Reply to: William M. Nahumck
The Lubrizol Corporation
29400 Lakeland Boulevard
Wickliffe, OH 44092
Phone: 440-347-2596
Fax: 440-347-4096
Email: wmn@lubrizol.com

Unapproved Minutes of the June 30, 2003
Sequence III Surveillance Panel Teleconference

Attendees: Bill Nahumck, Monica Beyer, Phil Scinto, Gordon Farnsworth, Mike Kasimirsky, Bob Campbell, Ben Weber, Irwin Goldblatt, Dwight Bowden, Jason Bowden, Tim Caudill, Charlie Leverett, Sid Clark, Mark Mosher, Frank Fernandez, Jo Martinez

Meeting was called to order at 11:05 AM ET on 6-30-03.

The agenda was reviewed.

1. Official starting date for LTMS
2. Dual calibration status
3. LTMS parameters

It was adjusted to accommodate the additional discussion centered on the topic of controlling oil consumption, which was a last minute addition and actually took up most of the discussion time.

Official Starting Date for LTMS

Michael Kasimirsky reviewed the information that he sent previously to the Surveillance Panel. They are included for reference.

“For this item, I'd suggest that we use the actual dates for all the matrix and non-matrix tests. This way, any runs made since the end of the matrix will have been conducted on calibrated stands. For the matrix runs, the labs would be calibrated as of the second matrix test in the matrix and the remaining 10 runs (per lab) would be additional reference data. The 100 day/25 test counters would begin after the final matrix test, as is usual practice. Non-matrix runs would be treated in the same manner. We would make the test targets from the matrix effective immediately prior to the first matrix test so that the matrix runs would be considered against those target values. Future target updates would be made effective at some date in the future, which is also according to past practice. This also matches what we did when the IIIF test was introduced. Those matrix runs were charted according to the dates they completed on and calibration was effective as of the EOT date of the final matrix run, as if it was a normal reference oil test. This is the "AO" data shown in the IIIF LTMS data file on our web page.” The Precision Matrix laboratories entered into the Precision Matrix with the understanding that their stands would have a full reference amortization with registered tests at the completion and acceptance of the test.

After some further discussion, **Ben Weber moved that the Surveillance Panel designate that the start of the initial reference period for LTMS will coincide with the official acceptance of the test by ACC for test registration. The motion passed with 8 votes for, 1 against, 1 waives.**

Oil Consumption Concerns

Oil consumption concerns or perceptions that were voiced by ACC at the June 26, 2003 meeting of ILSAC/Oil were discussed by the panel, even though we have not received any official correspondence. The Surveillance Panel recognizes that the viscosity increase (PVIS) has been variable and that viscosity increase can be significantly impacted by oil consumption (OC). Although we have not been officially notified by ACC of the oil consumption concern voiced at the June 26, 2003 meeting of ILSAC/Oil, we discussed the Surveillance Panel’s perception of this concern at length. When the test was presented for acceptance to the Surveillance Panel, the statistical analysis noted that there was a correlation between viscosity increase and oil consumption. This correlation also applies to the MRV to a certain extent as the three parameters are related. An adjustment to the viscosity increase based on oil consumption was proposed to the Surveillance Panel by the statistical analysis group at our June 10, 2003 meeting. The Surveillance Panel was unwilling to accept the proposal as it was based on test results that were generated only with 5Wxx type oils. We did not know if the proposed adjustment will hold for other viscosity grades (0Wxx or 10Wxx).

Oil Consumption Concerns (con't)

Sid Clark and the test engineers from several laboratories are investigating rebuild and operational practices in an effort to find some clue related to PVIS and OC variability. We need additional information in order to investigate the oil consumption concern further since all the current reference oil information is still essentially what has been presented with the Precision Matrix. We have had a few additional reference runs since the matrix that do nothing to change the panel's original conclusion. Specific test data from ACC member companies may help to provide some direction and clues of what to investigate. The Surveillance Panel has limited avenues to explore with respect to the test procedure. Several parameters that are known to affect oil consumption are not adjustable by procedure which limits possible ideas to investigate. If any significant changes to the test procedure (like changing the fresh oil additions) are proposed, such changes could likely alter the performance of the test and negate the results of the Precision Matrix.

The Surveillance Panel asked the statistical analysis group on June 10, 2003 to investigate several items when the Surveillance Panel accepted the test. These items follow.

a. Understand the delta between labs for OC and WPD
b. Oil Consumption and its correlation between all the other parameters
c. Oil Consumption Level versus time and its effect on parameters
d. Blowby/OC/PVIS/MRV correlation/relationship studied further
e. PVIS/MRV correlation/relationship studied further
f. NOX/WPD correlation/relationship studied further
g. Initial Oil Level

This analysis is currently in progress. The Surveillance Panel agreed to continue to investigate any issues that will improve the precision and conduct of the test. This is especially true for viscosity increase and oil consumption. **Dwight Bowden made the following motion; The Surveillance Panel requests that the TMC analyze the existing Sequence IIIF reference oil database for oil consumption trends and relationships to other parameters. The intent is to compare this data to the available IIIF reference oil data for the IIIG test to determine if this is a test specific phenomenon. The motion was seconded by Gordon Farnsworth. The motion passed with 10 votes for, 0 against, 0 waives. This motion was put on hold until we receive written correspondence about this issue of oil consumption.**

LTMS Parameters

In a related matter, the Surveillance Panel discussed how to apply a Severity Adjustment (SA) to MRV, which is an expected pass/fail parameter for GF-4. All three reference oils perform at different levels in the MRV test. In particular, RO 435 is highly variable and in several cases has resulted in yield stress. This will take some time to study how to apply a severity adjustment to this parameter. The Surveillance Panel will rely on the LOTRU group conclusions and recommendations when they become available. A reference oil result that has reached yield stress can not be used to calculate a SA. The Panel is reluctant to base an adjustment system, such as a SA which is applied to all candidates, based on only two of the three reference oils. With the current frequency of reference oil assignments, there could be some lengthy gaps to changes for the SA for the MRV parameter which could be a concern for users of the test. Concerns were also voiced about the variability of the MRV and how that will affect reference oil acceptance rate. The Surveillance Panel took no action during this teleconference, but it will be a topic at the next regular Surveillance Panel meeting. The Surveillance Panel does recognize that oil consumption has a significant impact on several rated parameters and we will continue to strive to improve the control and precision of the test. No changes are being recommended as we have none to offer at this time.

Dual Calibration Status

Questions have been raised regarding some specific scenarios about referencing (IIIF/IIIG). In particular, if a stand is currently IIIG referenced, but not IIIF referenced, how many runs are required to bring the stand in as a referenced IIIF stand? Michael Kasimirsky reviewed the information that he sent previously to the Surveillance Panel. They are included for reference.

“Currently, the system would probably require two tests to bring the stand back into the system, depending on the reason it was removed from the IIIF calibration pool to begin with. The Reduced K limits would apply to any lab with more than six data points in its charts, i.e. all current IIIF labs, but the Reduced K limits do not apply to stands removed from the system due to precision problems. A review of the stand in question would be required to determine for sure what the requirements may be.”

A motion was made by Gordon Farnsworth and seconded by Bill Nahumck that an active IIIG stand that has fallen out of IIIF reference status may reference using only one test to bring that stand back into IIIF calibration, provided that the stand has been referenced within the last 12 months. Otherwise, a minimum of two reference tests would be required to reference the stand for IIIF testing. The motion passed with 9 votes for, 0 against, 1 waives.

On a related topic, the LTMS is a lab based system. There were concerns that the test stands were not having the equipment calibrated as frequently as with the IIIF test. **A motion was made by Charlie Leverett and seconded by Gordon Farnsworth that the test stand and its associated equipment must be calibrated prior to referencing a IIIG stand and/or every 6 months. The motion passed with 10 votes for, 0 against, 0 waives.**

New Business

Based on concerns about bias with the WPD rating, Frank Farber from the TMC was asked to schedule a rating workshop, tentatively on July 15th-16th. These will be full day workshops so do not plan to leave early. Frank will notify the rating community and work with the San Antonio labs to set up the workshop.

The teleconference was adjourned at approximately 12:25 PM.

William Nahumck

Sequence IIIF/G Surveillance Panel Chairman
The Lubrizol Corp. Phone: 440-347-2596
Fax: 440-347-4096 E-Mail: wmn@lubrizol.com