

**David Sowards' comments (Syntroleum Corp.) on DOE Questions and Data Gaps, an October 16, 2002, DOE workshop presentation**

- ("data gap #1, third bullet") We have recently submitted additional information. Please let us if we need to address this point further. Please see the attached CEC (California Energy Commission) test data comparing Moss gas and Shell FTD with Chevron #2.
- ("data gap #1") I have provided the report entitled "Alternative Fuels: Gas-to-Liquids as Potential 21st Century Truck Fuels" to Ms. Bluestein. This report was put together by Southwest Research Institute, TACOM (US Army Tank-automotive and Armaments Command) and Massachusetts Institute of Technology.
- ("data gap #2") I have provided a copy of the work conducted by NREL testing FTD and Ultra Low Sulfur Diesel (ULSD) on a 2000 Power Stroke 7.3 liter turbocharged engine to Ms. Bluestein.
- ("data gap #3, first bullet") Please refer to the following Web site:  
<http://www.ott.doe.gov/fuelprops/>
- ("data gap #3, second bullet") This information was provided in our initial petition. We have recently submitted additional information. Section V-C of the FY 2001 Acv Pet Based Fuels for CIDI Engines has a great comparison of the toxicological performance of several fuels including FT diesel. FT-100 (100% FTD) showed the lowest toxicology based on a statistical analysis of 5 fuels in 7 of the 9 categories evaluated, and was amongst the lowest in the other categories. The fuels tested were LS Diesel, CARB reference fuel, 15% DMM in LS Diesel, #2 Cert Fuel, and FTD (most likely from Shell). Please let us if we need to address this point further.
- ("data gap #6) Please see the attached test results of Ricardo in Europe testing Syntroleum S-2 vs. BP's low sulfur fuel.
- ("data gap #7) FTD can be isomerized with the only effect being lower pour point. The following are test results of our S-2 with various cloud points/pour points:

ID Description	Cloud Point oC	10% D86		50% D86		90% D86
		oF	oF	oF	oF	
RDIL 3286 - PARC	-30	325.4	453.6	586.4		
RDIL 3288 - PARC	-18	260.8	471.7	538.6		
RDIL 3294 - PARC	-20	399.7	514.7	610.9		
RDIL 3349 - PARC	-14	332.5	483.2	652.5		
RDIL 3308	-27	353.8	479.3	595.7		
RDIL 3309	-26	376.5	482.0	589.9		
RDIL 3310	-26	322.3	455.3	586.6		
RDIL 3303	-11	364.3	507.4	641.3		
RDIL 3390	-19	373.0	499.7	605.3		
RDIL 3307	-26	323.3	457.8	592.7		
RDIL 3816 - Pennzoil	-57	386.8	460.2	538.8		
RDIL 1668 - PARC	-49	383.4	416.4	475.2		
RDIL 3937	-25	391.6	486.3	592.1		
RPU 12542	+1	377.1	505.1	666.6		
RPU 12691	-13	373.5	480.4	614.9		

RPU 12692	-6	370.9	497.2	645.4
RPU 13450	-20	371.0	478.0	604.2
RPU 10275	-71	379.9	441.2	558.2

- ("data gap #9) This is very similar to "data gap #3, second bullet." Please let us if we need to address this point further.
- ("data gap #9, second bullet") This information has been provided (link and hard copy) to Ms. Bluestein.
- ("data gap #9, third bullet") This information has been provided (link and hard copy) to Ms. Bluestein.
- ("data gap #10, second bullet") See FY 2001 Progress Report on Fuels for Advanced CIDI engines and Fuel Cells, Section V (Supporting Research), part B (Environmental Performance of Oxygenated Fuel Compounds used in Advanced Petroleum-Based Fuels) and part C (Chemical Characterization of Toxicologically Relevant Compounds from Diesel Emissions: A project of the Fuels/Particulate Matter Initiative). See below for URL.

EPISUITE URL: <http://www.epa.gov/oppt/exposure/docs/episuitedl.htm>

(Mark Goodman)--How would you like to address the "Questions" portion of the document you sent? Regarding Detroit Diesel, the contact is Nabil Hakim, Director-Engineering Technologies, Detroit Diesel Corporation, 13400 West Outer Drive, A17, Detroit, MI 48239-4001, 313-592-7455, [nabil.hakim@detroitdiesel.com](mailto:nabil.hakim@detroitdiesel.com) <<mailto:nabil.hakim@detroitdiesel.com>>.

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