Sequence V Surveillance Panel Meeting September 9th, 2021 1:30 PM EST

Roll Call:

Afton: B. Maddock

ExxonMobil: A. Meier

Ford: M. Deegan, R. Zdrodowski

General Motors: B. Cosgrove, K. Zreik

Haltermann: P. Tumati HCS Group: I. Gabrel

Infineum: D. Boese, C. Laufer, C. Leverett, A. Ritchie (Chair)

Intertek: A. Lopez

Lubrizol: J. Gingerich, J. Gleason

OHT: M. Bowden

Oronite: J. Martinez, R. Stockwell

Shell: J. Hsu

SwRI: D. Engstrom, M. Lochte, T. Kostan, P. Lang

TEI: D. Lanctot TMC: R. Grundza Valvoline: A. Savant

Willis Advanced Consulting: A. Willis

Meeting Summary:

The Sequence VH Surveillance Panel met to discuss a test plan in preparation for the new fuel batch. There was agreement from 4 labs to run 1011-1 by Sept 30th (2 Intertek, 2 SwRI, 1 Afton, 1 Lubrizol). Additional topics were covered. There is enough hardware to last through 2027. The statistician's group is discussing options to improve the current lab-based system. An Information Letter to correct the wording in Section A16.3 was issued on Sept 9th. Low RVP values was brought up again; Haltermann agreed to follow up on the topic.

Actions:

- 1. Action from Sep 9th meeting: **Haltermann** to report monthly inventory via email to VSP.
- Open action from March 26th meeting: Lab engineers to meet to investigate severity shifts (share operational data, build data, ratings, etc). Rich Grundza (TMC) to schedule meetings and to include Ford and the Chair.
- 3. Open action from Feb 25th meeting: **Robert Stockwell (Oronite)** to lead task force on obtaining clarity around test validity, QIs, 2 hours of no data, etc.
- 4. Open action from <u>June 24th, 2020 meeting</u>: **Haltermann** to look at fuel data from Sec 8.2.6 requirement and report back to panel.

Next call: Friday, October 15th @ 11 AM EST

Meeting Details:

The Chair opened the meeting with a hardware update from the recent engineers meeting: 5 labs reported parts inventories that will last at least through 2027. In 2021, the labs will not easily obtain capital to purchase parts when more than enough parts are on hand in inventory. We have critical parts needed for the test, but Al Lopez (Intertek) will work with the other labs to put together a list of service parts that could be purchased by local stores.

Doyle Boese (Infineum) provided an update on behalf of the stats group. The stats group met and decided against recommending a switch to a stand based LTMS. The group is investigating ways to improve the current system, but this will take time and may be able to report back in about 2 months. The Chair confirmed the panel will wait for the stats group to report back with their recommendations and advice.

Prasad Tumati (Haltermann) reported that less than 140k gallons remains as of September 9th. The fuel will be placed in totes in a few months. The Chair asked for confirmation of the projection with the latest depletion rates. Prasad recounted that there was fairly high demand in August but very low so far in September. On average, the rate is about 20k gal per month but if it goes down further, we have about 9 months. If the rate remains at 20k per month, we have 7 months. The Chair asked Haltermann to frequently report inventory. Prasad confirmed that a monthly email to the V SP would be sent.

Re: the new fuel batch, the Chair reported that the panel can expect a report from the contract team in October. We will likely have about 9 months to approve the new fuel. Rich Grundza (TMC) updated that the 2 major independent labs have about 50 gal of the good reference oil 1011 which would be enough for the fuel matrix / approval work if we so choose. Chair Ritchie added that Intertek, SwRI, and possibly other labs would be open to donate a run with 1011-1. TMC explained that the calibration period would be extended in time and in runs to compensate for the donated tests Al Lopez (Intertek) asked if the panel could do something similar as when we introduced 931. Unless there's a firm time commitment, Rich was opposed to this idea due to issues caused by the length of time it took to obtain data for 931. The objective for this group, Al explained, is to have accurate targets for the oil. What concerned Al is if we go live with the oil 1011-1 with existing targets, they may be off. Although acceptable, it might not be accurate, which is what happened to the efforts to introduce 1009-1. At the end of 931 introduction testing though, we had accurate targets and none of the candidate tests were impacted by an incorrect SA. The Chair summarized that our options: a) we do nothing and wait until we have the new fuel batch, or b) we ask 4 labs to commit to testing and we set targets to those 4 tests. Rich added it was preferable to try to get 5 to 6 tests like we did with 931 but in a timelier manner. Al confirmed that Intertek would be prepared to run 2 tests to support option c. After recapping what was done for 931, Pat Lang (SwRI) agreed to run 2 tests. Ben Maddock (Afton) also agreed to running a test, if the calibration periods are kept whole, but needs specifics on timeframe. Joe Gleason (Lubrizol) does not expect pushback but would need to confirm with Jim Matasic. There was no objection to start the tests with 1011-1 by Sept 30th.

Motion to correct the wording in Section A16.3 was passed by unanimous consent and the Information Letter (IL) was issued by TMC on Sept 9th. That IL can be found here: https://astmtmc.org/ftp/docs/gas/sequencev/procedure and ils/Sequence%20VH/il21-002-vh.pdf

Quarterly fuel analysis topic was brought up by Rich Grundza (TMC). Referring to Section 8.2.6 (copied below), he explained that we routinely see low RVP values, typically from the southern labs, in the quarterly analysis.

8.2.6 Laboratory Storage Tank Fuel Analysis—Analyze the fuel stored at laboratories and for calibrated Sequence VH tests quarterly. Laboratories should take composite samples using Table 1 in Practice D4057, as a guideline. The fuel supplier shall have the capability to analyze the fuel samples using the test methods specified in Table 3 and this section. The fuel supplier shall provide an adequate supply of fuel sample containers with packaging and pre-addressed return labels to each Sequence VH laboratory. Upon receipt of all fuel samples required in 8.2.6 from the laboratories, the fuel supplier shall perform the following analyses, report the results to the submitting laboratory, and tabulate the results in a database.

Reid vapor pressure (Test Method D323) API gravity (Test Method D287 or D1298) Distillation (Test Method D86) Lead (Test Method D3237 or D5059) Washed gums (Test Method D381) Unwashed gums (Test Method D381)

Remedy for the low RVP values has been to run another test but it seems to be an ongoing issue. Bob Campbell (Afton) commented that as the intention to ensure that the fuel is similar to the fuel in the big tank at Haltermann, a significant difference could potentially be a big deal for a test like the V. Rich summarized that we have essentially 3 options: reject it, rework it, or accept as-is; and we've been typically accepting as-is. Caroline Laufer (Infineum) pointed to an open action for Haltermann investigate the matter and report back to the panel; Prasad will follow up with Quinntine and will follow-up.

Meeting adjourned at 2:28 PM EST.