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Reply to:

Scott Parke
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February 6, 2006

To: Single Cylinder Diesel Surveillance Panel

Enclosed are the minutes of the SCOTE Surveillance panel teleconference held January 23, 2006. 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%202006-01-23.pdf>

distribution: Email

TELECONFERENCE MINUTES

SINGLE CYLINDER DIESEL SURVEILLANCE PANEL

HELD JANUARY 23, 2006

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13:55cst REPLACEMENT FOR 0.4% SULFUR DIESEL TEST FUEL (SDTF)

Chairman Jim McCord (Southwest Research) called the teleconference to order immediately following a C13 Task Force meeting at 13:55 cst. The purpose of the meeting was to discuss Dow/Haltermann's proposed replacement fuel for SDTF. The participants in the call are listed in attachment 1.

Bob Rumford (Dow/Haltermann) described the development of Haltermann's proposed replacement for SDTF fuel (certificate of analysis shown in attachment 2). He reported that this fuel could be available in six to eight weeks in a 17,000 gallon initial batch and the stocks required to make it should be available for the next five to seven years. The price is expected to be approximately \$7.65/gallon.

The panel was enthusiastic that the fuel conformed so well to the specs in place for SDTF. In light of this enthusiasm and considering the urgently low fuel supplies at several labs, Scott Parke (TMC) moved that the fuel be approved for use immediately; Bob Campbell (Afton) seconded. Pat Fetterman (Infineum) protested that he wouldn't feel very comfortable using the new fuel on one of his tests until it had first been used in a reference test. Scott asked how he would be able to determine if a hypothetical failing reference result was caused by something the lab did wrong or by the new fuel. The panel didn't seem to think that that was a concern but, if it was, Bob Campbell suggested that calibration periods be extended/shortened to promote data collection. Scott reminded the panel that that approach has generated dissatisfaction in some companies' management in the recent past. Chris Mazuca (Intertek) reported that he expected to reference at least two stands in the near term that could contribute data. Sensing a lack of support, Scott withdrew the motion.

Jim McCord suggested that all labs run a reference using the new fuel as soon as it's available. Bob Rumford asked if labs would plan to dump a delivery of new fuel into a tank that included old fuel. All agreed that that would not be the best approach. Jim and Chris Mazuca both reported that they were essentially out of fuel. Mike Griggs (Lubrizol) said his lab still has 2500 gallons. Bob Campbell also has some fuel remaining. Scott Parke asked Jim if his suggestion included labs that still had fuel. Jim said it did. Scott asked Pat Fetterman if he felt comfortable running a test on old fuel in a stand that calibrated on new fuel. All agreed that a stand should run all tests on the fuel it calibrated on. Scott asked Mike if Lubrizol had any objections to that notion. Mike said they did. He also was not keen on the idea of having his calibration period shortened considering the difficulty his lab had achieving their present calibration. Jim suggested that labs could wait until their next reference. Mike noted that a need to re-reference was not imminent for some labs. There was some circular debate regarding whether tests should be run as soon as fuel is available or not until the next regularly scheduled reference occurs. In the end, Jim McCord made the following motion:

Beginning with the next reference test, use the new Dow/Haltermann fuel (SDTF2) for all 1M-PC tests. TMC will extend a stand's existing calibration (for a period of not more than 6 months) to cover the period from expiration of the current calibration up until analysis of results from new fuel runs is complete. The subsequent calibration period will then be shortened a compensating period of time.

Bob Campbell seconded the motion which then passed 8-0-2 (for-against-waive; Chuck Dutart and Scott Parke waiving).

The question was raised of what would happen if the new fuel caused dramatically different results. Specifically, what would be done in a case where a lab had been producing severe (though still passing) results and produces a mild (but passing) result on the new fuel. This might trigger a precision alarm. Bob Campbell suggested that a way to prevent that problem was to eliminate precision alarms and so moved the following:

Revise precision alarm actions for the 1K, 1N, 1M-PC, and 1P test to be the same as is the case for 1R. i.e. candidate testing may continue, no additional test runs are required, check boxes are added to the report forms to indicate precision status, and letters are sent to clients (see 1R LTMS for full details).

Jim McCord seconded the motion. Without discussion, it passed by an 8-1-1 vote (Scott Parke against; Chuck Dutart waiving).

14:48cst 1P LINER STATUS

Chuck Dutart (Caterpillar) updated the group on the status of replacement 1P liners. He said that they were currently doing some tooling changes but by mid-February he should know where things stand. All labs reported that they were running low on liners. Chuck's current plans are to run a small lot of around ten to fifteen liners and subject them to the inspection process. The latest liners use a different casting and different machining. He may have parts ready to test in March. Chuck was curious as to how desperately each lab's supply was. The labs declined publicly disclosing that information but agreed to supply it to Chuck individually.

The teleconference concluded at 15:00cst.

Attendance:

Representative

Chuck Dutart
Jim Gutzwiller
Pat Fetterman
Elisa Santos
Jim Rutherford
Mark Sutherland
Mike Griggs
Jim McCord
Bob Campbell
Chris Mazuca
Riccardo Conti
Bob Rumford
Ron Buck
Scott Parke

Organization

Caterpillar
Infineum
Infineum
Infineum
Chevron
Chevron
Lubrizol
Southwest Research
Afton Chemical
PerkinElmer
ExxonMobil
Dow/Haltermann
TEI
Test Monitoring Center

PRODUCT: .4% Sulfur Diesel Test Fuel

Batch No.: lab blend #5 Ave of last
six blends

PRODUCT CODE: TR 1029 (HF001)

REFORMULATION

TEST	METHOD	UNITS	SPECIFICATIONS			RESULTS	AVE Results
			MIN	TARGET	MAX		
Distillation - IBP	ASTM D86	°F		Report		373	416
10%		°F		Report		433	450
50%		°F	500		530	523	506
90%		°F	590		620	607	610
Distillation - EP		°F	650		690	650	661
Gravity	ASTM D4052	°API	33.0		35.0	34.9	34.1
Density	ASTM D4052	kg/m ³		Report		850	854
Pour Point	ASTM D97	°F			20	-5	-3
Cloud Point	ASTM D2500	°F		Report		5	7
Flash Point	ASTM D93	°F	140			>150	189
Viscosity, 40°C	ASTM D445	cSt	2.0		4.0	2.7	2.9
Natural Sulfur	ASTM D4294	wt %	0.38		0.42	0.38	0.39
Natural Sulfur	ASTM D2622	wt %		Report			4.00
Composition, aromatics	ASTM D1319	vol %		Report		32.0	30.1
Composition, olefins	ASTM D1319	vol %		Report		1.0	0.9
Composition, saturates	ASTM D1319	vol %		Report		67.0	69.0
Cracked stocks				None		None	None
Basic Sediment & Water	ASTM D1796	vol %			0.1	<0.05	<0.05
Ramsbottom carbon, 10% residue	ASTM D524	wt %			0.20	0.10	0.07
Ash content	ASTM D482	wt %			0.01	<0.01	<0.001
Acid Number	ASTM D664	mg KOH/g			0.15	0.10	0.10
Copper Corrosion	ASTM D130				2	1	1
Cetane Number	ASTM D613		47.0		53.0	48.0	49.9
Aliphatic paraffins	ASTM D2425	wt %	45.0		65.0	42.9	48.3
Monocycloparaffins	ASTM D2425	wt %		Report		20.0	13.1
Dicycloparaffins	ASTM D2425	wt %	0.0		15.0	7.7	8.9
Tricycloparaffins	ASTM D2425	wt %		Report		3.3	3.7
Alkylbenzenes	ASTM D2425	wt %	5.0		10.0	14.1	5.4
Indanes/Tetralins	ASTM D2425	wt %		Report		4.6	4.2
Indenes	ASTM D2425	wt %		Report		3.6	3.4
Naphthalene	ASTM D2425	wt %		Report		0.7	0.7
Naphthalenes	ASTM D2425	wt %	5.0		15.0	4.4	7.8
Acenaphthenes	ASTM D2425	wt %		Report		2.1	2.9
Acenaphthylenes	ASTM D2425	wt %		Report		1.4	1.2
Tricyclic aromatics	ASTM D2425	wt %		Report		0.2	0.3