

**LAFAYETTE AREA LABORATORY**4790 N.E. EVANGELINE THRUWAY
CARENCRO, LA 70520
PHONE (337) 896-3055
FAX (337) 896-3077**Certificate of Analysis**

Number: 2030-2012090046-001A

Karl Duckworth
SAGE Environmental Consulting
Jefferson Hwy
Baton Rouge LA 70809

September 07, 2012

Sample ID:
Station Name : 3517
Station Number :
Station Location : Texas Brine
Sample Point:Sampled By: EW - TMSI
Sample Of: Gas Spot
Sample Date: 09/07/2012 10:35
Sample Conditions: N.G. Pres., N.G. Temp.
PO / Ref. No: L0019668**ANALYTICAL DATA**

Components	Mol %	Wt %	GPM at 15.025 psia	Method	Lab Tech.	Date Analyzed
GPA-2261 M CC 9/7/2012 2:31:24 PM						
Nitrogen	53.482	64.921				
Carbon Dioxide	1.037	1.978				
Methane	43.841	30.476				
Ethane	1.229	1.601	0.336			
Propane	0.221	0.422	0.062			
Iso Butane	0.051	0.128	0.017			
n-Butane	0.051	0.128	0.016			
Iso Pentane	0.021	0.066	0.008			
n-Pentane	0.013	0.041	0.005			
Hexane	0.013	0.049	0.005			
Heptanes Plus	0.041	0.190	0.019			
	100.000	100.000	0.468			

GPM TOTAL : C2 + C3 + iC5 +
0.468 0.132 0.037
Relative Density Real Gas 0.7973
Calculated Molecular Weight 23.08
Compressibility Factor 0.9990**GPA 2172-09 Calculation:****Calculated Gross BTU per ft³ @15.025 psia & 60°F**Real Gas Dry BTU: 489
Water Sat. Gas_Base BTU: 481**Calculated Gross BTU per ft³ @ 14.730 psia & 60° F**Real Gas Dry BTU: 479
Water Sat. Gas_Base BTU: 471Comments : H2O Mol% : 1.706 ; Wt% : 1.337
Cylinder Number 3517

Laboratory Manager

Quality Assurance:

The above analyses are performed in accordance with ASTM, UOP or GPA guidelines for quality assurance, unless otherwise stated



Certificate of Analysis

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4790 N.E. EVANGELINE THRUWAY
CARENCRO, LA 70520
PHONE (337) 896-3055
FAX (337) 896-3077

Number: 2030-2012090046-002A

For: Karl Duckworth
SAGE Environmental Consulting
Jefferson Hwy
Baton Rouge, LA 70809

Sample ID:
Station Name: CSI-5
Station Number:
Project / Station Location: Texas Brine
Project Number:
Project Name:
Sampled by: EW - TMSI

Report Date: 09/07/2012
Sample Of: Gas Spot
Sample Date: 09/07/2012 @ 10:35
Sample Pres (psig): N.G. psi
Sample Temp (D.F.): N.G. °F
Sample Point:
PO / Ref. No: L0019668
Cylinder No: Tedlar Bag

SULFUR ANALYSIS

Method: GPA-2199

SULFIDES		MERCAPTANS		DISULFIDES	
	ppm (wt.)		ppm (wt.)		ppm (wt.)
Hydrogen	<1.0	Methyl	N/D	Carbon	N/D
Carbonyl	<1.0	Ethyl	N/D	DiMethyl	N/D
DiMethyl	N/D	Isopropyl	N/D	Methyl Ethyl	N/D
Methyl Ethyl	N/D	n-Propyl	N/D	DiEthyl	N/D
DiEthyl	N/D	Isobutyl	N/D	Di-iso-propyl	N/D
Di-iso-propyl	N/D	sec-Butyl	N/D	Di-n-Propyl	N/D
Di-n-Propyl	N/D	tert-Butyl	N/D	Di-iso-butyl	N/D
Di-iso-butyl	N/D	n-Butyl	N/D	Di-sec-Butyl	N/D
Di-sec-Butyl	N/D	Isoamyl	N/D	Di-tert-Butyl	N/D
Di-tert-Butyl	N/D	pri-Amyl	N/D	Di-n-Butyl	N/D
Di-n-Butyl	N/D	n-Amyl	N/D	Unknown Disulfides	N/D
Unknown Sulfides	N/D				
OTHER					
Thiophene	N/D ppm(wt.)				
Thiophane	N/D ppm(wt.)				
TOTAL SULFUR	<1.0 ppm(wt.)				
	<0.0001 weight %				
	<0.033 grains/100 cu.ft.				

REMARKS:

Note: N/D = None Detected
<1.0 = Detected @ unquantifiable level below 1.0 ppm.


SPL Data Reviewer

