The Issue

The term "dioxin" is commonly used to refer to a family of toxic chemicals that share a similar chemical structure and induce harm through a similar mechanism. Dioxins have been characterized by EPA as likely human carcinogens and are anticipated to increase the risk of cancer at background levels of exposure.

Dioxin levels in the environment have been declining since the early seventies and have been the subject of a number of federal and state regulations and clean-up actions; however, current exposures levels still remain a concern. Examples of dioxins include polychlorinated biphenyls (PCBs), polychlorinated dibenz dioxins (PCDDs), and polychlorinated dibenzo furans (PCDFs). PCBs were produced commercially in large quantities until production was stopped in 1977. PCDDs and PCDFs are not commercial chemical products, but are unintentional by-products of most forms of combustion and several industrial chemical processes.

EPA Action

Scientists in EPA's National Center for Environmental Assessment are currently working on a comprehensive reassessment of dioxin exposure and human health effects. The latest draft assessment, Exposure and Human Health Reassessment of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Related Compounds, posted in Dec 2003, is still undergoing revisions in light of the review by the National Academy of Sciences (NAS) in November 2004. A Workshop in Feb 2008 was held to discuss EPA's response to the NAS reports.

History

- Sep 1985: EPA released the Health Assessment Document for Polychlorinated Dibenz o-P-Dioxins report.
- Jun-Aug 1994: EPA released the draft documents: Health Assessment Document for 2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD) and Related Compounds Volume (1 of 3), Volume (2 of 3), and Volume (3 of 3).
- Sep 1994: EPA launched the Dioxin Exposure Initiative: a research program to further evaluate the exposure of Americans to this class of compounds.
- Jul 1996: EPA released the consolidated comments from the Peer Review of the Draft Dioxin Reassessment.
- Oct 2004: EPA released the NAS External Review Draft of the Dioxin Assessment, in preparation for the first NAS panel meeting (held 11/22-23/2004), in Wash., DC. This is still the most current version of the EPA Dioxin Assessment.
- Aug 2008: EPA released a preliminary search list to address EPA's Reponses to the NAS comments on the 2003 Dioxin Reassessment report.
- Feb 2009: EPA hosted a 3-day public, scientific workshop to assist EPA in responding to the NAS reports on Dioxin.
- Jun 2008: EPA released the Dioxin Workshop Summary report containing discussion and conclusions from the Feb 18-20, 2009 workshop held in Cincinnati, Ohio.
- Sep 2009: EPA released the University of Michigan study of dioxin exposures in Midland, Michigan.
- May 2010: EPA released EPA's Reanalysis of Key Issues Related to Dioxin Toxicity and Response to NAS Comments under the IRIS process, which includes the release of the interagency comments and pre-release drafts.

Related Links

- EPA Analytical Method 1613 for analysis of dioxin and other related compounds.
- Dioxin Overview: from EPA's Office of Chemical Safety and Pollution Prevention (OCSPP)
List additional resources associated with Dioxin