Sequence VI Surveillance Panel Conference Minutes March 15 @ 9:00-10:00AM EST

1.0) Members present:

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2.0) Approval of minutes

2.1 Approve the minutes from the <u>March 1, 2016</u> Sequence VI Surveillance Panel. Motion: Moles 2^{nd} : Buscher

ftp://ftp.astmtmc.cmu.edu/docs/gas/sequencevi/minutes/VIMinutes20160301Conf erenceCall.pdf

3.0) Action Item Review

3.1 OHT to provide update on current VIE inventory and service engine order. 22 VIE engines left at OHT

3.2 Update of VID engine inventory and expected depletion date of VID engines.

-Expected life of engines range from 2016 Q3

- Lab1: 0 engines
- Lab2: 0 engines
- Lab3: 2 engines
- Lab4: 1 engines

4.) Old Business

4.1 List of items to be reviewed after the Precision Matrix

-Do we really need to run three RO tests to establish the new engine for LTMS?

-Discussion of reducing the new reference requirement to two oils, then a third oil run after a defined number of candidates.

-Discussion of using FEI 2 and FEI Sum for references to match candidate pass/fail criteria.

-Discussion of evaluating 80/20 ratio of BL before to after for FEI 1 and 10/90 for FEI 2. Consider evaluating FEI 1 vs 100% BLB2 (or 3) and evaluating FEI 2 vs 100% BLA.

-Should the acceptance bands value of 1.96 be rounded up? Due to the rounding on FEI 1 and 2 the actual pass limit is 1.91 and 1.92.

-SP chair and test sponsor to investigate what is needed to establish VID equivalent limits for $\ensuremath{\mathsf{VIE}}$

-Discussion of changing BLB1 to BLB2 delta acceptable limits.

-Update appendix K

4.2 Discussion on precision matrix.
IAR completed
SWRI on 7th test
Ashland on 3rd
Approximately 6 weeks to completion

David Glaenzer mentioned that preliminary analysis of Precision matrix data by Afton Chemical indicates some significant differences in Engine Oil pressure for BLB2, Stages 1 & 3.

The data indicates differences as high as 150 kPa for the BLB2 oil in matrix engines with similar engine hours.

During test procedure revisions to accommodate the change from VID to VIE, it was noted that different engine oil pressures were measured based on the line sizes used on the oil supply to the engine oil pump.

To standardize, Section 6.6.5.3(3) was changed in the 08/24/15 Draft of the Sequence VIE procedure to specifying size #12 hose for the application. Additionally, the minimum internal diameter of the fittings on the suction side of the engine driven oil pump shall be equal to or greater than 0.50 inches.

Nathan Moles assigned an action item to the PM labs to verify fitting sizes to procedure.

4.3 Update from task force, to investigate alternative test procedure Sequence "VIF" that would improve 0W-16.
SWRI on 3rd test
IAR on 2nd test
Will complete approximately 2 weeks after VIE

4.4 Update from task force to investigate option to use short blocks to supplement engine inventory.Meeting next week.Workshop scheduled for 3/31

5.) New Business

5.1 Discussion on face to face meeting following completion of precision matrix End of May or early June meeting.

Action Items:

- Labs to check line and fitting sizes to procedure.
 TMC to check VIF oil pressure data for variability.