

## CERTIFICATE OF ANALYSIS N° PAS-193639

**VESSEL** : Hafnia Hawk  
**LOCATION** : PEMEX - Deer Park, TX  
**PRODUCT** : ULSD

**MOVEMENT** : Load  
**REF. NO.** : HAFNIA HAWK  
V02/24

Volumetric Composite		After Load	Sample N° :	52 (2)	13-SEP-2024 Sampled at 17:40
			<i>Minimum</i>	<i>Maximum</i>	<i>Remarks</i>
ASTM D4052	API Gravity @ 60°F	37.6 °API	30	41.0	Pass
ASTM D4052	Density @ 15°C	836.3 Kg/m3	820.0	876.0	Pass
ASTM D4176 (1A)	Appearance	Clear & Bright		Clear & Bright	Pass
ASTM D1500	ASTM Color	L1.0		2.0	Pass
ASTM D93(A)	Flash Point	65.0 °C	60		Pass
ASTM D97	Pour Point	-18 °C		0	Pass
ASTM D445	Viscosity @ 40 °C	2.339 cSt	2.0	4.1	Pass
ASTM D86	Distillation of Petroleum Products (Recovered)				
	Initial Boiling Point	166.6 °C			
	10%	195.2 °C			
	50%	258.9 °C		292	Pass
	90%	320.4 °C	282	340	Pass
	Final Boiling Point (End Point)	348.1 °C			
	Recovery	98.1 Vol. %			
	Residue	1.4 Vol. %			
	Loss	0.5 Vol. %			
ASTM D976	Cetane Index	49.9	45		Pass
ASTM D613	Cetane Number	48.5	40.0		Pass
ASTM D5453	Sulfur	13.0 ppm wt.		15	Pass
ASTM D482	Ash	<0.001 Mass %		0.01	Pass
ASTM D4530	Carbon Residue, Micro Carbon	<0.10 Mass %		0.1	Pass
ASTM D2709	Sediment & Water	<0.010 Vol. %		0.05	Pass
ASTM D130	Copper Corrosion @ 50 °C (3 hrs)	1a		1	Pass
Olfactory	Odor	Marketable		Marketable	Pass
ASTM D2624	Electrical Conductivity	341 pS/m	50		Pass
ASTM D5186	Total Aromatics (correlated to D1319)	27.2 Vol. %		35	Pass
ASTM D7371	Biodiesel Content (FAME)	<1.00 Vol. %		1	Pass
ASTM D6079	Lubricity by HFRR				
	Wear Scar Diameter @ 60° C	410 microns		460	Pass
ASTM D4868	Lower Heating Value	128869 Btu/US gal	127000		Pass
ASTM D6217	Particulate Contaminant	0.200 g/m3		Report	

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<b>PRODUCT</b>	: ULSD		

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		<i>Minimum</i>	<i>Maximum</i>	<i>Remarks</i>

<sup>(2)</sup> Samples taken as per Standard Practice for Manual Sampling of Petroleum and Petroleum Products (ASTM D4057 / API MPMS Chapter 8.1) via a Closed System Sampler. Customer is advised that, due to its limitations, the samples may not fully represent the entire cargo.

All testing is performed on premises by Camin Cargo Control and in accordance to the latest referenced test method unless specifically stated otherwise.

The results apply to the samples as received and specifically to the items listed on this certificate.

Data contained in this report is confidential to the addressee and shall not be disclosed to any other party without their approval. This report may not be reproduced except in full without the written consent of the Camin Cargo Control.

The statement of conformity (i.e. Pass/Fail) within this document does not consider measurement uncertainty and applies the decision rules of Pass if the values are equal or are within limits and Fail if outside of limits. Limits are defined by the product's recognized specification or as determined by written client contract and/or individual job request.