



California Regional Water Quality Control Board Central Valley Region

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9 February 2010

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CENTRAL VALLEY WATER BOARD COMMENTS ON DRAFT DIAZINON CRITERIA

California Regional Water Quality Control Board, Central Valley Region staff has reviewed the draft diazinon criteria document. Major comments are presented first, followed by minor editorial comments. The authors have done a thorough review of the toxicology literature, and applied the criteria derivation methodology developed by Tenbrook, et al., in a sound and transparent manner to derive criteria that should be protective of aquatic life.

The initial chronic criteria concentration is calculated as 0.2 ug/L. The available toxicity data in the supplemental data set, however, indicate that there may be toxic effects to cladocerans at concentrations between 0.1 and 0.2 ug/L. Therefore the authors recommend to using one of the lower values for calculating the chronic criteria, either using the 5th percentile with a 95% confidence limit, of using the 5th percentile and the 50% confidence limit for the more sensitive subset of the data. Both of these calculations yield a chronic criterion concentration of 0.1 ug/L. This use of a more conservative chronic criterion by the authors to ensure protective criteria is rational and consistent with the criteria derivation methodology.

In section 7, the determination of the species sensitivity distribution (SSD) used for calculating the acute criteria is somewhat confusing. The discussion should explain why the Reciprocal Weibull distribution was used. Since it was not used, the inclusion of the Reciprocal Pareto distribution for comparison may be more confusing than informative.

The Criteria statement indicates that the recommended criteria would be protective of aquatic life in the Sacramento and San Joaquin River Basins. The specificity of these criteria to those basins should not be over-emphasized. It would be useful to note in the criteria statement that these criteria should also likely be protective of aquatic life in freshwater ecosystems in North America, unless species more sensitive than are represented by the species examined in the development of these criteria are likely to occur in those ecosystems.

The discussion of uncertainty in section 17 should review the following information gaps:

- The genera that would be needed to do a full species sensitivity distribution.

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- The lack of directly applicable information on the synergistic effects of the combination of diazinon with other compounds, especially those for which there are indications of synergistic effects such as pyrethroids.

In section 18, the comparison of criteria using other data sets and/or methodologies should be clarified. The document should state the chronic criteria that would result from using the EPA methodology on the data set used in sections 7 and 8 to derive the draft criteria.

Minor editorial comments:

The first paragraph on page 1 should state that the criteria are for the **Sacramento and San Joaquin** Valleys. A table of contents would make the document easier to read. If possible, it would be useful to display the toxicity information in data tables in order of species sensitivity.

We appreciate the tremendous effort that has gone into development of this document and look forward to seeing it finalized.

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