

Unapproved Minutes of the January 13, 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 November 18, 2014 Sequence VG Panel Conference Call
- 2) Report from Haltermann on status of current fuel batch and timing for blending a new fuel batch
- 3) Additional Old Business
- 4) New Business
- 5) Next meeting/call

Chairman Ritchie asked if there were any additions or corrections to the minutes from the November 18, 2014 VG Panel Conference Call. There being none, Ed Altman moved and Jason Bowden seconded a motion to approve the minutes. The motion was approved unanimously.

Chairman Ritchie commented that he has been hearing reports that Sequence VH completion is being delayed because of poor planning on the part of the VG Panel in blending a new fuel batch. Chairman Ritchie indicated that this allegation is absolutely false, and that the VG Panel had anticipated this well in advance and was doing all that it could to bring a new fuel batch on line, given the logistics required to blend and store a new 400K gallon fuel batch while a significant quantity of the current batch still remains. He asked that the other Panel members respond accordingly if they are approached on this subject.

Chairman Ritchie then asked Mark Overaker to provide an update on the planning for the new fuel batch. Mark indicated that, for the current fuel

batch, there are 17 ISO containers totaling 102K gallons, plus 7 ISO containers totaling 42K gallons which have been stored for VH development work, plus probably an additional 35K gallons at the labs now. This is approximately 180K gallons. Intertek indicated they had 7-8K gallons on hand, SwRI has 8K gallons, Lubrizol has 5-6K gallons, Afton has 4K gallons, and Ashland has 1500 gallons.

For the new fuel batch, which will be designated DAO121, Haltermann is making preparations for blending now. The raw material deliveries are complete, and maintenance activities are complete on tank 62 which will be used for the new fuel blend. Haltermann plans to begin blending the new batch next week, and hopes to complete the initial blending of the new batch, making adjustments as necessary, and conducting CofA testing by the last week in January or first week in February. A 400K gallon batch is being targeted. With this projected timing, Chairman Ritchie suggested that a conference call the first Tuesday in February would be appropriate.

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

New Business: Amol Savant asked what his lab should do with the fuel from the current batch remaining. Ron Romano replied it could be used for VH development, VH stand shakedown, etc. It can also be held and blended with the new fuel batch once it is approved. There was some discussion about how much can be blended with the new batch. Rich Grundza checked the VG procedure and found that 10% can be used for that.

Ed Altman had several questions about VH matrix timing, beginning with the status of the ECM. Ron replied that work on reprogramming the ECM is about 90% complete. Testing at Ford is essentially complete, and Ford will ship a "Golden Harness" to SA this week. Once prove out of this harness is completed in SA during the week of January 26, Ford will flash several more and start construction of several more harnesses. The new harnesses should be available by the end of February, at the latest. The exhaust manifold is being designed by OHT, and manifolds should be available 4-6 weeks after the design is complete. Amol asked about a list of parts required for VH stands. Ron replied that all parts should have been purchased by Ashland by now. Amol will check with Tim Caudell to ensure that this is the case. Ed asked about rings. Ron indicated that he is working on it, trying to get a part number released. Ron said Ford should have a quote to

the labs by the end of the month. The current Bosch fuel injectors can't be made anymore. The current supply of fuel injectors is all we have.

Discussion then switched to the new fuel approval matrix. For the matrix, SwRI will make 2 stands available, Intertek 2 stands, and Lubrizol 1 stand for a total of 5 stands. Ed said he would let the Panel know by the end of the week if Afton will participate in the fuel approval matrix. If so, that would make a total of 6 stands. It was agreed that fuel matrix testing will likely take 10-12 weeks and include testing on Oils 940, 1009, and 1006.

Chairman Ritchie suggested that Doyle, Jo and the rest of Statistical Group put together a proposed matrix design for consideration during the February 3 call.

Ron then gave a short update on the VH and Chain Wear tests. For the VH, one additional test has been run on Oil 1009 which came in on target. For the Chain Wear test, it also is running on target. All labs should have a drum of reference oil for testing. Labs should also check to see if they are running on the latest calibration. The test procedure hasn't changed except everyone should be using the Lubrizol measurement rig. Ford testing with that rig fell right in line with Lubrizol's results. Ron doesn't think we need to use the 100 lb load, though. The weight of the rig itself is sufficient, as Ford's testing of the rig was without the 100 lb load. Amol also asked about engine mounting. Al Lopez offered to help Amol set up their engine. Ron also indicated the test development Task Force went over the test readiness template. Ron would like to have a meeting/call of the Task Force next week to evaluate whether the Chain wear test is fit for purpose/ready for matrix testing.

Next Meeting: The next VG Panel Conference Call will be held on Tuesday, February 3, 2015 at 2:00 PM EST.

The conference call was adjourned at 3:00 PM EST.

Attachment 1

Attendance for 1/13/15 Sequence VG Call

Infineum: Andrew Ritchie, Mike McMillan, Gordon Farnsworth,
Doyle Boese

Ashland	Amol Savant
Ford:	Ron Romano
GM :	Robert Stockwell, Bruce Matthews
Haltermann :	Mark Overaker, Tracey King
SwRI :	Dan Worcester, Cole Hudson
Intertek:	Al Lopez, Bill Buscher
Afton:	Ed Altman
TMC:	Rich Grundza
Lubrizol:	Chris Mileti
OHT:	Jason Bowden
Oronite:	Jo Martinez, Ricardo Affinito