



## Test Monitoring Center

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MEMORANDUM: 03-060  
DATE: June 2, 2003  
TO: Sequence IIIF Surveillance Panel  
FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*  
SUBJECT: Sequence IIIG Rating Round Robin

At the April 16, 2003 meeting of the Sequence IIIF Surveillance Panel, the panel discussed some differences in APV rating that were identified during the most recent test development activities. Pat Lang commented on these rating differences and the reasons for them that they had uncovered during their investigation. The panel voiced some concerns over these differences and how that information would be propagated to the rest of the industry, but the panel approved no formal plan at that time. Due to time constraints in relation to the GF-4 Matrix, there was not sufficient time to conduct a Rating Workshop to address these issues. After some discussion between the TMC and Test Development Group, it was decided that the best course of action would be to perform an APV rating round robin on a set of IIIG pistons. To this end, a set of IIIG pistons generated during the test development activities were sent to the non-matrix laboratories for APV rating. No WPD ratings were performed since this was not an area of concern during development.

At this time, all six laboratories planning to conduct Sequence IIIG testing after the Matrix is complete have rated the round robin pistons. The results of these ratings are shown in the attached table. In that table, there are summary statistics based upon the ratings from all raters listed in the table. In addition, there are target statistics (mean, standard deviation) based upon the rating data from the Matrix laboratories (shown in blue). At the bottom of the page Shewhart Severity ( $Y_i$ ) values have been calculated, based upon the Matrix lab target values, for the individual ratings and APV value for each rater represented in the round robin.

The Surveillance Panel has approved no formal plan for evaluation of the round robin data at this time. However, a review of the data shows that some additional work in this area is probably warranted and a Sequence IIIG Rating Workshop may be in order to address these concerns.

c: <ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceiii/memos/mem03-060.mtk.pdf>

Distribution: Electronic Mail

| Lab | Rater            | P1T  | P1AT  | P2T   | P2AT  | P3T    | P2AT  | P4T   | P4AT  | P5T   | P5AT  | P6T   | P6AT  | APV    |
|-----|------------------|--|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|--------|
| A   | JMR              | 7.81   | 9.17  | 6.75  | 9.50  | 7.95   | 9.39  | 6.12  | 9.35  | 8.16  | 9.42  | 5.84  | 9.48  | 8.24   |
| A   | GC               | 8.14   | 9.03  | 6.46  | 9.25  | 7.84   | 9.18  | 5.69  | 9.25  | 7.48  | 9.33  | 6.68  | 9.62  | 8.16   |
| G   | OG               | 8.07   | 9.19  | 6.34  | 9.61  | 7.82   | 9.38  | 5.57  | 9.40  | 7.75  | 9.80  | 6.48  | 9.81  | 8.27   |
| M   | JK               | 8.17   | 9.00  | 6.10  | 9.42  | 7.62   | 9.19  | 4.90  | 9.08  | 6.72  | 9.46  | 5.90  | 9.61  | 7.93   |
| M   | PRA              | 7.68   | 9.12  | 5.55  | 9.32  | 6.89   | 8.96  | 4.62  | 9.08  | 6.48  | 9.28  | 5.18  | 9.39  | 7.63   |
| E   | DC               | 7.36   | 9.03  | 6.62  | 9.51  | 7.22   | 9.39  | 5.76  | 9.50  | 7.07  | 9.64  | 6.75  | 9.82  | 8.14   |
| F   | BJH              | 7.11   | 8.74  | 5.10  | 9.25  | 6.86   | 9.25  | 4.44  | 9.03  | 6.13  | 9.30  | 5.63  | 9.57  | 7.53   |
| F   | SWA              | 7.36   | 8.82  | 5.44  | 9.35  | 7.12   | 9.10  | 5.02  | 9.20  | 6.86  | 9.47  | 5.80  | 9.63  | 7.76   |
| B   | TRG              | 7.96   | 9.20  | 6.48  | 9.38  | 7.63   | 9.24  | 5.72  | 9.42  | 7.64  | 9.28  | 6.96  | 9.43  | 8.20   |
| B   | PJY              | 8.01   | 9.08  | 6.42  | 9.42  | 7.64   | 9.22  | 5.66  | 9.20  | 7.11  | 9.33  | 6.45  | 9.47  | 8.08   |
|     | Average          | 7.77   | 9.04  | 6.13  | 9.40  | 7.46   | 9.23  | 5.35  | 9.25  | 7.14  | 9.43  | 6.17  | 9.58  | 7.99   |
|     | Std Dev.         | 0.37   | 0.15  | 0.56  | 0.12  | 0.40   | 0.14  | 0.56  | 0.16  | 0.62  | 0.17  | 0.58  | 0.15  | 0.27   |
|     | Median           | 7.89   | 9.06  | 6.38  | 9.40  | 7.63   | 9.23  | 5.62  | 9.23  | 7.09  | 9.38  | 6.18  | 9.59  | 8.11   |
|     | Maximum          | 8.17   | 9.20  | 6.75  | 9.61  | 7.95   | 9.39  | 6.12  | 9.50  | 8.16  | 9.80  | 6.96  | 9.82  | 8.27   |
|     | Minumum          | 7.11   | 8.74  | 5.10  | 9.25  | 6.86   | 8.96  | 4.44  | 9.03  | 6.13  | 9.28  | 5.18  | 9.39  | 7.53   |
|     | Target Avg.      | 8.01   | 9.13  | 6.52  | 9.45  | 7.87   | 9.32  | 5.79  | 9.33  | 7.80  | 9.52  | 6.33  | 9.64  | 8.22   |
|     | Target Std. Dev. | 0.17   | 0.09  | 0.21  | 0.18  | 0.07   | 0.12  | 0.29  | 0.08  | 0.34  | 0.25  | 0.44  | 0.17  | 0.06   |
|     |                  | <i>Yi Values, based upon targets from the GF-4 Matrix Laboratories</i> |       |       |       |        |       |       |       |       |       |       |       |        |
| A   | JMR              | -1.13  | 0.46  | 1.11  | 0.25  | 1.14   | 0.62  | 1.13  | 0.22  | 1.06  | -0.39 | -1.12 | -0.95 | 0.29   |
| A   | GC               | 0.77   | -1.15 | -0.27 | -1.10 | -0.43  | -1.15 | -0.36 | -1.09 | -0.92 | -0.75 | 0.79  | -0.10 | -1.11  |
| G   | OG               | 0.36   | 0.69  | -0.84 | 0.85  | -0.71  | 0.53  | -0.77 | 0.87  | -0.14 | 1.14  | 0.33  | 1.05  | 0.82   |
| M   | JK               | 0.94   | -1.49 | -1.98 | -0.18 | -3.57  | -1.07 | -3.09 | -3.32 | -3.14 | -0.23 | -0.99 | -0.16 | -5.16  |
| M   | PRA              | -1.88  | -0.11 | -4.59 | -0.72 | -14.00 | -3.01 | -4.06 | -3.32 | -3.85 | -0.95 | -2.63 | -1.49 | -10.43 |
| E   | DC               | -3.72  | -1.15 | 0.49  | 0.31  | -9.29  | 0.62  | -0.12 | 2.18  | -2.12 | 0.49  | 0.95  | 1.11  | -1.47  |
| F   | BJH              | -5.16  | -4.47 | -6.72 | -1.10 | -14.43 | -0.56 | -4.68 | -3.97 | -4.87 | -0.87 | -1.60 | -0.40 | -12.19 |
| F   | SWA              | -3.72  | -3.56 | -5.11 | -0.56 | -10.71 | -1.83 | -2.67 | -1.75 | -2.74 | -0.19 | -1.22 | -0.04 | -8.15  |
| B   | TRG              | -0.27  | 0.80  | -0.17 | -0.40 | -3.43  | -0.65 | -0.25 | 1.13  | -0.46 | -0.95 | 1.43  | -1.25 | -0.41  |
| B   | PJY              | 0.02   | -0.57 | -0.46 | -0.18 | -3.29  | -0.82 | -0.46 | -1.75 | -2.01 | -0.75 | 0.27  | -1.01 | -2.52  |