Peer Review Charge for

Mirex and Chlordecone Toxicological Profile - Draft for Public Comment

Reviewer #1

This toxicological profile is an update of a previous one published in 1995. This update has focused on Chapter 2, Health Effects, and resulted in the revision of the previous mirex MRL; and the addition of a new chlordecone MRL.

Thus, we would like for you to focus on the specific chapters noted below, including the health effects section (Chapter 2), and the MRL issue presented below.

CHARGE TO REVIEWER:

CHAPTER 1:

Does Chapter 1 adequately summarize the published literature regarding the health effects present in Chapter 2 for this substance?

CHAPTER 2:

First, does Chapter 2 adequately reflect the published literature regarding health effects for this substance? Are you aware of any studies that are not included that may be relevant in the derivation of MRLs for this chemical?

Second, we would like you to focus on the current data assessment which resulted in the revision of the previously derived mirex MRL in the 1995 toxicological profile; and the addition of a new chlordecone MRL.

MRLs: The chronic-duration oral MRL for Mirex and the intermediate-duration oral MRL for chlordecone were revised from 1995 toxicological profile only.

Mirex – Chronic-Duration Oral MRL: A revised chronic-duration oral MRL for mirex is included in this profile.

The previous MRL was 0.0008 mg/kg/day and was derived based on dose-related hepatic changes from a 2-year oral study of male and female F344/N rats (NTP 1990). The NOAEL of 0.075 mg/kg/day had been divided by a total uncertainty factor of 100 (10 for animal to human extrapolation and 10 for human variability).

The new MRL is 0.0003 mg/kg/day using the same study and adding an additional uncertainty factor of 3. Now the total uncertainty factor is 300 based on 10x10x3 =300. The new MRL thus becomes 0.075/300= 0.0003 mg/kg/day.

-- Please comment on any aspect of our MRL database assessment that you feel should be addressed.

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Chlordecone – Intermediate-Duration Oral MRL (Revised from 1995 toxicological profile):

A provisional MRL of 0.003 mg/kg/day has been derived for intermediate-duration oral exposure to chlordecone based on neurological effects from a 90-day oral study of male Sprague-Dawley rats (Linder et al. 1983). The

NOAEL of 0.26 mg/kg/day was divided by a total uncertainty factor of 100 (10 for animal to human extrapolation and 10 for human variability) to derive intermediate-duration MRL of 0.003 mg/kg/day.

-- Please comment on any aspect of our MRL database assessment that you feel should be addressed.

CHAPTER 7:

We would like to know your thoughts on the regulations and guidelines that are presented and any that should be added or removed. Are you aware of any additional regulations or guidelines that we should add? Please provide citations. Are there any that should be removed? Explain.

APPENDIX A:

Please address the MRL worksheets based upon the questions provided above about the MRLs.

APPENDIX B:

Please provide comments about the process utilized in this section.

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