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Reply to:

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

August 4, 2004

To: Single Cylinder Diesel Surveillance Panel

Enclosed are the minutes of the SCOTE Surveillance panel teleconference held July 30, 2004. Please forward any corrections or additions to my attention.

Scott Parke
Secretary SCOTE Surveillance Panel

Attachments

cc: <ftp://ftp.astmtmc.cmu.edu/docs/diesel/scote/minutes/TELECONFERENCE%202004-07-30.pdf>

distribution: Email

TELECONFERENCE MINUTES

SINGLE CYLINDER DIESEL SURVEILLANCE PANEL

HELD JULY 30, 2004

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09:10cdt CALL TO ORDER

The teleconference was scheduled to begin at 09:00 cdt; several participants experienced connection difficulties delaying the start. The participants are listed in attachment 1. The agenda is shown as attachment 2. The minutes of the previous teleconference were approved as published.

09:11cdt REPLACING LSRD-4 FUEL WITH PC-9 FUEL FOR 1N & 1P TESTING

This teleconference was convened to discuss replacing Dow/Haltermann LSRD-4 fuel with Chevron Phillips PC-9 fuel for 1N and 1P testing.

Chairman Jim McCord (Southwest Research) requested that the participants make their comments in the order he set out in the agenda (attachment 2).

Scott Parke (TMC) said that while he had no particular interest in one fuel or the other he wanted to ask a couple of questions to better form an opinion. First, he asked for clarification of the oft-used declaration that PC-9 fuel is a "subset" of the LSRD-4 fuel. Does PC-9 fuel meet the specifications for LSRD-4 in *all* cases? The reply was yes. Scott then asked if the specification given for LSRD-4 *completely* describes that fuel. Again the answer was yes. Abdul Cassim (Caterpillar) pointed out that the PC-9 fuel specification does have additional measurements for cetane, heat of combustion, and sulfur. All participants agreed that though these three items are not in the LSRD-4 spec they are unimportant for 1N and 1P testing (hence their absence from the spec). The panel was quite confident that switching to PC-9 fuel would have no impact on test results.

Such being the case, then, Scott asked the panel if they should consider picking an implementation date and just switching to PC-9 fuel for all testing after that date. Dan Domonkos (Lubrizol) felt that such a path would be imprudent. His preference was that the PC-9 fuel be introduced during reference tests. Bob Campbell (Afton) echoed Dan's thoughts. Both felt that their customers would not feel comfortable running fuel that had not been proved out.

Considering the current state of flux in the 1N test (new liners still in the process of introduction), Chuck Dutart (Caterpillar) wondered whether now was the best time to introduce the additional variable of new fuel. Should this perhaps wait until liner introduction was complete? Jim McCord reassured Chuck that the PC-9 fuel won't influence test results. Dan Domonkos concurred. Chuck asked, then, if the labs could offer some assurance that tests to prove out the new fuel could at least

be conducted on proven, reliable stands. No lab confessed to having any stand that did not meet that description.

Abdul Cassim stated his belief that any performance difference between LSRD-4 and PC-9 fuel is unlikely to manifest itself in a 1N or 1P test. He recalled some of the discussions that took place several years ago in a Fuel Taskforce spawned by the T8 Surveillance Panel where a fuel-dependent viscosity difference was found. He asked if, perhaps, the place to prove fuel equivalence might not be in the T8 test. Jim McCord returned the focus to the Cat tests; he didn't want to discuss any test outside the scope of the present panel.

Jim then asked to continue down the speaker list with comments from Lubrizol. Dan Domonkos's position was that anything that could reduce test costs or simplify fuel tankage would be a positive development. Dan reiterated his conviction that the PC-9 fuel should be tried first in reference tests.

Bob Campbell concurred with Dan's thoughts and also repeated his support for trying the PC-9 fuel in reference tests.

Jim Gutzwiller's (Infineum) position was that he would be satisfied that the fuels were equivalent as long as PC-9 fuel was tried in reference testing

Chris Mazuca (PerkinElmer) said that his lab was concerned about how switching 1N/1P testing to PC-9 fuel might impact the cost of LSRD-4 fuel. If Haltermann/Dow is asked to produce smaller or fewer batches of LSRD-4 fuel then those smaller/fewer batches could be more expensive. Since LSRD-4 would still be required for T8 testing, any cost saving realized in 1N/1P testing could be consumed by T8 testing. The sense of the panel was that if the 1N and 1P tests decided to switch to PC-9 fuel, the T8 panel would do the same.

Chris said that he has a 1P stand due for reference in the next week or so. Another of his concerns was the status of the result of that reference test should he run it on PC-9 fuel. He didn't want to be told that the status of the stand was "pending" while the panel waited for the outcome of other PC-9 1P tests or to have to run a second reference test should he fail the first due to a fuel-related severity shift. Abdul Cassim suggested that if Chris's PC-9 fuel run failed then perhaps the present calibration could be considered to be extended. Dan Domonkos and Bob Campbell both objected to this approach. Both felt that there were too many other reasons that a test might fail to assume that it was the fuel (oil consumption, for example). Scott Parke pointed out that such an approach could raise doubts about the status of any candidate test that might be run against the extended calibration if subsequent tests indicate that fuel was not the cause for the PC-9 run failing. Jim McCord said that he expected to start a 1P test sometime in the next month and a half which could provide a second 1P data point. Scott was asked if he could agree to extend Chris's present calibration period until Jim starts his run so that both would start at the same time. Scott said he could so long as the extension time was not indeterminate. All agreed to fix the new calibration expiration for Chris's stand to September 15, 2004.

Jim McCord concluded the scheduled comments saying that he was confident that the T8 panel would switch to PC-9 fuel and that the cost savings achieved by a wholesale switch away from LSRD-4 fuel would be good for the industry.

Preparatory to making any motion, Scott Parke asked to summarize the conclusions of the remarks made.

1. The next reference test on any 1N stand (most due October 31) will be run on PC-9 fuel.

2. These runs will still use the new 1Y3998 liners as was previously planned to gather data for analysis of the liner performance.
3. Also previously decided for these runs was to use an oil different from the first round of tests. This, too, will still be the case.

For the purposes of analyzing the liner performance, Scott pointed out that this experimental design will require assuming no effect due to the fuel change. The panel was comfortable making that assumption.

Dan Domonkos motioned to implement the above enumerated points. His motion also required the next 1P tests to use PC-9 fuel (with Chris Mazuca's stand's calibration extended as described). Bob Campbell seconded. The motion was approved 6-0-3 as shown under "Motion 1" on the attendance list.

10:33cdt ADJOURNMENT

The call was concluded at 10:33cdt.

Attendance:

| Representative | Organization | Motion 1 |
|----------------|------------------------|----------|
| Abdul Cassim | Caterpillar | |
| Chuck Dutart | Caterpillar | For |
| Dan Domonkos | Lubrizol | For |
| Jim McCord | Southwest Research | For |
| Bob Campbell | Afton Chemical | For |
| Chris Mazuca | PerkinElmer | For |
| Jim Gutzwiller | Infineum | For |
| Don Burnett | Chevron Phillips | Waive |
| Dennis Doerr | Chevron Phillips | |
| Ron Jones | Chevron Phillips | |
| Tom Wingfield | Chevron Phillips | |
| Eric Netemeyer | Chevron Phillips | |
| Bob Rumford | Dow | Waive |
| Jim Carter | Halterman/Dow | |
| Scott Parke | Test Monitoring Center | Waive |

From: James McCord [James.McCord@swri.org]
Sent: Thursday, July 29, 2004 4:15 PM
Subject: SCOTE AGENDA (7/30/04)

Gentlemen,

9:00 Call to order (Jim McCord)
9:05 Attendance (Scott Parke)
9:10 Acceptance of Previous Minutes
9:15 PC7 or PC9 fuel discussion:

In effort to ensure that all concerns are heard in a timely manner, please adhere to the following discussion sequence:

TMC
CAT
ExxonMobil
Lubrizol
Ethyl
Infineum
Oronite
PE
SwRI

10:00 Review of Positives and Negative
10:15 Open Discussion