

EPA also has concluded that presedimentation basins need to be operated continuously and treat 100% of the plant flow in order to reasonably ensure that the process will reduce influent *Cryptosporidium* levels by at least 0.5 log over the course of a full year. The Agency recognizes that, depending on influent water quality, some systems may determine it is more prudent to operate presedimentation basins intermittently in response to fluctuating turbidity levels. By

proposing these conditions for the presumptive presedimentation credit, EPA is not recommending against intermittent operation of presedimentation basins. Rather, EPA is attempting to identify the conditions under which a 0.5 log presumptive credit for presedimentation is warranted.

In response to the SAB panel recommendation that performance criteria other than overflow rate be included if credit is to be given for

presedimentation, EPA analyzed the relationship between removal of spores and reduction in turbidity through presedimentation for the three utilities that supplied these data. Results of this analysis are summarized in Table IV-12, which shows the relationship between monthly mean turbidity reduction and the percent of months when mean spore removal was at least 0.5 log.

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**Table IV-12.-- Relationship Between Mean Turbidity Reduction and the Percent of Months When Mean Spore Removal Was at Least 0.5 Log**

Log Reduction in Turbidity (monthly mean)	Percent of Months with at least 0.5 Log Mean Reduction in Spores
>= 0.1	64%
>= 0.2	68%
>= 0.3	73%
>= 0.4	78%
>= 0.5	89%
>= 0.6	91%
>= 0.7	90%
>= 0.8	89%
>= 0.9	95%
>= 1.0	96%

Source: Data from Cincinnati Water Works, Kansas City Water Services Department, and St. Louis Water Division

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Within the available data set, achieving a mean turbidity reduction of at least 0.5 log appears to provide approximately a 90% assurance that average spore removal will be 0.5 log or greater. The underlying data are shown graphically in Figure IV-4. Based on

this information, EPA has concluded that it is appropriate to require 0.5 log turbidity reduction, determined as a monthly mean of daily turbidity readings, as an operating condition for the 0.5 log presumptive *Cryptosporidium* treatment credit for

presedimentation. Further, EPA is proposing that systems must meet the 0.5 log turbidity reduction requirement in at least 11 of the 12 previous months on an ongoing basis to remain eligible for the presedimentation credit.

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