

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

September 23, 2013  
OFFICE OF WATER

Dr. Pamela Shubat  
Dr. Sheela Sathyanarayana  
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Environmental Health Division  
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Dear Dr. Shubat and Dr. Sathyanarayana:

Thank you for your letter dated August 2, 2013, addressed to Administrator Gina McCarthy regarding Human Health Benchmarks for Pesticides (HHBP). We thank you for providing us with feedback about the recent update to the HHBP table we posted on August 21, 2013.

In your letter, you expressed concern that the HHBPs "fail to use current Environmental Protection Agency (EPA) guidance related to the most recent children's health and exposure data and methods". HHBPs are intended to make information available to the public for use in interpreting monitoring data. They are developed using the same method used by OW in developing HAs from OPP hazard data. We believe that HHBPs are achieving their intended purpose. We also believe that we have partially addressed the issues you raised in the current update.

Your letter cites concerns regarding four key assumptions and considerations that protect early life. These are addressed separately below:

- 1) the importance of using current estimates of children's drinking water intake in calculating risk values.

Our HHBP website, as currently revised, addresses this concern. Although our HHBP table reflects the current policy of using adult values for calculation of Health Advisory values, we have added the following language to the webpage and to the technical background document:

"In deriving benchmarks, alternate bodyweights and drinking water intake may be considered for certain specific life stages (e.g., infants, children, fetuses/pregnant mothers) and these could be found in the 'Exposure Factors Handbook 2011 Edition' at <http://www.epa.gov/ncea/efh/pdfs/eihcomplete.pdf>".

Stakeholders can choose to consider the lifestage-specific drinking water intake as well as the lifestage-specific groupings in applying EPA's benchmarks for interpreting their drinking water monitoring data.

- 2) an acute health effect on the body can be at least as, if not more, harmful to children as to adults.

While we agree that acute effects are of concern to all lifestages, we have continued to rely on using adult intake values for calculation of most endpoints. However, the notation of information available in the 2011 Exposure Factors Handbook for intake and body weight data for multiple lifestages provides a means for interested parties to consider the potential implications for a variety of lifestages. In addition, the majority of HHBPs reflect points of departure (POD) from chronic exposures. These PODs are

generally lower in magnitude than comparable PODs from short term or acute studies, and are therefore more health protective.

- 3) the importance of including Food Quality Protection Act (FQPA) safety factors in HHBP calculations to address concerns about children's susceptibility.

FQPA factors are specific to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug, and Cosmetic Act (FFDCA). The factors were developed in response to passage of the FQPA, an act that specifically amended only FIFRA and FFDCA, but made no reference to the Safe Drinking Water Act (SDWA). As such, they are not applicable to activities under the SDWA. We recognize that various users of HHBPs may have interest in including FQPA factors in their activities while others prefer not to consider them. We have included the FQPA factors, denoted in footnotes, with applicable benchmarks in the HHBP table.

- 4) the importance of using EPA supplemental guidance for carcinogens, which recommends age dependent adjustment factors (ADAFs) for children.

The EPA policy limits the application of ADAFs to chemicals that mediate cancer through a mutagenic mode of action. No pesticides listed in the table have been identified as having a mutagenic mode of action and therefore ADAFs were not used calculating HHBPs.

We appreciate the opportunity to engage with the CHPAC to exchange information and views regarding derivation of HHBPs. The EPA remains committed to making information to support environmental decisions available to states, tribes and other stakeholders. We will continue to move forward to update HHBPs to reflect new data and evolving policy. We will consult with the Office of Children's Health Protection in considering how to make additional progress in future updates.

We thank CHPAC for their recommendations.

Sincerely,

Elizabeth Behl, Director  
Health and Ecological Criteria Division

cc: Jack Housenger, Director, Health Effects Division, Office of Pesticide Programs  
Richard Keigwin, Director, Pesticide Re-evaluation Division, Office of Pesticide Programs  
Eric Burneson, Acting Director, Office of Ground Water and Drinking Water, Office of Water  
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