

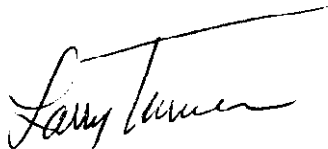


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Memorandum

From: Larry Turner, Ph. D. 
Environmental Field Branch
Field and External Affairs Division

To: Arthur-Jean Williams, Chief
Environmental Field Branch
Field and External Affairs Division

Subject: Effects Determination for Chlorpyrifos for Pacific Anadromous Salmonids

I reviewed data and other information for chlorpyrifos, a pesticide named by the Washington Toxics Coalition (WTC) and included in the court order for 'effects determinations' and potential consultation with the National Marine Fisheries Service. An Interim Reregistration Eligibility Decision (IREED) document was issued for chlorpyrifos in September, 2001. This IRED summarizes the ecological risks of chlorpyrifos; considerably more information is in the Environmental Risk Assessment for Chlorpyrifos developed in 1999 and revised in June, 2000, and I have used these discussions as the primary starting point for my analysis. To develop an analysis of the potential for effects on endangered and threatened Pacific salmon and steelhead, I have adapted the more general findings of the Environmental Risk Assessment to the various ESUs of these salmon and steelhead. I have also sought other information since that Environmental Risk Assessment was completed. The new information is supplemental and does not change the overall assessment for chlorpyrifos.

Based on the RED and additional considerations indicated in my analysis and other attached or referenced materials, I conclude that the use of chlorpyrifos will have no effect on two salmon Evolutionarily Significant Units (ESUs), may affect, but is not likely to adversely affect six salmon and steelhead ESUs, and may affect the other 18 listed and one proposed salmon and steelhead ESUs. There is some uncertainty about the future use of chlorpyrifos because residential uses have largely been cancelled and phased out, but the termiticide use will continue until the end of 2005, and perhaps longer if appropriate data are submitted. Some modifications, but few complete deletions of agricultural uses are in the process of being revised and relabeled. There is little that OPP can do under FIFRA, as I understand it, with regard to protective measures for the termiticide use, beyond the cancellation and phase out. For the agricultural uses

that will remain, I propose that OPP work with the Pacific States to determine how to limit the aquatic exposure of chlorpyrifos to no more than 0.05 ppb, which I consider to be a no-effect level to protect the aquatic food sources of listed salmon and steelhead. A buffer between chlorpyrifos applications and aquatic habitats would seem to be the most efficacious protection, but the States may have alternatives that would be equivalently protective. I recommend working with the States and NMFS to determine the appropriate size of buffers or the nature of other methods of protection.