APPENDIX G: DATA PROBLEMS AND SCORING REMEDIES

The initial certified military value data set improved in quality after a concerted effort to have Activities correct questionable data, but some apparent inconsistencies remained unresolved at the time this report was published. These remaining data problems, without intervention, could have disturbed the scoring of some or all Activities in a categorical grouping (e.g. ICPs). Consequently, the S&S JCSG investigated possible remedies for persistent data problems. The chosen remedies described below are conservative, analytically sound, and enable the computation of reasonable and fair military values in the absence of "perfect" data.

1) Missing part of a ratio: No data, zero, or incomplete data (numerator of a ratio but not the denominator, or vice-versa) was reported for some but not all fiscal years.
   - Data Remedy
     a   Metrics where higher is better (i.e. a higher value equates to a higher military value score):
       * Method: Ratios for each fiscal year will be calculated as zero if one or both of the numerator and denominator is zero or missing. Then the average across fiscal years is computed from only the non-zero numbers.
       * Rationale: A zero, or ratio calculated as zero, for one of the fiscal years is most likely a data hole for this set of metrics, so we don't want to average it with the other non-zero values. This method prevents divide by zero errors and skewing the average because of a data hole. It does not penalize the activity for missing data that may have been unavailable; rather, this method calculates the Activity's average based on fiscal years for which the data was complete.
       * Example:

DoD #	2820	2851	
Name of Activity	FY01 Cost of operations_n	# of people Assigned to Supply and Storage Activity 30 Sep 01_n	FY01 Cost of Operations per Person
Activity X	10135340	0	missing value

Activity X does have complete data for FY02 and FY03; the average cost of operations per person will be based on their FY02 and FY03 ratios.

   b   Metrics where lower is better (i.e. a lower value equates to a lower military value score):
       * N/A response or an incomplete ratio does not figure into the average, but a zero does. Example: Question 2803, number of ratified contract actions by fiscal year: average all non-blank answers

2) Activities reported negative excess capacity (i.e. their utilized space was greater than their available space).
       * Applies to one DRMO Activity

- Data remedy: Assume available space value is correct and calculate as if 100% space is utilized (rather than > 100%).
- Rationale: A ratio greater than 100% is not possible. This solution is in the best interest of the "offending" activity (who still gets scored on the question) as well as the others who are being scored alongside the "offender" (who now are not being compared to an unrealistic answer).

3) When one answer was required per Activity, some Activities reported more than one answer. For these questions, the data may be misrepresented if the sum or average is used to create one value to be scored.
   - Applicable questions:
     a   2845: Avg Yrs Government Service per Gov't Employee as of 30 Sep 03 (Occurs once in ICP data)
     b   2846: % of Workforce with 4-year College Degree as of 30 Sep 03 (Occurs once in ICP data)
   - Data Remedy: Use maximum value given.
   - Rationale: The correct answer can only be figured by the Activity. In lieu of a correction on their part, the S&S JCSG chose to use the data point that most favorably affects the Activity (rather than penalizing it).

4) Questions 2800 and 2801 both asked for Total Number of Customer Orders Received but the answers are not always consistent.
   - Case 1: Data was given in one question but not the other.
     *   Occurs three times in ICP data
     b   Data Remedy: Use the non-zero response.
     c   Rationale: Use the answer provided to fill the corresponding data hole.
   - Case 2: A different non-zero answer was reported in 2800 than in 2801.
     *   Occurs four times in ICP data
     b   Data Remedy: None; use the data given in 2800 for the associated ratio and the data given in 2801 for the associated ratio.
     c   Rationale: Data is used exactly as submitted, free from extra interpretation on the part of the S&S JCSG.