



Ben Horenstein  
*Tri-TAC Chair*  
East Bay Municipal Utility District  
375 – 11<sup>th</sup> Street, MS702  
Oakland, CA 94607  
(510) 287-1846  
[bhorenst@ebmud.com](mailto:bhorenst@ebmud.com)

August 29, 2011

Ms. Susan Bartow  
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: Fipronil Pesticide (Docket Number EPA–HQ–OPP–2011–0448)

Dear Ms. Bartow:

The purpose of this letter is to provide comments on the registration review of the pesticide fipronil. We are pleased to have the opportunity to provide U.S. EPA with information that may help U.S. EPA ensure that the environmental risk assessment for fipronil is complete and accurate so that U.S. EPA can make a well-informed registration review decision. Our comments focus specifically on the environmental risks of fipronil discharges to publicly owned wastewater treatment plants (POTWs).

As background, Tri-TAC is a technical advisory group for POTWs in California. The group 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 discharges or 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 pesticides 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).

In the current review of fipronil, Tri-TAC endorses the letter from CASQA, our colleagues in the storm water arena. Their issues are slightly different from our own, but many of the same concerns of investigation and data gathering in your review process are shared

### **Tri-TAC's Interest in Fipronil**

Fipronil is of special interest to POTWs due to its many indoor uses (for pets and for other indoor treatments). Furthermore, its use is expected to increase because it is the most likely substitute for pyrethroids, specifically bifenthrin, which are facing regulatory restrictions in the next year due to linkages with aquatic toxicity.

#### ***Vice Chair***

**Natalie Sierra**  
San Francisco Public  
Utilities Commission  
1145 Market Street, 5<sup>th</sup> Floor  
San Francisco, CA 94103  
(415) 934-5772  
[nsierra@sfgwater.org](mailto:nsierra@sfgwater.org)

#### ***Water Committee***

**Co-Chairs**  
**Lorien Fono**  
Patricia McGovern Engineers  
2242 Leavenworth Street  
San Francisco, CA 94133  
(510) 684-2993  
[lorienjf@gmail.com](mailto:lorienjf@gmail.com)

#### ***Shannon Grund***

Los Angeles County  
Sanitation Districts  
1955 Workman Mill Road  
Whittier, CA 90601  
(562) 908-4288 x2843  
[sgrund@lacsds.org](mailto:sgrund@lacsds.org)

#### ***Air Committee***

**Chair**  
**Jay Witherspoon**  
CH2M Hill  
155 Grand Avenue,  
Suite 1000  
Oakland, CA 94612  
(510) 251-2888  
[jay.witherspoon@ch2m.com](mailto:jay.witherspoon@ch2m.com)

#### ***Land Committee***

**Co-Chairs**  
**Vincent De Lange**  
East Bay Municipal Utility  
District  
375 – 11<sup>th</sup> Street, MS702  
Oakland, CA 94607  
(510) 287-1141  
[vdelange@ebmud.com](mailto:vdelange@ebmud.com)

**Tom Meregillano**  
Orange County Sanitation  
District  
10844 Ellis Avenue  
Fountain Valley, CA 92708  
(714) 593-7457  
[tmeregillano@ocsd.com](mailto:tmeregillano@ocsd.com)

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Pesticides used indoors are contained in the influent to POTWs as a natural consequence of their use, cleanup, and ultimate disposal. When used in pet products, residues are 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. Pet bedding is washed and these discharges go to the sewer. Other uses have direct pathways to the sewer system. Once in the sewer system, wash water carrying fipronil flows to POTWs.

POTWs have three general types of emissions: water, solids, and air. The pathways of interest are likely to be water and biosolids. Effluent from the POTW will typically 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.

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 are incurred for identifying the source of the pollutants that have caused non-compliance with toxicity limits, source control to reduce the 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. In some cases, operational issues arise in the biological processes of wastewater treatment as a result of pesticides, which are by intent toxic to many life forms.

Also, when surface water bodies become impaired by pesticides, POTWs discharging to the water bodies can be affected through additional requirements established as part of Total Maximum Daily Loads (TMDLs) set for the water bodies by state agencies such as the California State Water Resources Control Board and the associated 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.

We request that US EPA seek to obtain all data necessary to review fipronil's impacts on POTWs and therefore on water quality and to complete a careful review. The direction EPA has taken on pyrethroids is a good example.

### **Estimating Environmental Concentrations of Fipronil**

The simple method of calculating national average indoor usage and estimating POTW discharge is not going to provide the necessary quality of analysis. Pesticide usage depends on climate, pest pressures, and other regional issues, causing

substantial variation in POTW discharges. At present, it is unclear which uses are the source of most fipronil discharges (could be pets or other indoor uses or evaporation into buildings from underground injection or cleanup from outdoor applications). This uncertainty would make it very difficult to determine which uses to include in the estimation. The outcome of such a simple calculation would not be sufficiently robust to form the basis for a decision with such significant financial implications for POTWs.

Further, EPA is asked to recognize cross-media transfer for this pesticide and to assess the environmental and management risks associated with fipronil and its very persistent degradates in sewage sludge ("biosolids").

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

Tri-TAC requests that EPA modify the use of the "down-the-drain" assessment to evaluate the impacts of fipronil sewer discharges. 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, OPP has proposed to work with Office of Water and stakeholders to refine the way it uses E-FAST.<sup>1</sup> In the past, OPP and OW have used different exposure periods and exposure frequencies in their ecological effects assessments. If these factors are not being addressed in the OPP/OW Common Effects Assessment Methodology project, we request that OPP work with OW to develop a means of avoiding regulatory inconsistencies. One option would be to modify OPP pesticide runoff models to provide exposure estimates for multiple time periods, including time periods consistent with those used by OW.

### **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 biosolids. Since many pesticides adsorb strongly to organic matter, a portion of fipronil entering POTWs will likely partition into biosolids. As such, the fipronil environmental risk assessment should address biosolids as well as effluent. The analysis of this partitioning has largely been missing from prior studies. We have heard that US EPA is open to including this component of your review and are pleased.

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<sup>1</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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## 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 fipronil that fill any gaps in available data. The data requirements for fipronil should mimic the data requirements for pyrethroids undergoing registration review, which are the minimum necessary for a scientifically sound environmental risk assessment.<sup>2</sup>

Because there are several potential sources of fipronil in POTW discharges, because fipronil has very persistent degradates, and because fipronil is toxic to aquatic organisms at very low concentrations, POTW monitoring is the only means by which it will be possible to determine whether fipronil and its degradates are present in POTW effluent or biosolids at levels that may be environmentally problematic.

## 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 the use of 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 assessment and a biosolids assessment be performed as part of EPA's registration review for fipronil.

Tri-TAC appreciates the opportunity to comment on this registration application. If you have any questions or require additional information, please contact Dr. Gail Chesler by phone at (925) 229-7294 or by email at [gchesler@centralsan.org](mailto:gchesler@centralsan.org).

Sincerely,



Ben Horenstein  
Chair

cc: Steven Bradbury, Director, U.S. EPA Office of Pesticide Programs  
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

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<sup>2</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.

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Eric Olson, U.S. EPA Office of Pesticide Programs, Pesticide Re-Evaluation Division  
Nancy Andrews, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects  
Edward Odenkirchen, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects  
Stephen Wentz, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects Division  
Mah Shamim, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects  
Donald Brady, Director, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects  
Jack Housenger, U.S. EPA Office of Pesticide Programs, Biological and Economic Analysis  
Ephraim King, Director, U.S. EPA Office of Water, Office of Science and Technology  
James A. Hanlon, Director, U.S. EPA Office of Water, Office of Wastewater Management  
Jacqueline Guerry, U.S. EPA Region 3  
Alexis Strauss, Director, Water Division, U.S. EPA Region 9  
Debra Denton, U.S. EPA Region 9  
Patti TenBrook, U.S. EPA Region 9  
Syed Ali, California State Water Resources Control Board  
Tom Mumley, California Regional Water Quality Control Board, San Francisco Bay Region  
Janet O'Hara, California Regional Water Quality Control Board, San Francisco Bay Region  
Daniel McClure, California Regional Water Quality Control Board, Central Valley Region  
Charles Andrews, California Department of Pesticide Regulation, Pesticide Programs Division  
Ann Prichard, California Department of Pesticide Regulation, Pesticide Registration Branch  
John Sanders, California Department of Pesticide Regulation, Environmental Monitoring Branch  
Nan Singhasemanon, California Department of Pesticide Regulation  
Kelly D. Moran, Urban Pesticides Pollution Prevention Project  
Chris Hornback, Regulatory Affairs, National Association of Clean Water Agencies