

## Sequence V Surveillance Panel Meeting June 16<sup>th</sup>, 2021 1:30 PM EST

### Roll Call:

Afton: E. Altman, B. Maddock  
BP: J. Agudelo  
Ford: M. Deegan, R. Zdrodowski  
General Motors: B. Cosgrove, M. Hopp, N. Siebert  
Haltermann: Q. Dunford, P. Tumati  
HCS Group: I. Gabrel  
Infineum: D. Boese, C. Laufer, A. Ritchie (Chair)  
Intertek: A. Lopez  
Lubrizol: J. Gingerich, J. Gleason  
OHT: J. Bowden  
Oronite: J. Martinez, R. Stockwell  
PSL Services: C. Taylor  
Shell: J. Hsu  
SwRI: A. Chaudhry, D. Engstrom, T. Kostan, P. Lang  
TEI: D. Lanctot  
TMC: R. Grundza  
Valvoline: A. Savant

### Meeting Summary:

The Sequence VH Surveillance Panel met to vote on Information Letter 21-04. Although the motion “**The negative vote received for Information Letter 21-04 is non-persuasive.**” passed, the panel could not come to a consensus (7 approve, 5 waive and 1 recusal/waive, 1 negative). The voting members of Subcommittee B will decide how this is adjudicated.

### Actions:

1. Open action from [March 26<sup>th</sup> 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.
2. Open action from [Feb 25<sup>th</sup> meeting](#): **Robert Stockwell (Oronite)** to lead task force on obtaining clarity around test validity, QIs, 2 hours of no data, etc.
3. Open action from [June 24<sup>th</sup>, 2020 meeting](#): **Haltermann** to look at fuel data from Sec 8.2.6 requirement and report back to panel.

### Closed action:

1. Action from [March 26<sup>th</sup> meeting](#): **Amol Savant (Valvoline)** to discuss with **TMC** re: the overall correction with and without the ICF. ← Results of subsequent discussions and analysis were documented in the negative vote for IL 21-04.

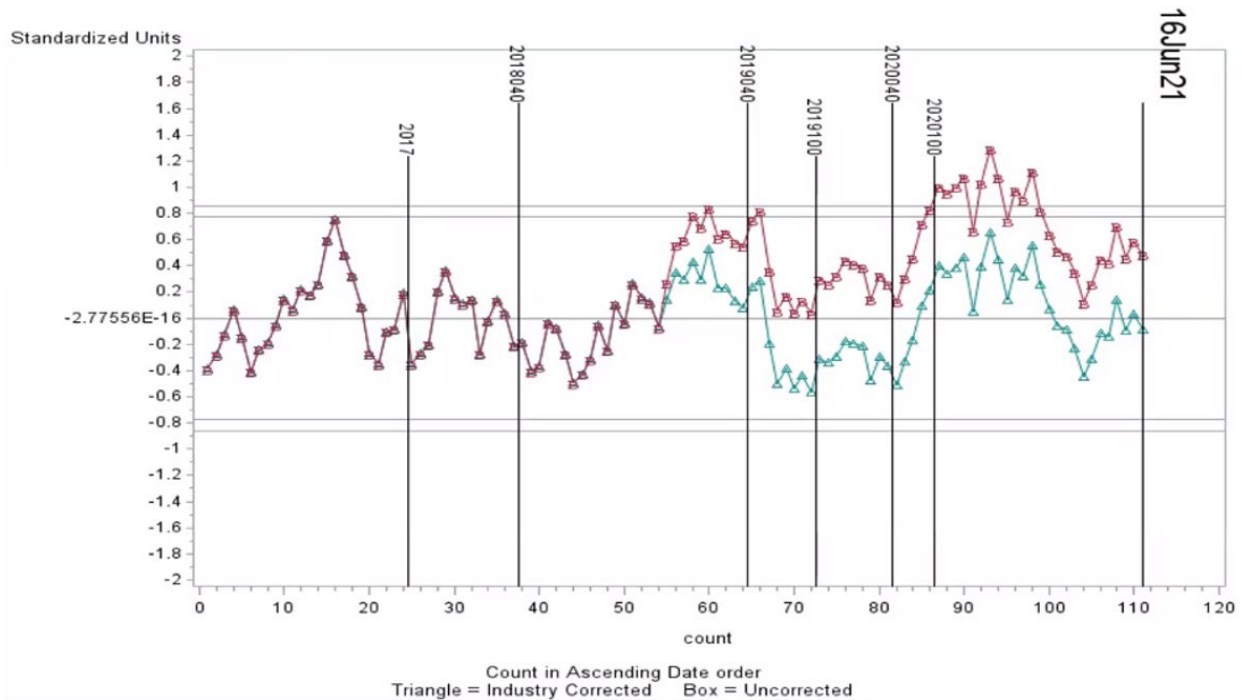
Next call: Thursday, August 4th @ 1 PM EST

## Meeting Details:

Approval of the [minutes from the March 26<sup>th</sup> call](#) and the [minutes from the June 14<sup>th</sup> call](#) are on hold to allow members time to review.

The surveillance panel reconvened to vote on the negative received for Information Letter 21-04. The options are 1) SP agrees with the negative and finds it technically persuasive, 2) SP disagrees and finds it non-persuasive, or 3) SP discussed and cannot come to a position.

Before the vote, Rich Grundza (TMC) shared the following plot that showed the ICF corrected results (triangles) brought us closer to target.



Al Lopez (Intertek) asked where the triangles start, and if the original fuel matrix data is included. Rich replied No - the fuel matrix data was never charted. Al commented that when the triangles start without correction, we were hitting mild results exceeding the 0.8 line. He asked where the fuel matrix data would lie. Rich stated around 50 but reiterated that it's not included for calibration purposes. Al understood but asked what it would have been, as we were suspecting now that it was at the time mild of target but without any confidence to apply a correction. If we see that data, maybe it was up in the mild zone. Rich said he could do this analysis. Al reiterated that one of our strong arguments is that when we approved the fuel, we were a little mild.

Amol Savant (Valvoline) stated that no one is debating that after ICF, data is more centered to target. However, if you go back to the plot, there was a sequence of tests that increased in Zi and stayed high. Now the results are back down. He pointed out tests 66 through 80 that showed closer to target. Rich asked to note the half standard deviation that occurs between 20 and 50 with the new fuel batch. The SA would have addressed things and the number of excursions we see is less. Amol commented that we're just guessing the mildness is due to the fuel. He said his main issue is with what is referred to as the 'stacking'. Rich stated that

sometimes stands lapse calibration and if you look at the statisticians' presentation, there's 100 pages of variability that was looked at. So he considered Amol's arguments were not technically persuasive.

Bob Campbell (Afton) made the motion: **The negative vote received for Information Letter 21-04 is non-persuasive.** Seconded by Al Lopez (Intertek) and offered to discuss with Amol Savant (Valvoline) afterwards.

Travis Kostan (SwRI) understood Amol's point and wanted to re-explain it to those who didn't fully understand yet: If you have not run a lot of tests on the new fuel batch, then the current lab severity is still sitting where you were with the old batch. If you start running with the new fuel batch, and you don't have ICF, then Zi should get pulled more in the mild direction more quickly if you don't use the corrected results. This can make a huge difference for those labs. Amol's lab can have 2 merits difference depending on whether you use the correction factor.

- Al Lopez (Intertek) said this applies to stands with existing charts; if a stand is out for more than a year, then would you have to start the chart over again? Travis answered that the problem is you don't start the charts all over.
- Bob Campbell (Afton) clarified that if you've been out of the system for so long, you have to come back as a new stand or lab.
- Rich Grundza (TMC) added that LTMS has additional requirements for a stand that has been out for more than 2 periods.
- Travis agreed with Bob that these are 2 separate issues: ICF is appropriate and the separate issue is we can visit the rules on if we treat all stands fairly with this new stand criteria.
- Rich stated that a stand can return to calibration status provide that 1 run meets level 1 Ei limits, which can be difficult to do if the fuel batch is indeed mild and you're a lab that's severe.
- Bob requested that Amol raise it as a specific, separate issue rather than getting the whole ICF twisted up with his lab. Amol said that we had this conversation back when we voted on it. It's not different from when we voted unanimously to the TSA but shortly after, dialed it back due to 1 party raising a concern. Similarly, Amol said he brought this back up and was told to handle it through subcommittee B. He said we need to give people 1-2 weeks to go back and analyze. We need time to give rightful view on it instead of pushing through these items in one meeting. Implementation of ICF should have waited at least 2 weeks. Rich added that TMC is working on this with the Technical Guidance Committee. He said we see issues when there's calculations involved, not just from this panel. He said TMC is working on guidance on voting rules and information letters. Amol thanked him for this update and clarified that he was replying to Bob's comment.

Al Lopez (Intertek) said that although he seconded the motion, he disagreed with Bob's comment and acknowledged that Amol has a legitimate concern. It's our responsibility as a panel to discuss in detail and come to some agreement. Considering that labs have 1 stand, the introduction of a stand with new fuel needs to be looked at as a case by case basis. He would be willing to entertain a motion that would bring a stand in with a new control chart. That way, Amol's concern needing 1-3 references could relieve that. Amol said he couldn't answer that now but would consider it and can talk with Rich separately about it. Rich brought up that normally, depending on LTMS, stand based systems need tests. Rule is 3 tests to reach Z0 for this. If we decide that's the proper course, that will be a hurdle. Amol reiterated that we need to give thought when we do something like this. He said just because we can't find something

obvious, we need to give deeper thought on why we're doing this. There's a chronological stacking effect.

The Chair asked Amol Savant (Valvoline) if a vote can be called or if he was prepared to withdraw the negative. Nathan Siebert (General Motors) said he does not see a correction factor is necessary and would like to change the GM vote (reference: ICF vote on page 7 of and top of page 8 from [March 15th meeting minutes](#)). He explained that we're resetting ICF to keeping something at zero and does not see that as necessary. Amol added that as his excel file from the Statement sent for 21-04 shows (excel file from Amol's statement for 21-04, referenced in the [June 14th meeting](#) as well, is copied in the appendix below), there's at least 7 stands, not counting his, that have Yi and Zi close to target. There's a downward trend without ICF and the question is why this is happening. The stacking effect of the stands brings Zi plot down. Bob Campbell (Afton) said this is not Zi. Travis Kostan (SwRI) added that the red points in the plot above were consistently above the line which is what we corrected for. Rich Grundza (TMC) stated that the red points include 931 which unfortunately occurred during this mild trend. When ICF is applied, some are more severe but most are on target. He stated that he does not lean one way or another re: having ICF in place because the overall correction will remain the same for all labs. We noted that we could re-do the severity adjustments and move forward if that's what the group would like to do.

The Chair summarized that what the SP did was technically persuasive. There were good counter arguments from Nathan and Amol. This panel is a technical group and we operate by consensus and made the best decision we could. While he can see the counter views, the charts and tripped alarms seem to have been addressed by the ICF. Amol commented that the Chair's characterization is ok as we took the path of least harm. With that said, the Chair called the vote on the following motion made by Bob Campbell (Afton) and seconded by Al Lopez (Intertek): **The negative vote received for Information Letter 21-04 is non-persuasive.**

Motion passed but panel could not come to a consensus: 7 approve, 6 waive, 1 negative

Intertek	Al Lopez	Approve
TMC	Rich Grundza	Approve
Valvoline	Amol Savant	Recusal (waive)
SwRI	Ankit Chaudhry	Approve
GM	Meryn Hopp	Negative
Infineum	Caroline Laufer	Approve
TEI	Dan Lanctot	Waive
HCS Group	Isabel Gabrel	Waive
OHT	Jason Bowden	Waive
Lubrizol	Joe Gleason voting for Jerry Brys	Approve
Shell	Jeff Hsu	Waive
Oronite	Robert Stockwell	Approve
BP	Jorge Agudelo	Approve
Ford	Mike Deegan	Approve
Haltermann	Prasad Tumati	Waive

In preparation for the June 22nd Subcommittee B meeting, the message is that the panel approved a motion to deem it non-persuasive; However, there was 1 negative vote.

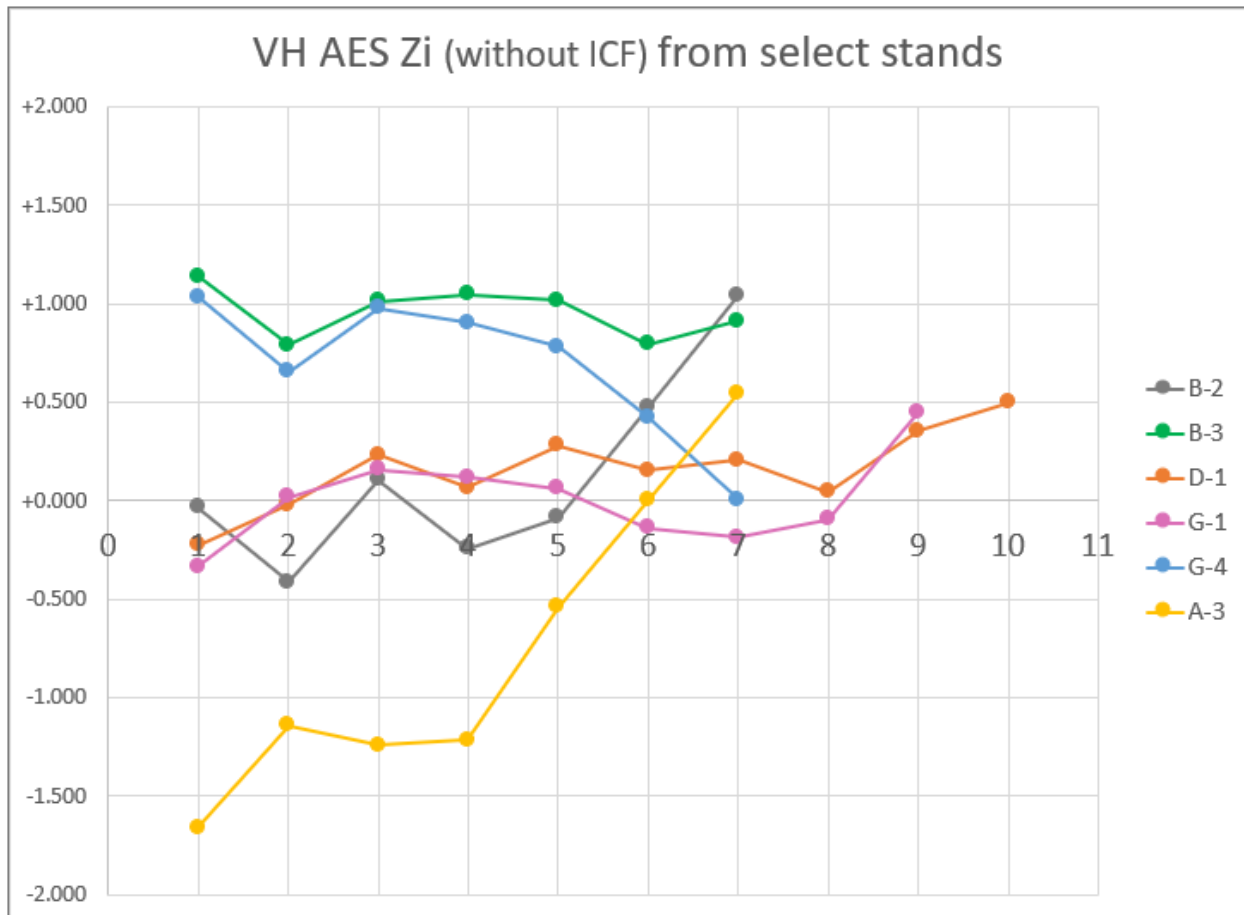
Al Lopez (Intertek) asked if the panel could see the data supporting the negative vote as the entity that brought this forward waived as a recusal. Nathan Siebert (GM) noted that the data corrected itself without the ICF; therefore, ICF is not needed.

The Chair closed the meeting by saying that anyone is welcome to join subcommittee B meeting and offer any technical commentary. Voting members of B will decide how this is adjudicated as this is the process.

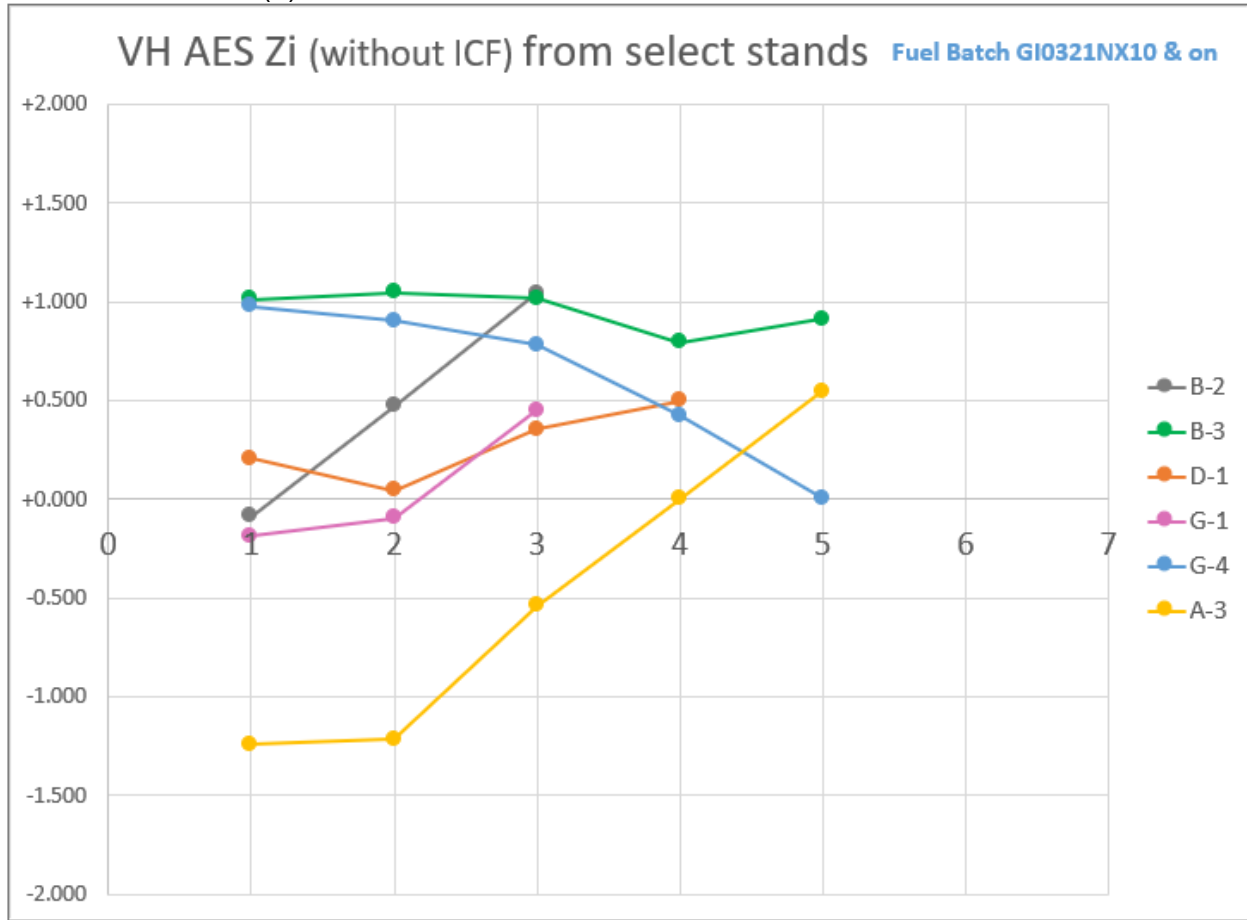
Meeting adjourned at 2:27 PM EST.

Appendix:  
Embedded excel file (referenced in the [June 14th meeting](#)) in Amol Savant's Statement for 21-04:

Worksheet "AES Zi":



Worksheet "AES Zi (2)":



Worksheet "B2-AES":

VH Control Chart parameter tracking for AES												Zi & Ei cells are set to flag, if the limits are crossed					
L A	A B	F	Test no.	CMIR	LTMSDate	no. of tests	IND	AES Orig. Results	ICF	AES-Corr.	Ref. oil Targets		+/- 1.800		+/- L1=1.351, L2=1.734, L3=2.066		Severity Adjustment
											Mean	s	Standardized Mean deviation	Exp. Wt. Avg. Std. Mean	EWMA based Prediction Error	Severity Adjustment based on EWMA	
											Ti	Yi	Zi	Ei	SA		
B	2	DJ0121NX10	129773-VH	20180419	1	1009	7.18	0	7.18	7.21	0.44	-0.068	-0.035	-0.020	-0.048	0.02	
B	2	DJ0121NX10	119159-VH	20180504	2	1011	7.69	0	7.69	8.43	0.57	-1.298	-0.414	-1.264	0.21		
B	2	DJ0121NX10	132160-VH	20180601	3	940	7.11	0	7.11	6.47	0.49	+1.306	+0.102	+1.720	-0.05		
B	2	DJ0121NX10	119158-VH	20180618	4	1011	7.83	0	7.83	8.43	0.57	-1.053	-0.244	-1.155	0.12		
B	2	GI0321NX10	138963-VH	20190321	5	1011	8.59	0	8.59	8.43	0.57	+0.281	-0.087	+0.525	0.04		
B	2	GI0321NX10	151836-VH	20200710	6	940	7.34	0	7.34	6.47	0.49	+1.776	+0.472	+1.862	-0.24		
B	2	GI0321NX10-1	160148-VH	20210205	7	940	7.63	0	7.63	6.47	0.49	+2.367	+1.041	+1.895	-0.52		

Worksheet "B3-AES":

VH Control Chart parameter tracking for AES											Zi & Ei cells are set to flag, if the limits are crossed				
L A	A B	Test no.	CMIR	LTMSDate	no. of tests	IND	AES Orig. Results	ICF	AES-Corr.	Ref. oil Targets		Shewhart Severity	EWMA Severity	Prediction Error for Severity	Severity Adjustment
										Mean	s				
						Industry oil Code	target mean of precision matrix population for specific oil		target std. dev of precision matrix population for specific oil	Standardized Mean deviation	Exp. Wt. Avg. Std. Mean deviation	EWMA based Prediction Error	Severity Adjustment based on EWMA		
											Ti	Yi	Zi	Ei	SA
B	3	DJ0121NX10	136675-VH	20180928	1	940	7.19	0	7.19	6.47	0.49	+1.469	+1.137	+0.475	-0.57
B	3	DJ0121NX10	137500-VH	20181011	2	1011	8.42	0	8.42	8.43	0.57	-0.018	+0.790	-1.154	-0.40
B	3	GI0321NX10	144088-VH	20190511	3	940	7.22	0	7.22	6.47	0.49	+1.531	+1.012	+0.740	-0.51
B	3	GI0321NX10	144089-VH	20190525	4	940	7.02	0	7.02	6.47	0.49	+1.122	+1.045	+0.110	-0.52
B	3	GI0321NX10	147288-VH	20191222	5	940	6.93	0	6.93	6.47	0.49	+0.939	+1.013	-0.107	-0.51
B	3	GI0321NX10	138962-VH	20200108	6	1011	8.59	0	8.59	8.43	0.57	+0.281	+0.794	-0.733	-0.40
B	3	GI0321NX10-1	151837-VH	20201105	7	940	7.05	0	7.05	6.47	0.49	+1.184	+0.911	+0.390	-0.46

Worksheet "D1-AES":

VH Control Chart parameter tracking for AES											Zi & Ei cells are set to flag, if the limits are crossed				
L A B	A P P	Test no.	CMIR	LTMSDate	no. of tests	IND	AES Orig. Results	ICF	AES-Corr.	Ref. oil Targets		Shewhart Severity	EWMA Severity	Prediction Error for Severity	Severity Adjustment
										Mean	s				
						Industry oil Code	target mean of precision matrix population for specific oil		target std. dev of precision matrix population for specific oil	Standardized Mean deviation	Exp. Wt. Avg. Std. Mean deviation	EWMA based Prediction Error	Severity Adjustment based on EWMA		
											Ti	Yi	Zi	Ei	SA
D	1	DJ0121NX10	119162-VH	20170212	1	1011	7.87	0	7.87	8.43	0.57	-0.982	-0.227	-1.079	0.11
D	1	DJ0121NX10	121400-VH	20170225	2	1011	8.69	0	8.69	8.43	0.57	+0.456	-0.022	+0.683	0.01
D	1	DJ0121NX10	121398-VH	20170317	3	940	6.87	0	6.87	6.47	0.49	+0.816	+0.229	+0.838	-0.11
D	1	DJ0121NX10	119160-VH	20170331	4	1009	7.07	0	7.07	7.21	0.44	-0.318	+0.065	-0.548	-0.03
D	1	DJ0121NX10	131705-VH	20180217	5	1011	8.87	0	8.87	8.43	0.57	+0.772	+0.277	+0.707	-0.14
D	1	DJ0121NX10	121399-VH	20180630	6	940	6.4	0	6.40	6.47	0.49	-0.143	+0.151	-0.420	-0.08
D	1	GI0321NX10	133505-VH	20190202	7	1011	8.62	0	8.62	8.43	0.57	+0.333	+0.206	+0.182	-0.10
D	1	GI0321NX10	120508-VH	20190803	8	1009	7.06	0	7.06	7.21	0.44	-0.341	+0.042	-0.547	-0.02
D	1	GI0321NX10	144090-VH	20200301	9	940	7	0	7.00	6.47	0.49	+1.082	+0.354	+1.040	-0.18
D	1	GI0321NX10-1	156938-VH	20210403	10	1011	8.9	0	8.90	8.43	0.57	+0.825	+0.495	+0.471	-0.25

Worksheet "G1-AES":

VH Control Chart parameter tracking for AES											Zi & Ei cells are set to flag, if the limits are crossed					
											Ref. oil Targets		+/- 1.800 +/- L1=1.351, L2=1.734, L3=2.066			
L	A	Test no.	CMIR	LTMSDate	no. of tests	IND	AES Orig. Results	ICF	AES-Corr.	Mean	s	Shewhart Severity	EWMA Severity	Prediction Error for Severity	Severity Adjustment	
A	B	F				Industry oil Code				target mean of precision matrix population for specific oil	target std. dev of precision matrix population for specific oil	Standardized Mean deviation	Exp. Wt. Avg. Std. Mean deviation	EWMA based Prediction Error	Severity Adjustment based on EWMA	
											Ti	Yi	Zi	Ei	SA	
G	1	DJ0121NX10	119150-VH	20170128	1	940	5.88	0	5.88	6.47	0.49	-1.204	+0.037	-0.336	-1.241	0.17
G	1	DJ0121NX10	123887-VH	20170211	2	940	6.88	0	6.88	6.47	0.49	+0.837	+0.016	+1.172	-0.01	
G	1	DJ0121NX10	118693-VH	20170227	3	1009	7.42	0	7.42	7.21	0.44	+0.477	+0.154	+0.461	-0.08	
G	1	DJ0121NX10	122927-VH	20170317	4	1011	8.45	0	8.45	8.43	0.57	+0.035	+0.119	-0.119	-0.06	
G	1	DJ0121NX10	131703-VH	20180202	5	1011	8.39	0	8.39	8.43	0.57	-0.070	+0.062	-0.189	-0.03	
G	1	DJ0121NX10	138240-VH	20180816	6	940	6.17	0	6.17	6.47	0.49	-0.612	-0.140	-0.674	0.07	
G	1	GI0321NX10	139084-VH	20190316	7	940	6.32	0	6.32	6.47	0.49	-0.306	-0.190	-0.166	0.10	
G	1	GI0321NX10	147286-VH	20191013	8	1011	8.5	0	8.50	8.43	0.57	+0.123	-0.096	+0.313	0.05	
G	1	GI0321NX10	155148-VH	20201001	9	1011	9.41	0	9.41	8.43	0.57	+1.719	+0.448	+1.815	-0.22	
G	1	GI0321NX10	162989-VH	20210419	10	931	8.73	0	8.73							

Worksheet "G4-AES":

VH Control Chart parameter tracking for AES											Zi & Ei cells are set to flag, if the limits are crossed					
											Ref. oil Targets		+/- 1.800 +/- L1=1.351, L2=1.734, L3=2.066			
L	A	Test no.	CMIR	LTMSDate	no. of tests	IND	AES Orig. Results	ICF	AES-Corr.	Mean	s	Shewhart Severity	EWMA Severity	Prediction Error for Severity	Severity Adjustment	
A	B	F				Industry oil Code				target mean of precision matrix population for specific oil	target std. dev of precision matrix population for specific oil	Standardized Mean deviation	Exp. Wt. Avg. Std. Mean deviation	EWMA based Prediction Error	Severity Adjustment based on EWMA	
											Ti	Yi	Zi	Ei	SA	
G	4	DJ0121NX10	122928-VH	20171111	1	1011	9.16	0	9.16	8.43	0.57	+1.281	+0.925	+1.032	+0.356	-0.52
G	4	DJ0121NX10	133492-VH	20180525	2	940	6.36	0	6.36	6.47	0.49	-0.224	+0.655	-1.256	-0.33	
G	4	GI0321NX10	133515-VH	20181207	3	1011	9.41	0	9.41	8.43	0.57	+1.719	+0.974	+1.064	-0.49	
G	4	GI0321NX10	139083-VH	20181221	4	940	6.83	0	6.83	6.47	0.49	+0.735	+0.902	-0.240	-0.45	
G	4	GI0321NX10	144094-VH	20190712	5	1011	8.71	0	8.71	8.43	0.57	+0.491	+0.779	-0.411	-0.39	
G	4	GI0321NX10	149664-VH	20200409	6	940	6.27	0	6.27	6.47	0.49	-0.408	+0.423	-1.187	-0.21	
G	4	GI0321NX10	155146-VH	20201120	7	940	5.99	0	5.99	6.47	0.49	-0.980	+0.002	-1.402	0.00	



Worksheet "A3-AES":

L A B	A P P	Test no.	CMIR	LTMSDate	no. of tests	IND	AES Orig. Results	ICF	AES-Corr.	Mean	s	Shewhart Severity	EWMA Severity	Prediction Error for Severity	Severity Adjustment
						Industry oil Code				target mean of precision matrix population for specific oil	target std. dev of precision matrix population for specific oil	Standardized Mean deviation	Exp. Wt. Avg. Std. Mean deviation	EWMA based Prediction Error	Severity Adjustment based on EWMA
								Ti				Yi	Zi	ei	SA
A	3	DJ0121NX10	129864-VH	20171214	1	1009	6.11	0	6.11	7.21	0.44	-2.500	-1.662	-1.197	0.83
A	3	DJ0121NX10	129862-VH	20171230	2	940	6.5	0	6.50	6.47	0.49	+0.061	-1.145	+1.723	0.57
A	3	GI0321NX10	138245-VH	20190525	3	940	5.75	0	5.75	6.47	0.49	-1.469	-1.242	-0.324	0.62
A	3	GI0321NX10	144096-VH	20190611	4	1011	7.77	0	7.77	8.43	0.57	-1.158	-1.217	+0.084	0.61
A	3	GI0321NX10	147290-VH	20200410	5	940	6.98	0	6.98	6.47	0.49	+1.041	-0.540	+2.258	0.27
A	3	GI0321NX10	157264-VH	20210316	6	931	9.15	0	9.15	8.43	0.57	+1.263	+0.001	+1.803	0.00
A	3	GI0321NX10	155341-VH	20210506	7	1011	9.46	0	9.46	8.43	0.57	+1.807	+0.543	+1.806	-0.27
					8										
					9										
					10										
						940			7.16	6.47	0.49	+1.408	+0.298	+1.586	-0.15
						1009			7.16	7.21	0.44	-0.114	-0.158	+0.064	0.08
						1011			9.50	8.43	0.57	-2.228	-0.793	-2.050	0.40