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Issued: 06.02.2020
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These are the unapproved minutes of the 05.27.2020 Sequence VI Conference Call.

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The meeting was called to order at 1:05 PM Central Time by Chair Andrew Stevens.

- 1.0 The Agenda is Attachment 1.
- 2.0 Roll Call. Attendance is Attachment 2. There were no member changes.

3.0 Old Business

MOTION: Approve minutes from the 05.14.2020 conference call.
Andrew, Ben second. Approval was unanimous.
There was a question on attendance. The secretary confirmed Todd was on the lists where he spoke on recent minutes.

4.0 New Business

4.1 There will be a Round Robin to compare fuel sampling.

4.2 This meeting was called to finalize the procedures for this sampling.

- The method considered would be to follow the Fuel Task Force recommendations. See Attachment 3. There would be two samples taken at each site to run analysis. One sample analyzed at the lab, then the second would be sent for further analysis. One suggestion was a sample for all tanks at each lab. However Mike Lochte suggested the two run tanks at SwRI.

ACTION: Haltermann will review what analysis is done in-house and what is sent to another lab for the each CofA [Certificate of Analysis].

- There was discussion was about gathering more data. Some labs do not run all the tests needed on a CofA. Discussion was that each lab would run the tests they can or usually do for regular testing. One suggestion was to pick tests, but that might not gather data on a parameter that could be affecting the test.
- Most labs do some testing for each tanker arrival. The goal would be to compare in tank fuels to look for lab bias or variation in test methods. Another concern was fuel life at the labs compared to the large tank at Nixon.
- More data is needed. The decision was made to gather 2 gallons of fuel for each tank to be considered.

ACTION LIST:

1. Each lab will take a 2 gallon sample. This will be from storage or run tanks. Each lab will take samples for at least two tanks.
2. Haltermann will supply each lab and GM a one gallon sample from the bulk tank.
3. Each lab will perform as many of the Certificate of Analysis tests as possible. This would be done the same as tests they would conduct for normal testing, either in-house or at a lab they use. Any remaining sample would be held for possible future testing.
4. This testing is mandatory. Results would be available by the last week of June. Data would be entered in the TMC data base.
5. The procedure was generated after the meeting but is included here for continuity. See Attachment 4.

The meeting adjourned at 2:33 PM Central time.

Sequence VI Surveillance Panel Call Meeting Agenda

May 27, 2020 @ 2:00-3:30 EST

Webex Meeting Details Below Agenda

1. Roll Call (start 2:05 EST)

1.1. SP Membership changes and additions

2. Old Business

2.1	Approve meeting minutes from 5/13/20 call	Andrew Stevens
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3. New Business

3.1	Logistics of Fuel Sampling "Round Robin"	Panel
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4. Next Meeting

4.1. SP Meeting: TBD

5. Meeting Adjourned

ASTM SEQUENCE VI

Name	Email	Company	Attend
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Kevin Brodwater				
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Ron Romano				
Clifford Salvesen				
Jim Carter				
Aleise Gauer				
Prasad Tumati				
Andy Ritchie				
Adrian Alfonso				
Andrew Stevens				
Jason Bowden				
Jeff Hsu				
Dan Worcester				
Dan Lanctot				

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Name	Email	Company	Attend
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Teri Kowalski			
Amol Savant			

MOTION:				
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Brianne Hockkeppel				
Kevin Brodwater				
Haiying Tang				
Tracey King				
Ron Romano				
Clifford Salvesen				
Jim Carter				
Aleise Gauer				
Prasad Tumati				
Andy Ritchie				
Adrian Alfonso				
Andrew Stevens				
Jason Bowden				
Jeff Hsu				
Dan Worcester				
Dan Lanctot				
Rich Grundza				
Teri Kowalski				
Amol Savant				

Seq. VI Lube Certification Fuel

2-Oct-19

TEST	METHOD	UNITS	Seq. VI Specs		
			MIN	TARGET	MAX
Distillation - IBP	ASTM D86	°C	23.9		35.0
5%		°C			
10%		°C	48.9		57.2
20%		°C			
30%		°C			
40%		°C			
50%		°C	93.3		110.0
60%		°C			
70%		°C			
80%		°C			
90%		°C	151.7		162.8
95%		°C			
Distillation - EP		°C			212.8
Recovery		vol %		Report	
Residue		vol %		Report	
Loss		vol %		Report	
Gravity @ 60°F/60°F	ASTM D4052	°API	58.7		61.2
Density @ 15° C	ASTM D4052	kg/l	0.734		0.744
Dry Vapor Pressure Equivalent	ASTM D5191	kPa	60.1		63.4
Carbon	ASTM D3343	wt %		Report	
Carbon	ASTM D5291	mass %		Report	
Hydrogen	ASTM D5291	mass %		Report	
Hydrogen/Carbon ratio	ASTM D5291	mole/mole		Report	
Oxygen ¹	ASTM D4815	wt %			0.2
Oxygenates Ethanol	ASTM D4815	%		Report	
MTBE		%		Report	
ETBE		%		Report	
Methanol		%		Report	
Sulfur	ASTM D5453	mg/kg	3		15
Composition, aromatics	ASTM D5769⁴	vol %	31.0		34.0
C6 aromatics (benzene)	ASTM D5769	vol %			1.00
C7 aromatics (toluene)	ASTM D5769	vol %		Report	
C8 aromatics	ASTM D5769	vol %		Report	
C9 aromatics	ASTM D5769	vol %		Report	
C10+ aromatics	ASTM D5769	vol %		Report	
Composition, olefins	ASTM D6550⁴	wt%			2.0
Lead ¹	ASTM D3237	mg/l			2.6
Manganese ¹	ASTM D3831	g/gal			0.01
Phosphorus ¹	ASTM D3231	mg/l			1.3
Silicon ¹	ICP method	mg/kg			4
Particulate matter	ASTM D5452	mg/l			1
Oxidation Stability	ASTM D525	minutes	1000		
Copper Corrosion	ASTM D130				1
Gum content, washed	ASTM D381	mg/100mls			5.0
Gum content, unwashed	ASTM D381	mg/100mls	7.0		20.0
Research Octane Number	ASTM D2699		96.0		
Motor Octane Number	ASTM D2700			Report	
R+M/2	D2699/2700			Report	
Sensitivity			7.5		
Net Heating Value, btu/lb	ASTM D3338	btu/lb		Report	
Gross Heating Value, btu/lb	ASTM D240	btu/lb		Report	
Net Heating Value, btu/lb	ASTM D240	btu/lb		Report	
Water and Sediment	ASTM D2709	vol%			0.01
Color ²	VISUAL	1.75 ptb		Red	
Top Tier Additive ³	ppm m/m	267		Report	

¹ no intentional addition of these elements² Innospec Oil Red B4 Liquid Dye³ Lubrizol UltraZol 8219. Can be obtained from Lubriol Sales.⁴ or use D6839 for everything measured by D5769 and D6550

SEQUENCE VI FUEL SAMPLING ROUND ROBIN
Sampling and Testing Instructions

The instructions for conducting sampling and testing are as follows:

- 1) Each lab is to take a 2-gallon sample of Seq VI fuel from all available storage or supply tanks. If a lab has more than two tanks, then take samples from at least two tanks.
- 2) Haltermann is to take a 1-gallon sample of Seq VI fuel from the bulk amount that supplies all labs and send to each lab that runs Seq VI testing and an additional sample to be sent to GM.
- 3) Each lab will perform as many Certificate of Analysis tests as possible. This will be done at their own lab or a contract lab or labs they would normally use to conduct this testing.
 - a. The labs will follow the most current proposed C of A, attached to this message
 - b. Each lab is to run one set of C of A tests per sample. Any extra sample is to be retained by the lab for potential future testing.
- 4) Each lab will enter these data at the TMC website (contact Rich Grundza for instructions) by the end of the week of June 22, 2020. Results will be plotted and analyzed at a future surveillance panel meeting.