

Screening-Level Review of Toxicity Information Contained in the Integrated Risk Information System (IRIS) Database

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The Integrated Risk Information System (IRIS) is a publicly-accessible U.S. Environmental Protection Agency (EPA) database containing information on the potential adverse health effects (noncancer and cancer) associated with chronic exposure to environmental chemicals. The information on IRIS is used throughout EPA and worldwide to produce consistent risk assessments based on analysis of peer-reviewed data on toxicity and dose-response relationships. EPA has an ongoing program to add new chemicals to IRIS and to update the reviews of chemicals already on IRIS. However, the information on most of the IRIS chemicals was loaded onto the database in the late 1980s and early 1990s. EPA was interested in the extent to which that information reflects the most current science and which entries should be considered for updating. A screening-level review of the available literature for chemicals in the IRIS database was conducted to reach a preliminary determination of whether a toxicological reassessment based on the evaluation of new health-effects literature would be likely to change existing IRIS toxicity values or cancer designations. This review consisted of a screen of the more recent literature contained in selected secondary literature sources (e.g., Agency for Toxic Substances and Disease Registry Toxicological Profiles) and in records retrieved from searches of on-line toxicological databases (e.g., MEDLINE and TOXLINE). Consistent with the screening nature of this effort, review of the literature for relevance to IRIS reference value development and cancer designation was limited to study titles and abstracts. To date, screening-level reviews have been conducted for 460 chemicals in the IRIS data base. Results indicate that for 63% of the chemicals evaluated in this screening-level review, no new health effects studies were identified that would be likely to produce a change in existing IRIS toxicity values or cancer designations. Statements summarizing the findings of this screen have been added to the IRIS database. These summary statements inform the IRIS user of the availability of newer scientific information that may be relevant to a health assessment for a given chemical. The findings of this review are considered in the priority-setting process for the annual selection of chemicals for IRIS reassessment.