Test Monitoring Center
6555 Penn Avenue
Pittsburgh, PA 15206-4489
(412) 365-1000

MEMORANDUM: 07-034

DATE: May 31, 2007

TO: Becky Grinfield,
Chairman, Engine Oil Elastomer Compatibility Surveillance Panel

FROM: Scott Parke

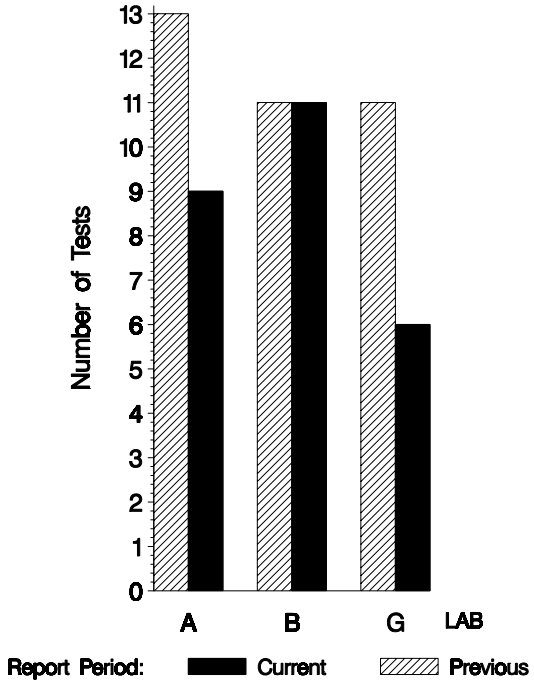
SUBJECT: EOEC Testing from October 1, 2006 through March 31, 2007

A total of 128 EOEC tests were reported to the Test Monitoring Center during the period from October 1, 2006 through March 31, 2007. The data from these tests is shown on page 8. Following is a summary of testing activity this period.

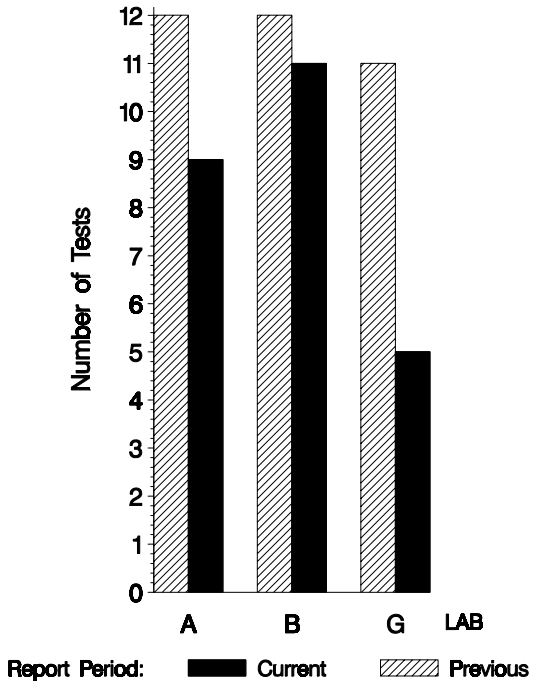
	Reporting Data
Number of Labs	3

Tests reported this period were distributed as shown below:

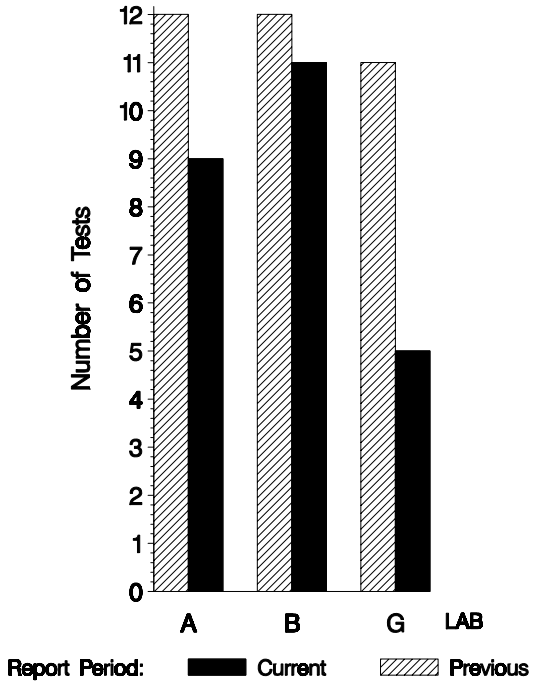
NUMBER OF FLUOROELASTOMER TESTS
REPORTED BY LAB AND REPORT PERIOD



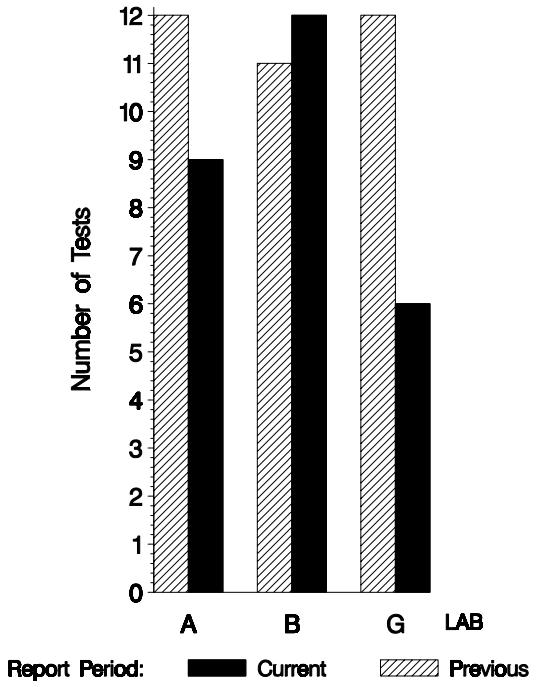
NUMBER OF NITRILE TESTS
REPORTED BY LAB AND REPORT PERIOD



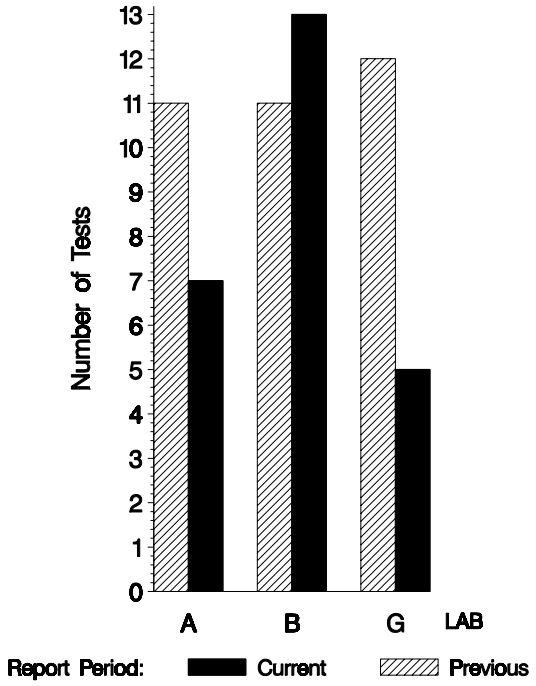
NUMBER OF POLYACRYLATE TESTS
REPORTED BY LAB AND REPORT PERIOD



NUMBER OF SILICONE TESTS
REPORTED BY LAB AND REPORT PERIOD

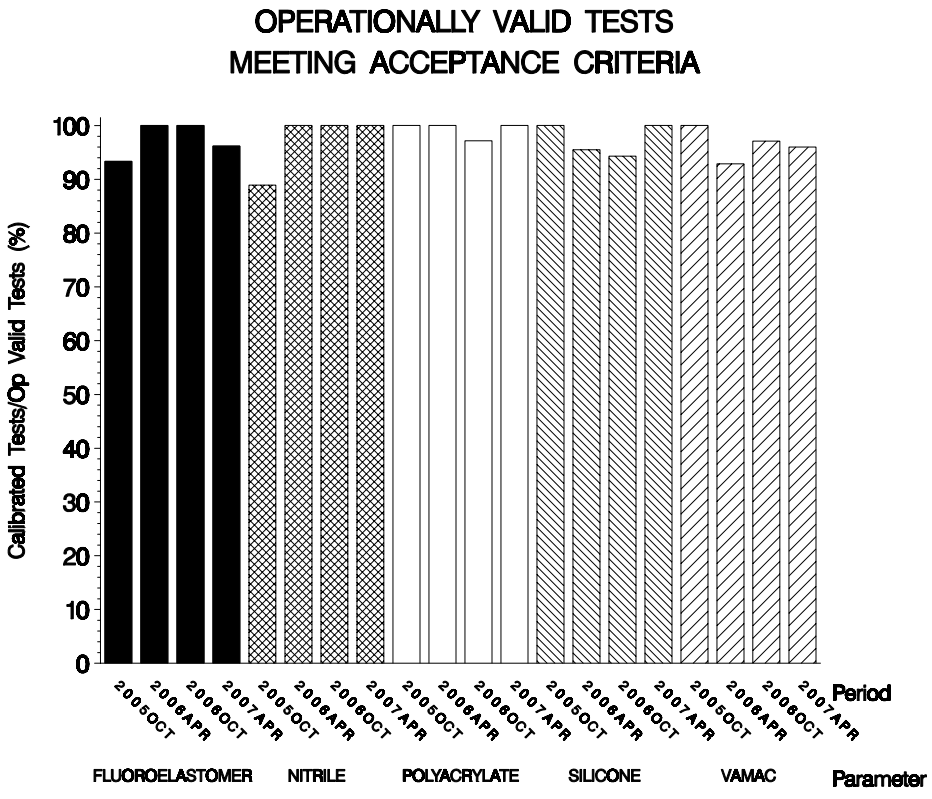


NUMBER OF VAMAC TESTS
REPORTED BY LAB AND REPORT PERIOD



Test Distribution by Oil and Validity

		Fluoroelastomer	Nitrile	Polyacrylate	Silicone	VAMAC	Totals Last Period	Totals This Period
Accepted for Calibration	AC	25	25	24	27	24	170	125
Rejected Mild	OC	0	0	0	0	1	2	1
Rejected Severe	OC	1	0	0	0	0	2	1
Information Run (not for calibration)	NI	0	0	1	0	0	0	1
Operationally Invalid (lab)	LC	0	0	0	0	0	0	0
Operationally Invalid (lab/TMC)	RC	0	0	0	0	0	0	0
Aborted Calibration	XC	0	0	0	0	0	0	0
Total		26	25	25	27	25	174	128



The above chart shows the percentage of accepted operationally valid tests. This period one fluoroelastomer and one VAMAC test failed to meet the acceptance criteria.

Lost Tests per Start by Lab and Elastomer Type

	Fluoroelastomer			**Nitrile**			**Polyacrylate**			**Silicone**			**VAMAC**			Total		
Lab	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%	Lost	Starts	%
A	0	9	0	0	9	0	0	9	0	0	9	0	0	7	0	0	60	0
B	0	11	0	0	11	0	0	11	0	0	12	0	0	13	0	0	57	0
G	0	6	0	0	5	0	0	5	0	0	6	0	0	5	0	0	57	0
Total	0	26	0	0	25	0	0	25	0	0	27	0	0	25	0	0	174	0

Lost tests are those that were either aborted, rejected by lab, or operationally invalid.

Causes for Lost Tests

Lab	Cause		Elastomer: Fluoroelastomer	Nitrile	Polyacrylate	Silicone	VAMAC	Validity: LC	RC	XC	Loss Rate: Lost	Starts	%
	No tests were lost this period.										0	128	0%
		Lost	0	0	0	0	0	0	0	0			
		Starts	26	25	25	27	25	128	128	128			
		%	0%	0%	0%	0%	0%	0%	0%	0%			

Average Δ/s by Lab						
Elastomer	Lab	n	VOLCYI	HARDYI	TENSYI	ELONYI
Fluoroelastomer	A	9	-0.563	0.268	-0.542	-0.893
	B	11	-0.596	-0.054	-0.014	-0.465
	G	6	1.363	-1.500	1.118	1.013
	Industry	26	-0.133	-0.276	0.065	-0.272
Nitrile	A	9	0.116	0.877	-1.515	-0.621
	B	11	0.971	1.316	-1.052	0.017
	G	5	0.593	0.073	0.337	-0.170
	Industry	25	0.588	0.910	-0.941	-0.250
Polyacrylate	A	9	0.129	0.777	-0.075	0.634
	B	11	0.650	0.081	0.090	-0.300
	G	4	0.796	0.561	-0.251	-0.297
	Industry	24	0.479	0.422	-0.029	0.051
Silicone	A	9	0.441	-0.650	-0.146	0.717
	B	12	1.129	-0.431	-1.077	0.621
	G	6	0.649	1.410	-0.375	-0.408
	Industry	27	0.793	-0.095	-0.611	0.424
VAMAC	A	7	0.392	-1.559	2.026	0.538
		13	1.053	-1.120	1.969	-0.191
	B	5	1.526	-0.747	0.922	0.516
	Industry	25	0.962	-1.168	1.775	0.155

DATA FROM ALL OPERATIONALLY VALID TESTS REPORTED THIS PERIOD:

FLUOROELASTOMER

LTMS DATE	LAB	VOLC	HARD	TENS	ELON	VOLCYI	HARDYI	TENSYI	ELONYI
20061004	A	0.49	6	-71.9	-63.6	-0.811	-0.591	-0.490	-0.546
20061019	B	0.37	7	-67.0	-60.8	-1.622	-0.136	0.426	-0.235
20061019	G	0.88	4	-61.5	-55.2	1.824	-1.500	1.454	0.388
20061102	A	0.50	8	-70.6	-59.9	-0.743	0.318	-0.247	-0.135
20061108	G	0.73	4	-59.6	-51.3	0.811	-1.500	1.809	0.822
20061110	A	0.56	8	-74.1	-70.2	-0.338	0.318	-0.901	-1.280
20061113	B	0.41	7	-67.4	-63.8	-1.351	-0.136	0.351	-0.568
20061116	G	0.73	4	-62.4	-52.0	0.811	-1.500	1.286	0.744
20061120	B	0.45	7	-72.4	-65.2	-1.081	-0.136	-0.583	-0.724
20061122	A	0.52	9	-71.6	-65.1	-0.608	0.773	-0.434	-0.713
20061127	B	0.67	8	-68.9	-56.7	0.405	0.318	0.071	0.221
20061219	B	0.86	6	-65.2	-54.5	1.689	-0.591	0.763	0.466
20061227	B	0.47	7	-71.3	-66.9	-0.946	-0.136	-0.378	-0.913
20070103	A	0.52	8	-72.1	-65.8	-0.608	0.318	-0.527	-0.791
20070105	B	0.56	7	-69.7	-65.8	-0.338	-0.136	-0.079	-0.791
20070206	G	0.88	4	-64.1	-46.7	1.824	-1.500	0.968	1.334
20070212	B	0.36	7	-69.0	-63.6	-1.689	-0.136	0.052	-0.546
20070214	A	0.56	8	-72.4	-67.7	-0.338	0.318	-0.583	-1.002
20070223	G	0.57	5	-64.9	-46.3	-0.270	-1.045	0.819	1.378
20070227	B	0.55	7	-71.7	-67.5	-0.405	-0.136	-0.452	-0.980
20070228	A	0.44	8	-72.8	-68.4	-1.149	0.318	-0.658	-1.080
20070308	B	0.38	7	-70.7	-64.4	-1.554	-0.136	-0.265	-0.635
20070320	B	0.66	9	-69.6	-62.4	0.338	0.773	-0.060	-0.413
20070321	A	0.62	8	-72.1	-69.3	0.068	0.318	-0.527	-1.180
20070328	A	0.53	8	-72.0	-70.5	-0.541	0.318	-0.508	-1.314
20070331	G	1.08	3	-67.3	-46.0	3.176	-1.955	0.370	1.412

NITRILE

LTMS DATE	LAB	VOLC	HARD	TENS	ELON	VOLCYI	HARDYI	TENSYI	ELONYI
20061002	A	0.47	3	-40.8	-55.8	-0.298	0.751	-1.819	-0.735
20061017	G	1.14	1	-24.2	-47.0	0.500	-0.379	0.446	0.574
20061023	B	1.32	5	-36.2	-47.2	0.714	1.881	-1.191	0.545
20061031	A	0.56	2	-34.2	-52.1	-0.190	0.186	-0.918	-0.185
20061108	G	1.33	1	-21.5	-53.2	0.726	-0.379	0.814	-0.348
20061108	A	0.85	4	-41.3	-56.1	0.155	1.316	-1.887	-0.780
20061110	B	1.66	4	-27.6	-51.8	1.119	1.316	-0.018	-0.140
20061115	G	1.15	2	-15.1	-48.2	0.512	0.186	1.688	0.396
20061117	B	1.45	4	-39.1	-59.9	0.869	1.316	-1.587	-1.345
20061120	A	0.85	4	-39.0	-48.3	0.155	1.316	-1.573	0.381
20061127	B	1.59	5	-29.8	-43.0	1.036	1.881	-0.318	1.170
20061220	B	1.63	4	-37.2	-53.8	1.083	1.316	-1.327	-0.437
20070102	B	1.68	3	-42.2	-54.4	1.143	0.751	-2.010	-0.527
20070123	A	1.13	2	-37.5	-57.3	0.488	0.186	-1.368	-0.958
20070201	B	1.51	3	-37.2	-39.8	0.940	0.751	-1.327	1.646
20070206	G	1.74	2	-31.9	-56.2	1.214	0.186	-0.604	-0.795
20070212	A	1.04	2	-36.9	-54.4	0.381	0.186	-1.286	-0.527
20070215	B	1.54	3	-30.1	-50.1	0.976	0.751	-0.359	0.113
20070222	G	0.73	3	-32.3	-55.4	0.012	0.751	-0.659	-0.676
20070226	A	1.12	5	-41.2	-58.9	0.476	1.881	-1.873	-1.196
20070228	B	1.49	3	-34.7	-54.1	0.917	0.751	-0.986	-0.482
20070312	B	1.38	4	-37.3	-53.0	0.786	1.316	-1.341	-0.318
20070319	B	1.64	6	-35.6	-51.1	1.095	2.446	-1.109	-0.036
20070322	A	0.65	4	-38.1	-53.4	-0.083	1.316	-1.450	-0.378
20070326	A	0.69	3	-38.2	-59.0	-0.036	0.751	-1.464	-1.211

POLYACRYLATE

LTMS DATE	LAB	VOLC	HARD	TENS	ELON	VOLCYI	HARDYI	TENSYI	ELONYI
20061003	A	1.03	0	6.0	-11.2	0.250	0.839	0.642	0.768
20061004	B	1.19	-2	1.4	-33.9	0.461	-0.272	0.071	-1.768
20061017	G	1.50	0	6.0	-19.1	0.868	0.839	0.642	-0.115
20061020	B	1.09	-1	-0.2	-28.9	0.329	0.283	-0.126	-1.209
20061101	A	1.38	0	-2.5	-8.1	0.711	0.839	-0.415	1.115
20061109	A	1.00	0	-6.7	-9.0	0.211	0.839	-0.938	1.015
20061113	G	1.49	0	-7.2	-5.6	0.855	0.839	-1.000	1.395
20061113	B	1.35	-1	0.5	-25.7	0.671	0.283	-0.044	-0.849
20061116	G	1.23	0	-7.3	-25.0	0.513	0.839	-1.012	-0.775
20061120	B	1.52	0	-0.3	-7.7	0.895	0.839	-0.137	1.155
20061121	A	0.99	0	0.7	-5.3	0.197	0.839	-0.017	1.428
20061128	B	1.44	-1	-1.8	-34.8	0.789	0.283	-0.328	-1.870
20061219	B	1.37	-2	9.2	-23.5	0.697	-0.272	1.042	-0.611
20061228	B	1.28	-1	-2.7	-2.3	0.579	0.283	-0.444	1.766
20070102	A	0.24	1	4.6	-12.8	-0.789	1.394	0.468	0.589
20070213	B	1.29	0	-1.6	-18.7	0.592	0.839	-0.307	-0.075
20070213	A	0.98	-2	1.7	-25.4	0.184	-0.272	0.107	-0.820
20070222	G	1.56	-2	3.8	-33.2	0.947	-0.272	0.368	-1.692
20070227	A	1.02	0	-7.6	-18.6	0.237	0.839	-1.050	-0.059
20070301	B	1.24	-1	0.8	-17.9	0.526	0.283	-0.011	0.025
20070309	B	1.28	-3	8.4	-16.8	0.579	-0.828	0.937	0.142
20070320	B	1.62	-3	3.5	-18.1	1.026	-0.828	0.332	-0.002
20070320	A	1.06	-1	4.9	-14.9	0.289	0.283	0.505	0.355
20070327	A	0.74	1	1.0	-6.3	-0.132	1.394	0.020	1.317

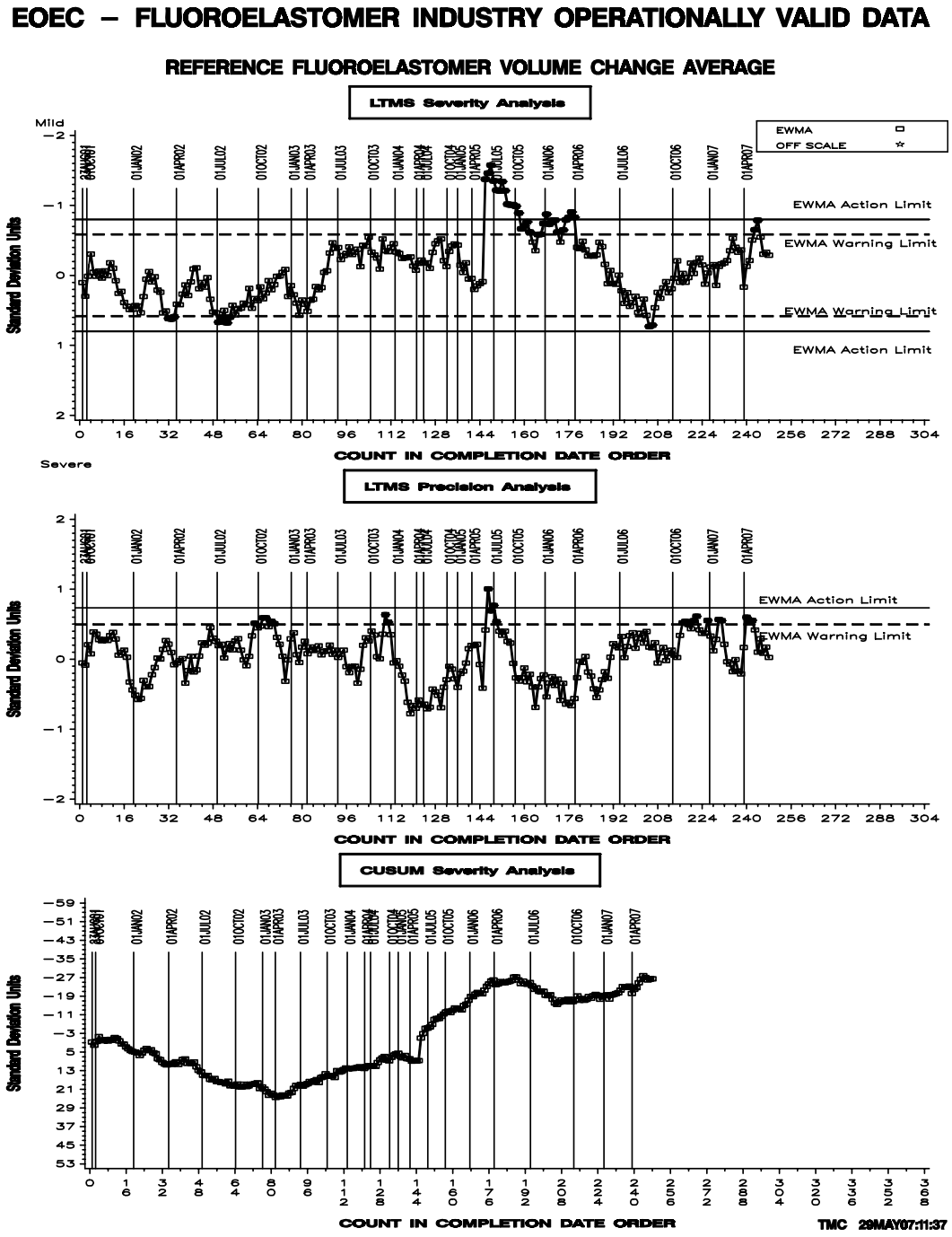
SILICONE

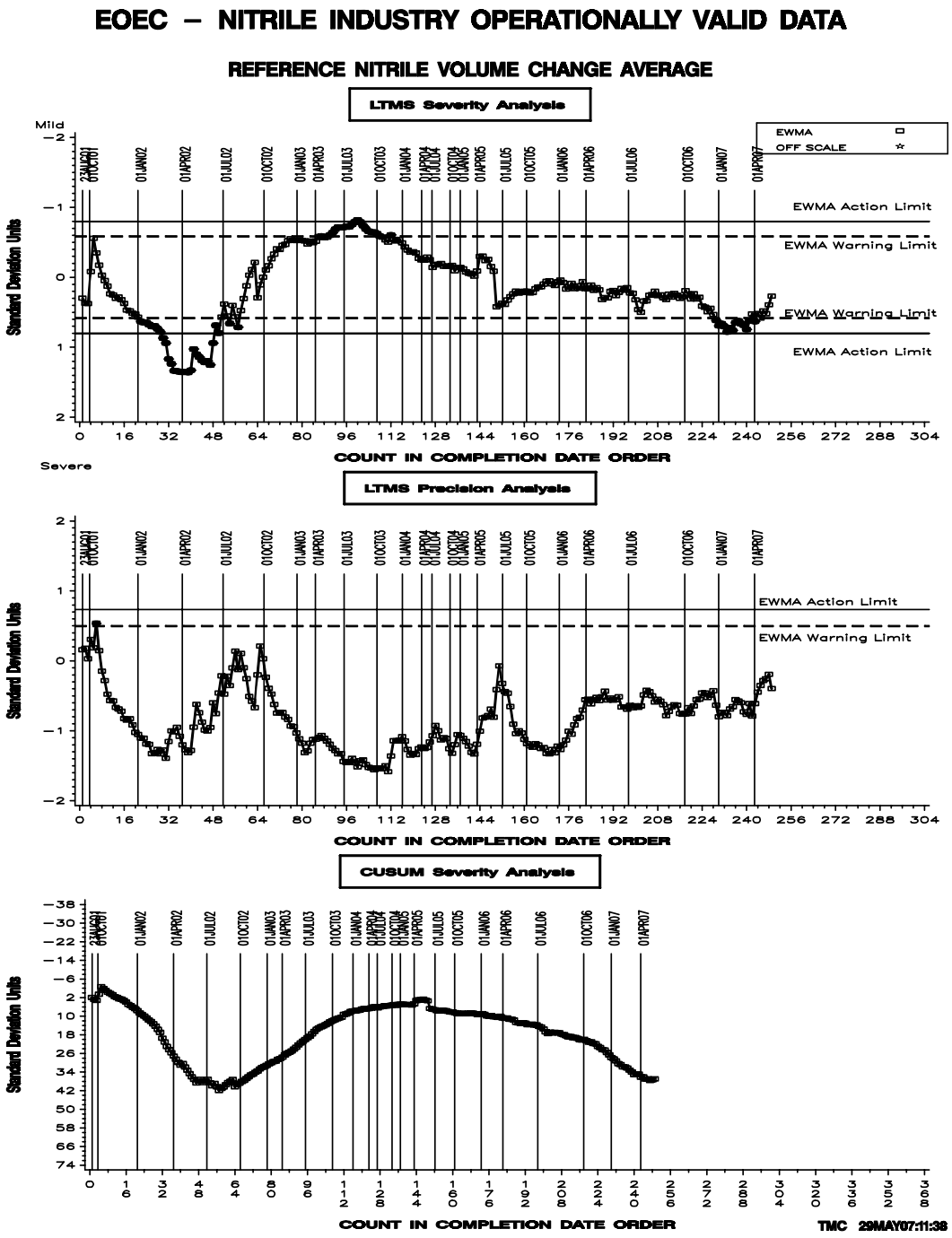
LTMS DATE	LAB	VOLC	HARD	TENS	ELON	VOLCYI	HARDYI	TENSYI	ELONYI
20061002	B	29.88	-19	-16.9	-16.9	1.542	-0.187	-0.773	0.914
20061005	A	28.10	-20	-13.4	-12.9	0.758	-0.604	0.047	1.489
20061019	G	29.60	-15	-12.8	-17.6	1.419	1.479	0.187	0.813
20061024	B	28.92	-20	-15.4	-22.2	1.119	-0.604	-0.422	0.151
20061103	A	26.20	-20	-15.5	-13.0	-0.079	-0.604	-0.445	1.475
20061113	B	29.41	-20	-23.2	-37.8	1.335	-0.604	-2.248	-2.094
20061113	G	26.68	-15	-15.8	-23.2	0.132	1.479	-0.515	0.007
20061114	A	29.31	-20	-15.0	-20.9	1.291	-0.604	-0.328	0.338
20061115	G	27.86	-16	-20.0	-30.1	0.652	1.063	-1.499	-0.986
20061121	B	28.87	-20	-22.5	-22.7	1.097	-0.604	-2.084	0.079
20061124	A	28.39	-19	-11.2	-22.0	0.885	-0.187	0.562	0.180
20061128	B	28.65	-19	-16.2	-11.8	1.000	-0.187	-0.609	1.647
20061220	B	28.69	-19	-9.4	-9.0	1.018	-0.187	0.984	2.050
20061229	B	28.47	-19	-17.2	-17.6	0.921	-0.187	-0.843	0.813
20070104	A	28.90	-21	-16.2	-18.8	1.110	-1.021	-0.609	0.640
20070206	G	28.44	-14	-20.0	-34.0	0.907	1.896	-1.499	-1.547
20070208	B	28.67	-20	-21.5	-15.2	1.009	-0.604	-1.850	1.158
20070214	B	28.14	-19	-22.9	-20.7	0.775	-0.187	-2.178	0.367
20070215	A	26.74	-21	-5.7	-17.9	0.159	-1.021	1.850	0.770
20070223	G	26.76	-14	-15.1	-27.5	0.167	1.896	-0.351	-0.612
20070301	B	28.94	-21	-13.1	-13.0	1.128	-1.021	0.117	1.475
20070301	A	26.87	-21	-20.9	-29.6	0.216	-1.021	-1.710	-0.914
20070314	B	29.52	-20	-18.8	-24.9	1.383	-0.604	-1.218	-0.237
20070319	A	26.49	-20	-9.2	-6.1	0.048	-0.604	1.030	2.468
20070320	B	29.16	-19	-21.3	-15.4	1.225	-0.187	-1.803	1.129
20070329	A	25.43	-19	-20.9	-23.2	-0.419	-0.187	-1.710	0.007
20070331	G	27.78	-17	-7.5	-24.1	0.617	0.646	1.429	-0.122

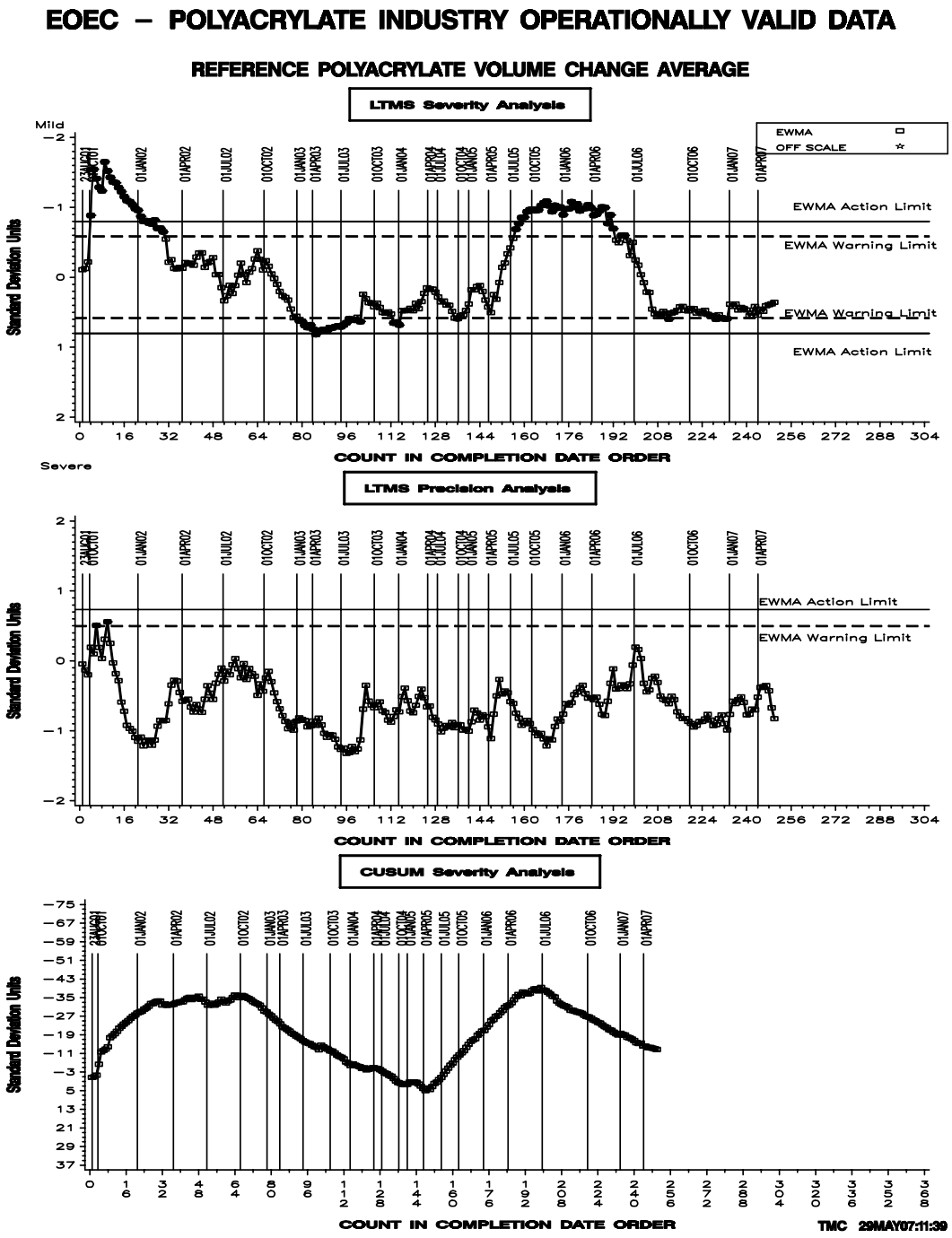
VAMAC

LTMS DATE	LAB	VOLC	HARD	TENS	ELON	VOLCYI	HARDYI	TENSYI	ELONYI
20061002	B	20.97	-10	-10.7	-25.7	1.346	-2.011	1.901	0.116
20061006	A	19.55	-10	-3.9	-16.1	0.739	-2.011	2.907	0.897
20061019	G	21.48	-9	-23.5	-21.1	1.564	-0.958	0.007	0.490
20061025	B	20.16	-8	-9.7	-25.3	1.000	0.095	2.049	0.148
20061106	A	19.77	-11	-5.1	-11.3	0.833	-3.063	2.729	1.288
20061108	G	22.13	-9	-14.4	-13.7	1.842	-0.958	1.354	1.093
20061113	B	21.04	-9	-10.1	-39.6	1.376	-0.958	1.990	-1.016
20061115	A	19.59	-10	-14.1	-20.4	0.756	-2.011	1.398	0.547
20061116	G	20.63	-9	-17.3	-16.8	1.201	-0.958	0.925	0.840
20061117	B	20.98	-10	-8.8	-15.9	1.350	-2.011	2.182	0.914
20061127	A	19.35	-8	-9.4	-20.2	0.654	0.095	2.093	0.564
20061128	B	20.68	-9	-9.3	-36.1	1.222	-0.958	2.108	-0.731
20061212	B	20.22	-9	-6.9	-25.8	1.026	-0.958	2.463	0.107
20061219	B	20.07	-10	-9.3	-30.4	0.962	-2.011	2.108	-0.267
20061227	B	20.26	-10	-10.7	-27.0	1.043	-2.011	1.901	0.010
20070130	B	19.72	-8	-10.5	-28.6	0.812	0.095	1.930	-0.121
20070206	G	22.49	-9	-17.5	-26.4	1.996	-0.958	0.895	0.059
20070207	B	20.13	-9	-12.5	-36.9	0.987	-0.958	1.635	-0.796
20070214	B	19.12	-8	-14.8	-40.0	0.556	0.095	1.294	-1.049
20070216	A	18.97	-10	-14.0	-22.9	0.491	-2.011	1.413	0.344
20070223	G	20.22	-8	-13.9	-25.9	1.026	0.095	1.428	0.099
20070228	B	19.71	-9	-10.8	-25.8	0.808	-0.958	1.886	0.107
20070302	A	19.41	-10	-12.0	-19.3	0.679	-2.011	1.709	0.637
20070313	B	20.63	-10	-9.0	-25.9	1.201	-2.011	2.152	0.099
20070330	A	14.52	-8	-10.5	-33.4	-1.410	0.095	1.930	-0.511

LTMS CONTROL CHARTS




EOEC – NITRILE INDUSTRY OPERATIONALLY VALID DATA
REFERENCE NITRILE VOLUME CHANGE AVERAGE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:38


EOEC – POLYACRYLATE INDUSTRY OPERATIONALLY VALID DATA
REFERENCE POLYACRYLATE VOLUME CHANGE AVERAGE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
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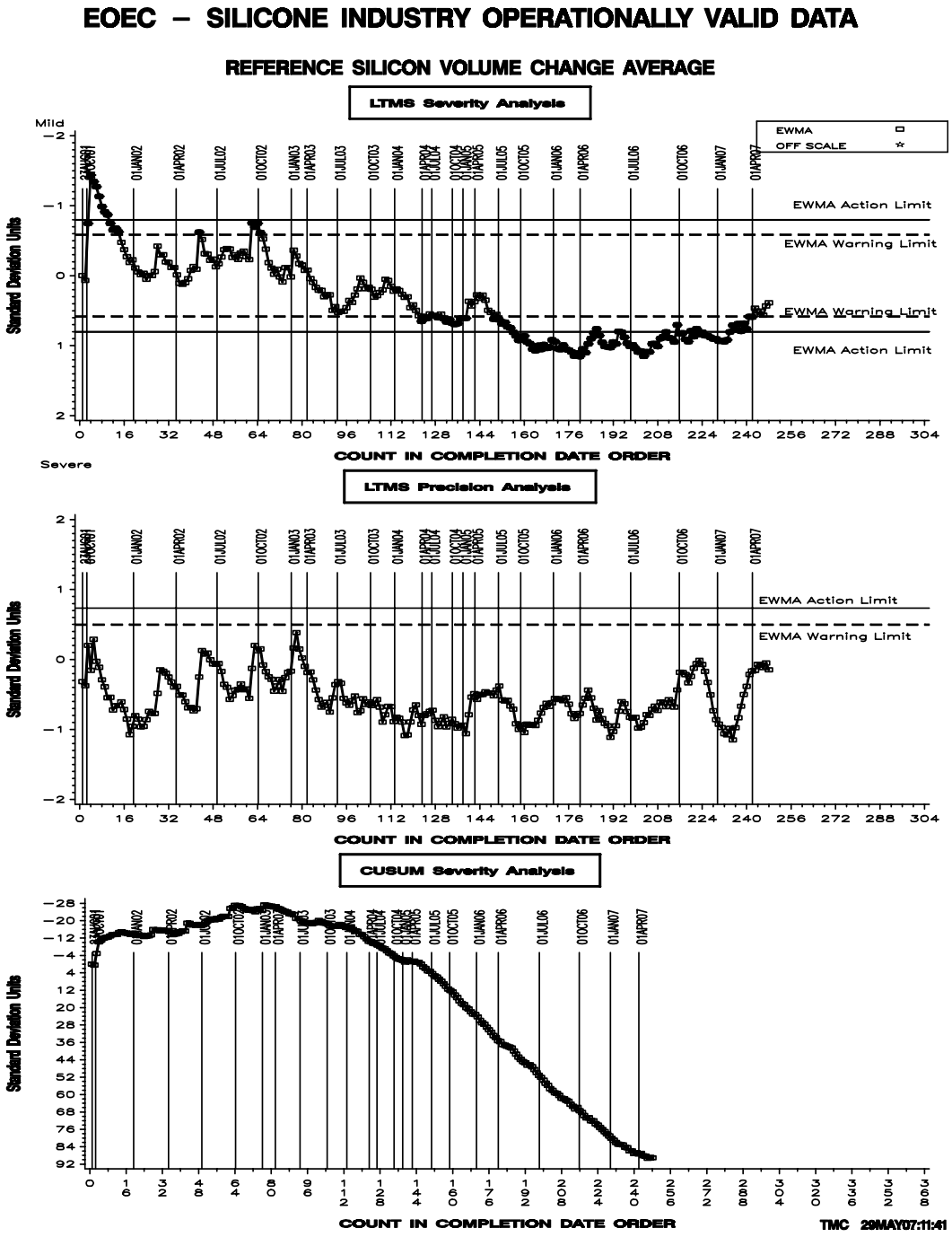
EOEC – SILICONE INDUSTRY OPERATIONALLY VALID DATA
REFERENCE SILICON VOLUME CHANGE AVERAGE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
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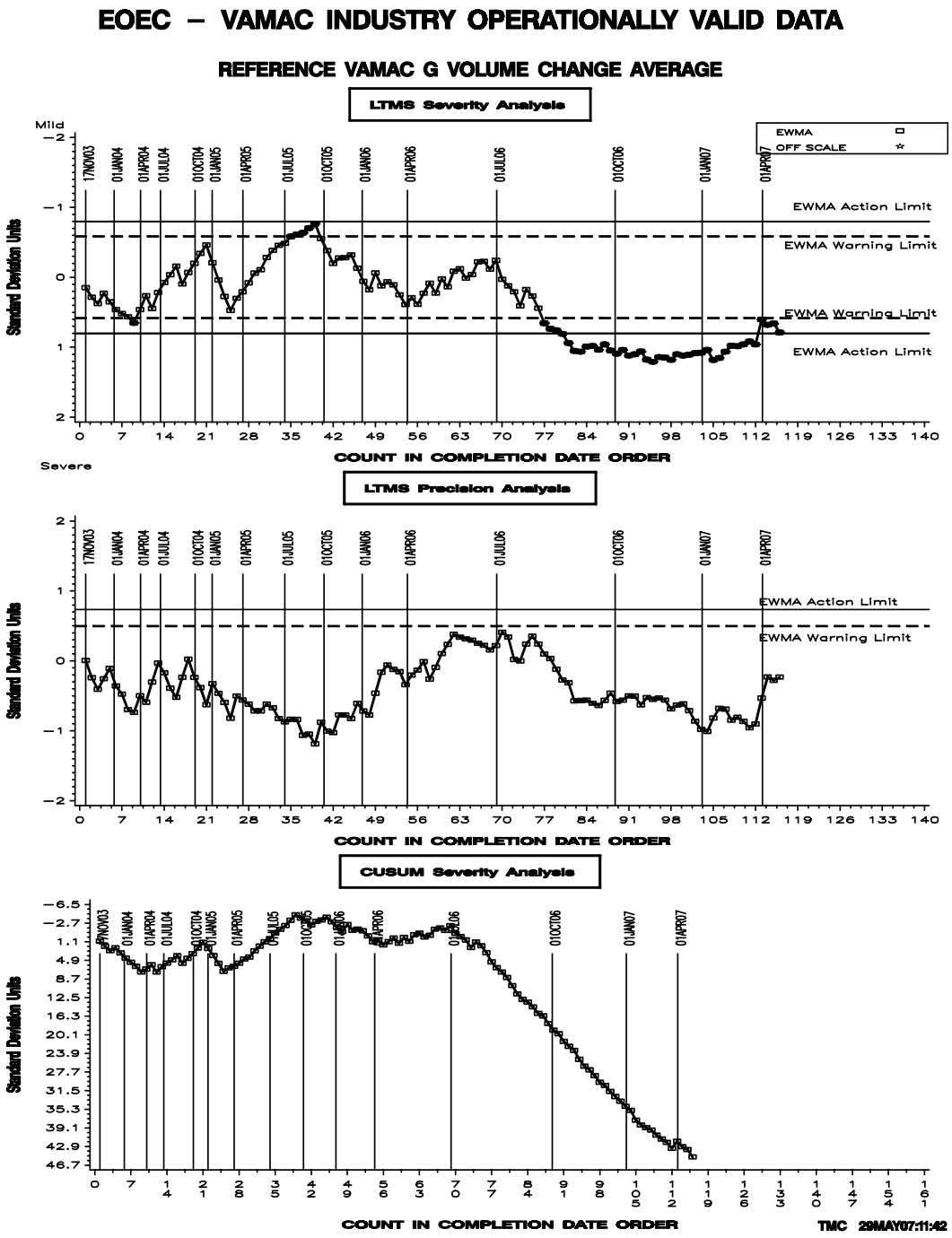
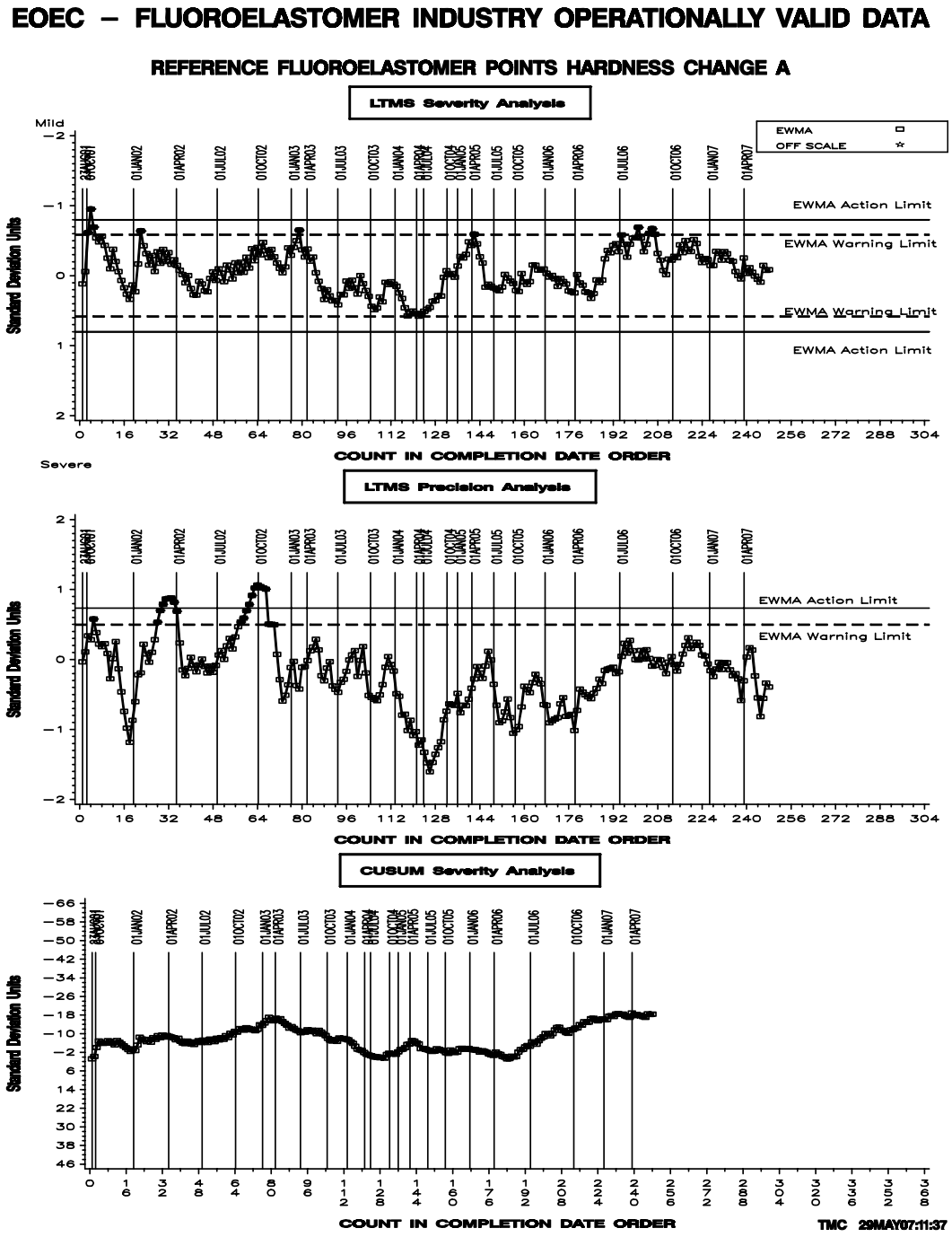
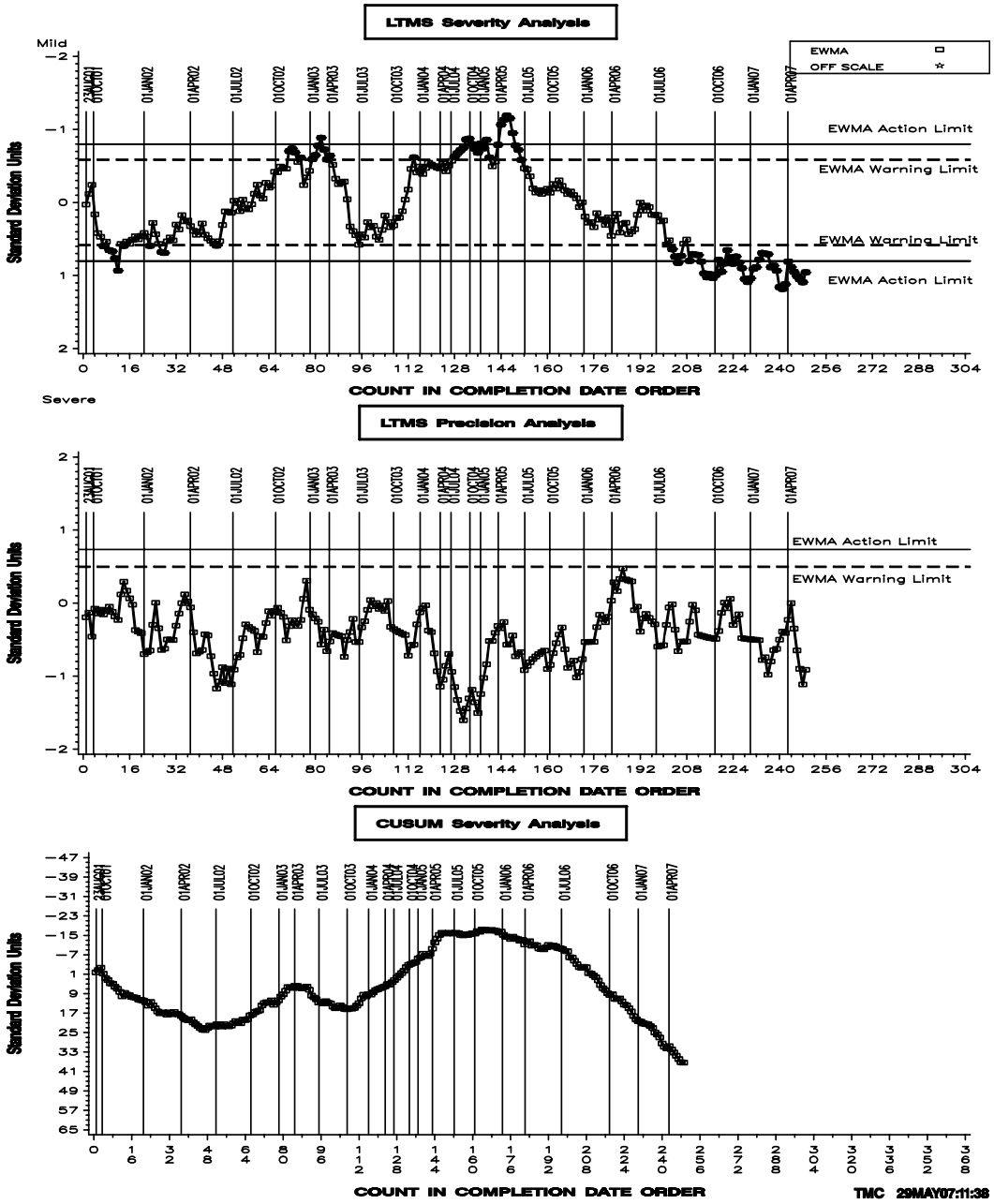
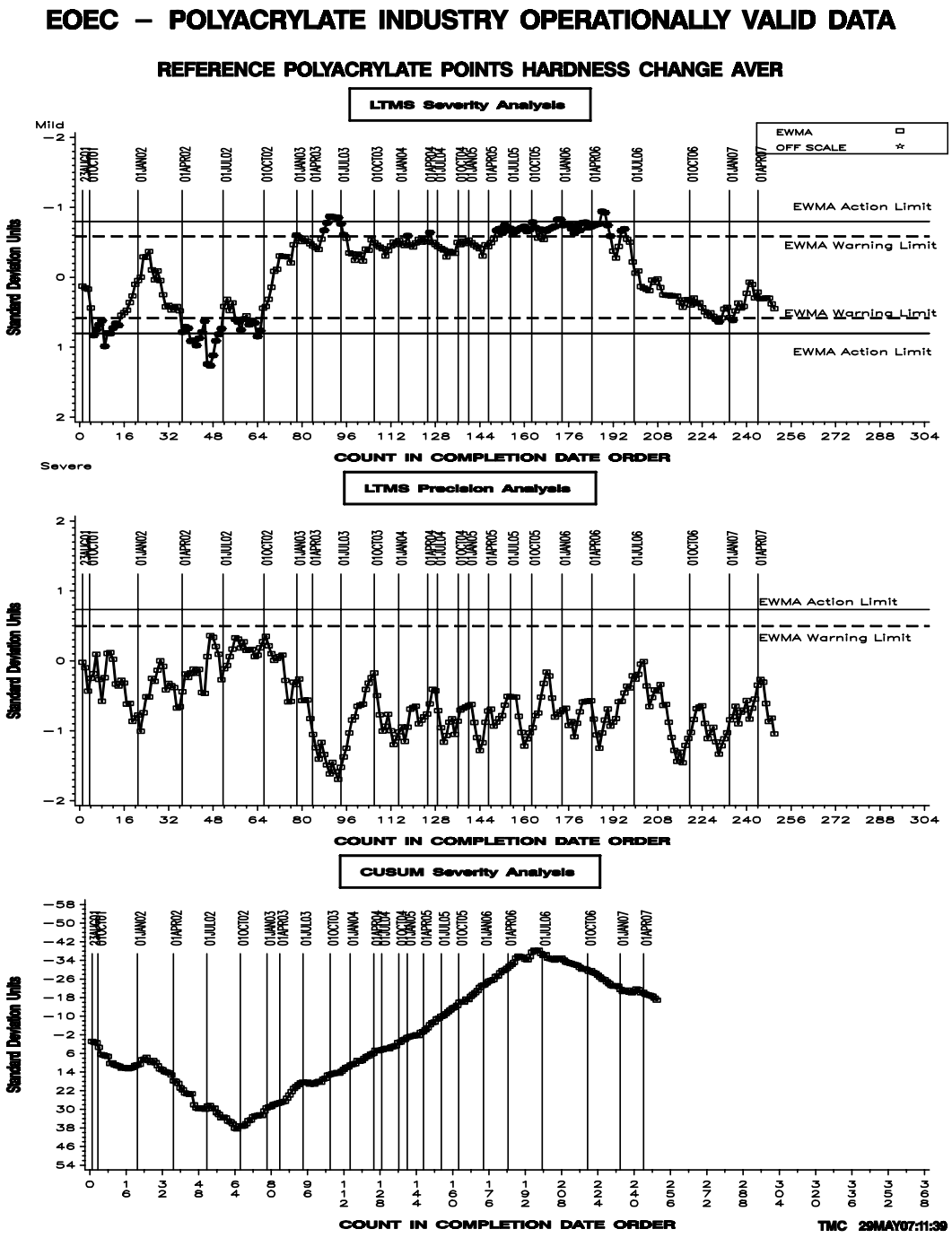

EOEC – VAMAC INDUSTRY OPERATIONALLY VALID DATA
REFERENCE VAMAC G VOLUME CHANGE AVERAGE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
17NOV03
01JAN04
01APR04
01JUL04
01OCT04
01JAN05
01APR05
01JUL05
01OCT05
01JAN06
01APR06
01JUL06
01OCT06
01JAN07
01APR07
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
CUSUM Severity Analysis
TMC 29MAY07:11:42

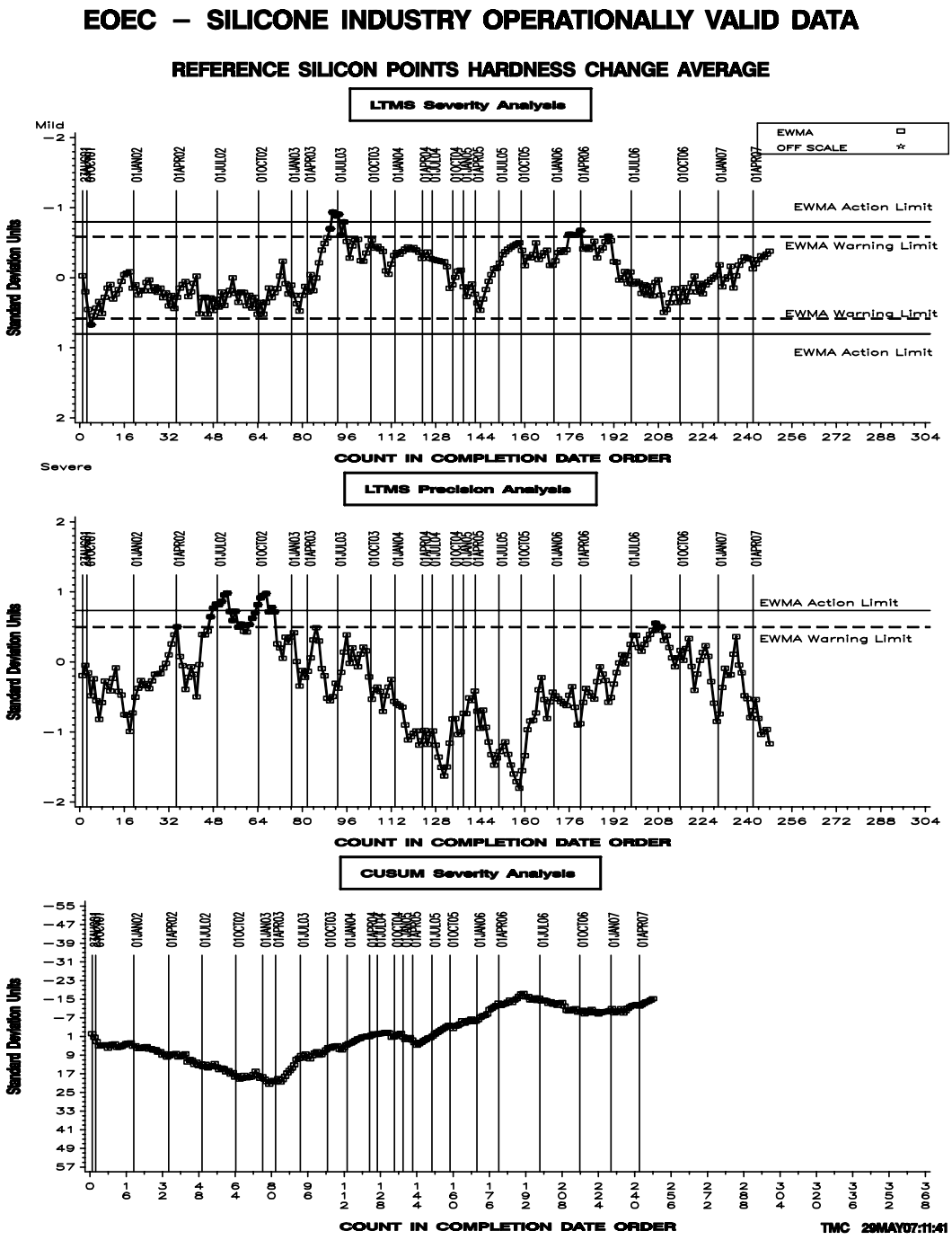

EOEC – FLUOROELASTOMER INDUSTRY OPERATIONALLY VALID DATA
REFERENCE FLUOROELASTOMER POINTS HARDNESS CHANGE A
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:37

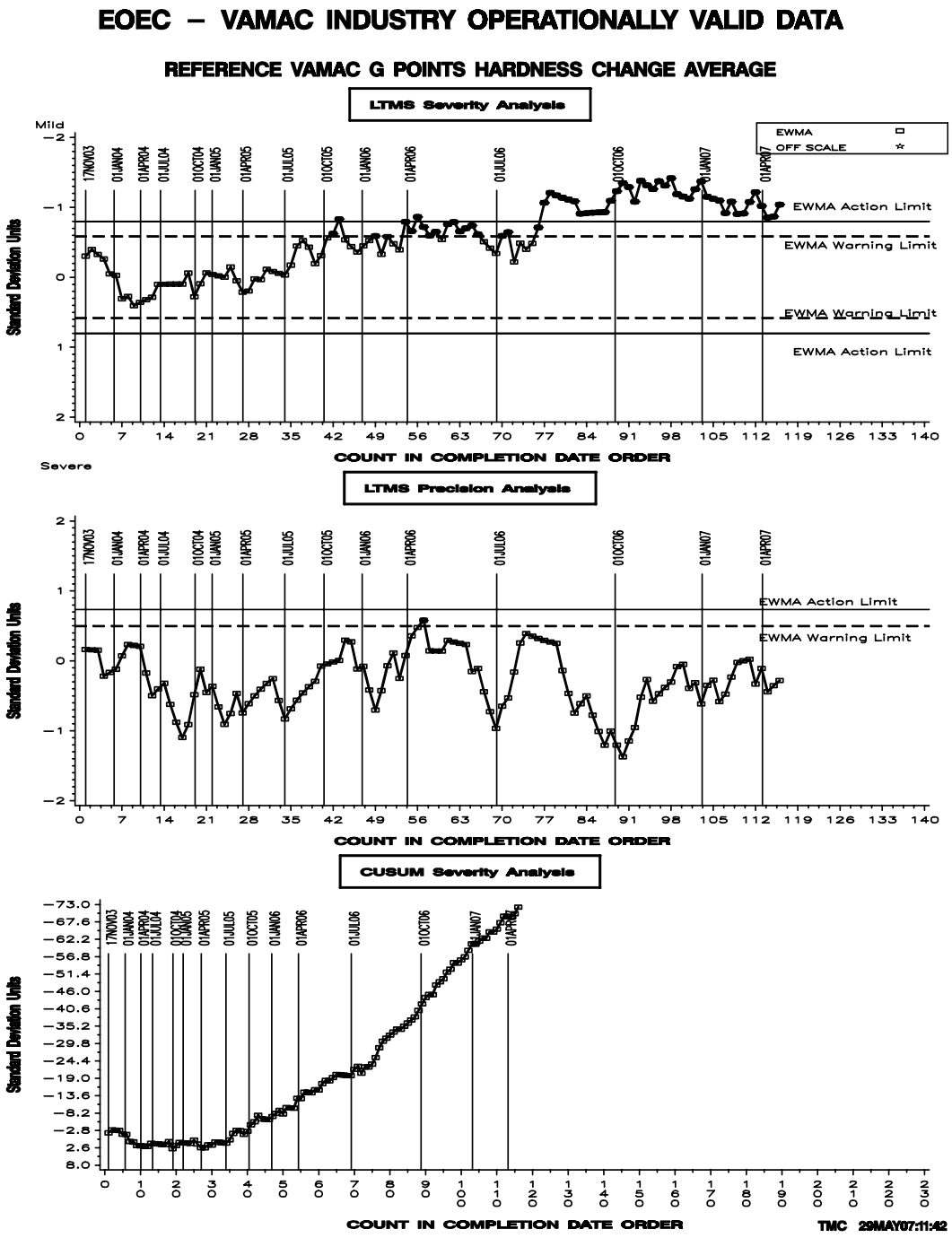
EOEC – NITRILE INDUSTRY OPERATIONALLY VALID DATA

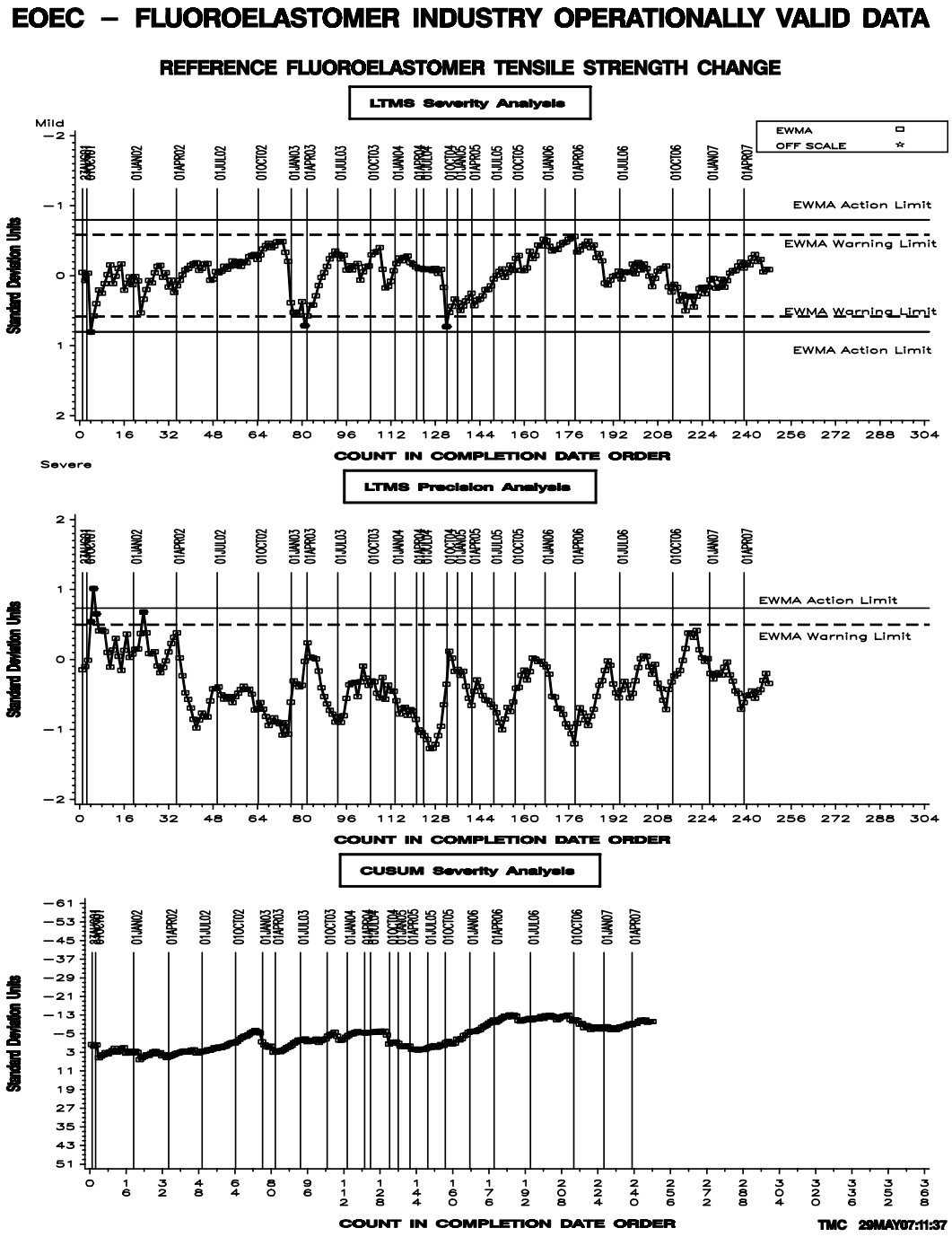
REFERENCE NITRILE POINTS HARDNESS CHANGE AVERAGE

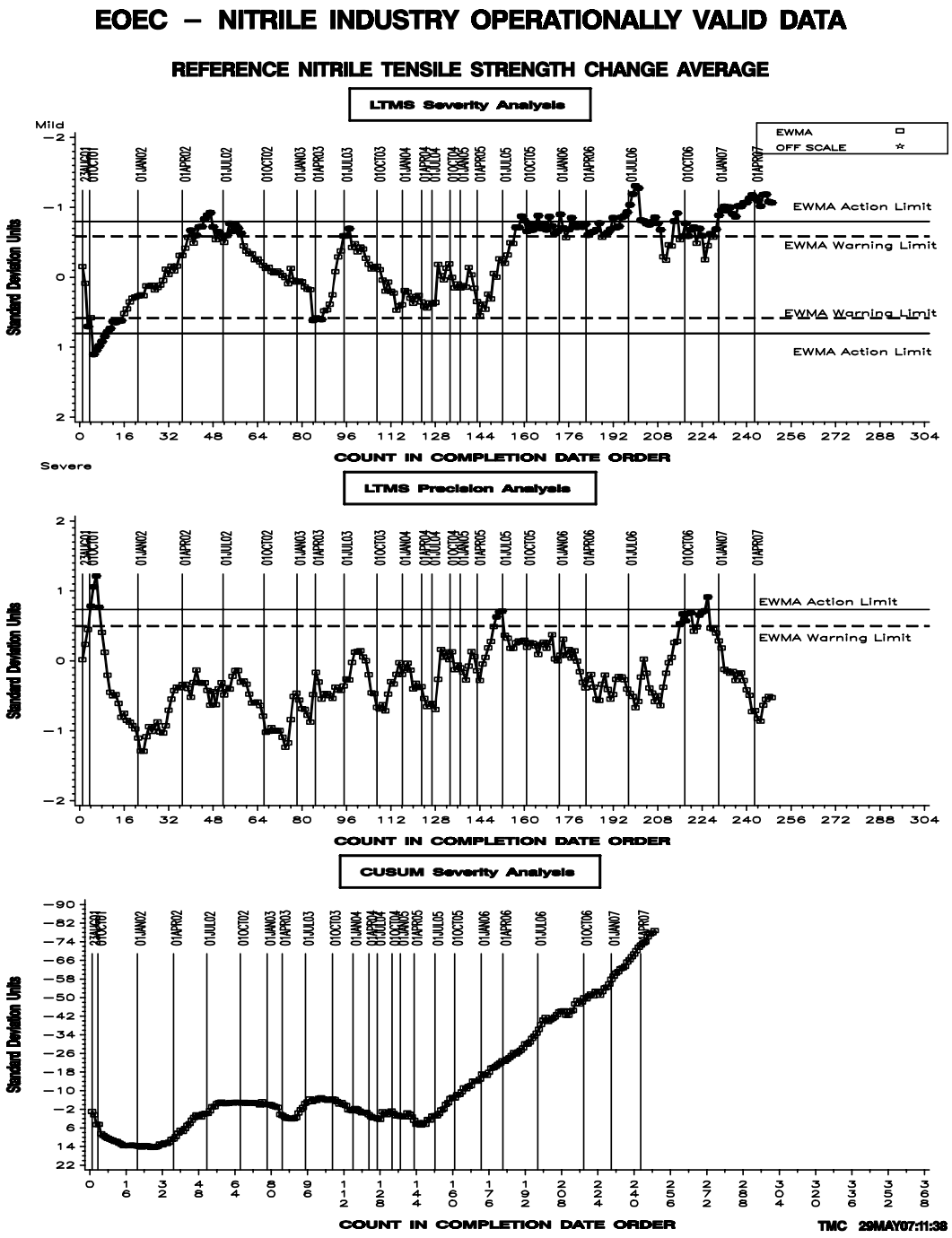


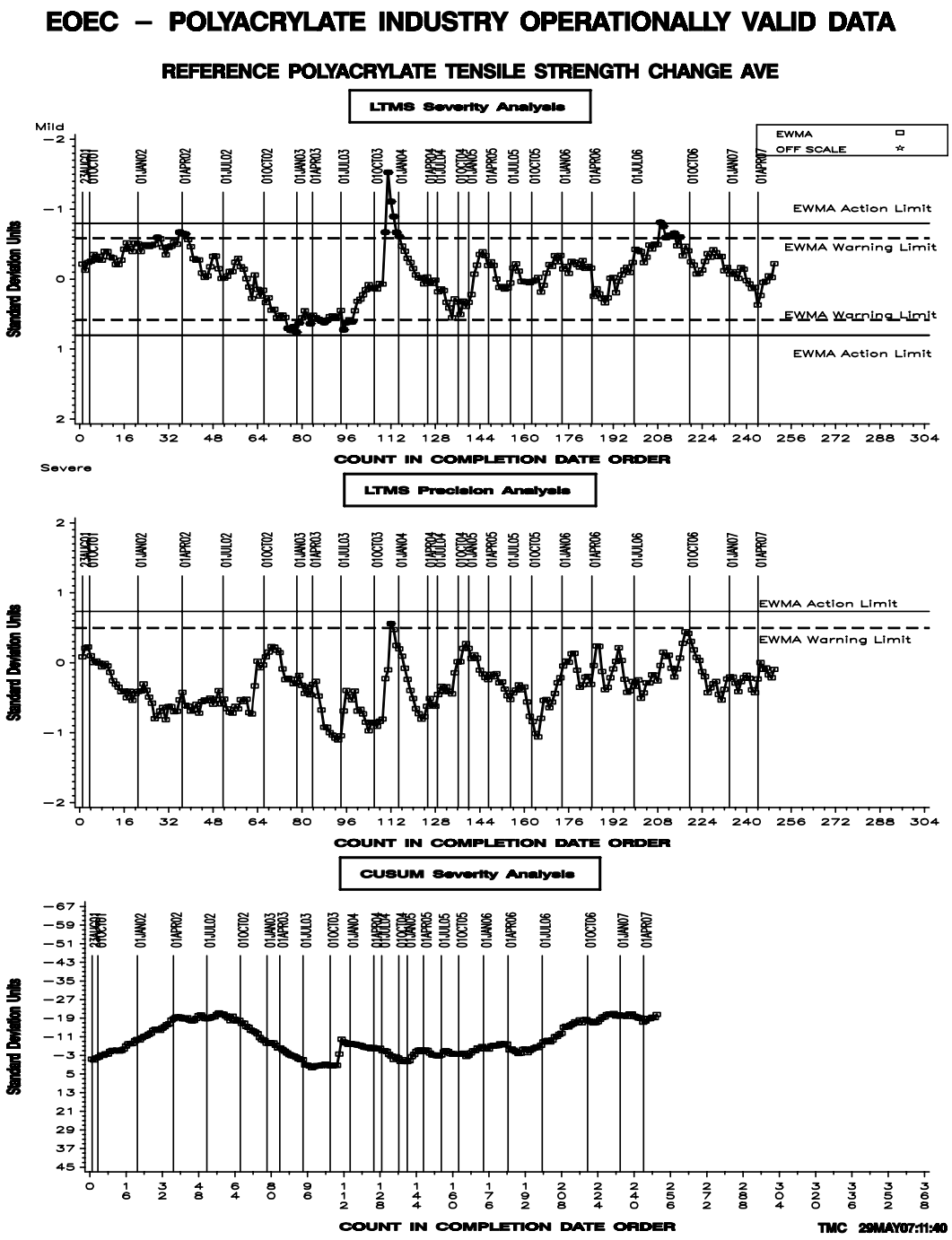

EOEC – POLYACRYLATE INDUSTRY OPERATIONALLY VALID DATA
REFERENCE POLYACRYLATE POINTS HARDNESS CHANGE AVER
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:39

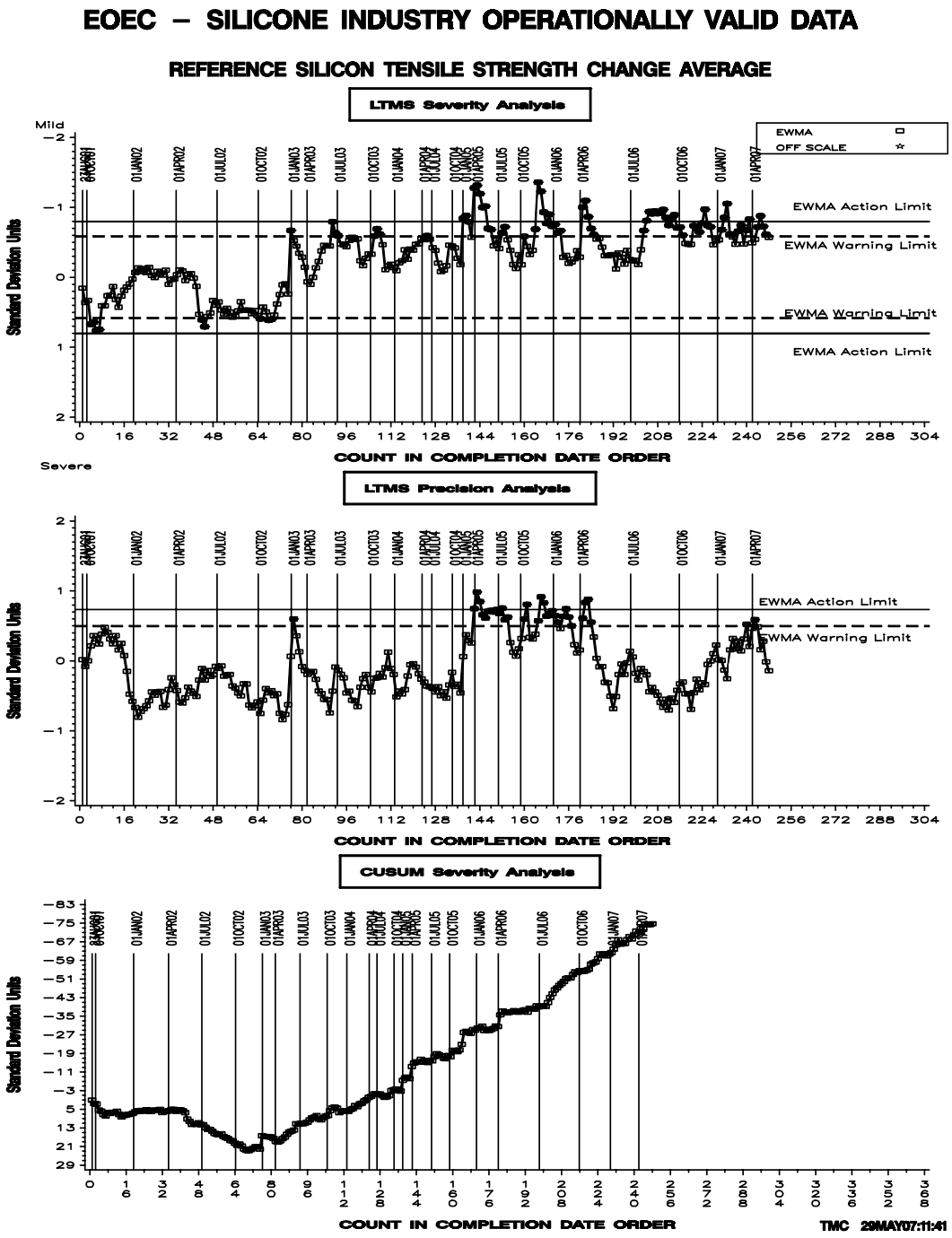

EOEC – SILICONE INDUSTRY OPERATIONALLY VALID DATA
REFERENCE SILICON POINTS HARDNESS CHANGE AVERAGE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:41

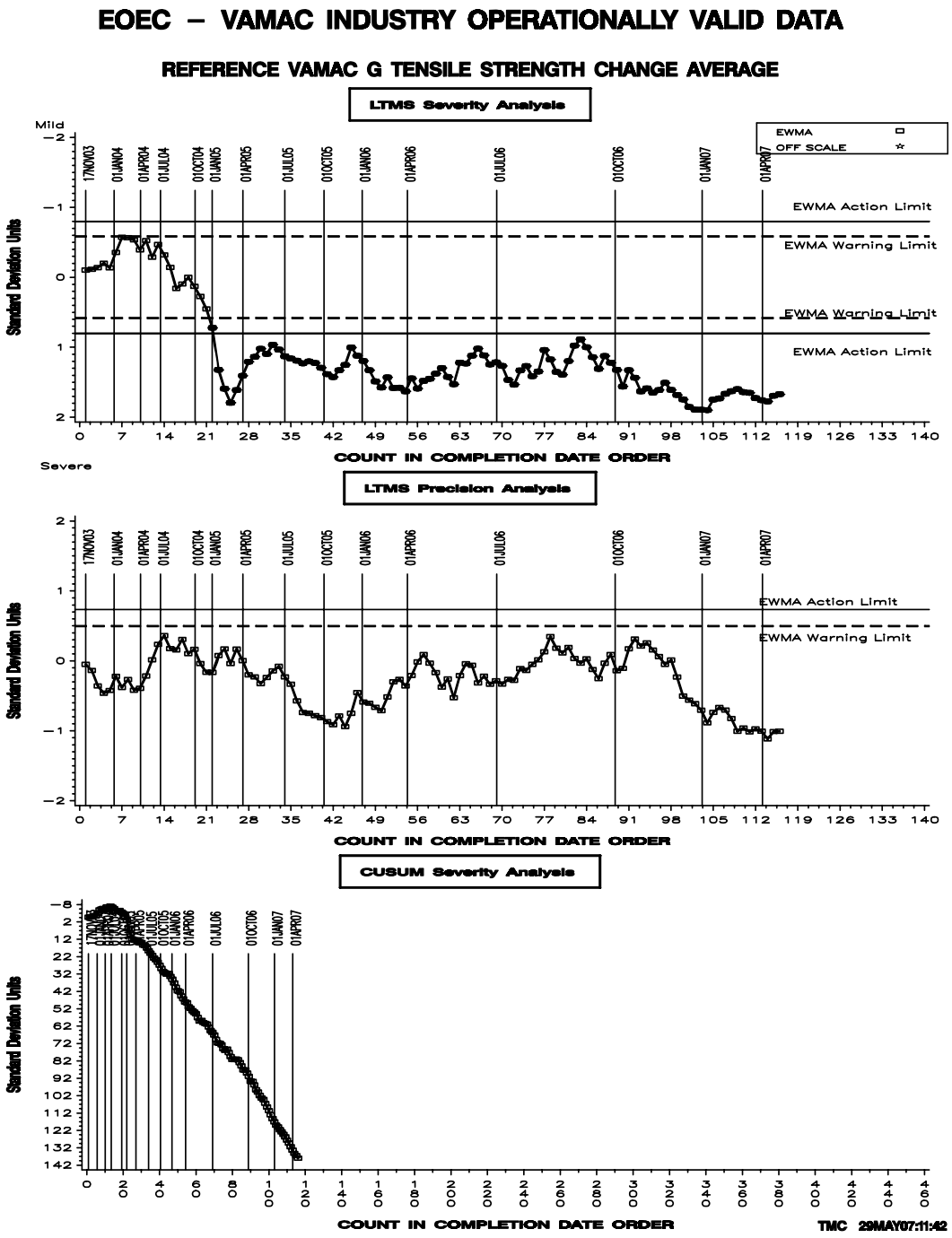

EOEC – VAMAC INDUSTRY OPERATIONALLY VALID DATA
REFERENCE VAMAC G POINTS HARDNESS CHANGE AVERAGE
LTMS Severity Analysis
Mild
Severe
Standard Deviation Units
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
17NOV03
01JAN04
01APR04
01JUL04
01OCT04
01JAN05
01APR05
01JUL05
01OCT05
01JAN06
01APR06
01JUL06
01OCT06
01JAN07
01APR07
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:42

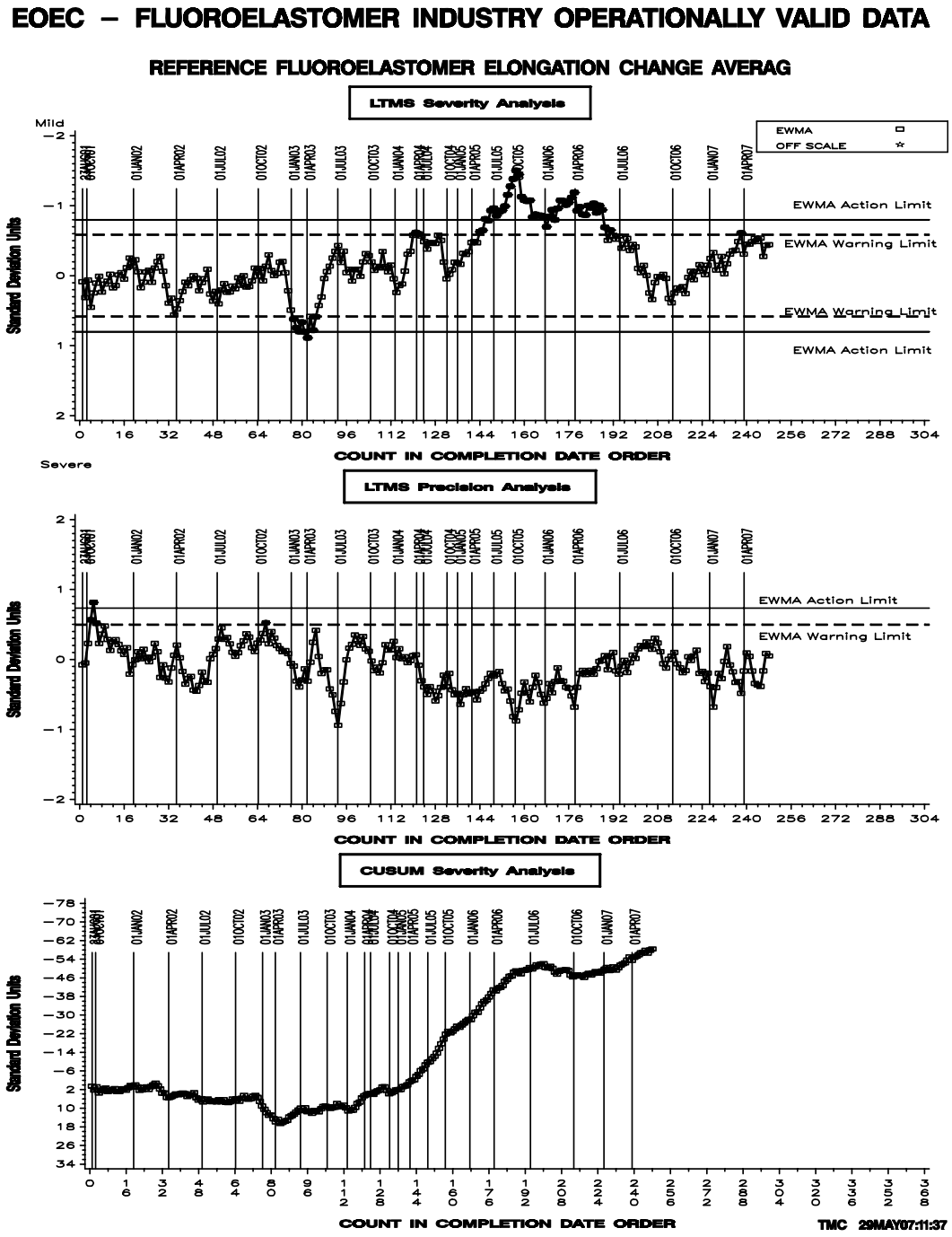

EOEC – FLUOROELASTOMER INDUSTRY OPERATIONALLY VALID DATA
REFERENCE FLUOROELASTOMER TENSILE STRENGTH CHANGE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:37


EOEC – NITRILE INDUSTRY OPERATIONALLY VALID DATA
REFERENCE NITRILE TENSILE STRENGTH CHANGE AVERAGE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:38


EOEC – POLYACRYLATE INDUSTRY OPERATIONALLY VALID DATA
REFERENCE POLYACRYLATE TENSILE STRENGTH CHANGE AVE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:40

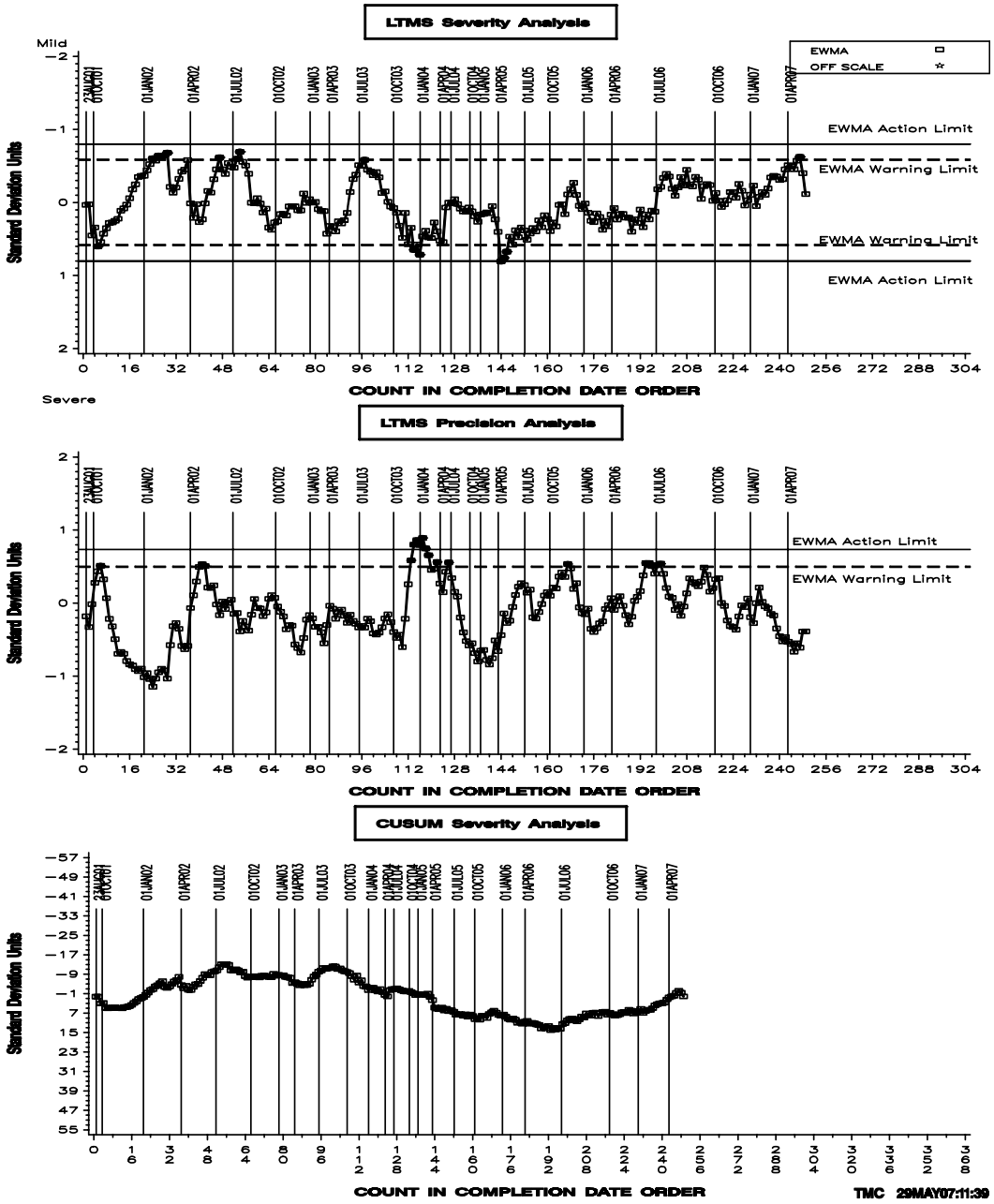

EOEC – SILICONE INDUSTRY OPERATIONALLY VALID DATA
REFERENCE SILICON TENSILE STRENGTH CHANGE AVERAGE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:41

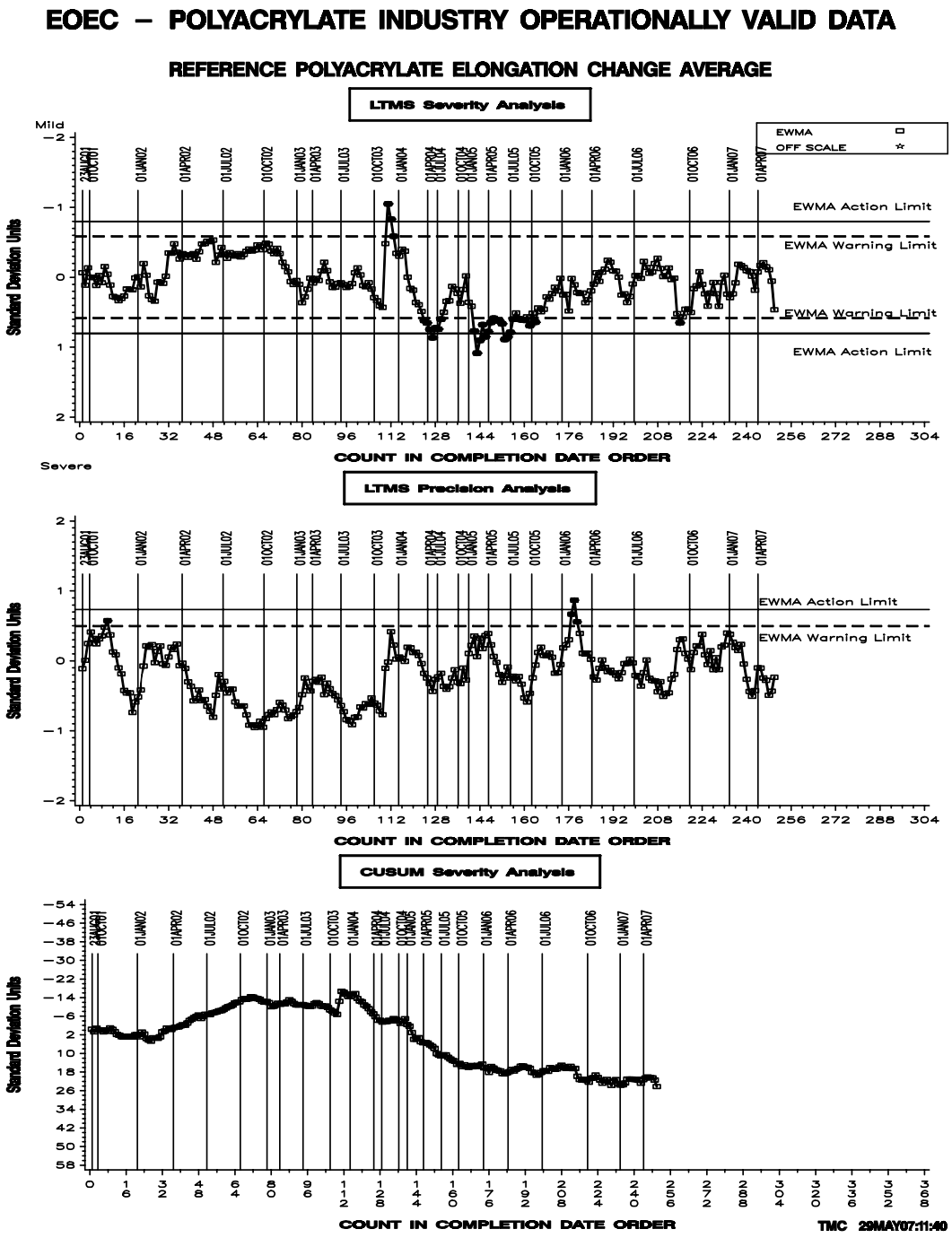

EOEC – VAMAC INDUSTRY OPERATIONALLY VALID DATA
REFERENCE VAMAC G TENSILE STRENGTH CHANGE AVERAGE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
CUSUM Severity Analysis
TMC 29MAY07:11:42

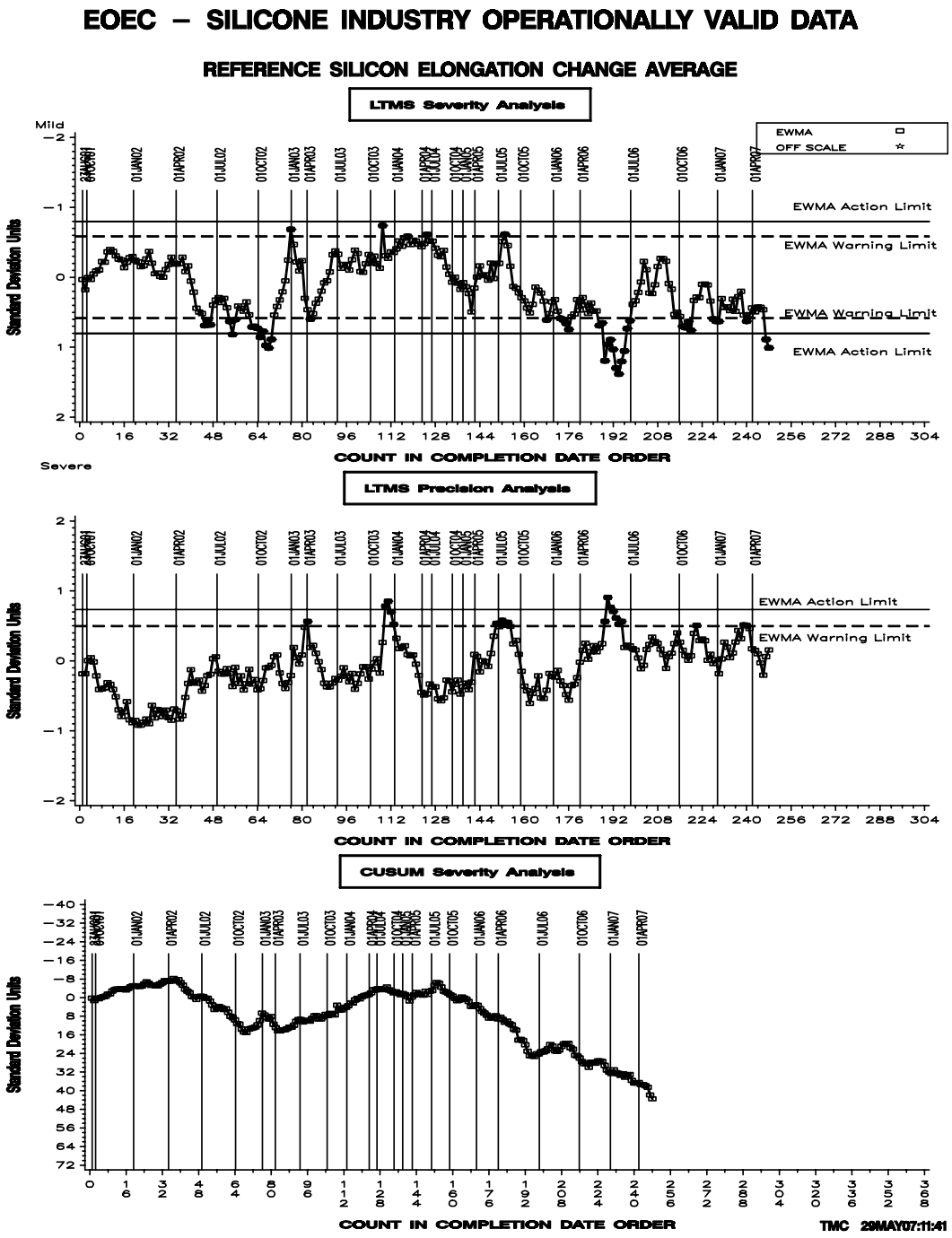

EOEC – FLUOROELASTOMER INDUSTRY OPERATIONALLY VALID DATA
REFERENCE FLUOROELASTOMER ELONGATION CHANGE AVERAG
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:37

EOEC – NITRILE INDUSTRY OPERATIONALLY VALID DATA

REFERENCE NITRILE ELONGATION CHANGE AVERAGE

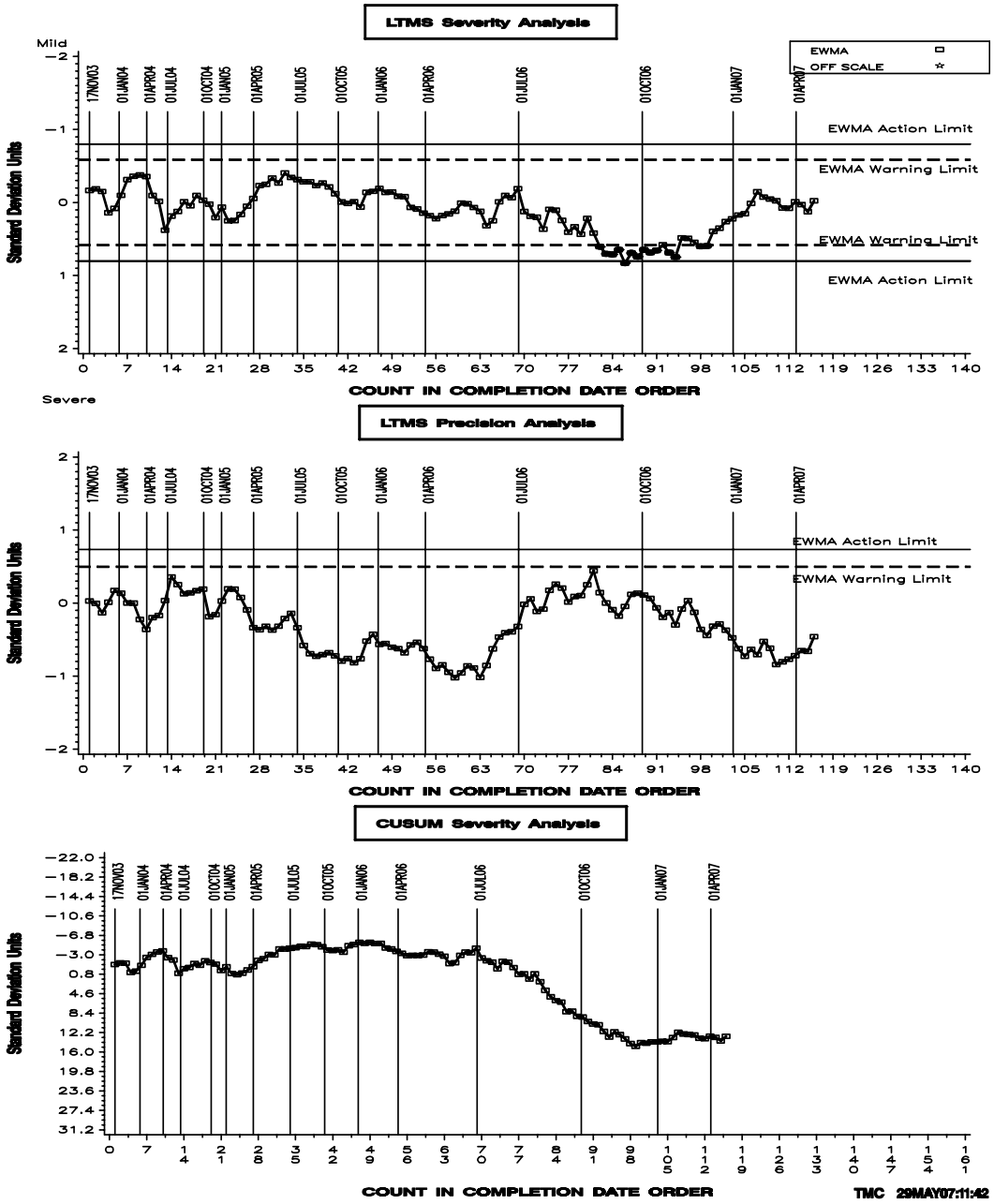



EOEC – POLYACRYLATE INDUSTRY OPERATIONALLY VALID DATA
REFERENCE POLYACRYLATE ELONGATION CHANGE AVERAGE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:40


EOEC – SILICONE INDUSTRY OPERATIONALLY VALID DATA
REFERENCE SILICON ELONGATION CHANGE AVERAGE
LTMS Severity Analysis
Mild
Severe
EWMA
OFF SCALE
EWMA Action Limit
EWMA Warning Limit
EWMA Warning Limit
EWMA Action Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
LTMS Precision Analysis
EWMA Action Limit
EWMA Warning Limit
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
CUSUM Severity Analysis
Standard Deviation Units
COUNT IN COMPLETION DATE ORDER
TMC 29MAY07:11:41

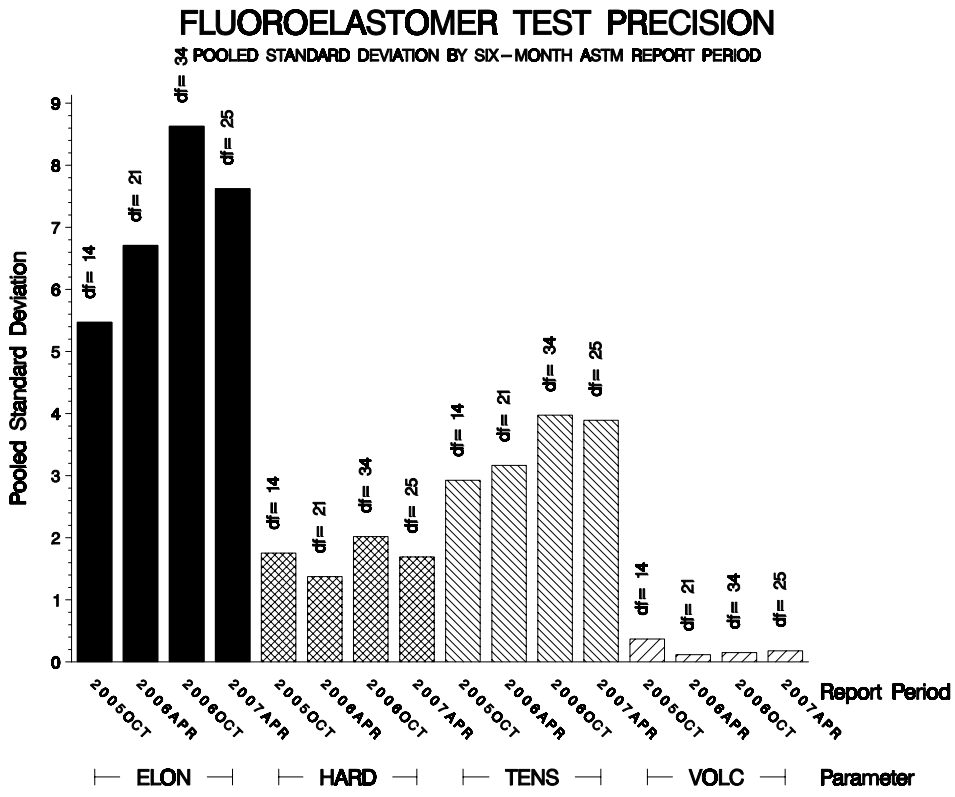
EOEC – VAMAC INDUSTRY OPERATIONALLY VALID DATA

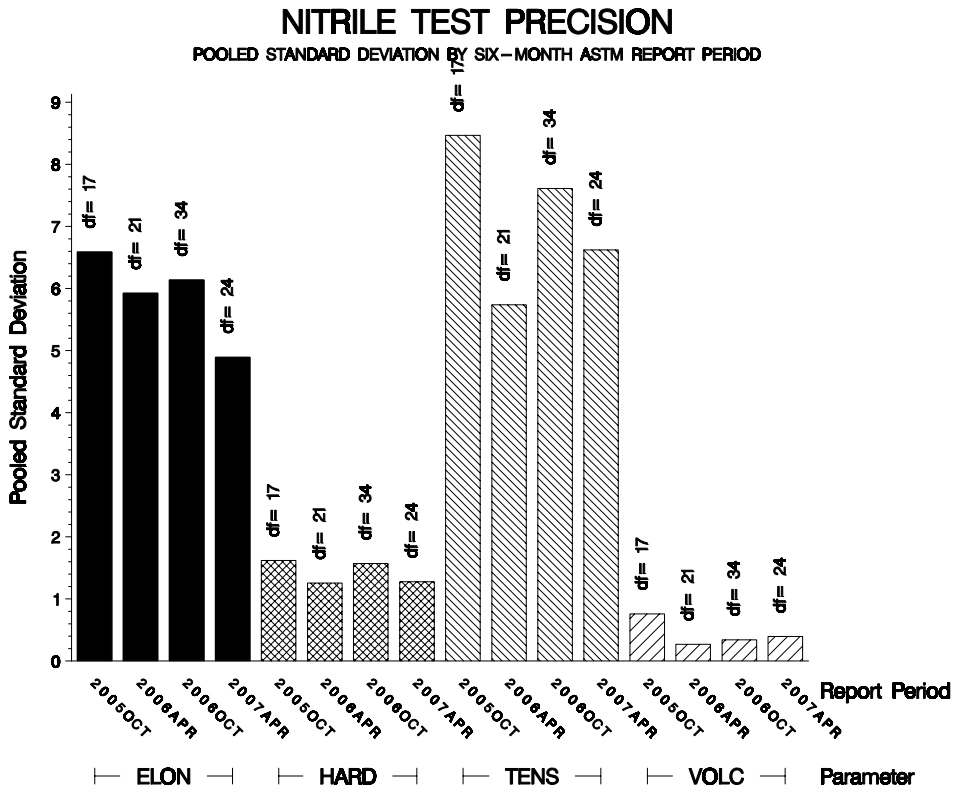
REFERENCE VAMAC G ELONGATION CHANGE AVERAGE

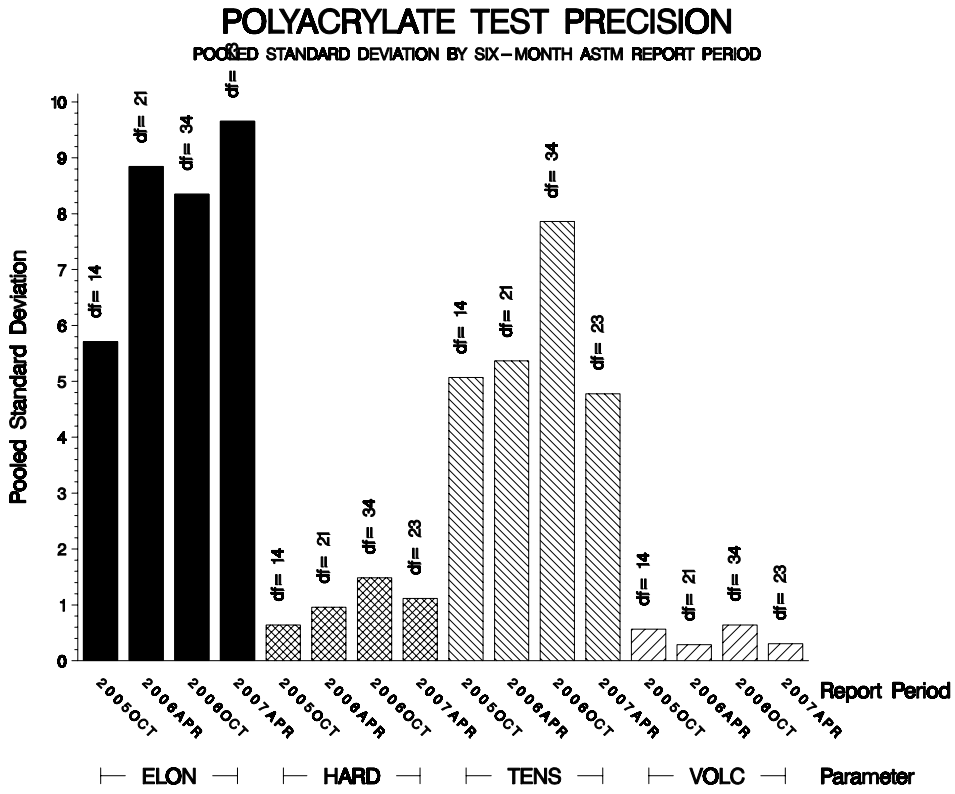


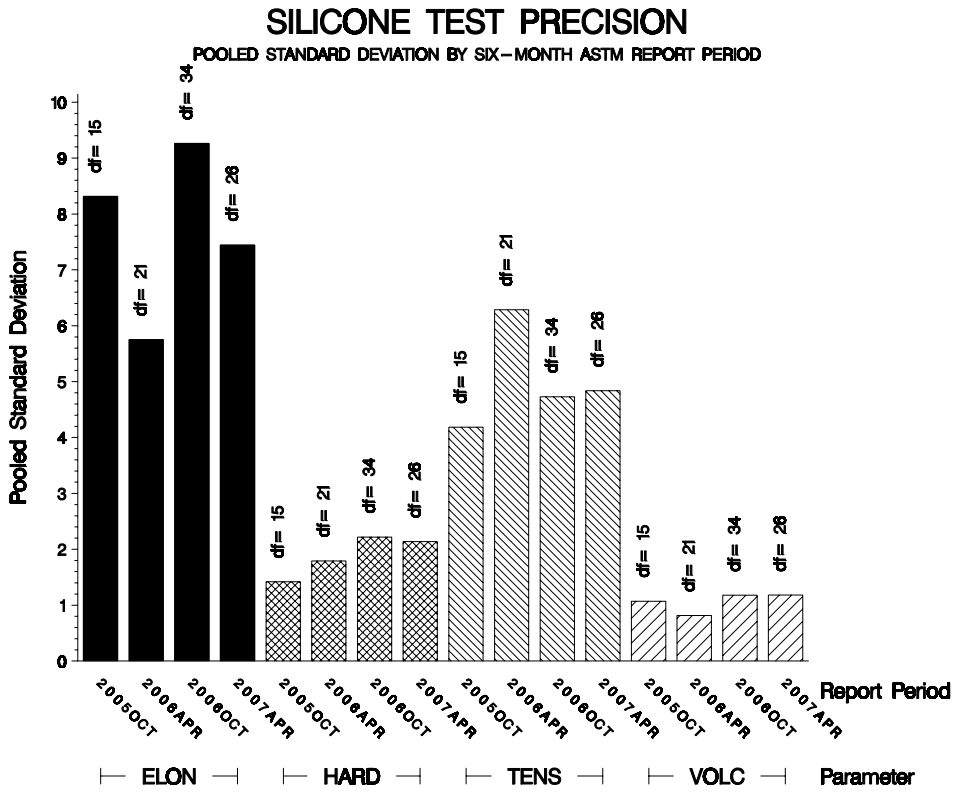
POOLED S:

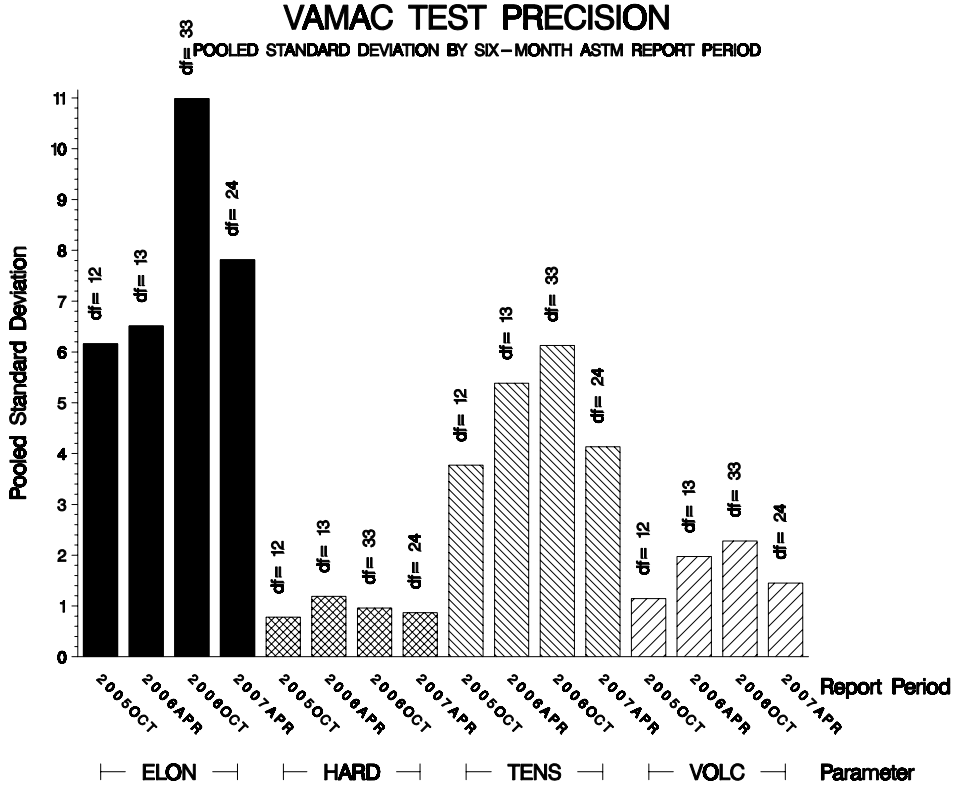
Shown below are bar charts comparing the pooled s values for the EOEC test parameters over the last four report periods. Where degrees of freedom equal zero, no bars are shown. This will occur where only one test was reported or where multiple tests are reported but all are on different oils. Periods showing no information had no tests reported.




NITRILE TEST PRECISION
POOLED STANDARD DEVIATION BY SIX-MONTH ASTM REPORT PERIOD
Pooled Standard Deviation
df= 17
df= 21
df= 34
df= 24
Report Period
2005OCT
2006APR
2006OCT
2007APR
ELON
HARD
TENS
VOLC
Parameter


POLYACRYLATE TEST PRECISION
POOLED STANDARD DEVIATION BY SIX-MONTH ASTM REPORT PERIOD
Pooled Standard Deviation
df= 14
df= 21
df= 34
df= 23
Report Period
2005OCT
2006APR
2006OCT
2007APR
ELON
HARD
TENS
VOLC
Parameter


SILICONE TEST PRECISION
POOLED STANDARD DEVIATION BY SIX-MONTH ASTM REPORT PERIOD
Pooled Standard Deviation
df= 15
df= 21
df= 34
df= 26
df= 15
df= 21
df= 34
df= 26
df= 15
df= 21
df= 34
df= 26
df= 15
df= 21
df= 34
df= 26
2005OCT
2006APR
2006OCT
2007APR
Report Period
ELON
HARD
TENS
VOLC
Parameter


VAMAC TEST PRECISION
POOLED STANDARD DEVIATION BY SIX-MONTH ASTM REPORT PERIOD
Pooled Standard Deviation
df= 12
df= 13
df= 33
df= 24
df= 12
df= 13
df= 33
df= 24
df= 12
df= 13
df= 33
df= 24
df= 12
df= 13
df= 33
df= 24
2005OCT
2006APR
2006OCT
2007APR
Report Period
ELON
HARD
TENS
VOLC
Parameter

STATUS OF REFERENCE OIL SUPPLY:
At the end of this report period, the testing oil supply stood as outlined in the following table:

		@TMC	
Oil	Cans @Labs	Cans	Gallons
1006-1	102	15094	2991
Total	102	15094	2991

* Future reblends of oils marked with an asterisk are not obtainable by TMC.

Be aware that this table presumes that all of each of these oils is dedicated to the EOEC test area. This is not the case; all of these oils are also used in several other test areas.

INFORMATION LETTERS:
No information letters were issued during this report period.

SUMMARY

Summary of Severity
as Measured by LTMS Control Charting

Elastomer	VOLC	HARD	TENS	ELON
Fluoroelastomer	Within limits	Within limits	Within limits	Within limits
Nitrile	Within limits	**Severe**	**Mild**	Within limits
Polyacrylate	Within limits	Within limits	Within limits	Within limits
Silicone	Within limits	Within limits	Within limits	**Severe**
VAMAC	Within limits	**Mild**	**Severe**	Within limits

Summary of Precision
as Measured by LTMS Control Charting

Elastomer	VOLC	HARD	TENS	ELON
Fluoroelastomer	Within limits	Within limits	Within limits	Within limits
Nitrile	Within limits	Within limits	Within limits	Within limits
Polyacrylate	Within limits	Within limits	Within limits	Within limits
Silicone	Within limits	Within limits	Within limits	Within limits
VAMAC	Within limits	Within limits	Within limits	Within limits

SDP/sdp/astm0407.doc/mem07-034.sdp.doc
c: J. L. Zalar
F. M. Farber
EOEC Surveillance Panel
ftp://ftp.astmtmc.cmu.edu/docs/bench/eoec/semiannualreports/eoec-04-2007.pdf

Distribution: email