



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

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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Mr. James W. Burnette, Jr.
North Carolina Pesticide Board
Post Office Box 27647
Raleigh, North Carolina 27611

Dear Mr. Burnette:

Thank you for your letter to Stephen Johnson, Acting Deputy Administrator, concerning changes to pesticide aerial application regulations currently being considered by the North Carolina Pesticide Board (the Board). Mr. Johnson asked my office to reply on his behalf because we have primary oversight responsibility for pesticides in the Environmental Protection Agency (EPA).

Your questions included whether the methodology supporting the suggested regulatory changes was consistent with EPA's process for estimating residential exposure to pesticides, whether the proposed changes were a valid method to address health risks of aerial spraying, and whether EPA had any recommendations for changing the methodology used by the Board. We shared your letter and the supporting documentation with several staff, including scientists in our Health Effects Division, for review. In general, the Agency has concerns about the underlying approach to calculating an acceptable residue level. EPA is also concerned about the possibility of setting a standard level for all pesticide active ingredients for enforcement purposes.

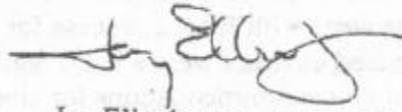
The approach taken to establish a baseline residue level following aerial applications relies on some, but not all, methods used by EPA to assess exposure to pesticides applied in residential settings. In addition, the conversion method used in the proposal is based on a 1992 article by personnel from the California Department of Pesticide Regulation (CPDR). This conversion method is no longer routinely used by CPDR and may not be reliable. For adults, the proposal relies on transfer coefficients developed for agricultural workers. These may not be representative of activities performed by adults on their lawns or in other areas. In addition the proposal uses an exposure duration of one-hour rather than the two-hour duration used by EPA.

As for the proposal's validity as a health-protective standard for pesticide drift, the endpoint selection and uncertainty factors presented may not be protective since other factors used by EPA, such as those outlined in the Food Quality Protection Act, are not considered in estimating a safe total residue level. The proposal also relies on a limited database of toxicity values that may not address adverse effects besides dermal toxicity, and does not include newer

generation pesticides that may have higher toxicities and lower application rates. Thus, the 6 ppm value may underestimate exposure to these products. Since detection and quantification of pesticide residues is highly dependent on issues such as timeliness of sample collection, quality of the sample, storage, and analytical procedures, the Agency would anticipate difficulties with the enforcement of a standard such as the one suggested by the proposal. The time factor seems especially important since there may be significant periods between human contact, and the collection and analysis of samples. This time lapse provides opportunities for pesticides at sites to diminish through volatilization, rain-wash, photolysis, hydrolysis, and microbial degradation prior to sample collection and analysis.

EPA fully appreciates the difficulties of developing a sound, effective, and protective policy for pesticide spray drift from aerial and other methods of application, and we appreciate your interests and efforts to address this important issue. However, for the reasons detailed above, the Agency has significant concerns with the Board's proposal. I hope these comments are helpful to you and the Board. If you would like to discuss this issue or our findings, please feel free to contact my office.

Sincerely yours,



Jay Ellenberger, Acting Director
Field and External Affairs Division