Address 100 Barr Harbor Drive
PO Box C700
W. Conshohocken, PA
19428-2959 | USA

Phone 610.832.9500
Fax 610.832.9555
e-mail service@astm.org
Web www.astm.org

Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

Reply to:

Scott Parke
ASTM Test Monitoring Center
6555 Penn Avenue
Pittsburgh, PA 15206

December 2, 2005

To: Single Cylinder Diesel Surveillance Panel

Enclosed are the minutes of the SCOTE Surveillance panel teleconference held October 6, 2005. Please address any corrections during the time allotted for minutes approval at the next meeting.

Scott Parke
Secretary SCOTE Surveillance Panel

Attachments
cc: ftp://ftp.astmtmc.cmu.edu/docs/diesel/scote/minutes/TELECONFERENCE%202005-10-06.pdf

distribution: Email

TELECONFERENCE MINUTES

SINGLE CYLINDER DIESEL SURVEILLANCE PANEL

HELD OCTOBER 6, 2005

13:05cdt SUPPLY STATUS FOR 0.4% SULFUR FUEL (SDTF)

Chairman Jim McCord (Southwest Research) called the teleconference to order at 13:05 cdt to discuss the soon-to-be depleted supply of Dow/Haltermann 0.4% sulfur test fuel. The participants in the call are listed in attachment 1.

Bob Rumford (Dow/Haltermann) explained how the LSRD4 (0.04% sulfur) and SDTF (0.4% sulfur) diesel test fuels were produced using the same line in the refinery. When his company lost the LSRD4 business, sales volume for that line dropped below what was sufficient to keep it profitable and so they decided to shut it down. Before shutting down, however, they did run one last batch of SDTF. This batch is nearing depletion.

Abdul Cassim (Caterpillar) reminded the panel that simply switching to PC-9 fuel as has been done with several diesel tests recently is not an option. He expects that such a change would produce significant changes to the tests using SDTF (1K and 1M-PC). This is, of course, well known given the performance difference between the 1K and 1N tests.

Bob Rumford said that there were other ways that his company could produce 0.4% sulfur fuel but that other properties of the fuel would probably also change (specifically, gravity and the distillation points). They can probably maintain cetane number by tinkering with the aeromatics; gravity would probably be lighter. Dow/Haltermann has been unable to locate any other refinery willing or able to supply the same diesel/kero cut that they had been using to make SDTF.

Bob asked the panel if they could, perhaps, prioritize the specs to help guide him. Abdul Cassim asked Jim McCord to read the current SDTF specs (attachment 2). Jim felt that sulfur and cetane would be the highest priority to maintain. Bob suggested that they might be able to run two or three candidate fuels and see how the properties change.

Jim McCord estimated annual usage of SDTF at approximately 70,000 gallons and asked Bob Rumford if that volume would be enough to continue Dow's interest in producing. Bob replied that it was. He reported that they currently have on hand 16,000 gallons of SDTF and the components to make approximately 5,000 gallons in addition to that.

Abdul Cassim was concerned that the sulfur level be natural; the performance of fuel doped with added sulfur is expected to be different. Bob Rumford was aware of that concern.

Riccardo Conti (ExxonMobil) noted that Haltermann makes a 0.25% sulfur fuel for the Volkswagen TDI test. He was unsure how the other specs of that fuel compare to SDTF but he offered to check. Jim Gutzwiller (Infineum) pointed out that that fuel is produced by Haltermann in Germany so shipping would become an issue. Riccardo also knows of a 4% sulfur fuel that is used for marine testing that might be worth investigating.

Abdul Cassim asked Bob Rumford if the current fuel could be made in Europe. Bob was doubtful since he had investigated that option in the past.

Bob Rumford agreed to investigate the various options and circulate the resulting specs for each possibility to the panel for review.

13:43cdt OTHER BUSINESS

Bob Campbell (Afton) asked if anyone else had seen 1M-PC ring end gaps out of spec. He's recently had between 5 to 7 ring sets out of spec by 0.002". Chuck Dutart (Caterpillar) is aware of the problem and is handling it with the ring supplier.

The teleconference concluded at 13:50cdt.

Attendance:

Representative	Organization
Abdul Cassim	Caterpillar
Chuck Dutart	Caterpillar
Jim Gutzwiller	Infineum
Jerry Brys	Lubrizol
Jim McCord	Southwest Research
Bob Campbell	Afton Chemical
Chris Mazuca	PerkinElmer
Joe Franklin	PerkinElmer
Riccardo Conti	ExxonMobil
Bob Rumford	Dow/Haltermann
Scott Parke	Test Monitoring Center

SDTF

Product: _____ Batch No.: _____

TMC No.: _____

Product No.: _____ TMO No.: _____

Tank No.: _____

Analysis Date: _____

Shipment Date: _____

TEST	METHOD	SPECIFICATION				
		UNITS	MIN	TARGET	MAX	RESULTS
Distillation - IBP	ASTM D86	°F		REPORT		
10%		°F		REPORT		
50%		°F	500		530	
90%		°F	590		620	
Distillation - EP		°F	650		690	
Gravity	ASTM D4052	°API	33.0			
Density	ASTM D4052	kg/m3		REPORT		
Pour point	ASTM D97	°F			35.0	
Cloud point	ASTM D2500	°F		REPORT	20	
Flash point	ASTM D93	°F	140		4.0	
Viscosity,40°C	ASTM D445	cSt	2.0		0.42	
Natural Sulfur	ASTM D4294	wt %	0.38			
Natural Sulfur	ASTM D2622	wt %		REPORT		
Composition, Aromatics	ASTM D1319	vol %		REPORT		
Composition, Olefins	ASTM D1319	vol %		REPORT		
Composition, Saturates	ASTM D1319	vol %		REPORT		
Cracked Stocks				None		
Basic sediment & water	ASTM D1796	vol %			0.1	
Ramsbottom carbon, 10% residue	ASTM D524	wt %			0.20	
Ash content	ASTM D482	wt %			0.01	
Acid Number	ASTM D664	mg KOH/g			0.15	
Copper Corrosion	ASTM D130				2	
Cetane Number	ASTM D613		47.0		53.0	
Aliphatic paraffins	ASTM D2425	wt %	45.0		65.0	
Monocycloparaffins	ASTM D2425	wt %		REPORT		
Dicycloparaffins	ASTM D2425	wt %	0.0		15.0	
Tricycloparaffins	ASTM D2425	wt %		REPORT		
Alkylbenzenes	ASTM D2425	wt %	5.0		10.0	
Indanes/Tetralins	ASTM D2425	wt %		REPORT		
Indenes	ASTM D2425	wt %		REPORT		
Napthalene	ASTM D2425	wt %		REPORT		
Napthalenes	ASTM D2425	wt %	5.0		15.0	
Acenaphthenes	ASTM D2425	wt %		REPORT		
Acenaphthalanes	ASTM D2425	wt %		REPORT		
Tricyclic aromatices	ASTM D2425	wt %		REPORT		

Approved by: _____ Analyst _____