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To: Ron Ott
CALFED

Victor de Vlaming
From: Victor de Vlaming
Division of Water Quality
State Water Resources Control Board

Subject: ECOSYSTEM WATER QUALITY TEAM

My apologies for missing the August 1, 1996 team meeting. Ecosystem water quality is a crucial issue at this time and the goals of this team are vital and admirable, so I do want to participate in this team's activities.

Over the last ten years the State Water Resources Control Board (SWRCB) and various Regional Water Quality Control Boards (RWQCB) have been using toxicity testing as a key monitoring tool to gauge water quality. We have found that this tool, in association with Toxicity Identification Evaluations (TIE-- procedures designed to identify the chemical causes of toxicity in a water sample), to be very powerful instruments for detecting water quality degradation. The SWRCB and Regional Boards have found toxicity testing and TIEs extremely effective in terms of identification of location, chemical cause, and land use source of toxicity (i.e., water quality problems). I can think of no other water quality monitoring tool which provides as much information on additive/cumulative (i.e., the tests provide an integrative measure) effects of chemicals and on biological availability of chemicals. These toxicity tests are a direct measure of the suitability of water for supporting healthy aquatic life. Results of SWRCB and RWQCB toxicity testing programs have been effective at initiating regulatory or voluntary responses designed to correct water quality problems.

Much of the SWRCB and RWQCB toxicity testing/TIE procedures have implicated pesticides (especially organophosphate and carbamates) as water quality problems. Control programs are needed to reduce the offsite movement of these pesticides into surface waters. Nonetheless, there are contaminants other than pesticides which contribute to water quality degradation. Continued toxicity testing in association with TIEs and chemical analyses are necessary to identify these other contaminants.

Given the points covered above, it will not be overly surprising that I enthusiastically advocate a toxicity testing with associated TIEs and chemical analyses program to the Ecosystem Water Quality Team. Such a program should include a "clean up" component to deal with contaminants identified as water quality problems. The SWRCB has recently initiated a contract with the University of California to develop alternative agricultural

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practices which will reduce offsite movement of pesticides. This project involves a coordinated effort including SWRCB, the Central Valley Regional Water Quality Control Board (CVRWQCB), and the Department of Pesticide Regulation (DPR). This effort is a response to data collected by the SWRCB and CVRWQCB toxicity testing programs. SWRCB and DPR funds for such projects are limited, so we are hopeful that other entities can become involved with the development of practices which eliminate or reduce the movement of contaminants into surface waters.

I do encourage the Ecosystem Water Quality Control Team to incorporate a toxicity testing and contaminant cleanup program into its priorities. Should you have any questions, please contact me at 657-0795.