

# PEER REVIEW COMMENT FORM

## UPDATED ATSDR POLICY GUIDELINE FOR DIOXINS AND DIOXIN-LIKE COMPOUNDS IN SOIL

October 2004

### GUIDE TO REVIEWERS:

The objective of peer review conducted by the Office of Science is to ensure the highest quality of science for NCEH/ATSDR policy, studies, and results of research; therefore, your comments should be provided with this goal in mind. Please note that your unaltered comments will be sent to the investigator for a response. You should receive a copy of the response to the peer review comments when they are available.

**Please comment on the three (3) major changes to the dioxin and dioxin-like revised policy:**

#### 1. **Change #1**

**Deletion of the 1 ppb Action Level as the criteria for taking specific public actions, and retained only as a reference to the Superfund Dioxin Cleanup policy criteria.**

#### ***Comments:***

**In my opinion, this is the most significant and beneficial change to the dioxin/dioxin-like revised policy. The confusion caused by declaring 1 ppb soil dioxin as an “action level,” and subsequent misinterpretation as criteria for clean up or a public health hazard, warranted revision. Correlating a 1 ppb action level with a public health hazard is not based in the toxicological or epidemiological literature and is potentially damaging to the credibility of health assessments and consultations. Furthermore, site-specific characteristics such as soil type, access to contaminated soils, demographics of nearby populations, sufficiency of sampling and background levels should be accounted for in public health assessments or consultations.**

2. **Change #2**

Retention of the 0.05 ppb Screening Level, the MRL-based EMEG for dioxin TEQ in soil, to be consistent with the approach for evaluating chemical contaminants in health assessments.

***Comments:***

Retaining the screening level of 0.05 ppb is adequate as a health protective approach and for consistency purposes for evaluating other contaminants in soil. The EMEG bioavailability factor of 100% is conservative, especially considering that bioavailability of 2,3,7,8-TCDD in corn oil was about 87% in a human volunteer (Poiger & Schlatter, 1986), that higher chlorinated congeners will be less bioavailable compared with lesser chlorinated congeners and that ingestion of dioxins via contaminated soil will further reduce bioavailability when compared to other vehicles of exposure. Furthermore, the MRL is based on results in monkeys with a sufficient uncertainty factor (90).

3. **Change #3**

Indirect exposure pathways, such as local dietary sources, could make a significant contribution to the overall dioxin exposure. As a result the guideline emphasizes the need for conducting a complete exposure pathways analysis for dioxins and dioxin-like compounds in site-specific health assessments.

***Comments:***

The inclusion of dietary exposure as a result of site-specific dioxin contamination is necessary to adequately characterize a completed exposure pathway. The draft updated policy guideline mentions fish, eggs and dairy products that are known media for the accumulation of dioxin and dioxin-like compounds and correctly identifies plant uptake as insignificant. Future land-uses may be an integral component to consider in assessing the food chain uptake of dioxins via contaminated soils.

**Additional questions and comments:**

1. Does the revised document serve as effective guidance for assessing potential public health hazards associated with dioxin contamination in soil?

Yes (  ) No (  ) Unsure (  )

**Why?:**

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**This revised document provides straight-forward guidance that serves to 1) reduce confusion about the 1 ppb “action level,” 2) maintain a consistent screening approach with other soil contaminants, 3) to better characterize complete exposure pathways and 4) to offer the health assessor greater flexibility in the consideration of site-specific factors to determine the risk posed by dioxin/dioxin-like compounds in soil.**

2. Do you have any other comments regarding the revised dioxin and dioxin-like policy guideline?

Perhaps a statement on background levels of dioxin/dioxin-furans as a result of natural processes such as forest fires would be useful. The confusion over background soil levels has been raised by several agencies in this region.