

Appendix J: Goodness of Fit for Distributions

Appendix J contains tables with values quantified for each connection group. The tables are arranged to display values for the three Weibull parameters of location, shape and scale, Lognormal parameters of min x, mean and standard deviation of the Normal, goodness of fit p-value for K^2 , K-S and A-D statistics, overall decision to accept or reject, best fit distribution between Weibull and Lognormal, and whether the Lognormal or Weibull distribution is 2- or 3-parameter. (Simply, 2-parameter has a value of 0 for location parameter (Weibull) and min x parameter (Lognormal). Weibull and Lognormal distributions and respective parameters as well as Chi Square (K^2), Kolmogorov-Smirnov (K-S) and Anderson-Darling (A-D) statistics are discussed in-depth in Chapter 4. Parameters used in the tables are described as follows:

α = Shape parameter for Weibull distribution

β = Scale parameter for Weibull distribution

μ = Mean value of the included Normal**

σ = Shape parameter

**Note: For a Lognormal random variable, the natural logarithm is a Normal random variable.