The base data used in this evaluation considered a range of values comprised of a high estimate (V_H) and a low estimate (V_L) to represent an initiator rate or a demand rate. The data was generally expressed in exponents of 10 and a log normal distribution was used for the evaluation. Use of the log normal distribution implies that the exponent has a normal distribution and that the exponent is viewed as the significant variable in the analysis. The range of a value was considered to be the 90% confidence interval to account for uncertainty. There is a 5% chance that the high value may be higher than the estimate, and a 95% chance that the value is greater than the low estimate. This consideration provided a way to obtain a mean value for a range. A log normal distribution is, mathematically, a function of (μ,σ^2), where μ is the mean and σ^2 is the variance. μ and σ were calculated based on the 90% confidence interval consideration from the following two relationships:

$$V_H = \exp^{(\mu + 1.645\sigma)}$$

and $$V_L = \exp^{(\mu - 1.645\sigma)}$$

The method used to describe the result was based on the geometric mean (V_M) of these ends points (for two points, $V_H / V_M = V_M / V_L$) and was characterized as the median value. For example, the median value for the handling system failure rate ($V_H = 1.0\text{x}10^{-4}$, $V_L = 1.5\text{x}10^{-5}$) would be computed as $V_M = 3.9\text{x}10^{-5}$ incidents per year (the high value is 2.6 times the median value, and the median value is 2.6 times the low value). Because of the uncertainties in the base data, the possibility of interdependencies of the conditional failure (demand) rates, and their confidence limits, this median value was used for this evaluation.