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SEQUENCE VI SURVEILLANCE PANEL CONFERENCE CALL

Date: 29 January 2020

ATTENDANCE	
SWRI	Khaled Rais, Dan Engstrom, Christine Eickstead, Travis Kostan
INTERTEK	Adrian Alfonso
LUBRIZOL	Andrew Stevens
ORONITE	Robert Stockwell, Jo Martinez
SHELL	Jeff Hsu
AFTON	Bob Campbell, Todd Dvorak, Ben Maddock, Bill Anderson
TMC	Rich Grundza
VALVOLINE	Amol Savant
EXXONMOBIL	Cliff Salvesen
INFINEUM	Doyle Boese, Andy Ritchie
FORD	Ron Romano
HALTERMANN CARLESS	Tracey King
HALTERMANN	Prasad Tumati
SOLUTIONS	
GM	Tim Cushing, Charles Van Camp, Mike Raney
OHT	Jason Bowden
TEI	Dan Lanctot
GAGE	Bob Patzelt, Jim Carter

Old Business

Approve minutes from 16 Jan 20 call

Motion: Andrew

Second: Adrian Alfonso

Motion passed unanimously (no negative, no waives, no discussion)

Continuing Business

→ Fuel batches:

- Same supplier, blended batches:
 - Do we need a full C of A for each batch? Do we need a full C of A at all?

Discussion:

Charlie – Each shipment comes with a C of A, so is known to meet requirements, do we need another one?

Adrian – If current and new fuel have C of A, we do not need another one for blended batch from same supplier

One consideration – assuming the fuel sent to the engine matches the C of A for that fuel, whether singe batch or blended batch, do we need a small study to determine if the fuel matches the C of A before and after a reference test?

Charlie – Labs with one run tank would have difficulty.

Adrian – With blended batch, the engine does not see the exact fuel from the C of A anyway. Do not see any concerns from the VIE/VIF perspective with this effecting test results.

Rich – We know that the fuel meets the C of A at time of delivery, does the fuel meet the C of A in the tank?

Run new C of A? Weighted C of A for blended batch?

Andrew – The Industry has been blending old and new batches for a while, and we never needed a new C of A before. Are there certification requirements that would necessitate this?

Ron Romano – Do not know of any regulations that require knowing the properties of the fuel blend exactly.

If know 90%, would 10% really effect the 90%? How much does fuel change sitting in the tank (months, not years)?

Charlie - Does anyone on call have a concern with the current practice?

Raney – Maybe have labs check once a year instead?

Charlie – IAR used to do sample out of delivery tanker before putting in fuel tanks (Adrian confirms this is still the case).

Jim – Do labs ever do periodic testing of fuel before a tank gets to 10% low? (No response.)

Charlie – Have not because fuel doesn't usually sit around that long.

Charlie – Should labs take a C of A on a tank before and after adding new fuel to compare?

C of A analysis should be done by the supplier, not the labs.

Adrian – Has something happened with VI to raise this concern or are we just trying to standardize across all test types?

Andrew – Just standardizing, no specific concern with VI at this time.

Adrian – If we run CofA and DO find changes (as has happened for years), why would it effect the test now? What would be the action?

Cliff - Would have to develop a new procedure to blend new and old. Stir, draw water or sediment off bottom? If there is a difference, what do we do about it?

Amol - Asked Rich what to do if there are C of A differences (results submitted to TMC in past). What have we done in the past?

Rich – Routinely saw differences. No corrective action, no one ever wanted to dump a fuel batch (III) (RVPs drift out), rerun C of A tests to verify drift, but no desire by anyone to reject the fuel.

Unless we are willing to say that if the fuel is out of spec it is not usable, why do this at all?

Ben – Look at LTMS data and correlate batch switches and severity.

Charlie – Todd did analysis, did not find anything, but can look at it again.

Adrian – Agreed, no significance in analysis.

Discussed terminology: shipment (one holding tank) vs. batch (blended at same time, not same shipment)

Charlie – Different facilities for fuel source caused concern in the past.

Rich – Effects of fuel confounded by other stand/lab/engine differences – not enough data to sort out the different influences.

Tracey King – Do you hold fuel for more than a few weeks? Yes. Adrian – A lot of fuel can last 2-4months.

Is there a real concern that we should monitor better because it could affect test results or just paperwork consistency?

Adrian - No concern with test results for VI.

Andrew – If the fuel does change, if would have to be a change that affects the baseline and candidate *differently* for it to matter for this test.

Adrian – Not seen data to support that, would theoretically move in same direction (magnitude difference maybe?).

Rich - 16 Nov 2017 minutes, attachment 4 - A lot of discussion, started task force, viscosity response, BB effects, severity shift began right after completion of PM. Task force started to investigate this.

Some labs exclusively used Michigan site, some Texas site, couldn't separate data.

Rich – Since We gone to single batch, we have had no shift in severity.

Check with Todd, will send data from 16 Nov 2017 minutes.

Adrian – We have discussed this at length, have enough data to make a decision.

Andrew – Do we want analysis on mixed blend or are we fine with using the 90/10% rule and using the C of A from the 90% of the batch?

Adrian – Second option please.

Rich – The intent of the C of A is to confirm that what is shipped to you is indeed within specifications. It is not necessarily to be used for analysis of test results later. So what do we intend to do with the C of A information?

Adrian – In practice, the lab would be running tests but have to stop until all C of A testing is complete (days, weeks?) on new fuel. Sample before each test? Considerable delays in testing....

Stockwell – Previous requirement was to never add fuel to tank during test. Is 90/10 the right way to go with what we are doing today?

Adrian – Even if we test CofA when fuel leaves site, there might be a change when it gets to the lab, same with the fuel in the tanks.

Charlie – Fuel was contaminated one time in tankers, but caught before it was put into a tank. IAR started doing quality check for deliveries before adding new fuel because of this.

Tracy – A full c of a can take several days, hold up shipment for that whole time? Or wait to use that tank until testing is done? Run test and then take action if the C of A was bad?

Andrew – Labs would not run and risk having an invalid test at the end due to C of A failures. Should we just get data for the record for audit purposes?

Ben M. – Not on board with holding stands up for a week to send a sample back to Haltermann for analysis; Adrian agrees.

Do a DOE in the future, but no current data that what we are talking about has any value, just headache.

Ben – Clarify where analysis should be done. Lab differences? Repeatability of instruments, locations?

Adrian – Put a hold on blend until receive results?

Ben – What do we do with the data once we have it? What do we do with it? Unique batch identifier at that point?

Stockwell – need more discussion – what is the point of 90/10 rule if we do it this way? Need couple sets of data

MOTION:

Primary: Tim Cushing

As a new shipment of fuel is received, a full C of A is to be done on the blend by the supplier.

Second: Robert Stockwell

Vote Record:

COMPANY	VOTING MEMBER	VOTE
INTERTEK	Adrian Alfonso	Waive
LUBRIZOL	Andrew Stevens	Negative
INFINEUM	Andrew Ritchie	Negative
HALTERMANN CARLESS	Tracey King	Negative
ORONITE	Robert Stockwell	Waive
HALTERMANN SOLUTIONS	Prasad Tumati	Negative
TMC	Rich Grundza	Waive
GAGE	Bob Patzelt	Negative
GM	Mike Raney	Approve
OHT	Jason Bowden	Waive
SWRI	Dan Engstrom	Waive
AFTON	Ben Maddock	Negative
SHELL	Jeff Hsu	Negative
FORD	Ron Romano	Waive
VALVOLINE	Amol Savant	Waive
EXXONMOBIL	Cliff Salvesen	Negative

VOTE	TOTAL
APPROVE	1
NEGATIVE	8
WAIVE	7

Motion fails.

Adrian – We have been dumping new fuel on top of old fuel for a long time, with no idea if it was in spec. each time. What would be value? What would we do differently?

Andrew: Time is up.

We will continue to have calls regarding fuel; we need to decide how to handle fuel from different suppliers.

As for fuel from the same supplier, we will use the 90/10 rule.

Meeting adjourned.