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March 25, 2011

Ms. BeWanda Alexander  
Office of Pesticide Programs (OPP)  
Regulatory Public Docket (7502P)  
U.S. Environmental Protection Agency (U.S. EPA)  
1200 Pennsylvania Ave., NW.  
Washington, DC 20460–0001

RE: Flumethrin Pesticide Product; Registration Application for Pet Treatment  
(Docket Number EPA–HQ–OPP–2011–0013)

Dear Ms. Alexander:

The purpose of this letter is to comment on the application to register the pyrethroid flumethrin as a treatment for cats and dogs. We are pleased to have the opportunity to provide U.S. EPA with information from our experience and from the scientific literature, with the goal of helping U.S. EPA ensure that the environmental risk assessment for flumethrin is complete and accurate such that U.S. EPA can make a well-informed registration decision. Our comments focus specifically on the environmental risks of flumethrin discharges to publicly owned wastewater treatment plants (POTWs).

As background, Tri-TAC is a technical advisory group for POTWs in California. It is jointly sponsored by the California Association of Sanitation Agencies, the California Water Environment Association, and the League of California Cities. The constituency base for Tri-TAC collects, treats, and reclaims more than two billion gallons of wastewater each day and serves most of the sewered population of California.

Tri-TAC members are very concerned about the water quality impacts from the discharge of pyrethroids into our municipal wastewater systems. These concerns have been expressed in our previous letters to U.S. EPA and in letters from our colleagues at the Bay Area Clean Water Agencies (BACWA) and the National Association of Clean Water Agencies (NACWA). We appreciated U.S. EPA's decision to include wastewater discharges in pyrethroid Registration Review environmental problem formulations and work plans.<sup>1</sup> This decision recognized the potential water quality impacts from pet treatments and other indoor pyrethroid pesticide applications.

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<sup>1</sup> See for example Solliday, A.; Federoff, N. E.; Meléndez, J. L.; U.S. EPA Office of Pesticide Programs Environmental Fate and Effects Division (2010). *Environmental Fate and Ecological Risk Assessment Revised Problem Formulation in Support of Registration Review for Bifenthrin*. December 22.

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### Tri-TAC's Interest in Pyrethroid Pesticides

Pyrethroids in pet products can be transferred to the pet's fur, from which they can be subsequently washed and discharged to the sewer system when the pet is bathed by owners, groomers, or veterinarians. Once in the sewer system, wash water carrying pyrethroids flows to POTWs.

POTWs have three general types of emissions: water, solids, and air. Assuming flumethrin is similar to other pyrethroids, it would likely occur primarily in water and solids emissions.<sup>2</sup> Effluent water may be discharged into creeks, rivers, estuaries, or the ocean. In some cases, waterways receiving discharges have little other flow (these are called "effluent dominated" waters). Recycled wastewater has growing use for irrigation, toilet flushing, industrial use, and groundwater recharge. Wastewater solids, commonly called sewage sludge or "biosolids," may be reused in agriculture or in urban gardens or disposed of in landfills.

Tri-TAC is concerned about potential effluent toxicity to aquatic organisms from pyrethroid discharges to POTWs. Weston & Lydy (2010)<sup>3</sup> found that pyrethroids are being discharged into sewers, entering POTWs, and may not be fully degraded during wastewater treatment. The Weston & Lydy study detected pyrethroids in secondary and tertiary POTW effluent samples. In wastewater effluent, the researchers measured toxicity to the standard aquatic toxicity test organism *Hyaella azteca*, which is also resident in some California watersheds. During the study, 44% of POTW effluent samples caused death or immobilization of the *Hyaella azteca*. Through toxicity identification evaluation experiments, this toxicity was linked to pyrethroid pesticides.

POTWs are subject to National Pollutant Discharge Elimination System (NPDES) permits under the Federal Clean Water Act. In addition to the adverse environmental impacts, non-compliance with Federal Clean Water Act requirements can be extremely costly for POTWs. Costs to POTWs include sampling and laboratory expenses incurred to identify the source of the pollutants that caused non-compliance; the cost of implementing source control to reduce impacts of the pollutants; and construction, operation, and maintenance costs to upgrade POTWs with advanced treatment to remove pollutants that cannot be adequately reduced with source control. Furthermore, when surface water bodies become impaired by pesticides, POTWs discharging to the water bodies may receive additional

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<sup>2</sup> Meléndez, J. L.; Solliday, A.; Sappington, K.; U.S. EPA Office of Pesticide Programs Environmental Fate and Effects Division (2010). "Response to Public Comments on the EFED Registration Review Problem

Formulation for Bifenthrin." Memorandum. December 22, page 12.

<sup>3</sup> Weston, D. P.; Lydy M. J. (2010). Urban and Agricultural Sources of Pyrethroid Insecticides to the Sacramento-San Joaquin Delta of California. *Environ. Sci. Technol.* **44**: 1833–1840.

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requirements established as part of Total Maximum Daily Loads (TMDLs) set for the water bodies by the California State Water Resources Control Board and Regional Water Quality Control Boards. The cost to POTWs to comply with TMDLs can be up to millions of dollars per water body per pollutant.

### **Down-the-Drain Assessment**

Tri-TAC requests that EPA conduct a “down-the-drain” assessment to evaluate the impacts of flumethrin sewer discharges, which will inevitably occur if flumethrin is registered for application on dogs and cats. Although Tri-TAC supports the use of U.S. EPA’s standard tool for down-the-drain assessments, Exposure and Fate Assessment Screening Tool (E-FAST) Version 2.0, we have concerns with the way that OPP has applied E-FAST. In response to past Tri-TAC comments (see enclosed letter), OPP has proposed to work with Office of Water and stakeholders to refine the way it uses E-FAST.<sup>4</sup> We strongly recommend that these anticipated refinements be incorporated in the flumethrin down-the-drain assessment.

Available POTW monitoring data for other pyrethroids should be extrapolated to provide input into E-FAST for the down-the-drain assessment. If POTW influent, effluent, and biosolids monitoring data are not available in time for the flumethrin risk assessment or if available data are insufficient to account for the variety of POTW treatment processes and operational parameters utilized nationwide, EPA should use conservative assumptions for flumethrin removal during wastewater treatment in the down-the-drain assessment.

### **Biosolids Land Application Assessment**

Roughly fifty percent of the total cost of wastewater treatment is expended on solids handling. Land application is a frequently used method for recycling and beneficially reusing biosolids. Since pyrethroids adsorb strongly to organic matter, a portion of flumethrin entering POTWs will likely partition into biosolids. As such, the flumethrin environmental risk assessment should address biosolids as well as effluent.

### **Aquatic Toxicity Data**

Acute and chronic toxicity data for freshwater and estuarine/marine fish and invertebrates are necessary to perform the down-the-drain and biosolids assessments. Tri-TAC recommends that EPA issue data requirements for flumethrin that fill any gaps in available data. The data requirements for flumethrin should mimic the data requirements for pyrethroids undergoing registration review, which are the minimum necessary for a scientifically sound environmental risk

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<sup>4</sup> Meléndez, J. L.; Solliday, A.; Sappington, K.; U.S. EPA Office of Pesticide Programs Environmental Fate and Effects Division (2010). “Response to Public Comments on the EFED Registration Review Problem Formulation for Bifenthrin.” Memorandum. December 22, pages 3-4.

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assessment.<sup>5</sup> To assist with the financial portion of the justification for these data requirements, we have enclosed a previous comment letter on another pyrethroid that details costs that each affected POTW could incur if EPA does not prevent pyrethroid-related toxicity in POTW effluents.

## Conclusion

In conclusion, POTWs need EPA's assistance to protect surface water from contamination from pesticides. POTWs are required by NPDES permits to meet effluent toxicity standards; however our agencies do not have the authority to directly regulate pesticides. When toxicity problems occur, they can be very costly for POTWs. Tri-TAC requests that necessary aquatic toxicity data be obtained, and the down-the-drain and biosolids assessments be performed as part of EPA's review of the application to register flumethrin for applications on dogs and cats.

Tri-TAC appreciates the opportunity to comment on this registration application. If you have any questions or require additional information, please contact Ms. Preeti Ghuman by phone at (562) 699-7411, extension 2904, or by email at [pghuman@lacsds.org](mailto:pghuman@lacsds.org).

Sincerely,



Ben Horenstein  
Tri-TAC Chair

Encl: Tri-TAC letter re: Bifenthrin Registration Review Problem Formulation and Work Plan

cc: Rick P. Keigwin, Jr., U.S. EPA Office of Pesticide Programs, Pesticide Re-Evaluation Division  
Kevin Costello, U.S. EPA Office of Pesticide Programs, Pesticide Re-Evaluation Division  
Mah Shamim, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects Division  
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Chris Hornback, Regulatory Affairs, National Association of Clean Water Agencies

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<sup>5</sup> See data requirements in Solliday, A.; Federoff, N. E.; Meléndez, J. L.; U.S. EPA Office of Pesticide Programs Environmental Fate and Effects Division (2010). *Environmental Fate and Ecological Risk Assessment Revised Problem Formulation in Support of Registration Review for Bifenthrin*. December 22.