



Test Monitoring Center

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MEMORANDUM: 04-022
DATE: April 9, 2004
TO: Warren Totten, Chairman, Cummins Surveillance Panel
FROM: Jeff Clark
SUBJECT: M11EGR Calibration Testing for the April 2004 ASTM Report Period

The following is a summary of M11EGR reference oil tests completed during the April 2004 ASTM report period, which began on October 1, 2003 and ended on March 31, 2004.

Test Status	TMC Validity Code	Number of Tests
Acceptable Calibration Test	AC	2
Failed Calibration Test (LTMS Criteria)	OC	1
Operationally Invalid Calibration Test	LC	0
Aborted Calibration Test	XC	0
Total		3

The failed calibration test was due to severe Average Sludge Rating.

Severity and Precision:

Figures 1, 2, and 3 (attached) show the current industry EWMA severity, EWMA precision, and cusum charts for Crosshead Weight Loss (CWL), Filter Plugging Delta P (FPD), and Average Sludge Rating (ASR). Low-test activity makes it difficult to offer any meaningful commentary regarding severity trends.

Precision, as estimated by the pooled standard deviation, is shown in the table below. Precision estimates are presented on an annual basis. However, any conclusions drawn from a comparison between current and previous precision estimates are of little value due to the reduced number of degrees of freedom. Please note, that the degrees of freedom (df) equals $\Sigma(n \text{ observations per oil} - 1)$.

M11EGR Pooled Precision By Year

Parameter	2001	2002	2003	2004
df	11	13	53	
CWL	3.12	3.19	2.63	
FPD	0.85	0.98	1.08	
ASR	0.33	0.64	0.84	

Reference Oils:

The current reference oil test targets are shown below:

Oils	N	Parameter	Mean (cSt)	S
830-2	10	CWL	12.2	3.2
		ASR	8.40	0.36
		FPD	11.9121	1.0554

Once 20 tests have been completed on oil 830-2, the TMC will provide a target update for surveillance panel consideration. To date, 16 tests have been completed on oil 830-2.

Information Letters:

M11EGR Information Letter 03-1, Sequence No. 2, was issued on October 3, 2003. As a result of this information letter, top ring weight loss is no longer a pass/fail parameter and it is no longer monitored for calibration purposes.

TMC Laboratory Visits:

No TMC laboratory visits were conducted this ASTM period.

Additional Information:

The M11EGR database, timeline, and alarm logs can be accessed on the TMC's homepage. If you have any questions on how to access this information, contact the TMC.

JAC/jac/mem04-022.jac.doc

Attachments

c: J.L. Zalar, TMC

F.M. Farber, TMC

Cummins Surveillance Panel

<ftp://ftp.astmtmc.cmu.edu/docs/diesel/cummins/semiannualreports/M11EGR-04-2004.pdf>

Distribution: Email

FIGURE 1
M11EGR INDUSTRY OPERATIONALLY VALID DATA

CROSSHEAD WEIGHT LOSS

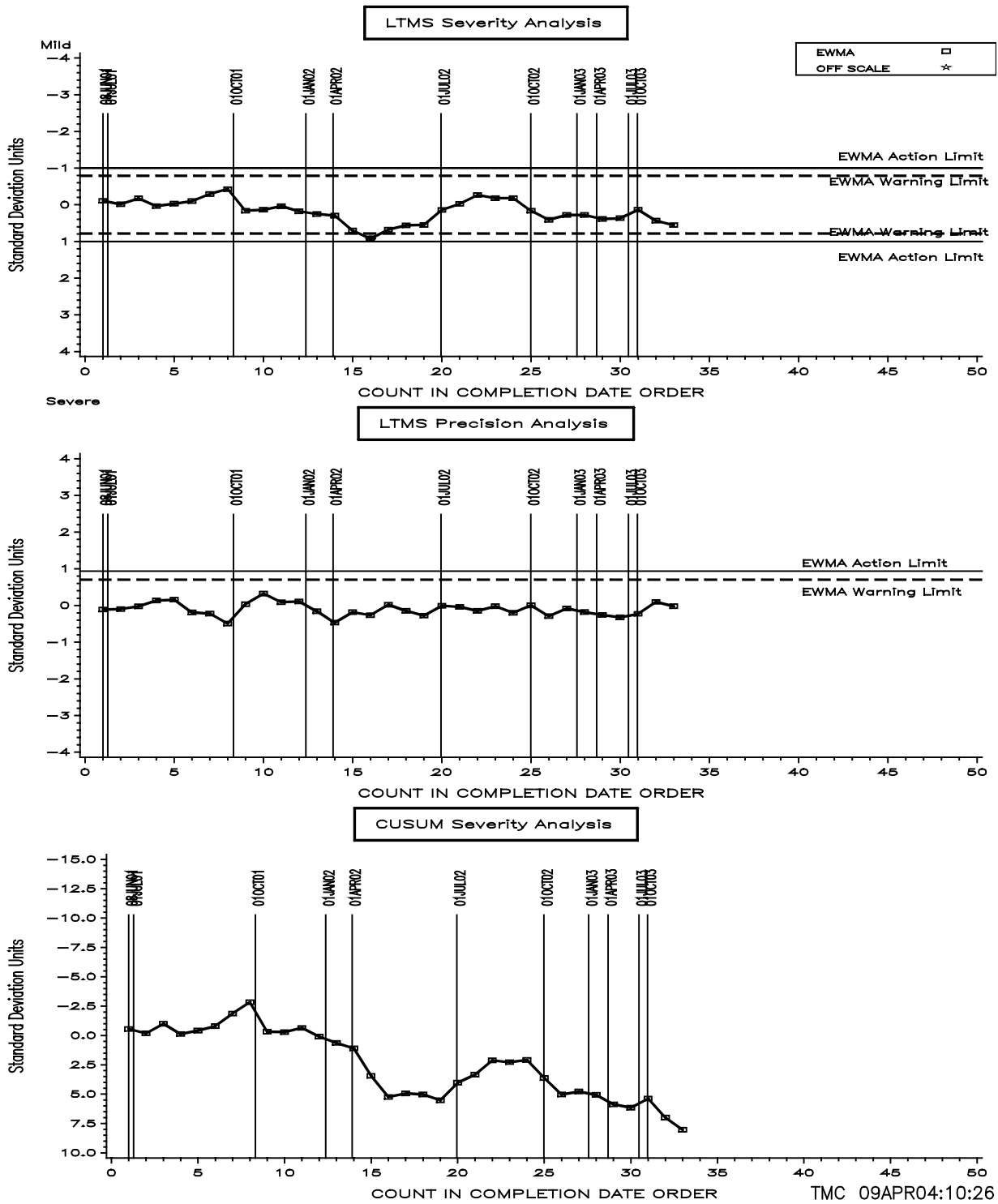


FIGURE 2
M11EGR INDUSTRY OPERATIONALLY VALID DATA

FILTER PLUGGING DELTA P

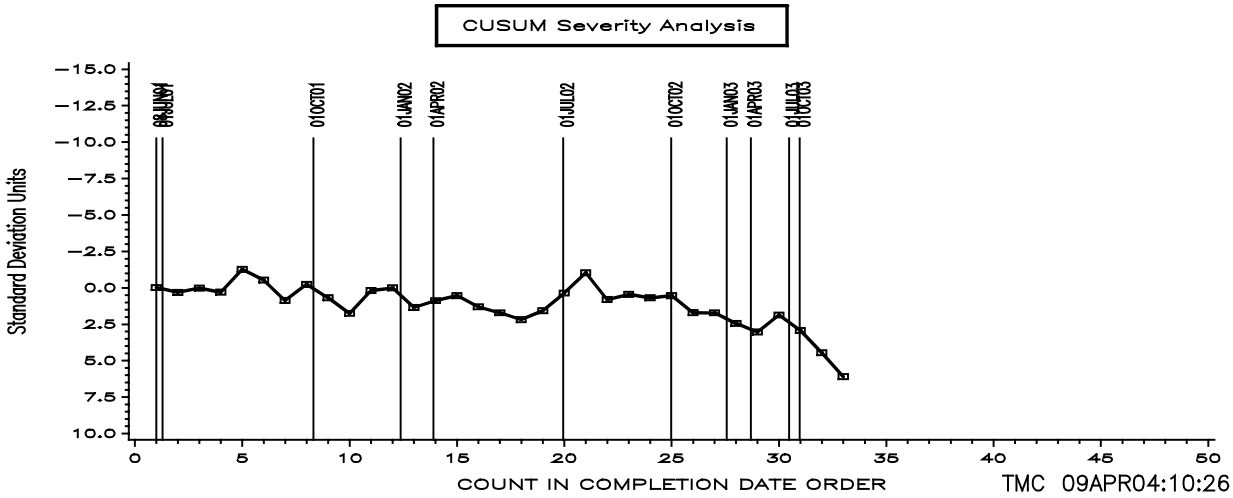
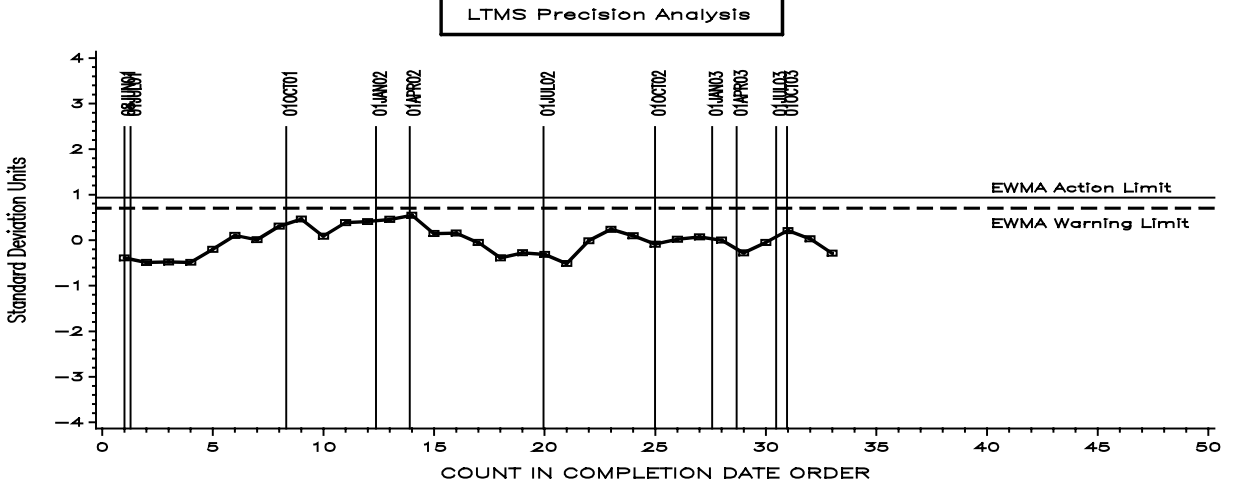
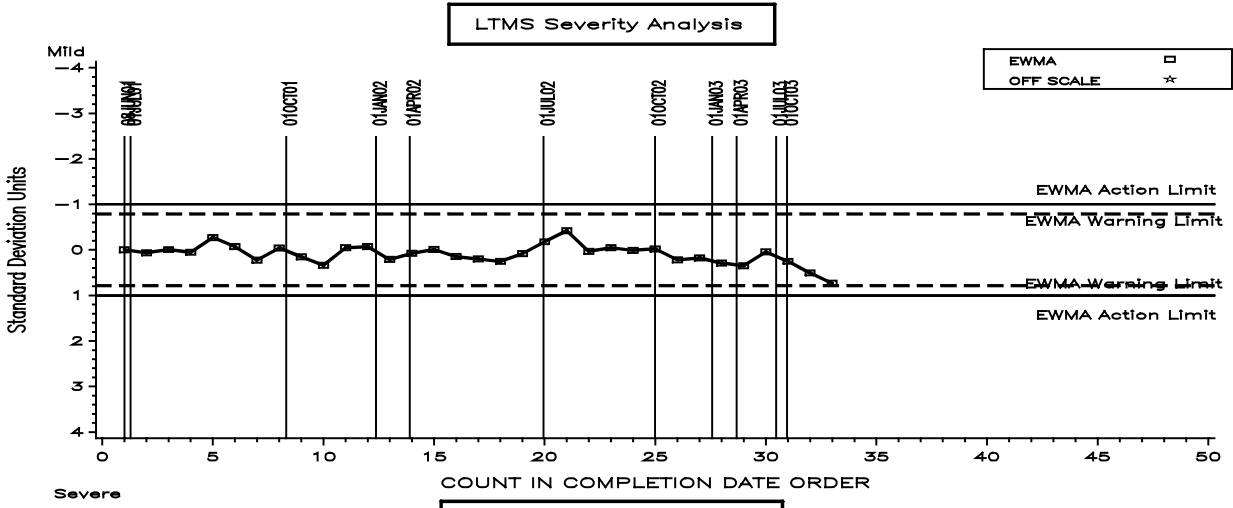


FIGURE 3
M11EGR INDUSTRY OPERATIONALLY VALID DATA

AVG SLUDGE RATING

