Electronic Supplementary Information

Figure ESI-1 and Figure ESI-2 show that 4-logs of redundancy would be sufficient to protect DPR systems against large magnitude failures for both enteric virus and *Giardia* while achieving the 2.7×10^{-7} daily risk goal 99% of the time and the 10^{-4} annual risk goal >99% of the time.
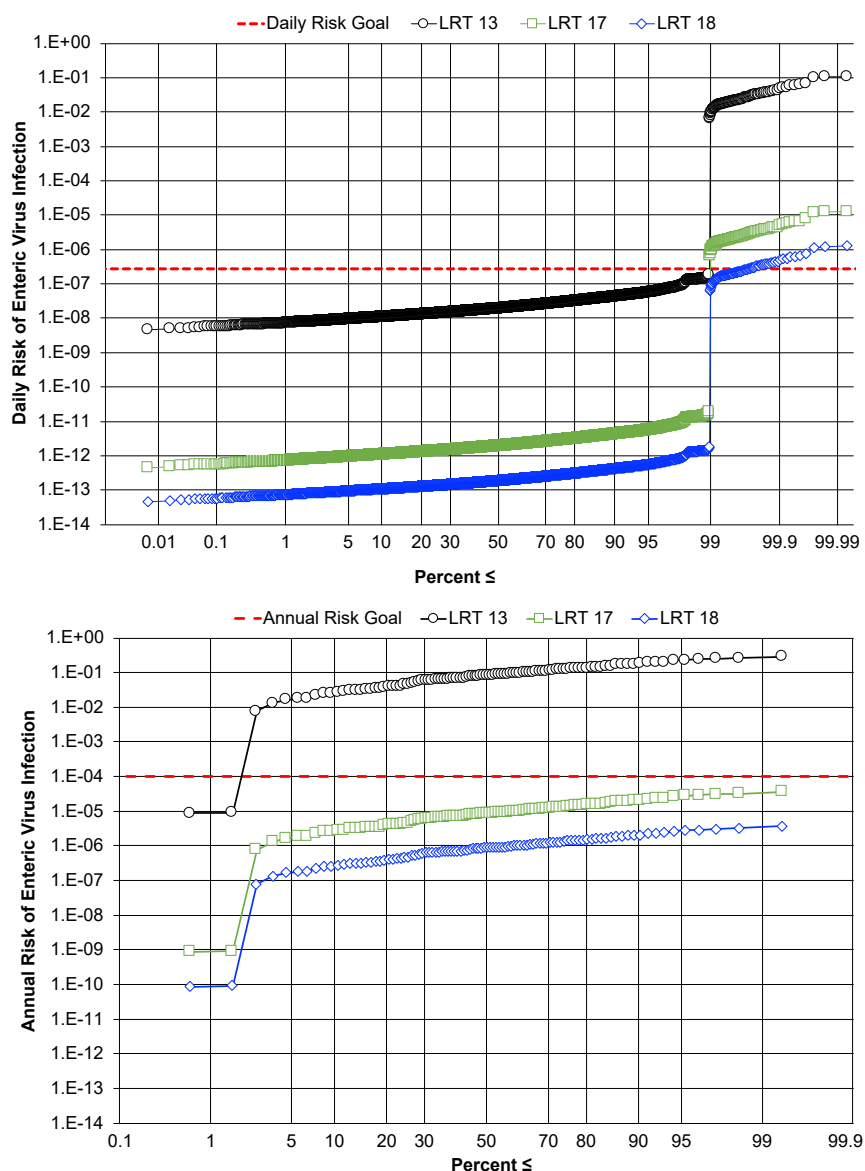

Figure ESI-1. Compliance with daily (top) and annual (bottom) risk goals for enteric virus based on a minimum treatment goal of 13 logs in addition to redundant treatment of 4-logs (17 logs total) and 5-log (18 logs total). X-axis denotes the probability of achieving a level of risk equal to or less than the value on the Y-axis.
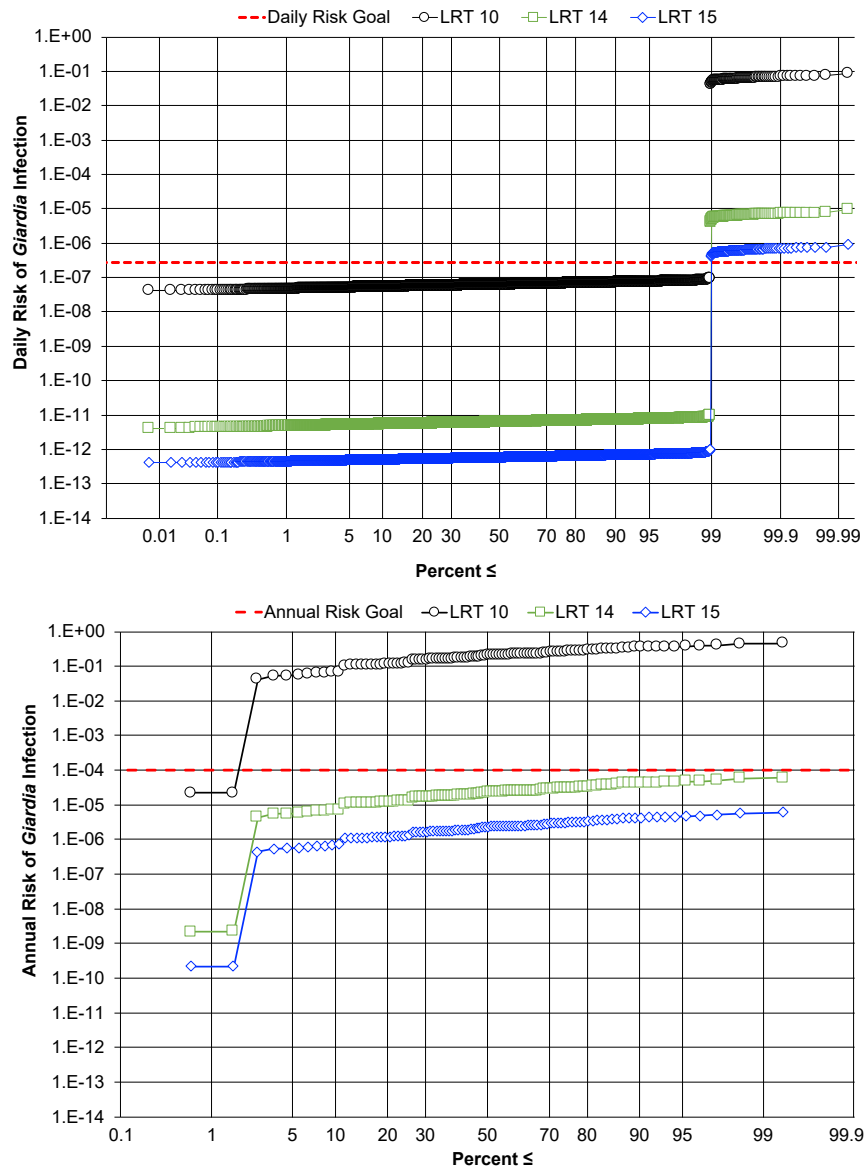
Figure ESI-2. Compliance with daily (top) and annual (bottom) risk goals for *Giardia* based on a minimum treatment goal of 10 logs in addition to redundant treatment of 4-logs (14 logs total) and 5-log (15 logs total). X-axis denotes the probability of achieving a level of risk equal to or less than the value on the Y-axis.