

EPA's Science Plan for Activities Related to Dioxins in the Environment

May 26, 2009

The U.S. Environmental Protection Agency is currently addressing several issues related to dioxins and dioxin-like chemicals in the environment. These include the comprehensive human health and exposure assessment for dioxin, commonly called the "dioxin reassessment," and a review of dioxin soil clean-up levels currently in use across the United States. To move forward with both of these efforts, as well as other dioxin related activities, a plan with interim milestones, has been developed and it is outlined below.

EPA's Exposure and Human Health Reassessment of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Related Compounds; Response to NAS and Completion of Dioxin Reassessment

- 1. *EPA will release a draft report that responds to the recommendations and comments included in the National Academy of Sciences' (NAS) 2006 review of EPA's 2003 draft dioxin reassessment.***
 - EPA's National Center for Environment Assessment (NCEA) in the Office of Research and Development, will prepare a limited response to key comments and recommendations in the NAS report (draft response to comments report).
 - The draft response will focus on dose-response issues raised by the NAS and will include an analysis of relevant new key studies.
 - The draft response will be provided for public review and comment and independent external peer review.
 - The draft response will also include an evaluation of some of the significant recommendations that are difficult for the Agency to address given the current state of science, and a detailed rationale for these conclusions.
 - The peer review will be conducted by the EPA Science Advisory Board, an independent review body chartered under the Federal Advisory Committee Act.
 - The draft response to comments report will be completed and released for public and peer review by December 31, 2009.
- 2. *EPA will provide the draft response to comments report for internal and external review.***
 - The draft response to comments report will also undergo both internal EPA review and interagency review.
 - The availability of the draft report for public review and the start of the comment period will be announced in the *Federal Register*.
 - The draft report will be publicly available on EPA's Web site (www.epa.gov/ncea).
- 3. *The SAB will review the science content of the response to comments report.***
 - The SAB's review will focus on the analyses of the new dose-response studies, and the rationale for the recommendations that EPA could not implement.
 - EPA will work with the SAB to ensure that the SAB's report is completed in a timely manner.

- 4. EPA will review impacts of the draft response to comments report on the Agency's 2003 draft dioxin reassessment.**
- Throughout the development of the draft response to comments report, NCEA will determine whether any new analyses included in the draft response to comments report will require some, or extensive, revisions to EPA's 2003 draft dioxin reassessment.
 - This process will continue during the SAB and public review period.
 - NCEA will provide an estimated completion date for the 2003 draft dioxin reassessment
 - NCEA will complete any changes expeditiously.
- 5. EPA will release the final response to comments report and focus on completion of the dioxin reassessment.**
- By the end of 2010, EPA will release the final response to comments report.
 - By the end of 2010, EPA expects to complete the final dioxin human health and exposure assessment and release it to the public, subject to further consideration of the science.
 - The release date of the final dioxin human health and exposure assessment is dependent on the scope and complexity of the revisions that will need to be made to the 2003 draft assessment based on the contents of the final response to comments report.

Other Dioxin Related Activities

- 6. EPA will review currently available information from an exposure study by the University of Michigan.**
- NCEA, working together with EPA's Region 5 and the Office of Solid Waste and Emergency Response (OSWER), will review currently available information from the University of Michigan study of dioxin exposures in the Midland, Michigan area
 - EPA will determine the relationship of this work to addressing potential risks from dioxin exposure
 - The review of the study will be completed by September 30, 2009.
- 7. EPA will evaluate information about the basis for dioxin soil clean-up levels.**
- NCEA will review information about the basis for state dioxin soil clean-up levels.
 - NCEA will prepare a report for OSWER that includes a survey and evaluation of the clean-up levels in the states
 - The report will characterize the science that these values are based on, as well as the degree of peer review, if any that was done.
 - This report will be completed before December 31, 2009, and provided to OSWER.
 - OSWER will announce an updated interim dioxin soil clean-up level to the public by December 31, 2009.
- 8. EPA will release final report on Dioxin Toxicity Equivalency Factors (TEF).**
- EPA will complete its report entitled, "Recommended Toxicity Equivalency Factors (TEFs) for Human Health Risk Assessments of Dioxin and Dioxin-Like Compounds."
 - This document will describe EPA's updated approach for evaluating the human health risks from exposures to environmental media containing dioxin-like compounds.
 - The report is expected to recommend the use of consensus TEF values for 2,3,7,8-tetrachlorodibenzo-*p*-dioxin and dioxin-like compounds published in 2005 by the World Health Organization.
 - This report will be completed and released to the public by December 31, 2009.