



## Test Monitoring Center

@ Carnegie Mellon University  
6555 Penn Avenue, Pittsburgh, PA 15206, USA

<http://astmtmc.cmu.edu>  
412-365-1000

MEMORANDUM: 14-014

DATE: May 22, 2014

TO: Yong-Li McFarland,  
Chairwoman, Engine Oil Filterability Test Surveillance Panel

FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*

SUBJECT: EOWT Testing from October 1, 2013 through March 31, 2014

A total of 799 EOWT tests were reported to the Test Monitoring Center during the report period from October 1, 2013 through March 31, 2014.

Please find attached a summary of testing activity this period.

MTK/mtk/astm0414.doc/mem14-014.mtk.doc

cc: F. M. Farber

J. A. Clark

EOWT Surveillance Panel

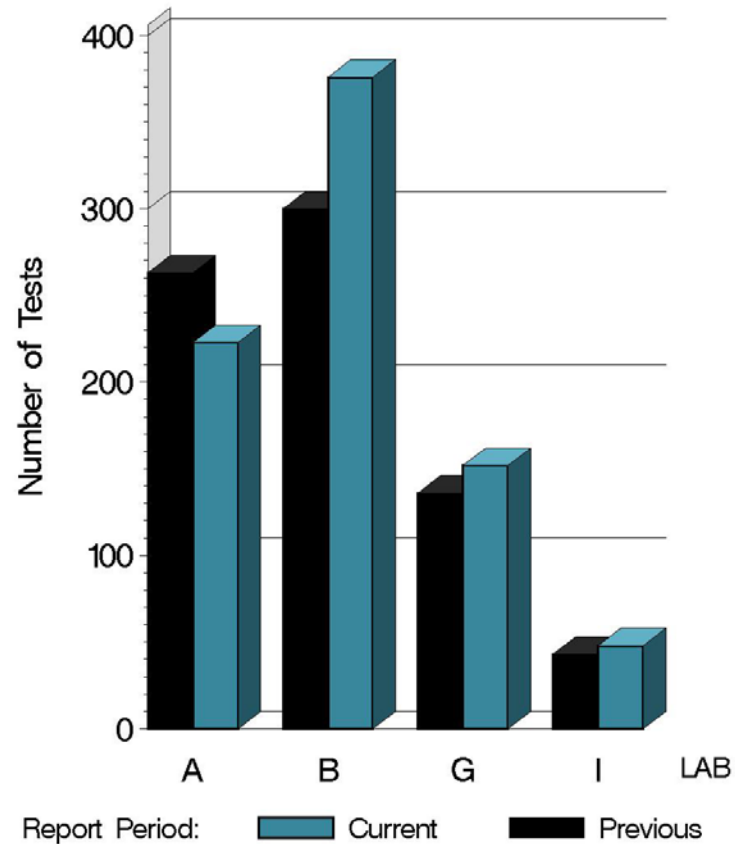
<ftp://ftp.astmtmc.cmu.edu/docs/bench/eowt/semiannualreports/eowt-04-2014.pdf>

Distribution: email

# EOWT (D 6794)

Reporting Data	
Number of Labs	4

NUMBER OF TESTS REPORTED  
BY LAB AND REPORT PERIOD



15:22:10 21MAY2014

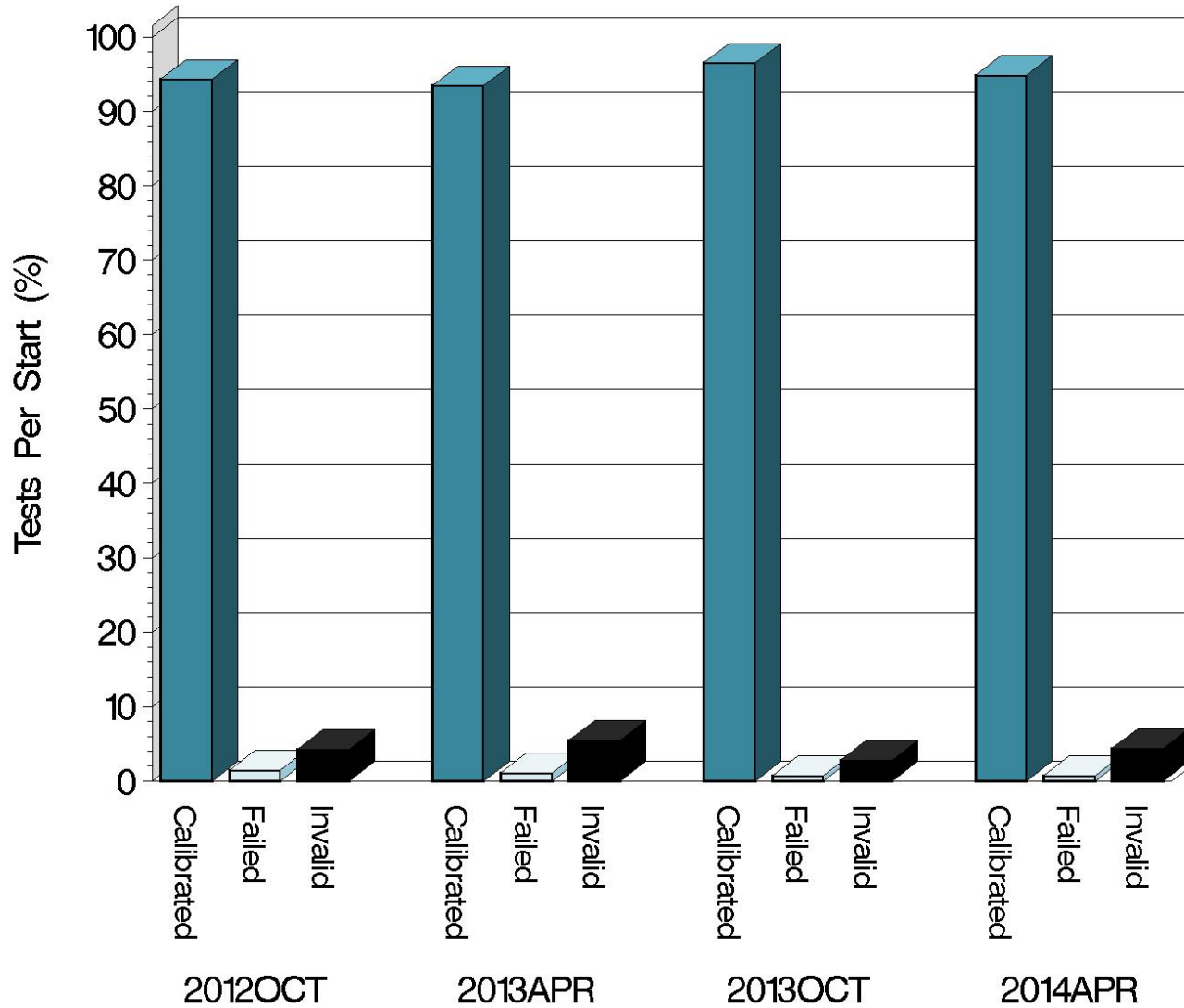
# EOWT (D 6794)

## Test Distribution by Oil and Validity

		By Oil				By Treat Level				Totals	
		77-1	77-2	78-1	78-2	0.6	1.0	2.0	3.0	This Period	Last Period
Accepted for Calibration	AC	102	310	4	342	189	190	190	189	758	715
Acceptable Donated Tests	NI	0	0	0	0	0	0	0	0	0	16
Unacceptable Donated Tests	MI	0	0	0	0	0	0	0	0	0	0
Rejected Tests	OC	0	3	0	3	1	1	2	2	6	5
Operationally Invalid (lab)	LC	2	0	0	0	0	0	1	1	2	2
Operationally Invalid (lab/TMC)	RC	0	0	0	0	0	0	0	0	0	0
Aborted Calibration	XC	5	4	0	24	8	8	8	9	33	3
<b>Total</b>		<b>109</b>	<b>317</b>	<b>4</b>	<b>369</b>	<b>198</b>	<b>199</b>	<b>201</b>	<b>201</b>	<b>799</b>	<b>741</b>

# EOWT (D 6794)

## CALIBRATION ATTEMPT SUMMARY



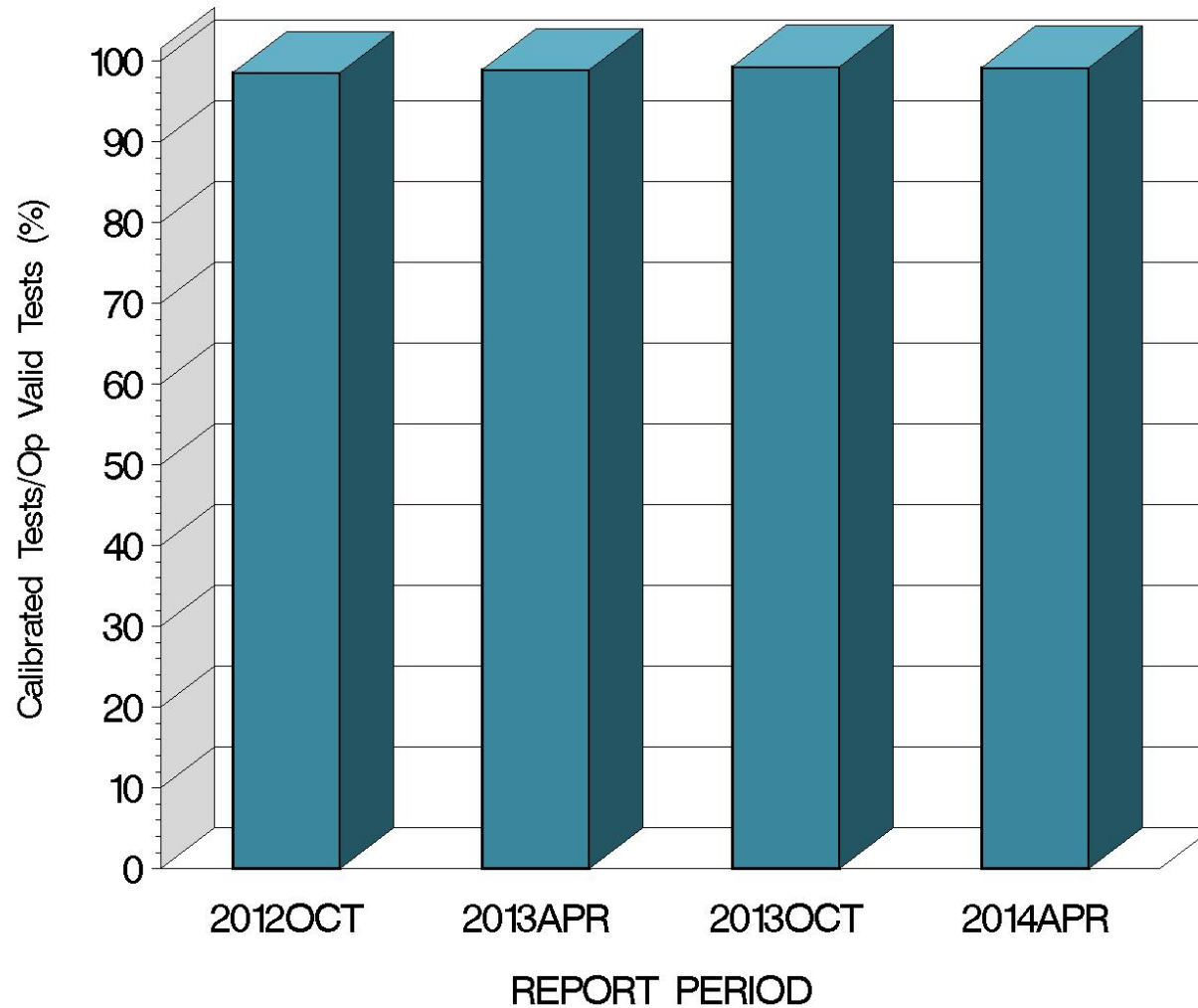
Resolution

Report Period

15:22:10 21MAY2014

# EOWT (D 6794)

OPERATIONALLY VALID TESTS  
MEETING ACCEPTANCE CRITERIA



15:22:10 21MAY2014

# EOWT (D 6794)

## CAUSES FOR LOST TESTS

		Oil				Validity			Loss Rate		
Lab	Cause	77-1	77-2	78-1	78-2	LC	RC	XC	Lost	Starts	%
A	Sample Leaked	1	0	0	0	0	0	1	1	223	0.4%
B	Sample Spill	0	4	0	0	0	0	4	4	376	1%
	Sample Prep Error	4	0	0	16	0	0	20	20		5%
G	Sample Prep Error	0	0	0	4	0	0	4	4	152	3%
	Time Error	0	0	0	4	0	0	4	4		2%
I	Sample Prep Error	2	0	0	0	2	0	0	2	48	4%
Lost		7	4	0	24	2	0	33			
Starts		109	317	4	369	799	799	799			
%		6%	1%	0%	6%	.2%	0%	4%			

1

Lost tests are calibration attempts that were either aborted or operationally invalid

# EOWT (D 6794)

Average $\Delta$ /s By Laboratory			
Treat Level	Lab	n	CFAYI
0.6	A	55	-0.118
	B	88	0.178
	G	36	0.615
	I	11	1.259
	Industry	190	0.238
1.0	A	56	-0.205
	B	88	-0.086
	G	36	0.756
	I	11	1.124
	Industry	191	0.108
2.0	A	56	-0.404
	B	88	-0.023
	G	36	0.857
	I	12	1.366
	Industry	192	0.117
3.0	A	55	-0.220
	B	88	-0.062
	G	36	0.931
	I	12	1.343
	Industry	191	0.168

# EOWT (D 6794)

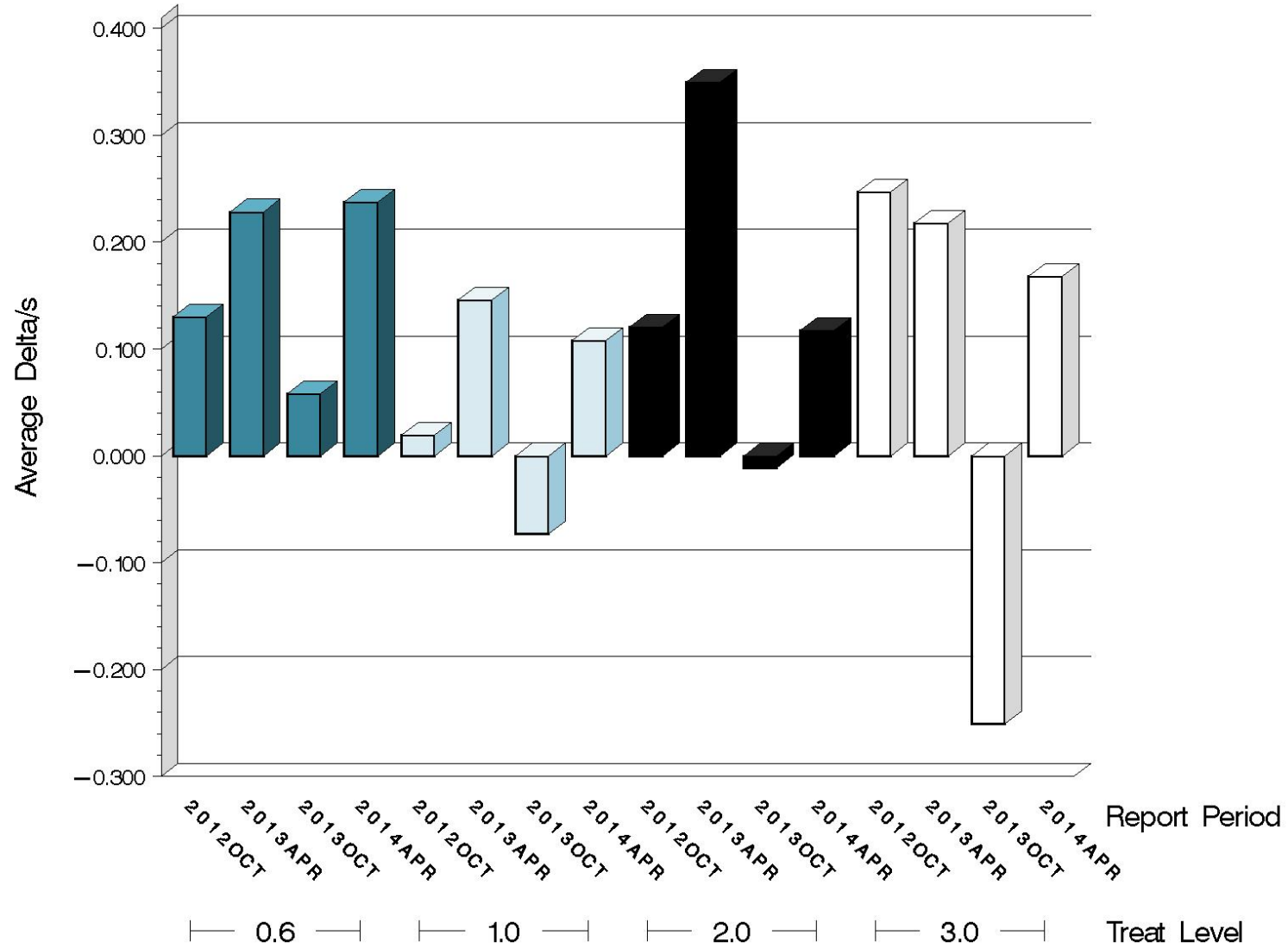
Individual test results can be found on the TMC Web Page at the following link:

<ftp://ftp.astmtmc.cmu.edu/refdata/bench/eowt/data/>



# EOWT (D 6794)

## AVERAGE DELTA/S



15:22:10 21MAY2014

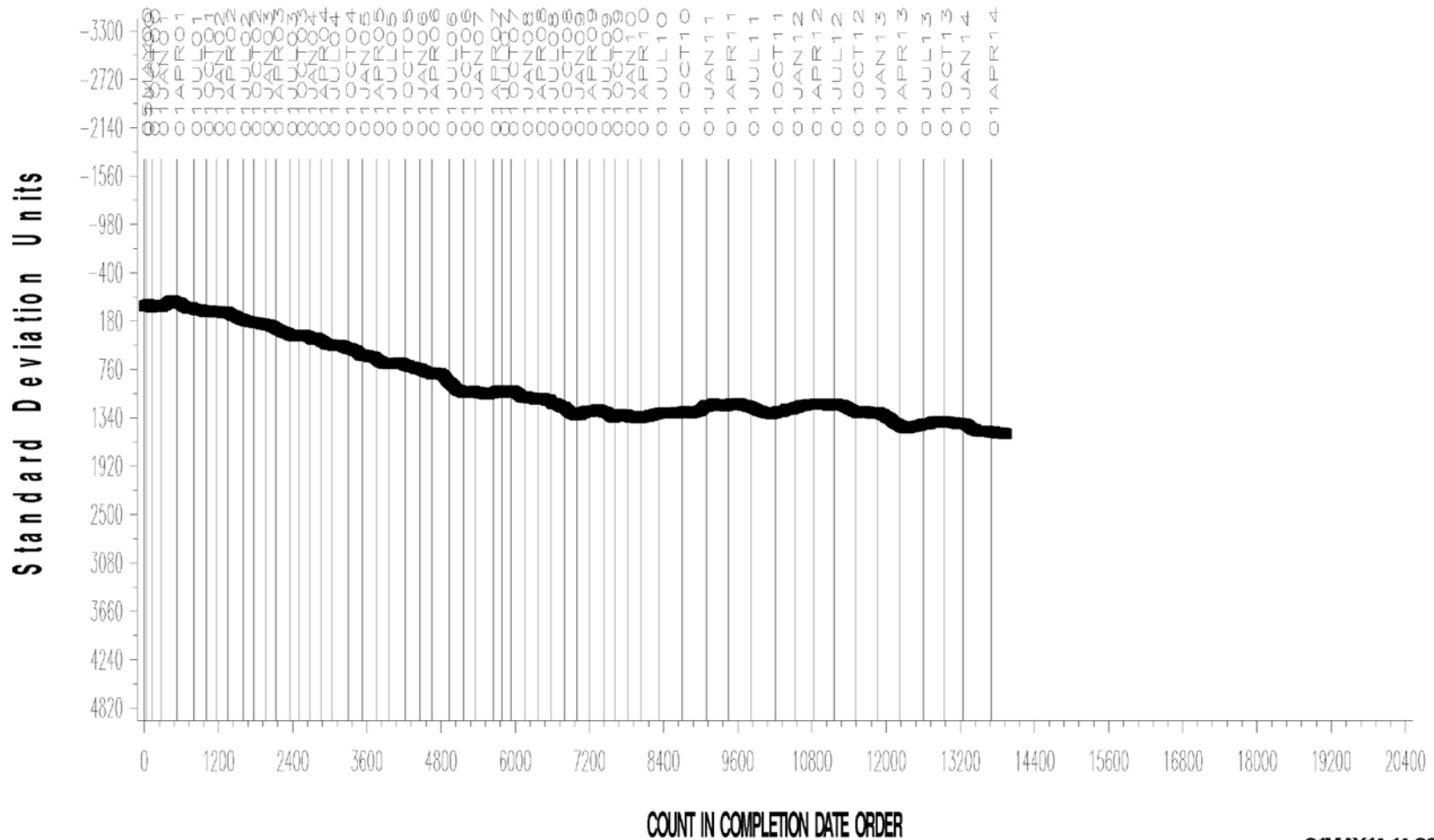
# EOWT (D 6794)

EOWT INDUSTRY OPERATIONALLY VALID DATA



20 — 25 ML CHANGE IN FLOWRATE AVG.

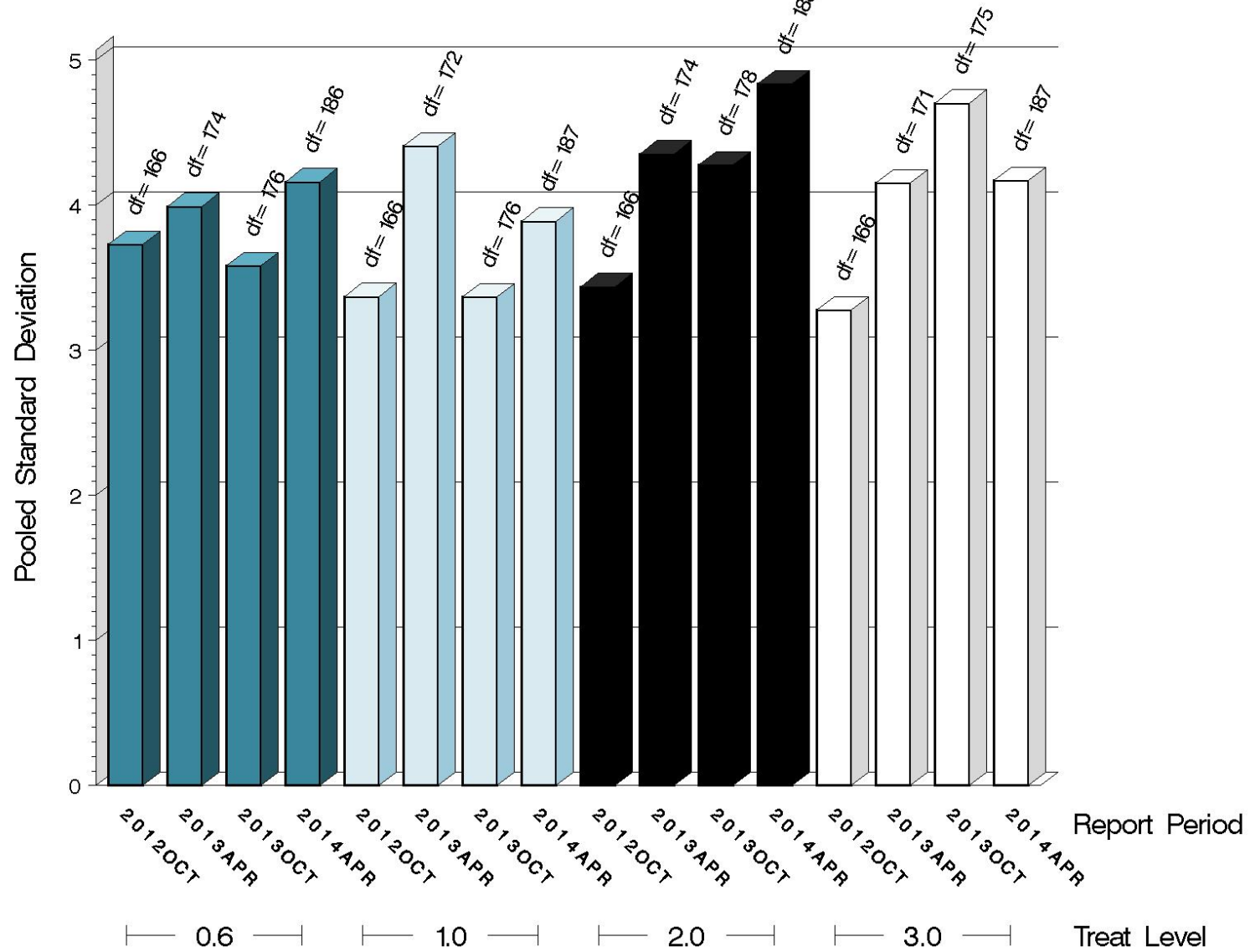
CUSUM Severity Analysis



21MAY14:14:26

# EOWT (D 6794)

## POOLED STANDARD DEVIATION



16:32:35 21MAY2014

# EOWT (D 6794)

## SUMMARY OF SEVERITY & PRECISION

### Severity

Over the course of this report period, CIFA severity, as measured by CUSUM plotting, is trending slightly severe.

### Precision

Pooled s values for this period are 4.16 (0.6%), 3.89 (1.0%), 4.84 (2.0%), and 4.17 (3.0%).

Precision, as measured by pooled standard deviation, is still comparable to historical performance.

# EOWT (D 6794)

## INFORMATION LETTERS

No EOWT Information Letters were issued this period.

# EOWT (D 6794)

## STATUS OF REFERENCE OIL SUPPLY

Oil	Samples @ Labs	@ TMC	
		Samples (290 mL)	Gallons
77-1	0	0	0
77-2	142	2706	208.4
78-1	0	0	0
78-2	148	772	59.5
Total	290	3478	267.9

The TMC supply of reference oils 77-1 & 78-1 have been depleted.

The TMC inventory of oil 78-2 is nearly depleted.

Work has begun to procure a reblend; reference oil 78-3.