Certificate of Analysis

Number: 5030-21080451-001A

Midland Laboratory
2200 East I-20
Midland, TX 79706
Phone 432-689-7252

Jeremy Aucoin
Crestwood Midstream Partners LP
811 Main Street
Houston, TX 77002

Aug. 19, 2021

Station Name:	WILLOW LAKE COMP STATION TRUCK CONDEN	Sampled By:	PAUL M	
Method:	GPA 2186	Sample Of:	Condensate	Spot
Cylinder No:	92313	Sample Date:	08/17/2021	
Analyzed:	08/19/2021 14:33:23 by MGN	Sample Conditions:	45 psig, @ 79 °F	

Analytical Data

Components	Mol. %	Wt. %	L.V. %
Nitrogen	0.008	0.003	0.003
Carbon Dioxide	0.016	0.008	0.007
Methane	1.162	0.216	0.497
Ethane	1.602	0.557	1.079
Propane	3.783	1.930	2.627
Iso-Butane	1.680	1.130	1.386
n-Butane	7.199	4.841	5.720
Iso-Pentane	5.694	4.753	5.249
n-Pentane	9.419	7.862	8.605
Hexanes Plus	69.437	78.700	74.827
	100.000	100.000	100.000

Calculated Physical Properties	Total	C6+
Specific Gravity at 60°F	0.6905	0.7263
API Gravity at 60°F	73.4203	63.3231
Molecular Weight	86.433	97.963
Pounds per Gallon (in Vacuum)	5.757	6.055
Pounds per Gallon (in Air)	5.751	6.049
Cu. Ft. Vapor per Gallon @ 14.73 psia	25.217	23.402
Specific Gravity as a vapor	2.984	3.382
D-2598 Calculated Vapor Pressure @ 100°F	19.92	
BTU / GAL. (as a vapor)	118534	123623
BTU / LB. (as a vapor)	20593	20419
CO2, Ethane LV Ratio	0.65	
Methane, Ethane LV Ratio	46.06	

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

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Analytical Data

Components	Mol. %	Wt. %	L.V. %
Nitrogen	0.008	0.003	0.003
Carbon Dioxide	0.016	0.008	0.007
Methane	1.162	0.216	0.497
Ethane	1.602	0.557	1.079
Propane	3.783	1.930	2.627
Iso-Butane	1.680	1.130	1.386
n-Butane	7.199	4.841	5.720
Iso-Pentane	5.694	4.753	5.249
n-Pentane	9.419	7.862	8.605
Hexanes	16.739	16.575	17.193
Heptanes Plus	52.698	62.125	57.634
	100.000	100.000	100.000

Calculated Physical Properties	Total	C7+
Specific Gravity at 60°F	0.6905	0.7444
API Gravity at 60°F	73.4203	58.5933
Molecular Weight	86.433	101.903
Pounds per Gallon (in Vacuum)	5.757	6.206
Pounds per Gallon (in Air)	5.751	6.199
Cu. Ft. Vapor per Gallon @ 14.73 psia	25.217	23.057
Specific Gravity as a vapor	2.984	3.519
BTU / GAL. (as a vapor)	118534	125891
BTU / LB. (as a vapor)	20593	20286
Methane, Ethane LV Ratio	46.06	
CO2, Ethane LV Ratio	0.65	

Hydrocarbon Laboratory Manager

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Aug. 19, 2021

Station Name:	WILLOW LAKE COMP STATION TRUCK CONDEN	Sampled By:	PAUL M	
Method:	GPA 2186	Sample Of:	Condensate	Spot
Cylinder No:	92313	Sample Date:	08/17/2021	
Analyzed:	08/19/2021 14:33:23 by MGN	Sample Conditions:	45 psig, @ 79 °F	

Analytical Data

Components	Mol. %	Wt. %	L.V. %
Nitrogen	0.008	0.003	0.003
Methane	1.162	0.216	0.497
Carbon Dioxide	0.016	0.008	0.007
Ethane	1.602	0.557	1.079
Propane	3.783	1.930	2.627
Iso-Butane	1.680	1.130	1.386
n-Butane	7.199	4.841	5.720
Iso-Pentane	5.694	4.753	5.249
n-Pentane	9.419	7.862	8.605
i-Hexanes	8.297	8.154	8.434
n-Hexane	8.442	8.421	8.759
Benzene	0.498	0.450	0.353
Cyclohexane	5.717	5.566	4.906
i-Heptanes	14.065	15.418	14.644
n-Heptane	5.934	6.879	6.898
Toluene	1.371	1.462	1.160
i-Octanes	16.209	19.855	18.239
n-Octane	2.428	3.208	3.135
Ethylbenzene	0.158	0.194	0.154
Xylenes	0.626	0.770	0.606
i-Nonanes	3.520	5.009	4.548
n-Nonane	0.737	1.095	1.046
i-Decanes	1.193	1.820	1.569
Decanes Plus	0.242	0.399	0.376
	100.000	100.000	100.000

Calculated Physical Properties	Total	C10+
Specific Gravity at 60°F	0.6905	0.7872
API Gravity at 60°F	73.4203	48.2455
Molecular Weight	86.433	133.967
Pounds per Gallon (in Vacuum)	5.757	6.563
Pounds per Gallon (in Air)	5.751	6.556
Cu. Ft. Vapor per Gallon @ 14.73 psia	25.217	18.548
Specific Gravity as a vapor	2.984	4.625
BTU / GAL. (as a vapor)	118534	130744
BTU / LB. (as a vapor)	20593	19919

Hydrocarbon Laboratory Manager

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