

GENERAL GAS ANALYSIS (C-6 +) [2,3,8]

GHG Compliant
Rule (40 CFR Part 98)

ELAP Cert.1396-A

Rev 03/27/13

Customer: EXAMPLE
Address: EXAMPLE
EXAMPLE
EXAMPLE
Attention: EXAMPLE
Sample Description: EXAMPLE

Log #: EXAMPLE
Date Received: EXAMPLE
Date Completed: EXAMPLE
Report Date: EXAMPLE

<u>Constituent</u>		<u>Mole %</u>	<u>Wt %</u>	<u>Lv %</u>
Oxygen/Argon	O2 / Ar	0.044	0.044	0.020
Nitrogen	N2	0.188	0.185	0.106
Carbon Dioxide	CO2	20.357	31.529	17.761
Carbon Monoxide	CO	0.000	0.000	0.000
Methane	C-1	62.709	35.403	54.351
Ethane	C-2	5.220	5.523	7.136
Propane	C-3	3.125	4.850	4.402
Iso-Butane	C-4	0.901	1.842	1.507
N-Butane	C-4	1.925	3.938	3.103
Neo Pentane	C-5	0.010	0.024	0.019
Iso-Pentane	C-5	0.962	2.442	1.798
N-Pentane	C-5	1.000	2.538	1.852
Hexanes Plus	C-6 (+)	3.562	11.681	7.946
Hydrogen	H ₂	0.000	0.000	0.000
Hydrogen Sulfide	H ₂ S	0.000	0.000	0.000
Total		100.000	100.000	100.000

[1,2]	Hydrogen Sulfide, H2S =	2.02 ppmv	Grains H2S 100 cu.ft. = 0.129	**** VOC's (% by wt.C-3+) = 27.315	[5] Water Content (lbs/MM C.F.) = NR
[1,2]	Total Sulfur, as H2S =	11.6	Grains 'S' 100 cu.ft. = 0.695		
[4,6,7,8]	Physical Data	<u>dry</u>	<u>wet</u>	<u>dry</u>	<u>wet</u>
	*** BTU cu.ft. ideal =	1,158.06	1,137.91	1,053.01	1,034.69
	*** BTU cu.ft. real =	1,164.17	1,143.91	1,058.57	1,040.15
	BTU/lb, ideal =	15,472.53	15,203.31		
	(Density) Sp. Gr. Ideal =	0.9811	0.9640	** GPM C-2+ =	5.4164
	(Density) Sp. Gr. Real =	0.9859	0.9687	** GPM C-3+ =	4.0241
	Density lbm/(1000 ft ³) =	74.878	73.575	** GPM C-4+ =	3.1654
				** GPM C-5+ =	2.2661
				z..factor =	0.9948
				* F..factor (60°F) DSCF/MM Btu =	8,762
				* F..factor (68°F) DSCF/MM Btu =	8,896
				Sp.Vol. Cu.Ft./Lb =	13.39
				Av. Mol. Wt. =	28.41
	C-H-O-N-S	<u>% by Wt.</u>		QC-Ck	Measured Range
	% Carbon =	62.340		1. Fidelity Ck. =	0.99 (0.97-1.11)
	% Hydrogen =	14.506		2. Cont area Ck =	8.7E+06 (8.3 -- 9.2)E+6
	% Oxygen =	22.969		3. Un-Norm Sum =	99.5 (95 - 105)
	% Nitrogen =	0.185			
	% Sulfur =	0.000			
	Total =	100.000			

Notes:

* F..factor = dcf/MMBTU (CARB)
** GPM = Gallons Per 1000 Ft³
*** Hexane (+) BTU Calc. using GPA 2261 Constant
**** VOC's Volatile Organic Constituents
N.R.= "Not Requested"
Density-Specific Gravity where Air = 1.0000
DSCF= Dry Standard Cubic Feet
MM = 1 Million

References

1. ASTM D6228-10
2. ASTM D1945-03(2010)
3. ASTM D1946-90(2011)
4. ASTM D3588-98(2011)
5. ASTM D1142-95(2012)
6. GPA 2172-96
7. GPA 2145-09
8. GPA 2261-00

QC _____ Date _____

All Calculations Tabulated @ 60/60
dry, 14.696psia
(288.15°K, 101.325kPa)

Date: _____

Jeff R. Scheidemantel, Laboratory Director Midway Laboratory, Inc.