intertek
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5404 Bandera Rd., San Antonio, TX 78238

Report of Analysis

Conducted For: INTERTEK AR
5404 Bandera Road San Antonio,

Client Code: HF2003
Sponid: N/A
Requester: ALFONSO, A

Labcode: 202374FU1
Alt. Code: TANK 62
AR Code: TF00348B
Grade: N/A
Ref No.:
Date Completed: 20200825
Report Printed: 20200825

Test		Result	Units	Test Method
Gravity, API		59.0900		D4052
Color/Visual		CLEAR		COLOR
Cu Strip Corrosion	COPPER STRIP RATING	1A		D130
Cu Strip Corrosion	TEST TEMPERATURE	50.0	°C	D130
Cu Strip Corrosion	TEST HOURS	3.0	Hours	D130
Density at 15°C		0.74213	g/mL	D4052
Sim. Distillation	Initial Boiling Point	148.3	°C	D2887
Sim. Distillation	5%	155.2	°C	D2887
Sim. Distillation	10%	158.4	°C	D2887
Sim. Distillation	15%	159.9	°C	D2887
Sim. Distillation	20%	161.1	°C	D2887
Sim. Distillation	30%	163.8	°C	D2887
Sim. Distillation	40%	167	°C	D2887
Sim. Distillation	50%	169.8	°C	D2887
Sim. Distillation	60%	175.1	°C	D2887
Sim. Distillation	70%	180.4	°C	D2887
Sim. Distillation	80%	186.7	°C	D2887
Sim. Distillation	90%	219.5	°C	D2887
Sim. Distillation	95%	246.3	°C	D2887
Sim. Distillation	Final Boiling Point	365.7	°C	D2887
Distillation of Fuel	Initial Boiling Point	34	°C *1	D86
Distillation of Fuel	5%	43	°C	D86
Distillation of Fuel	10%	51	°C *2	D86
Distillation of Fuel	20%	62	°C *3	D86
Distillation of Fuel	30%	73	°C *4	D86
Distillation of Fuel	40%	89	°C *5	D86
Distillation of Fuel	50%	103	°C *6	D86
Distillation of Fuel	60%	111	°C *7	D86
Distillation of Fuel	70%	117	°C *8	D86
Distillation of Fuel	80%	127	°C *9	D86
Distillation of Fuel	90%	158	°C *10	D86
Distillation of Fuel	95%	171	°C	D86
Distillation of Fuel	Final Boiling Point	199	°C *11	D86
Distillation of Fuel	Recovered	95.9000	vol. %	D86
Distillation of Fuel	Residue	1.0000	vol. % *1	D86
Distillation of Fuel	Loss	3.1000	vol. % *2	D86
Gum, Unwashed		12.6	mg/100 ml	D381
Gum, Washed		0	mg/100 ml	D381
Heat of Combst Gross	Heat of Combution Gross	45.968	MJ/kg	ASTM D240
Heat of Combst Gross	Heat of Combution Gross	19761	BTU / lb	ASTM D240
Heat of Combst Net	Heat of Combustion Net	44.115	MJ/kg	ASTM D240
Heat of Combst Net	Heat of Combustion Net	18965	BTU / lb	ASTM D240
ICP Acid Digestion	Silver	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Aluminum	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Boron	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Barium	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Calcium	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Cadmium	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Chromium	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Copper	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Iron	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Potassium	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Magnesium	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Manganese	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Molybdenum	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Sodium	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Nickel	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Phosphorus	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Lead	<0.0001	%	ICP Aqueous

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ICP Acid Digestion	Sulfur	0.0005	%	ICP Aqueous
ICP Acid Digestion	Antimony	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Silicon	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Tin	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Zinc	<0.0001	%	ICP Aqueous
ICP Acid Digestion	Vanadium	<0.0001	%	ICP Aqueous
Motor Octane Number		88.7000		D2700
Research Octane No.		97.0000		D2699
Oxidation Stability	Temperature	100.0	°C	D525
Oxidation Stability	Induction Time	>1000	Minutes	D525
Oxidation Stability	20% Pressure Drop From Maximum	NM	Minutes	D525
Oxygenates	METHANOL	NM	mass %	D4815
Oxygenates	METHANOL	<0.20	vol. %	D4815
Oxygenates	ETHANOL	NM	mass %	D4815
Oxygenates	ETHANOL	<0.20	vol. %	D4815
Oxygenates	2-PROPANOL	NM	mass %	D4815
Oxygenates	2-PROPANOL	<0.20	vol. %	D4815
Oxygenates	T-BUTANOL	NM	mass %	D4815
Oxygenates	T-BUTANOL	<0.20	vol. %	D4815
Oxygenates	1-PROPANOL	NM	mass %	D4815
Oxygenates	1-PROPANOL	<0.20	vol. %	D4815
Oxygenates	MTBE	NM	mass %	D4815
Oxygenates	MTBE	<0.20	vol. %	D4815
Oxygenates	DIPE	NM	mass %	D4815
Oxygenates	DIPE	<0.20	vol. %	D4815
Oxygenates	2-BUTANOL	NM	mass %	D4815
Oxygenates	ISOBUTANOL	NM	mass %	D4815
Oxygenates	2-BUTANOL	<0.20	vol. %	D4815
Oxygenates	ISOBUTANOL	<0.20	vol. %	D4815
Oxygenates	ETBE	NM	mass %	D4815
Oxygenates	ETBE	<0.20	vol. %	D4815
Oxygenates	T-PENTANOL	NM	mass %	D4815
Oxygenates	T-PENTANOL	<0.20	vol. %	D4815
Oxygenates	1-BUTANOL	NM	mass %	D4815
Oxygenates	1-BUTANOL	<0.20	vol. %	D4815
Oxygenates	TAME	NM	mass %	D4815
Oxygenates	TAME	<0.20	vol. %	D4815
Oxygenates	TOTAL OXYGEN	<0.20	mass %	D4815
RVP	RVP	62.40	kPa	D5191
RVP	Volume Container Size	QUART		D5191
Sulfur		2.9	mg/kg	D5453
WATER AND SEDIMENT		<0.01	%	D2709

Remarks: NONE.

In the opinion of the designated chemist, the testing on this report was conducted in a valid manner according to the test method listed. Test results only apply to sample(s) provided.

J. Franklin
Director, Analytical Testing

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Conducted For:	INTERTEK AR 5404 Bandera Road San Antonio,	**Labcode:**	202374FU1
		Alt. Code:	TANK 62
		AR Code:	TF00348B
		Grade:	N/A
Client Code:	HF2003	**Ref No.:**	
Sponid:	N/A	**Date Completed:**	20200825
Requester:	ALFONSO, A	**Report Printed:**	20200825

LAB Intertek-AR **Date(s) Analyzed:** 20200825

Fuel Batch ID HF2003

Test		Result	Units	Test Method	Max	Min
Distillation						
	IBP	34		D86	35.0	23.9
	5%	43		D86		
	10%	51		D86	57.2	48.9
	20%	62		D86		
	30%	73		D86		
	40%	89		D86		
	50%	103		D86	110.0	93.3
	60%	111		D86		
	70%	117		D86		
	80%	127		D86		
	90%	158		D86	162.8	151.7
	FBP	199		D86		
	RECOVERED	95.9000		D86		
	RESIDUE	1.0000		D86		
	LOSS	3.1000		D86		
API Gravity (60°F/60°F)		59.0900		D4052	61.2	58.7
Gums, Washed		0		D381	5	
RVP		62.40		D5191	63.4	60.8
Sulfur, ppm		2.9		D5453	15	3

Remarks: NONE.