



BUREAU
VERITAS

Certificate of Analysis

Nomination ID: PRPUE-19-00220

Bureau Veritas
Peñuelas Laboratory
Firm Delivery Carr. 127 Km. 19.1
Peñuelas PR, 00624
E: puertorico.ops@inspectorate.com
T: 787-836-0810

Asset : Tank 32194
Product : Premium Pure 93
Job Location : F43, Grand Cayman
TOCM Job ID : PRPUE-19-00220
Quantity of Sample Taken : 4 Liters
Tamper Proof Seal ID : JR0000363 / OFREG00384

Submitted by : J & R Industrial Services
Date & Time Sampled : 23-Jul-2019 / 0927 Hrs.
Date & Time Sent to Lab : 24-Jul-2019 / 1116 Hrs.
Date & Time Received : 01-Aug-2019 / 0800 Hrs.
Date & Time Analyzed : 01-Aug-2019 / 0800 – 1700 Hrs.
02-Aug-2019 / 0800 – 1200 Hrs.
Date Reported : 19-Sep-2019

Tank 32194 Running PRPUE-19-00220-002				
Method	Test	Result	Specification	Condition
ASTM D130	Corrosion Copper Strip - 3h at 50°C (122°F)	1a	1a Max	Pass
ASTM D381	Unwashed Gum Content, mg/100mL	4.0		
	Washed Gum Content, mg/100mL	1.0	5 mg/100mL Max	Pass
ASTM D2699C	Research Octane Number	99.3		
ASTM D2700C	Motor Octane Number	87.5		
ASTM D4814	Antiknock Index	93.4		
ASTM D5452	Particulate Contamination, mg/L	0.35		
ASTM D86	IBP, °F	81.4		
	10% Evaporated, °F	125.6		
	50% Evaporated, °F	229.3		
	90% Evaporated, °F	320.9		
	95% Evaporated, °F	339.5		
	Endpoint, °F	396.0		
	Recovery, % (V/V)	97.2		
	Residue, % (V/V)	1.0		
	Loss, % (V/V)	1.8		
	Evaporated at 200°F, % (V/V)	35.3		
	Evaporated at 300°F, % (V/V)	84.3		
ASTM D3831	Manganese Content, ppm (m/m)	0.9	0.25 ppm (m/m) Max	Fail
ASTM D5191	DVPE, psi	9.71		
ASTM D4815-13	Ethanol, % (m/m)	Not Detected		



Eric X Rodriguez, Laboratory Chemist





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Asset : Tank 32195
Product : ULSD
Job Location : F43, Grand Cayman
TOCM Job ID : PRPUE-19-00220
Quantity of Sample Taken : 4 Liters
Tamper Proof Seal ID : JR0000393 / OFREG00397

Submitted by : J & R Industrial Services
Date & Time Sampled : 23-Jul-2019 / 0910 Hrs.
Date & Time Sent to Lab : 24-Jul-2019 / 1116 Hrs.
Date & Time Received : 01-Aug-2019 / 0800 Hrs.
Date & Time Analyzed : 01-Aug-2019 / 0800 – 1700 Hrs.
02-Aug-2019 / 0800 – 1630 Hrs.
Date Reported : 19-Sep-2019

Tank 32195 Running				
PRPUE-19-00220-004				
Method	Test	Result	Specification	Condition
ASTM D4052	API Gravity @60°F, °API	39.8		
ASTM D976	Calculated Cetane Index	56.3	40 Min	Pass
ASTM D86	IBP, °C	164.5		
	10% Recovered, °C	200.9		
	50% Recovered, °C	270.7		
	90% Recovered, °C	330.7	282 - 338 °C	Pass
	Endpoint, °C	363.2		
	Recovery, % (V/V)	98.2		
	Residue, % (V/V)	1.4		
	Loss, % (V/V)	0.4		
ISM - Liqui-Cult	Observation Period, Hours	30		
	Bacteria, #/mL	10 ⁴ 2		
ASTM D2709	Water and Sediment, % (V/V)	< 0.01	0.05 % (V/V) Max	Pass
ASTM D445	Kinematic Viscosity at 40°C, mm²/s	2.711	1.9 - 4.1 mm²/s	Pass
ASTM D7039	Total Sulfur, mg/kg	8.2		
EN 14078	Flame Content, % (V/V)	<0.05		
	Range	A		

Comments

¹ Analysis performed by other BV laboratory


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Asset :	Tank 6	Submitted by :	J & R Industrial Services
Product :	MOGAS	Date & Time Sampled :	23-Jul-2019 / 1111 Hrs.
Job Location :	F47, Grand Cayman	Date & Time Sent to Lab :	24-Jul-2019 / 1116 Hrs.
TOCM Job ID :	PRPUE-19-00220	Date & Time Received :	01-Aug-2019 / 0800 Hrs.
Quantity of Sample Taken :	4 Liters	Date & Time Analyzed :	01-Aug-2019 / 0800 – 1700 Hrs.
Tamper Proof Seal ID :	JR0000400 / OFREG00389	Date Reported :	02-Aug-2019 / 0800 – 1200 Hrs.
			19-Sep-2019

Tank 6 Running				
PRPUE-19-00220-003				
Method	Test	Result	Specification	Condition
ASTM D130	Corrosion Copper Strip - 3h at 50°C (122°F)	1a	1a Max	Pass
ASTM D381	Unwashed Gum Content, mg/100mL	7.5		
	Washed Gum Content, mg/100mL	2.5	5 mg/100mL Max	Pass
ASTM D2699C	Research Octane Number	99.1		
ASTM D2700C	Motor Octane Number	87.1		
ASTM D4814	Antiknock Index	93.1		
ASTM D5452	Particulate Contamination, mg/L	0.25		
ASTM D86	IBP, °F	85.9		
	10% Evaporated, °F	113.6		
	50% Evaporated, °F	226.6		
	90% Evaporated, °F	311.9		
	95% Evaporated, °F	333.3		
	Endpoint, °F	403.3		
	Recovery, % (V/V)	97.7		
	Residue, % (V/V)	1.0		
	Loss, % (V/V)	1.3		
	Evaporated at 200°F, % (V/V)	44.8		
	Evaporated at 300°F, % (V/V)	85.7		
ASTM D3831	Manganese Content, ppm (m/m)	1.0	0.25 ppm (m/m) Max	Fail
ASTM D5191	DVPE, psi	9.58		
ASTM D4815-13	Ethanol, % (m/m)	Not Detected		

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Asset : Tank 9
Product : ULSD
Job Location : F47, Grand Cayman
TOCM Job ID : PRPUE-19-00220
Quantity of Sample Taken : 4 Liters
Tamper Proof Seal ID : JR0000387 / OFREG00399

Submitted by : J & R Industrial Services
Date & Time Sampled : 23-Jul-2019 / 1055 Hrs.
Date & Time Sent to Lab : 24-Jul-2019 / 1116 Hrs.
Date & Time Received : 01-Aug-2019 / 0800 Hrs.
Date & Time Analyzed : 01-Aug-2019 / 0800 – 1700 Hrs.
02-Aug-2019 / 0800 – 1630 Hrs.
Date Reported : 19-Sep-2019

Tank 9 Running				
PRPUE-19-00220-005				
Method	Test	Result	Specification	Condition
ASTM D4052	API Gravity @60°F, °API	35.7		
ASTM D976	Calculated Cetane Index	49.4	40 Min	Pass
ASTM D86	IBP, °C	166.1		
	10% Recovered, °C	206.4		
	50% Recovered, °C	271.8		
	90% Recovered, °C	340.6	282 - 338 °C	Fail
	Endpoint, °C	367.6		
	Recovery, % (V/V)	98.4		
	Residue, % (V/V)	1.4		
	Loss, % (V/V)	0.2		
ISM - Liqui-Cult	Observation Period, Hours	30		
	Bacteria, #/mL	10 ⁴ 2		
ASTM D2709	Water and Sediment, % (V/V)	< 0.01	0.05 % (V/V) Max	Pass
ASTM D445	Kinematic Viscosity at 40°C, mm²/s	2.715	1.9 - 4.1 mm²/s	Pass
ASTM D7039	Total Sulfur, mg/kg	8.6		
EN 14078	Fame Content, % (V/V)	<0.05		
	Range	A		

Comments

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Asset :	Tank 32193	Submitted by :	J & R Industrial Services
Product :	Regular Pure 87	Date & Time Sampled :	23-Jul-2019 / 0939 Hrs.
Job Location :	F43, Grand Cayman	Date & Time Sent to Lab :	24-Jul-2019 / 1116 Hrs.
TOCM Job ID :	PRPUE-19-00220	Date & Time Received :	01-Aug-2019 / 0800 Hrs.
Quantity of Sample Taken :	4 Liters	Date & Time Analyzed :	01-Aug-2019 / 0800 – 1700 Hrs.
Tamper Proof Seal ID :	JR0000381 / OFREG00394	Date & Time Analyzed :	02-Aug-2019 / 0800 – 1200 Hrs.
		Date Reported :	19-Sep-2019

Tank 32193 Running				
PRPUE-19-00220-001				
Method	Test	Result	Specification	Condition
ASTM D130	Corrosion Copper Strip - 3h at 50°C (122°F)	1a	1a Max	Pass
ASTM D381	Unwashed Gum Content, mg/100mL	3.5		
	Washed Gum Content, mg/100mL	<0.5	5 mg/100mL Max	Pass
ASTM D2699C	Research Octane Number	95.6		
ASTM D2700C	Motor Octane Number	85.0		
ASTM D4814	Antiknock Index	90.3		
ASTM D5452	Particulate Contamination, mg/L	0.40		
ASTM D86	IBP, °F	86.4		
	10% Evaporated, °F	120.5		
	50% Evaporated, °F	202.4		
	90% Evaporated, °F	307.1		
	95% Evaporated, °F	327.6		
	Endpoint, °F	379.4		
	Recovery, % (V/V)	97.4		
	Residue, % (V/V)	1.0		
	Loss, % (V/V)	1.6		
	Evaporated at 200°F, % (V/V)	49.2		
	Evaporated at 300°F, % (V/V)	88.3		
ASTM D3831	Manganese Content, ppm (m/m)	0.7	0.25 ppm (m/m) Max	Fail
ASTM D5191	DVPE, psi	9.63		
ASTM D4815-13	Ethanol, % (m/m)	Not Detected		


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Asset : F42 - T4
Product : Premium Pure 93
Job Location : F42, Cayman Brac
TOCM Job ID : PRPUE-19-00239
Quantity of Sample Taken : 4 Liters
Tamper Proof Seal ID : JR0000212 / OFREG00225

Submitted by : J & R Industrial Services
Date & Time Sampled : 15-Aug-2019 / 0946 Hrs.
Date & Time Sent to Lab : 19-Aug-2019 / 1553 Hrs.
Date & Time Received : 27-Aug-2019 / 1530 Hrs.
Date & Time Analyzed : 29-Aug-2019 / 0800 – 1500 Hrs.
Date Reported : 19-Sep-2019

F42 – T4 Running PRPUE-19-00239-001				
Method	Test	Result	Specification	Condition
ASTM D130	Corrosion Copper Strip - 3h at 50°C (122°F)	1a	1a Max	Pass
ASTM D381	Unwashed Gum Content, mg/100mL	2.0		
	Washed Gum Content, mg/100mL	<0.5	5 mg/100mL Max	Pass
ASTM D2699C	Research Octane Number	97.7		
ASTM D2700C	Motor Octane Number	87.5		
ASTM D4814	Antiknock Index	92.6		
ASTM D5452	Particulate Contamination, mg/L	0.50		
ASTM D86	IBP, °F	82.1		
	10% Evaporated, °F	131.3		
	50% Evaporated, °F	222.5		
	90% Evaporated, °F	313.0		
	95% Evaporated, °F	343.1		
	Endpoint, °F	414.8		
	Recovery, % (V/V)	97.8		
	Residue, % (V/V)	1.1		
	Loss, % (V/V)	1.1		
	Evaporated at 200°F, % (V/V)	35.4		
	Evaporated at 300°F, % (V/V)	88.0		
ASTM D3831	Manganese Content, ppm (m/m)	<0.25	0.25 ppm (m/m) Max	Pass
ASTM D5191	DVPE, psi	9.14		
ASTM D4815-13	Ethanol, % (m/m)	Not Detected		

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Asset :	F42 - T1	Submitted by :	J & R Industrial Services
Product :	ULSD	Date & Time Sampled :	15-Aug-2019 / 0930 Hrs.
Job Location :	F42, Cayman Brac	Date & Time Sent to Lab :	19-Aug-2019 / 1553 Hrs.
TOCM Job ID :	PRPUE-19-00239	Date & Time Received :	27-Aug-2019 / 1530 Hrs.
Quantity of Sample Taken :	4 Liters	Date & Time Analyzed :	29-Aug-2019 / 0800 - 1700 Hrs.
Tamper Proof Seal ID :	JR0000252 / OFREG00222	Date Reported :	30-Aug-2019 / 0800 - 2027 Hrs.
			19-Sep-2019

F42 - T1 Running				
PRPUE-19-00239-002				
Method	Test	Result	Specification	Condition
ASTM D4052	API Gravity @60°F, °API	39.8		
ASTM D976	Calculated Cetane Index	56.6	40 Min	Pass
ASTM D86	IBP, °C	164.5		
	10% Recovered, °C	200.5		
	50% Recovered, °C	271.8		
	90% Recovered, °C	331.5	282 - 338 °C	Pass
	Endpoint, °C	364.7		
	Recovery, % (V/V)	98.5		
	Residue, % (V/V)	1.4		
	Loss, % (V/V)	0.1		
ISM - Liqui-Cult	Observation Period, Hours	30		
	Bacteria, #/mL	10 [^] 2		
ASTM D2709	Water and Sediment, % (V/V)	< 0.01	0.05 % (V/V) Max	Pass
ASTM D445	Kinematic Viscosity at 40°C, mm²/s	2.737	1.9 - 4.1 mm²/s	Pass
ASTM D7039	Total Sulfur, mg/kg	8.4		
EN 14078	Fame Content, % (V/V)	<0.05		
	Range	A		

Comments

* Analysis performed by other BV laboratory

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Asset : F31 - P8
Product : Premium Gasoline 8000
Job Location : F31, Grand Cayman
TOCM Job ID : PRPUE-19-00347
Quantity of Sample Taken : 4 Liters
Tamper Proof Seal ID : JR0000261 / OFREG00267

Submitted by : J & R Industrial Services
Date & Time Sampled : 05-Nov-2019 / 1026 Hrs.
Date & Time Sent to Lab : 12-Nov-2019 / 1230 Hrs.
Date & Time Received : 19-Nov-2019 / 1120 Hrs.
Date & Time Analyzed : 19-Nov-2019 / 1120 - 1700 Hrs.
20-Nov-2019 / 0800 - 1600 Hrs.
Date Reported : 22-Nov-2019

F31 - P8				
PRPUE-19-00347-002				
Method	Test	Result	Specification	Condition
ASTM D130	Corrosion Copper Strip - 3h at 50°C (122°F)	1a	1a Max	Pass
ASTM D381	Unwashed Gum Content, mg/100mL	22.5		
	Washed Gum Content, mg/100mL	<0.5	5 mg/100mL Max	Pass
ASTM D2699C	Research Octane Number	99.0		
ASTM D2700C	Motor Octane Number	87.4		
ASTM D4814	Antiknock Index	93.2		
ASTM D5452	Particulate Contamination, mg/L	0.10		
ASTM D86	IBP, °F	88.0		
	10% Evaporated, °F	111.0		
	50% Evaporated, °F	226.2		
	90% Evaporated, °F	312.1		
	95% Evaporated, °F	341.2		
	Endpoint, °F	394.0		
	Recovery, % (V/V)	97.0		
	Residue, % (V/V)	1.5		
	Loss, % (V/V)	1.5		
	Evaporated at 200°F, % (V/V)	43.0		
	Evaporated at 300°F, % (V/V)	84.0		
ASTM D3831	Manganese Content, ppm (m/m)	<0.25	0.25 ppm (m/m) Max	Pass
ASTM D5191	DVPE, psi	9.73		
ASTM D4815-13	Ethanol, % (m/m)	Not Detected		

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Asset : F41 – P2
Product : Premium Pure 93
Job Location : F41, Grand Cayman
TOCM Job ID : PRPUE-19-00347
Quantity of Sample Taken : 4 Liters
Tamper Proof Seal ID : JR0000268 / OFREG00258

Submitted by : J & R Industrial Services
Date & Time Sampled : 05-Nov-2019 / 0919 Hrs.
Date & Time Sent to Lab : 12-Nov-2019 / 1230 Hrs.
Date & Time Received : 19-Nov-2019 / 1120 Hrs.
Date & Time Analyzed : 19-Nov-2019 / 1120 – 1700 Hrs.
20-Nov-2019 / 0800 – 1600 Hrs.
Date Reported : 22-Nov-2019

F41 – P2				
PRPUE-19-00347-005				
Method	Test	Result	Specification	Condition
ASTM D130	Corrosion Copper Strip - 3h at 50°C (122°F)	1a	1a Max	Pass
ASTM D381	Unwashed Gum Content, mg/100mL	9.5		
	Washed Gum Content, mg/100mL	<0.5	5 mg/100mL Max	Pass
ASTM D2699C	Research Octane Number	98.8		
ASTM D2700C	Motor Octane Number	87.1		
ASTM D4814	Antiknock Index	93.0		
ASTM D5452	Particulate Contamination, mg/L	0.45		
ASTM D86	IBP, °F	86.0		
	10% Evaporated, °F	121.2		
	50% Evaporated, °F	220.4		
	90% Evaporated, °F	317.8		
	95% Evaporated, °F	352.4		
	Endpoint, °F	400.0		
	Recovery, % (V/V)	98.0		
	Residue, % (V/V)	1.0		
	Loss, % (V/V)	1.0		
	Evaporated at 200°F, % (V/V)	37.0		
	Evaporated at 300°F, % (V/V)	85.0		
ASTM D3831	Manganese Content, ppm (m/m)	<0.25	0.25 ppm (m/m) Max	Pass
ASTM D5191	DVPE, psi	9.83		
ASTM D4815-13	Ethanol, % (m/m)	Not Detected		

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Asset : F31 - P8
Product : Regular Gasoline 5000
Job Location : F31, Grand Cayman
TOCM Job ID : PRPUE-19-00347
Quantity of Sample Taken : 4 Liters
Tamper Proof Seal ID : JR0000244 / OFREG00221

Submitted by : J & R Industrial Services
Date & Time Sampled : 05-Nov-2019 / 1024 Hrs.
Date & Time Sent to Lab : 12-Nov-2019 / 1230 Hrs.
Date & Time Received : 19-Nov-2019 / 1120 Hrs.
Date & Time Analyzed : 19-Nov-2019 / 1120 - 1700 Hrs.
20-Nov-2019 / 0800 - 1600 Hrs.
Date Reported : 22-Nov-2019

F31 - P8				
PRPUE-19-00347-001				
Method	Test	Result	Specification	Condition
ASTM D130	Corrosion Copper Strip - 3h at 50°C (122°F)	1a	1a Max	Pass
ASTM D381	Unwashed Gum Content, mg/100mL	21.5		
	Washed Gum Content, mg/100mL	<0.5	5 mg/100mL Max	Pass
ASTM D2699C	Research Octane Number	99.0		
ASTM D2700C	Motor Octane Number	87.4		
ASTM D4814	Antiknock Index	93.2		
ASTM D5452	Particulate Contamination, mg/L	0.10		
ASTM D86	IBP, °F	90.0		
	10% Evaporated, °F	111.6		
	50% Evaporated, °F	224.5		
	90% Evaporated, °F	308.7		
	95% Evaporated, °F	335.8		
	Endpoint, °F	396.0		
	Recovery, % (V/V)	97.0		
	Residue, % (V/V)	1.5		
	Loss, % (V/V)	1.5		
	Evaporated at 200°F, % (V/V)	43.0		
	Evaporated at 300°F, % (V/V)	84.0		
ASTM D3831	Manganese Content, ppm (m/m)	<0.25	0.25 ppm (m/m) Max	Pass
ASTM D5191	DVPE, psi	9.33		
ASTM D4815-13	Ethanol, % (m/m)	Not Detected		

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Asset : F41 - P2
Product : Regular Pure 89
Job Location : F41, Grand Cayman
TOCM Job ID : PRPUE-19-00347
Quantity of Sample Taken : 4 Liters
Tamper Proof Seal ID : JR0000297 / OFREG00221

Submitted by : J & R Industrial Services
Date & Time Sampled : 05-Nov-2019 / 0916 Hrs.
Date & Time Sent to Lab : 12-Nov-2019 / 1230 Hrs.
Date & Time Received : 19-Nov-2019 / 1120 Hrs.
Date & Time Analyzed : 19-Nov-2019 / 1120 - 1700 Hrs.
20-Nov-2019 / 0800 - 1600 Hrs.
Date Reported : 22-Nov-2019

F41 - P2				
PRPUE-19-00347-004				
Method	Test	Result	Specification	Condition
ASTM D130	Corrosion Copper Strip - 3h at 50°C (122°F)	1a	1a Max	Pass
ASTM D381	Unwashed Gum Content, mg/100mL	8.5		
	Washed Gum Content, mg/100mL	<0.5	5 mg/100mL Max	Pass
ASTM D2699C	Research Octane Number	95.4		
ASTM D2700C	Motor Octane Number	83.2		
ASTM D4814	Antiknock Index	89.3		
ASTM D5452	Particulate Contamination, mg/L	0.25		
ASTM D86	IBP, °F	98.0		
	10% Evaporated, °F	115.0		
	50% Evaporated, °F	199.2		
	90% Evaporated, °F	326.8		
	95% Evaporated, °F	364.8		
	Endpoint, °F	402.0		
	Recovery, % (V/V)	97.0		
	Residue, % (V/V)	1.5		
	Loss, % (V/V)	1.5		
	Evaporated at 200°F, % (V/V)	49.0		
	Evaporated at 300°F, % (V/V)	83.0		
ASTM D3831	Manganese Content, ppm (m/m)	<0.25	0.25 ppm (m/m) Max	Pass
ASTM D5191	DVPE, psi	9.73		
ASTM D4815-13	Ethanol, % (m/m)	Not Detected		

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Asset :	F31 – P8	Submitted by :	J & R Industrial Services
Product :	ULSD	Date & Time Sampled :	05-Nov-2019 / 1029 Hrs.
Job Location :	F31, Grand Cayman	Date & Time Sent to Lab :	12-Nov-2019 / 1230 Hrs.
TOCM Job ID :	PRPUE-19-00347	Date & Time Received :	19-Nov-2019 / 1120 Hrs.
Quantity of Sample Taken :	4 Liters	Date & Time Analyzed :	19-Nov-2019 / 1120 – 1700 Hrs.
Tamper Proof Seal ID :	JR0000222 / OFREG00284	Date Reported :	20-Nov-2019 / 0800 – 1720 Hrs.
			22-Nov-2019

F31 – P8				
PRPUE-19-00347-003				
Method	Test	Result	Specification	Condition
ASTM D4052	API Gravity @60°F, °API	35.0		
ASTM D976	Calculated Cetane Index	49.7	40 Min	Pass
ASTM D86	IBP, °C	176.0		
	10% Recovered, °C	220.0		
	50% Recovered, °C	278.0		
	90% Recovered, °C	335.0	282 - 338 °C	Pass
	Endpoint, °C	362.0		
	Recovery, % (V/V)	98.0		
	Residue, % (V/V)	1.0		
	Loss, % (V/V)	1.0		
ISM - Liqui-Cult	Observation Period, Hours	30		
	Bacteria, #/mL	10 ²		
ASTM D2709	Water and Sediment, % (V/V)	< 0.01	0.05 % (V/V) Max	Pass
ASTM D445	Kinematic Viscosity at 40°C, mm²/s	3.209	1.9 - 4.1 mm²/s	Pass
ASTM D7039	Total Sulfur, mg/kg	8.0		
EN 14078	Fame Content, % (V/V)	<0.05		
	Range	A		

Comments

* Analysis performed by other BV laboratory

Eric X Rodriguez, Laboratory Chemist





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Asset : F41 – P2
Product : ULSD
Job Location : F31, Grand Cayman
TOCM Job ID : PRPUE-19-00347
Quantity of Sample Taken : 4 Liters
Tamper Proof Seal ID : JR0000250 / OFREG00236

Submitted by : J & R Industrial Services
Date & Time Sampled : 05-Nov-2019 / 0924 Hrs.
Date & Time Sent to Lab : 12-Nov-2019 / 1230 Hrs.
Date & Time Received : 19-Nov-2019 / 1120 Hrs.
Date & Time Analyzed : 19-Nov-2019 / 1120 – 1700 Hrs.
20-Nov-2019 / 0800 – 1720 Hrs.
Date Reported : 22-Nov-2019

F41 – P2

PRPUE-19-00347-006

Method	Test	Result	Specification	Condition
ASTM D4052	API Gravity @60°F, °API	38.3		
ASTM D976	Calculated Cetane Index	50.9	40 Min	Pass
ASTM D86	IBP, °C	174.0		
	10% Recovered, °C	199.0		
	50% Recovered, °C	258.0		
	90% Recovered, °C	320.0	282 - 338 °C	Pass
	Endpoint, °C	355.0		
	Recovery, % (V/V)	98.0		
	Residue, % (V/V)	1.0		
	Loss, % (V/V)	1.0		
ISM - Liqui-Cult	Observation Period, Hours	30		
	Bacteria, #/mL	10 ⁴ 2		
ASTM D2709	Water and Sediment, % (V/V)	< 0.01	0.05 % (V/V) Max	Pass
ASTM D445	Kinematic Viscosity at 40°C, mm²/s	2.392	1.9 - 4.1 mm²/s	Pass
ASTM D7039	Total Sulfur, mg/kg	8.1		
EN 14078	Fame Content, % (V/V)	<0.05		
	Range	A		

Comments

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Eric X Rodriguez, Laboratory Chemist





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Asset : F32 - P3
Product : Gasoline 93
Job Location : F32, Grand Cayman
TOCM Job ID : PRPUE-20-00007
Quantity of Sample Taken : 4 Liters

Submitted by : J & R Industrial Services
Date & Time Sampled : 06-Dec-2019 / 0907 Hrs.
Date & Time Sent to Lab : 09-Dec-2019 / 1521 Hrs.
Date & Time Received : 13-Jan-2020 / 0800 Hrs.
13-Jan-2020 / 1000 - 1700 Hrs.
Date & Time Analyzed : 14-Jan-2020 / 0800 - 1700 Hrs.
15-Jan-2020 / 0800 - 1700 Hrs.
Date Reported : 16-Jan-2020

F32 - P3 PRPUE-20-00007-004				
Method	Test	Result	Specification	Condition
ASTM D130	Corrosion Copper Strip - 3h at 50°C (122°F)	1a	1a Max	Pass
ASTM D381	Unwashed Gum Content, mg/100mL	11.0		
	Washed Gum Content, mg/100mL	<0.5	5 mg/100mL Max	Pass
ASTM D2699C	Research Octane Number	98.6		
ASTM D2700C	Motor Octane Number	88.4		
ASTM D4814	Antiknock Index	93.5		
ASTM D5452	Particulate Contamination, mg/L	0.10		
ASTM D86	IBP, °F	90.1		
	10% Evaporated, °F	129.9		
	50% Evaporated, °F	222.9		
	90% Evaporated, °F	315.7		
	95% Evaporated, °F	339.9		
	Endpoint, °F	392.7		
	Recovery, % (V/V)	96.9		
	Residue, % (V/V)	1.1		
	Loss, % (V/V)	2.0		
	Evaporated at 200°F, % (V/V)	37.7		
	Evaporated at 300°F, % (V/V)	86.6		
ASTM D3831	Manganese Content, ppm (m/m)	<0.25	0.25 ppm (m/m) Max	Pass
ASTM D5191	DVPE, psi	9.66		
ASTM D4815-13	Ethanol, % (m/m)	Not Detected		

Comments

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Asset : F44 – P3
Product : Gasoline 93
Job Location : F44, Grand Cayman
TOCM Job ID : PRPUE-20-00007
Quantity of Sample Taken : 4 Liters

Submitted by : J & R Industrial Services
Date & Time Sampled : 06-Dec-2019 / 1035 Hrs.
Date & Time Sent to Lab : 09-Dec-2019 / 1521 Hrs.
Date & Time Received : 13-Jan-2020 / 0800 Hrs.
13-Jan-2020 / 1000 – 1700 Hrs.
Date & Time Analyzed : 14-Jan-2020 / 0800 – 1700 Hrs.
15-Jan-2020 / 0800 – 1700 Hrs.
Date Reported : 16-Jan-2020

F44 – P3 PRPUE-20-00007-005				
Method	Test	Result	Specification	Condition
ASTM D130	Corrosion Copper Strip - 3h at 50°C (122°F)	1a	1a Max	Pass
' ASTM D381	Unwashed Gum Content, mg/100mL	22.0		
	Washed Gum Content, mg/100mL	<0.5	5 mg/100mL Max	Pass
ASTM D2699C	Research Octane Number	99.3		
ASTM D2700C	Motor Octane Number	88.0		
ASTM D4814	Antiknock Index	93.6		
ASTM D5452	Particulate Contamination, mg/L	0.20		
' ASTM D86	IBP, °F	84.2		
	10% Evaporated, °F	110.6		
	50% Evaporated, °F	165.2		
	90% Evaporated, °F	309.1		
	95% Evaporated, °F	332.8		
	Endpoint, °F	384.0		
	Recovery, % (V/V)	96.1		
	Residue, % (V/V)	1.0		
	Loss, % (V/V)	2.9		
	Evaporated at 200°F, % (V/V)	54.6		
	Evaporated at 300°F, % (V/V)	87.9		
ASTM D3831	Manganese Content, ppm (m/m)	<0.25	0.25 ppm (m/m) Max	Pass
ASTM D5191	DVPE, psi	13.02		
ASTM D4815-13	Ethanol, % (m/m)	10.57		

Comments

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Asset : F44 - P3
Product : Gasoline 87
Job Location : F44, Grand Cayman
TOCM Job ID : PRPUE-20-00007
Quantity of Sample Taken : 4 Liters

Submitted by : J & R Industrial Services
Date & Time Sampled : 06-Dec-2019 / 1030 Hrs.
Date & Time Sent to Lab : 09-Dec-2019 / 1521 Hrs.
Date & Time Received : 13-Jan-2020 / 0800 Hrs.
13-Jan-2020 / 1000 - 1700 Hrs.
Date & Time Analyzed : 14-Jan-2020 / 0800 - 1700 Hrs.
15-Jan-2020 / 0800 - 1700 Hrs.
Date Reported : 16-Jan-2020

F44 - P3 PRPUE-20-00007-003				
Method	Test	Result	Specification	Condition
ASTM D130	Corrosion Copper Strip - 3h at 50°C (122°F)	1a	1a Max	Pass
ASTM D381	Unwashed Gum Content, mg/100mL	10.5		
	Washed Gum Content, mg/100mL	<0.5	5 mg/100mL Max	Pass
ASTM D2699C	Research Octane Number	91.6		
ASTM D2700C	Motor Octane Number	82.5		
ASTM D4814	Antiknock Index	87.0		
ASTM D5452	Particulate Contamination, mg/L	0.20		
ASTM D86	IBP, °F	87.4		
	10% Evaporated, °F	110.5		
	50% Evaporated, °F	153.3		
	90% Evaporated, °F	318.1		
	95% Evaporated, °F	349.0		
	Endpoint, °F	392.9		
	Recovery, % (V/V)	96.4		
	Residue, % (V/V)	1.1		
	Loss, % (V/V)	2.5		
	Evaporated at 200°F, % (V/V)	59.2		
	Evaporated at 300°F, % (V/V)	86.4		
ASTM D3831	Manganese Content, ppm (m/m)	<0.25	0.25 ppm (m/m) Max	Pass
ASTM D5191	DVPE, psi	13.11		
ASTM D4815-13	Ethanol, % (m/m)			

Comments

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Asset : F32 - P4
Product : ULSD
Job Location : F32, Grand Cayman
TOCM Job ID : PRPUE-20-00007
Quantity of Sample Taken : 4 Liters

Submitted by : J & R Industrial Services
Date & Time Sampled : 06-Dec-2019 / 0852 Hrs.
Date & Time Sent to Lab : 09-Dec-2019 / 1521 Hrs.
Date & Time Received : 13-Jan-2020 / 0800 Hrs.
Date & Time Analyzed : 13-Jan-2020 / 1000 - 1700 Hrs.
14-Jan-2020 / 0800 - 1600 Hrs.
Date Reported : 16-Jan-2020

F32 - P4				
PRPUE-20-00007-002				
Method	Test	Result	Specification	Condition
ASTM D4052	API Gravity @60°F, °API	37.7		
ASTM D976	Calculated Cetane Index	51.4	40 Min	Pass
ASTM D86	IBP, °C	166.1		
	10% Recovered, °C	206.4		
	50% Recovered, °C	264.8		
	90% Recovered, °C	323.1	282 - 338 °C	Pass
	Endpoint, °C	348.8		
	Recovery, % (V/V)	97.8		
	Residue, % (V/V)	1.5		
	Loss, % (V/V)	0.7		
ISM - Liqui-Cult	Observation Period, Hours	30		
	Bacteria, #/mL	10 ⁴ 2		
ASTM D2709	Water and Sediment, % (V/V)	< 0.01	0.05 % (V/V) Max	Pass
ASTM D445	Kinematic Viscosity at 40°C, mm²/s	2.480	1.9 - 4.1 mm²/s	Pass
ASTM D7039	Total Sulfur, mg/kg	7.0		
EN 14078	Fame Content, % (V/V)	<0.05		

Comments

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Asset : F44 – P3
Product : ULSD
Job Location : F44, Grand Cayman
TOCM Job ID : PRPUE-20-00007
Quantity of Sample Taken : 4 Liters

Submitted by : J & R Industrial Services
Date & Time Sampled : 06-Dec-2019 / 1040 Hrs.
Date & Time Sent to Lab : 09-Dec-2019 / 1521 Hrs.
Date & Time Received : 13-Jan-2020 / 0800 Hrs.
Date & Time Analyzed : 13-Jan-2020 / 1000 – 1700 Hrs.
Date Reported : 14-Jan-2020 / 0800 – 1600 Hrs.
Date Reported : 16-Jan-2020

F44 – P3				
PRPUE-20-00007-001				
Method	Test	Result	Specification	Condition
ASTM D4052	API Gravity @60°F, °API	35.8		
ASTM D976	Calculated Cetane Index	48.9	40 Min	Pass
ASTM D86	IBP, °C	160.9		
	10% Recovered, °C	204.7		
	50% Recovered, °C	268.2		
	90% Recovered, °C	328.1	282 - 338 °C	Pass
	Endpoint, °C	350.2		
	Recovery, % (V/V)	98.5		
	Residue, % (V/V)	1.4		
	Loss, % (V/V)	0.1		
ISM - Liqui-Cult	Observation Period, Hours	30		
	Bacteria, #/mL	10 ⁴ 2		
ASTM D2709	Water and Sediment, % (V/V)	< 0.01	0.05 % (V/V) Max	Pass
ASTM D445	Kinematic Viscosity at 40°C, mm²/s	2.614	1.9 - 4.1 mm²/s	Pass
ASTM D7039	Total Sulfur, mg/kg	6.5		
EN 14078	Fame Content, % (V/V)	9.1		

Comments

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