



Figure III-4.-- Plant-Mean *Cryptosporidium* Levels for ICRSS Large Plants

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5. Significance of new *Cryptosporidium* occurrence data.

The Information Collection Rule and ICRSS data substantially improve overall knowledge of the occurrence distribution of *Cryptosporidium* in drinking water sources. They provide data on many more water sources than were available when the IESWTR was developed and the data are of more uniform quality. In regard to filtered systems, these new data demonstrate two points:

(1) The occurrence of *Cryptosporidium* in many drinking water sources is lower than was indicated by the data used in IESWTR. Median plant-mean levels for the Information Collection Rule and ICRSS data sets are approximately 0.05 oocysts/L, whereas the median oocyst concentration in the LeChevallier and Norton (1995) data used in the IESWTR risk assessment was 2.3 oocysts/L.

(2) *Cryptosporidium* occurrence is more variable from plant to plant than was indicated by the data considered for the IESWTR (*i.e.*, occurrence distribution is

broader). This is illustrated by considering the ratio of the 90th percentile to the median plant-mean concentration. In the LeChevallier and Norton (1995) data used for the IESWTR, this ratio was 4.6, whereas in the Information Collection Rule data, this ratio is 27.

These data, therefore, support the finding that *Cryptosporidium* levels are relatively low in most water sources, but there is a subset of sources with relatively higher concentrations where additional treatment may be appropriate.

In regard to unfiltered plants, the Information Collection Rule data are consistent with the *Cryptosporidium* occurrence estimates for unfiltered systems in the IESWTR. However, due to the lower occurrence estimates for filtered systems noted previously, the Information Collection Rule data do not support the IESWTR finding that unfiltered water systems in compliance with the source water requirements of the SWTR have a risk of cryptosporidiosis equivalent to that of a

well-operated filter plant using a water source of average quality (63 FR 69492, December 16, 1998) (USEPA 1998a). Rather, these data indicate that Agency conclusions regarding the risk comparison between unfiltered and filtered drinking waters must be revised. For protection equivalent to that provided by filtered systems, unfiltered systems must take additional steps to strengthen their microbial barriers.

6. Request for Comment on Information Collection Rule and ICRSS Data Sets

EPA notes that there are significant differences in the Information Collection Rule and ICRSS medium and large system data sets. The median values for these data sets are 0.048, 0.050, and 0.045 oocysts/L, respectively, while the 90th percentile values are 1.3, 0.33, and 0.24 oocysts/L. The reasons for these differences are not readily apparent. The ICRSS used a newer method with better quality control that yields significantly higher recovery, and this suggests that these data are more