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DuPont Haskell Laboratory

8EHQ-0698-1061

June 24, 1998

Via Federal Express

Document Processing Center (7407)
Attention: 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
401 M Street SW
Washington, DC 20460-0001

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Dear 8(e) Coordinator:

Contains No CBI

1,4-Hexadiene
[CAS # 592-45-0]
[8EHQ-0990-1061]

This letter is to inform you of the results of two genetic toxicity studies (in vitro mouse lymphoma assay and human lymphocyte chromosomal aberration assay) which recently came to our attention with the above referenced test material.

In the in vitro mouse lymphoma assay, three trials were conducted. In two trials, the test material was weakly mutagenic in the presence of microsomes at the top dose analysed (200 µg/ml). No mutagenicity was seen in the third trial at 200 µg/ml. A linear trend was obtained in those trials where weak mutagenicity was noted. Significant cytotoxicity was also noted.

1,4-Hexadiene was tested in an in vitro cytogenetics assay using duplicate human lymphocyte cultures from male and female donors in two independent experiments with and without microsomes. The highest dose level used was 821.5 µg/ml which was cytotoxic. 1,4-Hexadiene induced a significantly higher frequency in chromosome aberrations (281.8 and 402.5 µg/ml in Trial 1 and 436.6 and 485.1 µg/ml in Trial 2) than those in the concurrent negative control cultures. The effect was only seen following treatment in the absence of microsomes.



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The test material was not mutagenic in the Ames Salmonella assay. In an in vivo micronucleus test in rats and mice, 1,4-hexadiene was negative in rats and weakly mutagenic in mice (8EHQ-0990-1061).

The effects described above are being reported in accordance with the guidance given in the EPA TSCA Section 8(e) Reporting Guide (June 1991).

Sincerely,



A. Michael Kaplan, Ph.D.
Manager - Regulatory Affairs

AMK/RV:jat
(302) 366-5260

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