

# **Diesel Fuel Comparison Study Advisory Panel Meeting**

**March 13, 2009**

**California Environmental Protection Agency**

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**Air Resources Board**

# Approved Property Ranges for “Average” CARB ULSD Test Fuel Selection and Properties of Proposed Test Fuel

Property	“Average” CARB ULSD Test Fuel Property Ranges (CARB ULSD)	Estimated Properties of Potential Test Fuel (Proposed)
<b>API Gravity</b>	<b>37.5 – 39.5</b>	<b>36.7</b>
<b>T50 (°F)</b>	<b>470 – 490</b>	<b>475</b>
<b>T90 (°F)</b>	<b>595 – 615</b>	<b>610</b>
<b>Aromatics (v%)</b> <small>Based on ASTM D 5186</small>	<b>16 – 19</b>	<b>19.2</b>
<b>Cetane Number</b>	<b>50 – 53</b>	<b>51 – 52</b>
<b>Sulfur (ppm)</b>	<b>2 - 6</b>	<b>8</b>
<b>Note: Test fuel must contain zero biodiesel</b>		

# Approved Property Ranges for “Average” Federal ULSD Test Fuel Selection and Properties of Proposed Test Fuel

<b>Property</b>	<b>“Average” Federal ULSD Test Fuel Property Ranges (Federal - A)</b>	<b>Estimated Properties of Potential Test Fuel (Proposed)</b>
<b>API Gravity</b>	<b>34.5 – 36.5</b>	<b>34.4</b>
<b>T50 (°F)</b>	<b>490 – 510</b>	<b>486</b>
<b>T90 (°F)</b>	<b>595 – 615</b>	<b>618</b>
<b>Aromatics (v%)</b> <small>Based on ASTM D 1319</small>	<b>27 – 30</b>	<b>27.0*</b>
<b>Cetane Number</b>	<b>45 – 48</b>	<b>46.4</b>
<b>Sulfur (ppm)</b>	<b>4 - 8</b>	<b>13</b>
<b>Note: Test fuel must contain zero biodiesel</b>		<b>*ASTM D 5186</b>

# Approved Property Ranges for “Fall-Back” Federal ULSD Test Fuel Selection (“Fall-Back” Federal - A) Defined and Approved December 2008

<b>Property</b>	<b>“Fall-Back” Federal ULSD Test Fuel Property Ranges (Fall-Back Federal - A)</b>
<b>API Gravity</b>	<b>2 – 4 points lower than the “Average” CARB ULSD test fuel</b>
<b>Aromatics (v%) *</b>	<b>10 – 12 Volume % higher than the “Average” CARB ULSD test fuel</b>
<b>Cetane Number</b>	<b>4 – 6 points lower than the “Average” CARB ULSD test fuel</b>
<b>Sulfur (ppm)</b>	<b>0 – 4 ppm higher than the “Average” CARB ULSD test fuel</b>
<p>Note: Fall-Back Federal-A test fuel to be used in the event that staff cannot locate Federal – A test fuel based on approved property ranges, must contain zero biodiesel</p> <p>* Determination will be made using ASTM 5186 for CARB ULSD and ASTM 1319 for Fall-Back Federal-A</p>	