Certificate of Analysis

SINCE 1985

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CLIENT:	Cook And Cook, Inc	**REQUESTED BY:**	Mr. T.W. Cook
CLIENT PROJECT:		**PURCHASE ORDER NO:**	Pre-Paid
LABORATORY NO:	75230 Page 1 of 2	**REPORT DATE:**	July 10, 2014
SAMPLE:	N653T / FUEL		

TEST **RESULT**

Composition Breakdown, Gas Chromatography/Mass Spectrometry, ASTM D 5739

The sample was analyzed on a gas chromatograph/ mass spectrometer. A library search was performed on the collected data using the Wiley 138 Library and the NIST 98 Library. Together the libraries contain approximately 200,000 compounds.

The gas sample was analyzed as received.

These data are based on the chromatographable components found. If heavier compounds or polymers are present these were not seen on the gas chromatograph/mass spectrometer. No corrections for the inorganic content or water have been performed. The identities and approximate concentrations that follow are based on the best spectral comparisons from our libraries and the total ion relative areas of the peaks observed.

The basic composition of the organic material found appears to be a mixture of paraffins, isoparaffins (including iso octane), mono-aromatics and some esters. The small amount of esters appear to be related to short chain phthalate esters and octyl esters of adipic acid (hexanedioic acid). We also saw a small amount of tetraethyl lead.

The approximate relative concentrations of the organic chemical types are as follows:

Tentatively Identified Compounds Found	**Approximate Concentration Percent by Weight**
Iso octane	19.0
Iso paraffins (C5 to C10)	65.3
Heptane	0.2
Toluene	11.3
Ethylbenzene	0.2
m,p-xylene	0.6
o-xylene	0.2
mono-aromatics	0.3
tetraethyl lead	0.1
Phthalate esters	0.8
dioctyl adipate	2.0
Total	100.0

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TEST **RESULT**

Metals by ICP-AES, ASTM D 1976

	Results, mg/Kg
Silver	<1.0
Aluminum	<1.0
Arsenic	<1.0
Boron	<1.0
Barium	<1.0
Beryllium	<1.0
Calcium	<1.0
Cadmium	<1.0
Chromium	<1.0
Copper	<1.0
Iron	<1.0
Potassium	<1.0
Lithium	<1.0
Magnesium	<1.0
Manganese	<1.0
Sodium	<1.0
Nickel	<1.0
Lead	670.5
Antimony	<1.0
Selenium	<1.0
Silicon	12.9
Tin	<1.0
Titanium	<1.0
Vanadium	<1.0
Zinc	<1.0

Respectfully submitted
For Texas OilTech Laboratories, L.P.

[redacted]

A. Phillip Sorurbakhsh
Director of Laboratory Operations

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