

Office of Environmental Health Hazard Assessment



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Secretary for Environmental Protection

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Arnold Schwarzenegger
Governor

January 14, 2010

Dr. Ruth Lunn, Director, Report on Carcinogens Center
National Institute of Environmental Health Sciences
P.O. Box 12233, MD K2-14
Research Triangle Park, North Carolina 27709

Dear Dr. Lunn:

I am writing in response to your request in the December 21, 2009 Federal Register for "Public Comments on the Report on Carcinogens (RoC) Expert Panel's Recommendations on Listing Status for Formaldehyde and the Scientific Justification for the Recommendation."

The following considerations led the RoC panel to unanimously recommend that formaldehyde be listed as "known to be a human carcinogen":

- Epidemiological studies of workers exposed to formaldehyde indicate that a causal relationship exists between exposure to formaldehyde and cancer in humans. These studies found evidence of a significant excess of three types of cancer with a positive dose-response relationship: nasopharyngeal carcinoma, sinonasal adenocarcinoma and myeloid leukemia.
- Formaldehyde-induced carcinogenicity has been demonstrated in two animal species, including multiple strains of rats at multiple sites using two routes of exposure to formaldehyde.
- Formaldehyde is a highly reactive chemical that readily binds with macromolecules such as DNA and proteins. Evidence from *in vitro*, animal and human studies indicates that formaldehyde is genotoxic, and suggests that formaldehyde-induced carcinogenicity may take place via a genotoxic mechanism.

It should also be noted that the California Air Resources Board Toxic Air Contaminant document for formaldehyde identifies it as a carcinogen, and formaldehyde is listed as a chemical known to the state of California to cause cancer under Proposition 65.

California Environmental Protection Agency

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.

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The Office of Environmental Health Hazard Assessment (OEHHA) has reviewed the RoC expert panel recommendation for listing status for formaldehyde and scientific justification for the recommendation report. OEHHA agrees with the conclusions of the RoC expert panel on formaldehyde, and their recommendations that NTP list formaldehyde as "known to be a human carcinogen" in the 12th Edition of the RoC.

Sincerely,

[Redacted]

Joan E. Denton, Ph.D.
Director

cc: George V. Alexeef, Ph.D., D.A.B.T.
Deputy Director for Scientific Affairs
Office of Environmental Health Hazard Assessment