

LDEOC/EOEC SURVEILLANCE PANEL

A LDEOC/EOEC conference call was held on Monday, 12-19-16, at 1 pm Central Standard Time. The following members were on the call:

Mike Lopez - Intertek
Joe Franklin - Intertek
Mike Birke – SwRI
Jason Bowden – OHT
Matt Bowden - OHT
Doyle Boese – Infineum
Vince Donndelinger – Lubrizol
Conika Own-Robinson – Savant
Maggie Smerdon - Savant
Tina Dasbach - Savant
Greg Miiller - Savant
Dennis Gaal - ExxonMobil
Mike Kasimirsky - TMC
Mike McMillan – Infineum
Gordon Lee – ExxonMobil
Julie Hudia - Lubrizol
Kaustav Sinah - Chevron
Robert Stockwell - Chevron

The primary purpose of the meeting was to discuss the volume severity shift in ACM-1 and the implementation of a correction factor. Also to be discussed was to examine as to whether the test is out of control. The cause of the increasing volume swell is due to a process change in the post curing of the elastomer, leading to an increased chance in variability of the material. Doyle Boese presented his analysis of the ACM-1 data. There is a clear upward trend in volume severity starting at batch 15, however it is unclear whether it is a true trend or random variation. For the statistical analysis, since batches 14-18 are made from the same process, the upward trend is treated as random variation. Using 11 points from batch 5 as the original target, and 243 points from batches 14 through 18, *the analysis suggests a correction factor of -1.50*. Joe Franklin made a motion to accept the correction factor as written. There was no additional discussion, and the motion carried with 17 affirmatives, 1 negative, and zero abstentions. Jason Bowden proposed that the motion goes into effect on 12-19-16 for the currently available batches back to batch 14, and all future batches of ACM-1. Mike Kasimirsky of TMC will issue an information letter stating the implementation of the correction factor. Since there is no provision in the report forms for a correction factor, the factor will be applied to both candidate and reference testing at the laboratory level, with a note added in the comment section that correction factor of -1.50 was applied. Greg Miiller proposed that the surveillance panel re-examines the data once 12 points from batch 19 are obtained. Mike Kasimirsky commented that test needs to

be examined to determine whether the test is out of control. Although the data has been analyzed in the past, inferring that the test is out of control, Doyle Boese volunteered to reexamine the data using the TMC "Out of Control" protocol as defined in the TMC web site. Earlier in the day, Mike Birke had conversations with Mike Alessi of ExxonMobil, who is representing the heavy duty interests. Mike A was sharing the concerns of the HD panel about test variability. During discussions of how the hardness test is performed, Mike Birke was explaining how the durometers are verified using the certified rubber reference blocks. As an ongoing effort to determine instrument brands play a role in the test variability, they requested that Mike Birke send out the blocks to the labs for measurements. Also, Mike Birke will send out a new hardware survey to the labs.

The meeting was adjourned at 9:47 am central time.