

Unapproved Minutes of the March 3, 2015  
Sequence VG Surveillance Panel  
Conference Call

The meeting was called to order by Chairman Andy Ritchie at 2:00 PM EST.

Mike McMillan agreed to take the minutes of the meeting.

A list of the attendees on the call is included as Attachment 1.

Chairman Ritchie listed the agenda items he would like to cover in this call:

- 1) Approval of the minutes from the February 3, 2015 Sequence VG Panel Conference Call
- 2) Report from labs participating in fuel approval testing on Row 1 Oil 940 test results
- 3) Decision on next steps in completing fuel approval matrix
- 4) Additional Old Business
- 5) New Business
- 6) Next meeting/call

Chairman Ritchie asked if there were any additions or corrections to the minutes from the February 3, 2015 VG Panel Conference Call. There being none, Jason Bowden moved and Jerry Brys seconded a motion to approve the minutes. The motion was approved unanimously.

Chairman Ritchie referred to the table of results put together by Rich Grundza for the results from the three runs on Oil 940 from Row 1 of the fuel approval matrix shown below. Rich's table is included as Attachment 2.

Lab	SwRI		IAR		LZ
Stand	1	2	1	2	1
Run 1	1009	940	940	1009	940
Run 2	1006-2	1009	1006-2	940	1006-2
Run 3	940	940	1009	1009	1009

Chairman Ritchie noted that the three results for AES appeared to be quite close (6.78, 6.91, 7.05), but that they were mild of the 6.4 AES target for Oil 940 by about one standard deviation (~0.5 merits). Al Lopez reported that Intertek's test went well, although they did have to increase fuel flow part way through the test. There was no re-gapping of the rings required. Dan Worcester reported that SwRI's test went about the same way, including having to increase fuel flow. Jerry Brys indicated that Lubrizol's test ran without any problems. Ron Romano noted that the distillation curve reported by Haltermann for the new fuel batch was lower than the distillation curve for the current fuel batch, and expressed concern over how this might affect fuel dilution in the test. Gordon Farnsworth noted that during the fuel batch approval matrix for the current VG fuel batch, Oil 925 gave an AES average of 7.37, about 2 standard deviations mild. That fuel was ultimately adjusted and turned out to be too severe. Other Panel members remarked that we would like to avoid that happening with this new fuel batch.

Al Lopez commented that VH testing to date with the current fuel batch has been providing mild results, so if we proceed with this new batch we are likely to be milder still. Ron commented that increasing fuel dilution should increase test severity, so that we might want to look at the distillation curve again. Jerry Brys expressed concern that if we try to re-blend the new batch, we may generate more scatter in the data, as we did the last time we adjusted the fuel batch, and we need to be concerned about VG results rather than what happens in the VH. Al disagreed, saying that the new batch was going to be used primarily for VH testing. Ed Altman questioned whether we need to look at distillation curve differences and whether they can be corrected. Unfortunately, Mark Overaker from Haltermann was not on the call, so this possibility could not be addressed today.

Chairman Ritchie tried to summarize where we are, noting that there appeared to be two schools of thought as to how we should move forward. Jerry Brys, and perhaps others, seem concerned we might go too far, if we

try to correct the fuel batch to make it more severe. Ron Romano, Al Lopez and others think we're not severe enough with the fuel batch. After further discussion it became apparent that most Panel members are concerned about running any further matrix approval tests without first talking with Mark Overaker to get his thoughts on what we can do about the distillation curve for the new fuel and/or possibly re-blending the fuel batch. Ed Altman remarked that perhaps adding about half of what we added in correcting the last batch might get us to where we want to be. Al Lopez suggested running the new fuel batch in some VH tests to see how it does. If it shows even milder results than the VG, there may not be enough room to discriminate Oil 940 from Oil 1009 and 1006. Jerry Brys said he agreed with this approach. Ron Romano replied that he was still opposed to running any further tests until we could bring Mark Overaker into the conversation. Others agreed that this needed to be done.

Considering all of the discussion, Chairman Ritchie suggested re-convening the Panel after Mark returns (which we believe will be later this week). Chairman Ritchie suggested next Monday, and it was agreed that this would work, or could be made to work, by most Panel members. It was decided that 1:00 PM EST would be the most convenient time.

**Old Business:** There was no additional Old Business brought before the Panel.

**New Business:** There was no New Business brought before the Panel.

**Next Meeting:** The next VG Panel Conference Call is planned for Monday, March 9, 2015 at 1:00 PM EST.

The conference call was adjourned at 2:55 PM EST.

### **Attachment 1**

#### **Attendance for 3/3/15 Sequence VG Call**

**Infineum:** Andrew Ritchie, Mike McMillan, Gordon Farnsworth

**Ashland:** Amol Savant, Tim Caudell

**BP Castrol :** Timothy Miranda

**Ford:** Ron Romano

**GM :** Bruce Matthews

**Haltermann :** Tracey King

**SwRI :** Dan Worcester, Cole Hudson, Pat Lang, Janet  
Buckingham

**Intertek:** Al Lopez, Bill Buscher

**Afton:** Ed Altman

**TMC:** Rich Grundza

**Lubrizol:** Chris Mileti, Jerry Brys, Jessica Buchanan

**Oronite:** Jo Martinez, Kaustav Sinha, Ricardo Affinito

**OHT:** Jason Bowden, Matt Bowden

**TEI:** Zack Bishop, Dan Langto

TESTKEY	Lab	AES	AESyi	RAC	RACyi	AEV	AEVyi	APV	APVyi	OSCR	OSCRyi
98102-VG	A	6.91	0.941176	9.12	1.054348	9.09	1.2	7.72	0.825397	60	0.190326
104160-VG	B	6.78	0.686275	8.99	0.913043	8.93	0.56	7.63	0.68254	30	-0.61549
105019-VG	G	7.05	1.215686	9.48	1.445652	9.21	1.68	8.24	1.650794	3	-3.05322