Candidate for Proposition 65 Listing via the Authoritative Bodies Mechanism Found Not to Meet the Scientific Criteria (22 CCR 12306(g)): Dimethyl Chlorothiophosphate (CAS No. 2524-03-0)

Office of Environmental Health Hazard Assessment
April, 2000

The U.S. Environmental Protection Agency (U.S. EPA), an authoritative body for purposes of Proposition 65 (22 CCR Section 12306(l)), identifies chemicals as causing developmental or reproductive toxicity in implementing its Toxic Release Inventory (TRI) program (*i.e.*, Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)). On this basis the U.S. EPA, in 1994, added a number of chemicals to the TRI list and published its findings in the *Federal Register* (**59:**1788-1859, 1994 and **59:**61432-61485, 1994). The Office of Environmental Health Hazard Assessment (OEHHA) has reviewed the bases for these TRI chemical additions in the context of the regulatory criteria governing Proposition 65 listing via the authoritative bodies mechanism (Title 22, California Code of Regulations, Section 12306 (22 CCR 12306)).

OEHHA determined for many TRI chemicals that the 22 CCR 12306 regulatory criteria were met and has placed these chemicals on the Proposition 65 list of chemicals known to cause reproductive toxicity. A number of other TRI chemicals were found not to meet the 22 CCR 12306 criteria and have been removed from consideration at this time. As described below, OEHHA has determined that scientific criteria for "as causing reproductive toxicity" given in regulation (22 CCR 12306(g)) were not satisfied for dimethyl chlorothiophosphate (CAS No. 2524-03-0), which was added by U.S. EPA in 1994 to the TRI list on the basis of developmental toxicity.

A single dominant lethal study in rats (Ethyl Corporation, 1981) served as the basis for the TRI identification of developmental toxicity (*Federal Register* **59:**1788-1859, 1994). This study reported an increase in preimplantation losses and dead implants. However, this study is not, in itself, fully adequate for identification of developmental toxicity under Proposition 65 in the absence of other data. No single factor led to this determination. Rather, the conclusion was based on a combination of factors, primarily the lack of clear and consistent dose-response relationships for effects on the critical endpoints (dead implants per pregnant female, and live implants per pregnant female) and the small size of the study. Thus, although the study is suggestive of reproductive effects for dimethyl chlorothiophosphate (particularly for male reproductive toxicity via dominant lethal activity) OEHHA has determined that the scientific criteria (22 CCR 12306) for listing dimethyl

chlorothiophosphate for developmental toxicity via the authoritative bodies listing mechanism have not been met.

Reference

Ethyl Corporation, 1981. Activity of T1605 in the Dominant Lethal Assay in Rodents. [Study conducted by Microbiological Associates, Bethesda, Maryland], as cited in Hazard Identification Review: O,O-Dialkyl Chlorothiophosphates, U.S. EPA TSCA Interagency Testing Committee, IR-255, 1982.