AUTHORITY TO SUSPEND INDUSTRY WIDE LABORATORY CALIBRATION STATUS WHEN A TEST IS JUDGED TO BE GIVING UNINTERPRETABLE PERFORMANCE

BACKGROUND

The Classification Panels request the authority to suspend industry wide laboratory calibration status when a test is judged to be out of control. This is needed to get immediate industry expertise solely focused on solving the test problem and prevent the continued approval of oils based on suspect data. To assure that any decision to temporarily suspend testing is justified, the following analysis process will be used and documented. This process also includes a method for determining when the test is back in control and calibrated testing can resume. This process was developed to address the concerns expressed during the earlier balloting of this subject.

FLOW PLAN

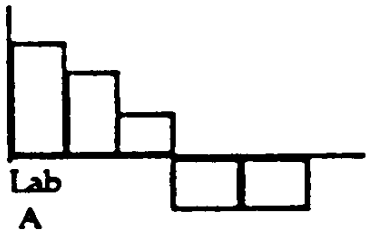
Step 1: An action alarm at the industry level must trigger on the Exponentially Weighted Moving Average (EWMA) plots, for either precision or severity, using the ASTM Reference Monitoring System.

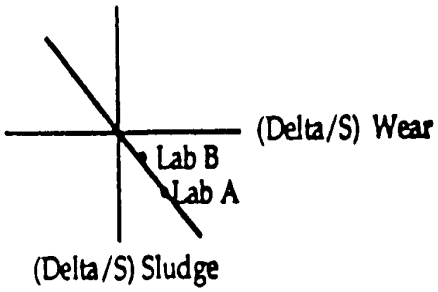
Step 2a: The test surveillance panel must consider the scope and size of the problem:

- Is the problem due to an identifiable cause?
- Is it affecting precision and/or severity?
- If the problem only affects severity, can a temporary correction be applied?
- Is the problem reference oil specific?
- Is it test lab or stand specific?
- When did the problem start?
- Are critical, non-critical, or both types of parameters involved?
- Does the problem transcend test type?
- What tools (statistical) were used to assess the problem?
- Was the problem a gradual one or an abrupt one?
- Does existing candidate oil experience support any reference oil trends?
- Has the problem been defined clearly?
- Has the available data been analyzed in a logical and methodical manner?

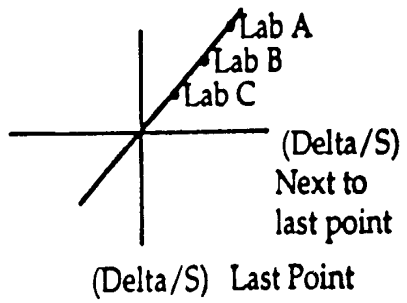
Step 2b: The following tools will be used, as a minimum, in the analysis of the problem:

DATA ANALYSIS	POTENTIAL INSIGHTS
1. All charts (lab, stand) should be made available for the Test Parameter which has gone out.	1. Time trends and changes, start of problem.
2. Mark on charts when Industry changed parts, fuel batches, etc.	2. Special Cause.
3. Plot each lab's last EWMA for the affected parameter:	3. Scope of Problem, Special Cause.
4. Provide a list of coded labs (or stands) which have had out of control signals on the Test Parameter within the last three months.	4. Scope of Problem, Special Cause.
5. Plots of known problem parameters (e.g. sludge/wear).	5. Problem discrimination.





6.	EWMA charts with $\lambda = 0.1$ (detects small shifts)	6.	Gradual vs. Step change.
7.	Youden plot of labs' last two points:	7.	Precision vs. Severity, Scope, Special cause.



8.	Dot plot of all data in last three months.	8.	Special Cause.

Step 3a: The Surveillance Panel decision to recommend to the appropriate Classification Panel that a test to be declared out of control will require a ¾ approval vote of voting members (or their alternates) present at a special Surveillance Panel meeting held to review all data developed. All negative votes must be resolved (declared non-persuasive, persuasive, or non-germane). For purposes of determining persuasiveness of a negative, a 2/3 majority vote of members present (or their alternates) will be used. The final vote plus all persuasive arguments and an action plan with timetable will be forwarded to the appropriate Classification Panel.

Step 3b: Within two weeks of such a Surveillance Panel decision, the appropriate Classification Panel will meet to determine if the test is out of control.

Step 3c: If the Classification Panel decides the test is out of control it may temporarily suspend calibrated testing. A technical memorandum will be issued immediately by the TMC (advising that calibration status for the appropriate test type cannot be technically supported in all previously calibrated laboratories effective for each stand prior to the start of the next test). This memorandum will be issued to all members of the Surveillance Panel involved, all calibrated test labs, the appropriate classification panel, and all members of Subcommittee B.

This memorandum will provide the background on the Surveillance Panel's decision, as well as a proposed action plan with timetable and milestones. A comment period will be extended for 30 days after the memorandum. Comments will go to the Subcommittee B Chairman who will determine if they are of sufficient quality to call a special session of B within 30 more days. TMC calibration status will continue to be suspended during this period unless the test has been declared back in control (see step 4a).

Step 3d: Any external communication (outside of ASTM Subcommittee B see notification list below) will be sent through the Chairman of Subcommittee B. All stake holders shown below are to be sent a letter by the Chairman of Subcommittee B notifying them of this action and stating that the performance category XX as stated in ASTM D4485 can no longer be measured until further notice. The reason that this performance can no longer be measured is that the calibration status of the uninterruptable test cannot be technically supported.

Notification List

Organization	Position
ASTM	D02.B0 Chairman
	Test Monitoring System Executive Committee Chairman
	Test Monitoring Center Director
	PCEOCP Chairman
	HDEOCP Chairman
	D02.B0.01 Chairman
	D02.B0.02 Chairman
	Membership of Effected Surveillance Panel
ACC	Product Approval Protocol Task Group Manager
	MAAG Chairman
API	EOLCS Manager
	EOLCS Chairman
Auto Alliance	
JAMA	
EMA	EMA Staff
AOAP	Chairman
DEOAP	Chairman
ACC-MA	Manager

Notification

From the TMC website (https://www.astmtmc.org/TestStatusNotification.aspx) a notification email can be generated with the current notification member emails. The Subcommittee B chairman will need to append a letter describing the situation using the current D02 letterhead (a link is on the TMC notification page) and a notification comment to the body of the email prior to sending.

Step4d: Determination that the test is back in control will be made by the Surveillance Panel or when the industry EWMA charts for precision and severity are back within the defined control limits whichever occurs first. At that point, an information memorandum will be immediately issued by TMC to the same distribution outlined in Step 3c. Any requirements, if necessary, to resume calibrated testing will be defined in this memorandum.