

Minutes from 7/29/2011 Sequence VG Surveillance Panel Conference Call

Attendees: Andy Ritchie, Gordon Farnsworth, Mike McMillan, Doyle Boese – Infineum Jo Martinez, Mark Sutherland – Chevron Rich Grundza -TMC Bruce Matthews – GM Ron Romano -Ford Raham Kirkwood, Bill Buscher, Janet Buckingham – SwRI Al Lopez, Martin Chadwick – Intertek Ed Altman, Christian Porter – Afton Jerry Brys, George Szappanos – Lubrizol Mark Overaker, Jim Carter, Wayne Petersen – Haltermann Irwin Goldblatt – BP Castrol Timothy Caudill, Thom Smith – Ashland Clayton Knight – TEI Jason Bowden, Adam Bowden, Matthew Bowden -OHT

- 1) Chairman Ritchie summarized the agenda for today’s meeting. The main items to be discussed are the following:
  - a. Review and approve minutes from July 26th call
  - b. Statisticians report on analysis of data from new VG fuel batch matrix testing
  - c. Next steps for new fuel batch
  - d. Old business
  - e. New Business
  - f. Next scheduled call
- 2) The minutes from the July 26, 2011 meeting were approved with no additions or corrections. Motion made by Ed Altman and seconded by George Szappanos.
- 3) Chairman Ritchie asked Doyle Boese to present the analysis of the matrix data performed by the Statistical Group [Doyle Boese, Jo Martinez, Alison Rajakumar, Todd Dvorak, Martin Chadwick, and Janet Buckingham]. Doyle, noting that their group was unanimous in their findings, summarized their conclusions and recommendations from the analysis which were that:
  - a. The differences between fuel batch means are not statistically

significant; therefore, the Statistical Group recommends including the Pilot Blends in the Fuel Batch Correction Factor analysis.

b. Based on the Fuel Batch data (Pilot 1, Pilot 2 and Large Batches), there are statistically significant differences in means (i.e., discrimination) among oils.

c. The Correction Factors for all parameters are not statistically significant (i.e., the means of the Fuel Batch and the targets are not statistically significantly different); therefore, the Statistical Group recommends no Fuel Batch Correction Factors be applied if the Fuel Batch is approved.

d. There is evidence to indicate that the variability, especially for AEV and APV, has increased relative to when the targets were set. The Statistical Group recommends that the TMC calculate oil and parameter standard deviations based on the last 30 results for each active reference oil. Those that are statistically significantly different should be considered for adoption and then reviewed in 6 months.

Rich Grundza indicated he had done some analyses as well, and his analysis showed that for Oils 1007 and 1006-2, the APV for the matrix runs is statistically significantly different from the APV for the last 30 runs on the previously approved fuel batch. However, further discussion revealed that the results from the 16 tests in the matrices were not included in the 30-run datasets. Several Panel members suggested that the comparison would be better if the 16 matrix runs were included in the 30 runs analyzed for each oil. Rich indicated he would redo his analysis of the data with the 16 matrix run results included in the 30-run datasets.

- 4) Al Lopez asked for additional explanation of the variation in the APV and AEV results. He expressed concern that 4 different piston batches were used in the matrix testing, and that this might account for some of the variation found in the matrix testing results. He also noted that a new piston batch is about to be introduced, and recommended using this new piston batch only for the next 30 tests for each reference oil going forward.
- 5) Ron Romano asked for additional clarification of how the various labs are using the different piston batches presently in use. SwRI and Intertek indicated they have used pistons from different piston batches in building engines, depending on the piston sizes required to obtain the required clearance. However, different batches are not used within any individual engine build. Raham Kirkwood indicated SwRI used India 1 pistons for the matrix testing. **Ed Altman stated that Afton also used India 1 pistons.** Al Lopez indicated Intertek had used India 3 batch pistons for the matrix testing. George Szappanos ~~and Ed Altman~~ indicated that Lubrizol ~~and Afton, respectively,~~ had used all US pistons for the

matrix testing. As a result of this discussion, Rich Grundza indicated he would include a piston batch identifier in the database for all of the matrix runs and recirculate his database to the Panel members.

- 6) Mark Overaker indicated that the new fuel batch will be designated YJ0621NX10-1. Chairman Ritchie asked whether the Panel was prepared to make motion to approve this batch of fuel with no correction factors, as recommended by the Statistical Group. Ed Altman asked whether the analysis Rich Grundza is going to do will change the severity of the APV and PSV. Rich responded that this will be discussed at the next VG Panel conference call after the new analysis has been completed, but that the new analysis will not affect whether the data obtained in the matrix support laboratory calibration or not.
- 7) Ron Romano made a motion to approve fuel Batch # YJ0621NX10-1 with no correction factors. Bill Buscher seconded the motion. In discussing the motion, Al Lopez asked whether diluting the new fuel batch in the storage tank with up to 10% of the old fuel in tank will be acceptable, as it has been in the past. It was agreed by all of the Panel members that this is still an acceptable practice, given the practical difficulty of completely emptying a fuel storage tank before adding the new fuel. The motion was called and was carried with 14 Affirmative, 0 Negatives, and 0 Waives. Chairman Ritchie noted that Thom Smith, Chairman of the ASTM PCEOCP, was present on the call. Thom indicated he would inform API of the VG Panel action to approve the new fuel batch.
- 8) Mark Overaker indicated that the new fuel batch was ready to be shipped, and that the price will be \$19.20/gal. Chairman Ritchie asked Mark if Haltermann would supply the rationale behind the calculation of this price. Mark indicated he would do so at the next VG Panel call.
- 9) Doyle Boese asked for clarification on whether the standard deviation should be calculated for each oil separately, or whether the data for all oils should be combined in calculating the standard deviation for each parameter. Rich Grundza indicated that a pooled s (combining data from all oils in calculating the standard deviations) was preferred. Rich further clarified that it was his intention to calculate a pooled s for each parameter based on the last 30 runs, including the 16 matrix runs. All Panel members agreed that was their understanding, as well. Rich further noted that, based on the matrix data obtained, calibration status was granted to each of the labs effective July 29, 2011.
- 10) Chairman Ritchie asked if there was any further old or new business. No additional items were brought forward.
- 11) The next VG conference call will be Tuesday, August 2, at 2:00 pm EDT.