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SUBJECT: CALFED Water Quality Acceptable Ranges for Parameters
of Concern

While I have not had time to review the entire draft, I do have the following comments/questions on the ranges listed in the 11/19/96 draft document.

The Central Valley Regional Water Quality Control Plan has a boron objective, what's the rationale for not using it?

It's not clear what the term 'general EPA guidelines' means. Moreover, it is not clear where the ranges for cadmium - below Hamilton City, cadmium - San Joaquin River, cadmium - Delta, copper - San Joaquin River, and zinc - San Joaquin River. I have enclosed the most recent EPA actions on metals criteria for your review and consideration. The Federal Register (May 4, 1995) standards are applicable nationwide, while the Great Lakes criteria are currently only applicable to Great Lake states. There, however, does not seem to be a reason why the recalculated criteria should not be considered for acceptable ranges.

Under footnote c, the hardness equations for cadmium, copper and zinc appear to be written incorrectly. Namely, the subtraction should occur in the superscript of the exponential and multiplication should be by 10 to the minus 3 power. The equations should read as follows:-

$$\begin{aligned} \text{Cu} &= e^{(0.905)(\ln \text{ hardness} - 1.612)} \times 10^{-3} \\ \text{Zn} &= e^{(0.830)(\ln \text{ hardness} - 0.299)} \times 10^{-3} \\ \text{Cd} &= e^{(2.160)(\ln \text{ hardness} - 5.777)} \times 10^{-3} \end{aligned}$$

Under footnote x, a clarifying sentence, namely, H = ln hardness should be added.

Enclosures (2)