola	iles Short	List	
Client ID: PBS	Batc	h ID: 29	849	F	RunNo: <b>40289</b>					
Prep Date: 1/24/2017	Analysis E	Date: 1/	26/2017	5	SeqNo: 12	262946	Units: <b>mg/k</b>	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Foluene	ND	0.050								
Ethylbenzene	ND	0.050								
(ylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		97.2	70	130			
Surr: 4-Bromofluorobenzene	0.40		0.5000		80.6	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		96.4	70	130			
Surr: Toluene-d8	0.49		0.5000		98.4	70	130			
Sample ID Ics-29849	Samp	Type: LC	S	Tes	tCode: EF	PA Method	8260B: Vola	iles Short	List	
Client ID: LCSS	Batch ID: 29849			F	RunNo: <b>40289</b>					
Prep Date: 1/24/2017	Analysis E	Date: 1/	25/2017	S	SeqNo: 12	262948	Units: mg/k	íg		
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	89.8	70	130			
oluene	0.97	0.050	1.000	0	96.6	70	130			
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		96.4	70	130			
Surr: 4-Bromofluorobenzene	0.40		0.5000		79.6	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		96.4	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			
	0.51	Гуре: М\$		Tes			130 8260B: Vola	tiles Short	List	
Sample ID 1701976-001ams	0.51 s SampT	Гуре: <b>М</b> \$ h ID: <b>29</b>	3			PA Method		tiles Short	List	
Sample ID 1701976-001ams Client ID: Grace #1	0.51 s SampT	h ID: 29	5 849	F	tCode: Ef	PA Method 0289			List	
Sample ID <b>1701976-001ams</b> Client ID: <b>Grace #1</b> Prep Date: <b>1/24/2017</b>	0.51 s SampT Batc	h ID: 29	S 849 25/2017	F	tCode: EF	PA Method 0289	8260B: Vola		<b>List</b> RPDLimit	Qual
Sample ID <b>1701976-001ams</b> Client ID: <b>Grace #1</b> Prep Date: <b>1/24/2017</b> Analyte	0.51 s SampT Batcl Analysis I	h ID: <b>29</b> Date: <b>1/</b>	S 849 25/2017	F	tCode: EF RunNo: 40 SeqNo: 12	PA Method 0289 262954	8260B: Vola Units: mg/F	ζg		Qual
Sample ID <b>1701976-001ams</b> Client ID: <b>Grace #1</b> Prep Date: <b>1/24/2017</b> Analyte Benzene	0.51 s SampT Batc Analysis I Result	h ID: <b>29</b> Date: <b>1/</b> PQL	5 849 25/2017 SPK value	F S SPK Ref Val	tCode: EF RunNo: 40 GeqNo: 12 %REC	PA Method 0289 262954 LowLimit	8260B: Vola Units: <b>mg/k</b> HighLimit	ζg		Qual
Sample ID <b>1701976-001ams</b> Client ID: <b>Grace #1</b> Prep Date: <b>1/24/2017</b> Analyte Benzene	0.51 s SampT Batc Analysis E Result 0.80	h ID: <b>29</b> Date: <b>1/</b> PQL 0.023	5 849 25/2017 SPK value 0.9141	F SPK Ref Val 0	tCode: EF RunNo: 40 SeqNo: 12 %REC 87.5	PA Method 0289 262954 LowLimit 61.9	8260B: Vola Units: mg/F HighLimit 146	ζg		Qual
Sample ID <b>1701976-001ams</b> Client ID: <b>Grace #1</b> Prep Date: <b>1/24/2017</b> Analyte Benzene Foluene	0.51 s SampT Batc Analysis D Result 0.80 0.88	h ID: <b>29</b> Date: <b>1/</b> PQL 0.023	5 849 25/2017 SPK value 0.9141 0.9141	F SPK Ref Val 0	tCode: EF RunNo: 40 SeqNo: 12 %REC 87.5 96.6	PA Method 0289 262954 LowLimit 61.9 70	8260B: Vola Units: mg/k HighLimit 146 130	ζg		Qual
Sample ID <b>1701976-001ams</b> Client ID: <b>Grace #1</b> Prep Date: <b>1/24/2017</b> Analyte Benzene Foluene Surr: 1,2-Dichloroethane-d4	0.51 s SampT Batc Analysis D Result 0.80 0.88 0.44	h ID: <b>29</b> Date: <b>1/</b> PQL 0.023	5 849 25/2017 SPK value 0.9141 0.9141 0.4570	F SPK Ref Val 0	tCode: EF RunNo: 40 GeqNo: 12 %REC 87.5 96.6 96.1	<b>PA Method</b> <b>0289</b> <b>262954</b> LowLimit 61.9 70 70	8260B: Vola Units: mg/k HighLimit 146 130 130	ζg		Qual
Sample ID <b>1701976-001ams</b> Client ID: <b>Grace #1</b> Prep Date: <b>1/24/2017</b> Analyte Benzene Foluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene	0.51 s Samp Batc Analysis D Result 0.80 0.88 0.44 0.37	h ID: <b>29</b> Date: <b>1/</b> PQL 0.023	5 849 25/2017 SPK value 0.9141 0.9141 0.4570 0.4570	F SPK Ref Val 0	tCode: EF RunNo: 40 SeqNo: 12 %REC 87.5 96.6 96.1 80.5	PA Method 0289 262954 LowLimit 61.9 70 70 70 70	8260B: Vola Units: mg/k HighLimit 146 130 130 130	ζg		Qual
Sample ID <b>1701976-001ams</b> Client ID: <b>Grace #1</b> Prep Date: <b>1/24/2017</b> Analyte Benzene Foluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8	0.51 s Samp Batc Analysis D Result 0.80 0.88 0.44 0.37 0.44 0.37	h ID: <b>29</b> Date: <b>1/</b> PQL 0.023	5 849 25/2017 SPK value 0.9141 0.9141 0.4570 0.4570 0.4570 0.4570	F SPK Ref Val 0 0	tCode: EF RunNo: 40 SeqNo: 12 %REC 87.5 96.6 96.1 80.5 95.6 103	24 Method 2289 262954 LowLimit 61.9 70 70 70 70 70 70 70 70 70	8260B: Vola Units: mg/k HighLimit 146 130 130 130 130	<b>íg</b> %RPD	RPDLimit	Qual
Sample ID <b>1701976-001ams</b> Client ID: <b>Grace #1</b> Prep Date: <b>1/24/2017</b> Analyte Benzene Foluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane	0.51 s Samp Batc Analysis E Result 0.80 0.88 0.44 0.37 0.44 0.37 0.44 0.47	h ID: <b>29</b> Date: <b>1/</b> <u>PQL</u> 0.023 0.046	SPK value 0.9141 0.9141 0.4570 0.4570 0.4570 0.4570	F SPK Ref Val 0 0 Tes	tCode: EF RunNo: 40 SeqNo: 12 %REC 87.5 96.6 96.1 80.5 95.6 103	PA Method 0289 262954 LowLimit 61.9 70 70 70 70 70 70 70 70 70 70	8260B: Vola Units: mg/k HighLimit 146 130 130 130 130 130	<b>íg</b> %RPD	RPDLimit	Qual
Sample ID 1701976-001ams Client ID: Grace #1 Prep Date: 1/24/2017 Analyte Benzene Foluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID 1701976-001ams Client ID: Grace #1	0.51 s Samp Batc Analysis E Result 0.80 0.88 0.44 0.37 0.44 0.37 0.44 0.47	h ID: 29 Date: 1/ PQL 0.023 0.046	<ul> <li>SPK value</li> <li>0.9141</li> <li>0.9141</li> <li>0.4570</li> <li>0.4570</li> <li>0.4570</li> <li>0.4570</li> <li>0.4570</li> <li>0.4570</li> <li>849</li> </ul>	F SPK Ref Val 0 0 Tes F	tCode: EF RunNo: 40 SeqNo: 12 %REC 87.5 96.6 96.1 80.5 95.6 103 tCode: EF	PA Method 0289 262954 LowLimit 61.9 70 70 70 70 70 70 70 70 70 70	8260B: Vola Units: mg/k HighLimit 146 130 130 130 130 130	iles Short	RPDLimit	Qual
Sample ID 1701976-001ams Client ID: Grace #1 Prep Date: 1/24/2017 Analyte Benzene Foluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID 1701976-001ams Client ID: Grace #1 Prep Date: 1/24/2017	0.51 Batcl Analysis I Result 0.80 0.88 0.44 0.37 0.44 0.37 0.44 0.47 Sod Samp Batcl Analysis I Result	h ID: 29 Date: 1/ PQL 0.023 0.046 Type: MS h ID: 29 Date: 1/ PQL	5 849 25/2017 SPK value 0.9141 0.9141 0.4570 0.4570 0.4570 0.4570 0.4570 5D 849 26/2017 SPK value	F SPK Ref Val 0 0 Tes F	tCode: EF RunNo: 40 SeqNo: 12 %REC 87.5 96.6 96.1 80.5 95.6 103 tCode: EF RunNo: 40 SeqNo: 12 %REC	24 Method 2289 262954 LowLimit 61.9 70 70 70 70 70 70 70 20 24 24 25 262955 LowLimit	8260B: Vola Units: mg/k HighLimit 146 130 130 130 130 130 8260B: Vola	Sg %RPD tiles Short Sg %RPD	RPDLimit	Qual
Sample ID 1701976-001ams Client ID: Grace #1 Prep Date: 1/24/2017 Analyte Benzene Foluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID 1701976-001ams	0.51 s Samp <sup>¬</sup> Batcl Analysis E Result 0.80 0.88 0.44 0.37 0.44 0.37 0.44 0.47 sd Samp <sup>¬</sup> Batcl Analysis E	h ID: 29 Date: 1/ PQL 0.023 0.046	<ul> <li>SPK value</li> <li>0.9141</li> <li>0.9141</li> <li>0.9141</li> <li>0.4570</li> <li>0.4570</li> <li>0.4570</li> <li>0.4570</li> <li>0.4570</li> <li>849</li> <li>26/2017</li> </ul>	F SPK Ref Val 0 0 Tes F S	tCode: EF RunNo: 40 SeqNo: 12 %REC 87.5 96.6 96.1 80.5 95.6 103 tCode: EF RunNo: 40 SeqNo: 12	24 Method 2289 262954 LowLimit 61.9 70 70 70 70 70 70 70 70 70 20 20 20 20 20 20 20 20 20 2	8260B: Vola Units: mg/k HighLimit 146 130 130 130 130 130 130 8260B: Vola Units: mg/k	Sg %RPD tiles Short	RPDLimit	

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- S % Recovery outside of range due to dilution or matrix
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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 16 of 20

Client: Agave Er Project: Grace	nergy Com	ipany											
Sample ID 1701976-001amsc	d SampT	уре: М	SD.	TestCode: EPA Method 8260B: Volatiles Short List									
Client ID: Grace #1	Batch	h ID: 29	849	R									
Prep Date: 1/24/2017	Analysis D	Date: 1/	26/2017	Ş	SeqNo: 12	262955	Units: mg/K	a					
	-						-	-		<u> </u>			
Analyte Surr: 1,2-Dichloroethane-d4	Result 0.48	PQL	0.4980	SPK Ref Val	%REC 96.7	LowLimit 70	HighLimit 130	%RPD	RPDLimit	Qual			
Surr: 4-Bromofluorobenzene	0.48		0.4980		90.7 79.3	70	130	0 0	0 0				
Surr: Dibromofluoromethane	0.39		0.4980		99.1	70	130	0	0				
Surr: Toluene-d8	0.40		0.4980		101	70	130	0	0				
Sample ID mb-29854		ype: ME					8260B: Volat	iles Short	List				
Client ID: PBS		h ID: 29			lunNo: <b>4(</b>								
Prep Date: 1/24/2017	Analysis D	Date: 1/	25/2017	S	SeqNo: 12	262962	Units: mg/K	g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Methyl tert-butyl ether (MTBE)	ND	0.050											
Benzene	ND	0.025											
Toluene	ND	0.050											
Ethylbenzene	ND	0.050											
Xylenes, Total	ND	0.10											
Surr: 1,2-Dichloroethane-d4	0.46		0.5000		91.7	70	130						
Surr: 4-Bromofluorobenzene	0.41		0.5000		82.3	70	130						
Surr: Dibromofluoromethane	0.48		0.5000		95.3	70	130						
Surr: Toluene-d8	0.51		0.5000		102	70	130						
Sample ID Ics-29854	SampT	ype: LC	S	Tes	tCode: EF	PA Method	8260B: Volat	iles Short	List				
Client ID: LCSS	Batch	h ID: 29	854	R	RunNo: <b>40</b>	0289							
Prep Date: 1/24/2017	Analysis D	Date: 1/	25/2017	S	SeqNo: 12	262963	Units: mg/K	g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
		· ~-											
Benzene	0.90	0.025	1.000	0	90.0	70	130						
	0.90 1.0	0.025 0.050	1.000 1.000	0 0			-						
				-	90.0	70	130						
Toluene	1.0		1.000	-	90.0 99.6	70 70	130 130						
Toluene Surr: 1,2-Dichloroethane-d4	1.0 0.48		1.000 0.5000	-	90.0 99.6 96.1	70 70 70 70	130 130 130						
Toluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene	1.0 0.48 0.41		1.000 0.5000 0.5000	-	90.0 99.6 96.1 81.2	70 70 70	130 130 130 130 130						
Toluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8	1.0 0.48 0.41 0.47 0.51	0.050	1.000 0.5000 0.5000 0.5000 0.5000	0	90.0 99.6 96.1 81.2 94.5 101	70 70 70 70 70 70 70	130 130 130 130 130 130 130	iles Chort	List				
Toluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID <b>1701976-008ams</b>	1.0 0.48 0.41 0.47 0.51 SampT	0.050 Type: <b>M</b> \$	1.000 0.5000 0.5000 0.5000 0.5000	0 Tes	90.0 99.6 96.1 81.2 94.5 101 tCode: <b>EF</b>	70 70 70 70 70 70 70 <b>PA Method</b>	130 130 130 130 130 130	iles Short	List				
Toluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID <b>1701976-008ams</b> Client ID: <b>Grace #8</b>	1.0 0.48 0.41 0.47 0.51 SampT Batch	0.050 	1.000 0.5000 0.5000 0.5000 0.5000	0 Tes F	90.0 99.6 96.1 81.2 94.5 101 tCode: <b>EF</b>	70 70 70 70 70 70 70 70 70	130 130 130 130 130 130 130 8260B: Volat		List				
Toluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID <b>1701976-008ams</b> Client ID: <b>Grace #8</b> Prep Date: <b>1/24/2017</b>	1.0 0.48 0.41 0.47 0.51 SampT Batch Analysis D	0.050 Type: <b>M\$</b> h ID: <b>29</b> Date: <b>1/</b>	1.000 0.5000 0.5000 0.5000 0.5000 854 25/2017	0 Tes R S	90.0 99.6 96.1 81.2 94.5 101 tCode: EF RunNo: 40 GeqNo: 12	70 70 70 70 70 70 70 <b>24 Method</b> 20289 262965	130 130 130 130 130 130 130 <b>8260B: Volat</b> Units: mg/K	g		Qual			
Toluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID <b>1701976-008ams</b> Client ID: <b>Grace #8</b> Prep Date: <b>1/24/2017</b> Analyte	1.0 0.48 0.41 0.47 0.51 SampT Batch Analysis D Result	0.050 	1.000 0.5000 0.5000 0.5000 0.5000 854 25/2017 SPK value	0 Tes F S SPK Ref Val	90.0 99.6 96.1 81.2 94.5 101 tCode: EF RunNo: 40 SeqNo: 12 %REC	70 70 70 70 70 70 <b>24 Method</b> 2289 262965 LowLimit	130 130 130 130 130 130 <b>8260B: Volat</b> Units: <b>mg/K</b> HighLimit		<b>List</b> RPDLimit	Qual			
Toluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane Surr: Toluene-d8 Sample ID <b>1701976-008ams</b> Client ID: <b>Grace #8</b> Prep Date: <b>1/24/2017</b>	1.0 0.48 0.41 0.47 0.51 SampT Batch Analysis D	0.050 Type: <b>M\$</b> h ID: <b>29</b> Date: <b>1/</b>	1.000 0.5000 0.5000 0.5000 0.5000 854 25/2017	0 Tes R S	90.0 99.6 96.1 81.2 94.5 101 tCode: EF RunNo: 40 GeqNo: 12	70 70 70 70 70 70 70 <b>24 Method</b> 20289 262965	130 130 130 130 130 130 130 <b>8260B: Volat</b> Units: mg/K	g		Qual			

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E Value above quantitation range

- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 17 of 20

Client: Agave I Project: Grace	Energy Con	npany											
Sample ID 1701976-008am	s Samp	Гуре: М	6	TestCode: EPA Method 8260B: Volatiles Short List									
Client ID: Grace #8	Batc	Batch ID: 29854 RunNo: 40289											
Prep Date: 1/24/2017	Analysis [	Analysis Date: 1/25/2017			SeqNo: 1	262965	Units: <b>mg/k</b>	٢g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Surr: 4-Bromofluorobenzene	0.38		0.4794		78.3	70	130						
	0.40		0.4794		95.3	70	130						
Surr: Dibromofluoromethane	0.46												
Surr: Dibromofluoromethane Surr: Toluene-d8	0.46 0.48		0.4794		100	70	130						
Surr: Toluene-d8	0.48	Гуре: М		Tes			130 8260B: Vola	tiles Short	List				
Surr: Toluene-d8 Sample ID 1701976-008ams	0.48 sd Samp	Гуре: <b>М</b> h ID: <b>29</b>	SD			PA Method		tiles Short	List				
Surr: Toluene-d8 Sample ID 1701976-008ams Client ID: Grace #8	0.48 sd Samp	h ID: 29	SD 854	F	tCode: E	PA Method 0289			List				
Surr: Toluene-d8 Sample ID 1701976-008ams Client ID: Grace #8 Prep Date: 1/24/2017	0.48 sd Samp Batc	h ID: 29	SD 854 /25/2017	F	tCode: El RunNo: 4	PA Method 0289	8260B: Vola		: List RPDLimit	Qual			
Surr: Toluene-d8 Sample ID 1701976-008ams Client ID: Grace #8 Prep Date: 1/24/2017 Analyte	0.48 sd Samp Batc Analysis I	h ID: <b>29</b> Date: <b>1</b> /	SD 854 /25/2017	F	tCode: El RunNo: 4 SeqNo: 1	PA Method 0289 262966	8260B: Vola Units: mg/F	٢g		Qual			
Surr: Toluene-d8 Sample ID 1701976-008ams Client ID: Grace #8 Prep Date: 1/24/2017 Analyte Benzene	0.48 sd Samp Batc Analysis I Result	h ID: <b>29</b> Date: <b>1</b> / PQL	SD 854 125/2017 SPK value	F S SPK Ref Val	tCode: E RunNo: 4 SeqNo: 1 %REC	PA Method 0289 262966 LowLimit	8260B: Vola Units: <b>mg/k</b> HighLimit	<b>(g</b> %RPD	RPDLimit	Qual			
Surr: Toluene-d8 Sample ID 1701976-008ams Client ID: Grace #8 Prep Date: 1/24/2017 Analyte Benzene	0.48 sd Samp Batc Analysis I <u>Result</u> 0.91	h ID: <b>29</b> Date: <b>1/</b> PQL 0.024	SD 854 25/2017 SPK value 0.9515	F SPK Ref Val 0	tCode: El RunNo: 4 SeqNo: 1 %REC 95.2	PA Method 0289 262966 LowLimit 61.9	8260B: Vola Units: mg/k HighLimit 146	<b>(g</b> <u>%RPD</u> 0.356	RPDLimit 20	Qual			
Surr: Toluene-d8 Sample ID 1701976-008ams Client ID: Grace #8 Prep Date: 1/24/2017 Analyte Benzene Toluene	0.48 <b>sd</b> Samp Batc Analysis I <u>Result</u> 0.91 0.98	h ID: <b>29</b> Date: <b>1/</b> PQL 0.024	SD 854 25/2017 SPK value 0.9515 0.9515	F SPK Ref Val 0	tCode: El RunNo: 4 SeqNo: 1 %REC 95.2 103	PA Method 0289 262966 LowLimit 61.9 70	8260B: Vola Units: mg/F HighLimit 146 130	<b>(g</b> %RPD 0.356 0.0140	RPDLimit 20 20	Qual			
Surr: Toluene-d8 Sample ID 1701976-008ams Client ID: Grace #8 Prep Date: 1/24/2017 Analyte Benzene Toluene Surr: 1,2-Dichloroethane-d4	0.48 <b>5d</b> Samp Batc Analysis I <u>Result</u> 0.91 0.98 0.47	h ID: <b>29</b> Date: <b>1/</b> PQL 0.024	SD 854 25/2017 SPK value 0.9515 0.9515 0.4757	F SPK Ref Val 0	tCode: E RunNo: 4 SeqNo: 1 %REC 95.2 103 98.1	PA Method 0289 262966 LowLimit 61.9 70 70	8260B: Vola Units: mg/k HighLimit 146 130 130	<b>(g</b> <u>%RPD</u> 0.356 0.0140 0	RPDLimit 20 20 0	Qual			

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- P Sample pH Not In Range
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- Page 18 of 20

SampType: MBLK

Agave Energy Company

Grace

Client ID: PBS	Batch	ID: 29	849	F	RunNo: 4	0289									
Prep Date: 1/24/2017	Analysis D	ate: 1/	/26/2017	S	SeqNo: 1	262973	Units: <b>mg/ł</b>	۲g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Gasoline Range Organics (GRO)	ND	5.0													
Surr: BFB	380		500.0		76.2	70	130								
Sample ID Ics-29849	SampT	ype: LC	s	TestCode: EPA Method 8015D Mod: Gasoline Range											
Client ID: LCSS	Batch	ID: 29	849	F	RunNo: 4	0289									
Prep Date: 1/24/2017	Analysis D	ate: 1/	/25/2017	S	SeqNo: 1	262974	Units: mg/k	٢g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	62.9	123								
Surr: BFB	400		500.0		79.1	70	130								
Sample ID mb-29854	SampT	ype: M	BLK	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range						
Client ID: PBS	Batch	ID: 29	854	-											
Prep Date: 1/24/2017	Analysis D	ate: 1/	/25/2017	S	SeqNo: 1	262982	Units: <b>mg/ł</b>	۲g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Gasoline Range Organics (GRO)	ND	5.0													
Surr: BFB	400		500.0		79.6	70	130								
								TestCode: EPA Method 8015D Mod: Gasoline Range							
Sample ID Ics-29854	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range						
	•	ype: LC 1D: 29			tCode: El		8015D Mod:	Gasoline	Range						
Sample ID Ics-29854	•	D: 29	854	F		0289	8015D Mod: Units: mg/ł		Range						
Sample ID Ics-29854 Client ID: LCSS	Batch	D: 29	854 /25/2017	F	RunNo: 4	0289			Range RPDLimit	Qual					
Sample ID         Ics-29854           Client ID:         LCSS           Prep Date:         1/24/2017	Batch Analysis D	D: 29	854 /25/2017	F	tunNo: 4 SeqNo: 1	0289 262983	Units: <b>mg/ł</b>	۲g	U	Qual					
Sample ID Ics-29854 Client ID: LCSS Prep Date: 1/24/2017 Analyte	Batch Analysis D Result	ate: 1/	854 /25/2017 SPK value	F S SPK Ref Val	RunNo: 4 SeqNo: 12 %REC	0289 262983 LowLimit	Units: <b>mg/ł</b> HighLimit	۲g	U	Qual					
Sample ID Ics-29854 Client ID: LCSS Prep Date: 1/24/2017 Analyte Gasoline Range Organics (GRO)	Batch Analysis D Result 25 400	ate: 1/	854 /25/2017 SPK value 25.00 500.0	F S SPK Ref Val 0	2unNo: 4 6eqNo: 1 %REC 98.4 79.9	0289 262983 LowLimit 62.9 70	Units: <b>mg/ł</b> HighLimit 123	<b>∕g</b> %RPD	RPDLimit	Qual					
Sample ID Ics-29854 Client ID: LCSS Prep Date: 1/24/2017 Analyte Gasoline Range Organics (GRO) Surr: BFB	Batch Analysis D Result 25 400 SampT	ate: 1/ PQL 5.0	854 /25/2017 SPK value 25.00 500.0 S	F S SPK Ref Val 0 Tes	2unNo: 4 SeqNo: 1 %REC 98.4 79.9	262983 262983 LowLimit 62.9 70 PA Method	Units: <b>mg/k</b> HighLimit 123 130	<b>∕g</b> %RPD	RPDLimit	Qual					
Sample ID Ics-29854 Client ID: LCSS Prep Date: 1/24/2017 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID 1701976-009ams	Batch Analysis D Result 25 400 SampT	ype: <b>M</b>	854 /25/2017 SPK value 25.00 500.0 S 854	F SPK Ref Val 0 Tes F	RunNo: 4 GeqNo: 12 %REC 98.4 79.9 tCode: El	262983 262983 LowLimit 62.9 70 PA Method 0289	Units: <b>mg/k</b> HighLimit 123 130	<pre>{g     %RPD     Gasoline</pre>	RPDLimit	Qual					
Sample ID Ics-29854 Client ID: LCSS Prep Date: 1/24/2017 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID 1701976-009ams Client ID: Grace #9	Batch Analysis D Result 25 400 SampT Batch	ype: <b>M</b>	854 /25/2017 25.00 500.0 S 854 /25/2017	F SPK Ref Val 0 Tes F	2unNo: 4 GeqNo: 1: <u>%REC</u> 98.4 79.9 tCode: <b>EI</b> 2unNo: 4	262983 262983 LowLimit 62.9 70 PA Method 0289	Units: <b>mg/k</b> HighLimit 123 130 <b>8015D Mod:</b>	<pre>{g     %RPD     Gasoline</pre>	RPDLimit	Qual					
Sample ID Ics-29854 Client ID: LCSS Prep Date: 1/24/2017 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID 1701976-009ams Client ID: Grace #9 Prep Date: 1/24/2017	Batch Analysis D Result 25 400 SampT Batch Analysis D	ype: <b>1</b> / ype: <b>1</b> / <b>1</b>	854 /25/2017 25.00 500.0 S 854 /25/2017	F SPK Ref Val 0 Tes F S	RunNo: 4 SeqNo: 1: %REC 98.4 79.9 tCode: El RunNo: 4 SeqNo: 1:	262983 LowLimit 62.9 70 PA Method 0289 262986	Units: mg/k HighLimit 123 130 8015D Mod: Units: mg/k	<g %RPD Gasoline <g< td=""><td>RPDLimit Range</td><td></td></g<></g 	RPDLimit Range						
Sample ID Ics-29854 Client ID: LCSS Prep Date: 1/24/2017 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID 1701976-009ams Client ID: Grace #9 Prep Date: 1/24/2017 Analyte	Batch Analysis D Result 25 400 SampT Batch Analysis D Result	ype: 1/ PQL 5.0 ype: 1/ ype: 1/ ate: 1/ PQL	854 /25/2017 SPK value 25.00 500.0 S 854 /25/2017 SPK value	F SPK Ref Val 0 Tes F SPK Ref Val	RunNo: 4 SeqNo: 1 %REC 98.4 79.9 tCode: El RunNo: 4 SeqNo: 1 %REC	262983 LowLimit 62.9 70 PA Method 0289 262986 LowLimit	Units: <b>mg/k</b> HighLimit 123 130 <b>8015D Mod:</b> Units: <b>mg/k</b> HighLimit	<g %RPD Gasoline <g< td=""><td>RPDLimit Range</td><td></td></g<></g 	RPDLimit Range						
Sample ID Ics-29854 Client ID: LCSS Prep Date: 1/24/2017 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID 1701976-009ams Client ID: Grace #9 Prep Date: 1/24/2017 Analyte Gasoline Range Organics (GRO)	Batch Analysis D Result 25 400 SampT Batch Analysis D Result 27 370	ype: 1/ PQL 5.0 ype: 1/ ype: 1/ ate: 1/ PQL	854 /25/2017 25.00 500.0 S 854 /25/2017 SPK value 23.90 478.0	F SPK Ref Val 0 Tes F SPK Ref Val 2.210	2unNo: 4 SeqNo: 1: %REC 98.4 79.9 tCode: El 2unNo: 4 SeqNo: 1: %REC 102 77.2	262983 LowLimit 62.9 70 PA Method 0289 262986 LowLimit 52.3 70	Units: mg/k HighLimit 123 130 8015D Mod: Units: mg/k HighLimit 132	<pre>{g     %RPD Gasoline {g     %RPD</pre>	RPDLimit Range RPDLimit						

TestCode: EPA Method 8015D Mod: Gasoline Range

**Qualifiers:** 

Analyte

Prep Date:

**Client:** 

**Project:** 

Sample ID mb-29849

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

1/24/2017

Н Holding times for preparation or analysis exceeded

Analysis Date: 1/25/2017

PQL

Result

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank

Е Value above quantitation range

SeqNo: 1262987

J Analyte detected below quantitation limits

Р Sample pH Not In Range

SPK value SPK Ref Val %REC LowLimit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Units: mg/Kg

%RPD

RPDLimit

Page 19 of 20

Qual

HighLimit

WO#: 1701976 31-Jan-17

WO#: 1701976 31-Jan-17

Client:	Agave Ener	rgy Company	
Project:	Grace		
Sample ID	1701976-009amsd	SampType: <b>MSD</b>	Те

Sample ID 1701976-009amsc	I SampT	уре: <b>М</b>	SD	TestCode: EPA Method 8015D Mod: Gasoline Range									
Client ID: Grace #9	Batch	n ID: 29	854	R	RunNo: <b>40289</b>								
Prep Date: 1/24/2017	Analysis D	ate: 1/	25/2017	S	SeqNo: 1	262987	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Gasoline Range Organics (GRO)	24	4.8	24.13	2.210	92.0	52.3	132	8.93	20				
Surr: BFB	390		482.6		80.2	70	130	0	0				

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- 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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 20 of 20

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Analysis Labo 4901 Hawk Albuquerque, NM TEL: 505-345-3975 FAX: 505-343 Website: www.hallenvironment	ins NE 87109 <b>Sam</b> 5-4107	ple Log-In Ch	eck List
Client Name: AGAVE ENERGY COMP W	ork Order Number: 1701976		RcptNo:	1
Received by/date:	24/17			
	/2017 9:40:00 AM Z4 /17	ON Marcan		
Chain of Custody				
1. Custody seals intact on sample bottles?	Yes	No 🗔	Not Present 🗹	
2. Is Chain of Custody complete?	Yes 🗹	No 🗌	Not Present	
3. How was the sample delivered?	<u>Courier</u>			
Log In				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗔		
5. Were all samples received at a temperature of >	0° C to 6.0°C Yes ✔	No 🗌	NA 🗌	
6. Sample(s) in proper container(s)?	Yes 🗸	No 🗌		
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗋		
8. Are samples (except VOA and ONG) properly pre	served? Yes 🗹	No 🗌		
9. Was preservative added to bottles?	Yes	No 🗹	NA 🗌	
10.VOA vials have zero headspace?	Yes 🗀	No 🗌	No VOA Viais 🗹	
11. Were any sample containers received broken?	Yes 🗌	No 🗹	# of preserved	· .
12. Does paperwork match bottle labels?	Yes 🔽	No 🗌	bottles checked for pH:	
(Note discrepancies on chain of custody)		N- 🗖	<pre>(&lt;2 or Adjusted?</pre>	>12 unless noted)
<ul><li>13. Are matrices correctly identified on Chain of Cust</li><li>14. Is it clear what analyses were requested?</li></ul>	ody? Yes ✔ Yes ✔	No 🗌 No 🗍		
15. Were all holding times able to be met?	Yes 🗹	No 🗌	Checked by:	
(If no, notify customer for authorization.) Special Handling (if applicable)	_			
16. Was client notified of all discrepancies with this o	rder? Yes	No 🗌	NA 🗹	
Person Notified:	Date			
By Whom:	Via: 🗌 eMail 🗌	] Phone 🔝 Fax	In Person	
Regarding: Client Instructions:	· · · · · · · · · · · · · · · · · · ·	an a	арсанал предакция и на станова и на стар	
17. Additional remarks:				
18. Cooler Information				,
Cooler No         Temp °C         Condition         Seal In           1         1.8         Good         Yes	tact Seal No Seal Date	Signed By		

Page 1 of 1

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		www.hallenvirogmental.com	4901 Hawkins NE - Albuquerque, NM 87109		Analysis	961) 961)	no s Dies DS,₄	'Od'	1РН 58062 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1)		3E 1 8( 1 8( 1 8( 1 8(	TTM + X3T TTM +	8       ×       8					90						Remarks: BTEX, TPH, CIT and yses. E T C.	Time 0940	Mited to Hall Environmental may be subcontracted to other above this serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Turn-Around Time:	tandard □ Rush	6		Project #:	i	Project Manager:	Kerry Egan		r: Kerry Egan	On Ice: 🛛 🕂 Yes 🔄 🛛 No	Sample Temperature: 🔰 🔏 👘	Container Preservative HEAL No Type and # Type	(1) ior Ice - col		N81	ha-	500-	900-	800-	-000	-010-	110-	$\langle \rangle \rangle$	No Date Date	Received by: Date Threadery Oragon 01/24/17	tracted to other accredited aboratories. This serves as
Chain-of-Custody Record	Client: Agave Energy Company $/L_{ucid}$	gy Delavare	6 West Quay St.	Artesia, NM 88210	Phone #: (575) 513-8988	email or Fax#:	QA/QC Package:	Standard Level 4 (Full Validation)	on: 	L Other	EDD (Type)	Time Matrix Sample Request ID	112010   10:30 Soil Grace #	<u></u> #2	H H H H H H	h# /	S#		8#       #		01# #10			Belinquished by	X	If necessary, samples during to Hall Environmental may be subcon