

Unapproved Minutes of the November 3, 2014
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 October 22, 2014 Sequence VG Panel Meeting
- 2) Discussion of options and timing for blending new VG fuel batch
- 3) Report from Haltermann on status of current fuel batch and timing for blending a new fuel batch
- 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 October 22, 2014 VG Panel Meeting in San Antonio. There being none, Rich Grundza moved and Ron Romano seconded a motion to approve the minutes. The motion was approved unanimously.

Chairman Ritchie referred to the list of Options for VH Test Development and Blending a New Sequence V Fuel Batch, which was distributed to the VG Panel mailing list prior to today's call (see Attachment 2). He explained that some of the options had been discussed during the October 22, 2014 face-to-face Panel meeting, at which time it seemed that Option 4 was the preferred approach. He further explained that, following the meeting, a group within Infineum discussed the options and concluded that Option 5 is probably the best approach. Option 5 is the same as Option 4, except that 40K gallons of the current fuel batch is reserved for the completion of VH development testing. Since provisions have already been made by Haltermann to hold 40K gallons of the current fuel batch for use in the VH

precision matrix, dedicating this amount for VH development should not be a problem, and, as explained in the Pros and Cons for Option 5, it guarantees that sufficient fuel will be available for completion of VH test development.

Chairman Ritchie asked if there were any other options the Panel should consider, and if the Panel members agreed that Option 5 was the best approach. Ron Romano replied that he agrees that Option 5 is the best option we have. Jerry Brys commented that we probably won't have any problem with fuel availability from the current batch for VG testing, since, even running full bore, we still will have enough of the current batch minus the 40K gallons (about 140K gallons) for 12-18 months of VG testing. Kaustav Sinha asked about the timeline for blending a new batch. Mark Overaker replied that Haltermann needs 1-2 weeks to put an estimate of that together. Al Lopez questioned the 12-18 month estimate for how long the current fuel batch will last under the Option 5 scenario, indicating he thinks more will be used than previously stated. Gordon Farnsworth offered that there still shouldn't be a problem, suggesting that VH test development should be complete and the VH ready for matrix testing by the end of this year at best or by the end of January or February of 2015 at worst. However, there would not be enough of the current fuel batch to then complete the matrix and conduct VH testing for at least one reference period. So we really need a new fuel batch approved by February of next year so as not to delay VH matrix testing.

Chairman Ritchie suggested that we probably don't need a formal motion or vote to proceed with Option 5, provided everyone on the call agrees that this is the best path forward. All Panel members agreed. Chairman Ritchie then asked Mark Overaker how long Haltermann needed to come up with an estimate of the timeline for blending a new fuel batch. Mark replied that Haltermann has already made provisions to hold 40K gallons of the current batch in a separate tank. If we want to prepare another batch in the same tank where the remainder is now being stored, Haltermann needs to get all of the fuel out of that tank, store it somewhere else, and perform maintenance on the tank to see if there are any problems with the tank. Mark indicated that he needs at least a week and preferably two to complete a plan for getting all of the fuel out and generating a timeline for preparing a new fuel batch.

With that input, Chairman Ritchie suggested that the next conference call be held in two weeks on November 18.

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

New Business: No New Business was brought forward.

Next Meeting: The next VG Panel Conference Call will be held on Tuesday, November 18, 2014 at 2:00pm EST.

The conference call was adjourned at 2:25 PM EST.

Attachment 1

Sequence VG Attendance for 11/3/14 Call

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

Ford: Ron Romano

Haltermann : Mark Overaker

SwRI : Dan Worcester, Cole Hudson

Intertek: Al Lopez

TMC: Rich Grundza

Lubrizol: Jerry Brys, Chris Mileti

Oronite: Jo Martinez, Kaustav Sinha

TEI: Zack Bishop, Dan Langto

Ashland: A.Savant

Attachment 1

Options for VH Test Development and Blending a New Sequence V Fuel Batch

All options require that a new batch of Sequence V fuel be started as soon as possible and storage to be found for the remainder of the current batch (AK2821NX10-1)

Option #1

Continue to use the current fuel batch for both VG candidate and VH development until a new batch is approved. Switch VH testing to the new batch and run out the old batch as needed with VG testing.

Pros – Allows both VG testing and VH development testing to continue for several months.

Cons – Current fuel batch may be depleted before the new batch is approved, which could delay completion of VH test development.

If VH matrix is run with current fuel batch, a move to a new fuel batch would be required almost immediately, negatively impacting reference oil target setting and possibly violating requirement that same fuel used in matrix testing be used for at least 1 reference period thereafter.

Option #2

Same as one above except reserve a minimum of 40,000 gallons of the current fuel batch for VH matrix testing.

Pros – Assures that the VH matrix can be run when test procedure is declared ready.

Cons – May restrict VG candidate testing if remainder of current fuel batch is depleted before new fuel batch is approved.

Will require very early switch of VH to new fuel, thus disrupting reference oil target generation and possibly violating requirement that same fuel used in matrix testing be used for at least 1 reference period thereafter.

Option #3

Stop all VG testing and reserve remaining quantity of the current fuel batch for VH test development, precision matrix testing and candidate testing.

Pros – VH test development can go on unimpeded.

Cons – Will be unable to run VG tests for several months.

Current fuel batch not large enough to support VH testing for very long after completion of precision matrix. Could violate requirement that same fuel used in matrix testing be used for at least 1 reference period thereafter.

Option #4

Dedicate current fuel batch for VG testing and remaining VH test development testing. Hold VH precision matrix testing until the next fuel batch is approved. Use the new batch for the VH precision matrix and all VH testing thereafter. Switch VG testing to the new fuel batch once the current batch is depleted.

Pros – Provides fuel to support VH development without restricting VG candidate testing. Allows VG stands to remain calibrated for use in new fuel batch approval testing.

Assures that the VH test, once approved, will not experience any change in fuel batch for a significant time, and assures a consistent fuel for establishing VH reference oil targets.

Cons – Could delay start of the VH precision matrix if the new fuel batch approval is significantly delayed (e.g., because a rework is required).

Could delay completion of VH test development if current batch is depleted before VH test development is completed.

Option #5

Same as Option #4, except reserve 40,000 gallons of the current fuel batch for VH test development work and release the remainder for VG candidate

testing. Still hold VH precision matrix testing until the next fuel batch is approved and use the new batch for the VH precision matrix and all VH testing thereafter. Switch VG testing to the new fuel batch once the current batch is depleted.

Pros – Ensures sufficient fuel from current batch will be available to support VH development, without restricting VG candidate testing. Allows VG stands to remain calibrated for use in new fuel batch approval testing.

Assures that the VH test, once approved, will not experience any change in fuel batch for a significant time and assures a consistent fuel for establishing VH reference oil targets.

Cons – Could delay start of the VH precision matrix if the new fuel batch approval is significantly delayed (e.g., because a rework is required).