

**ARCO Chemical Company**

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Health Sciences and Regulatory Programs

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Office of Pollution Prevention & Toxics  
U. S. Environmental Protection Agency  
401 M Street, S. W.  
Washington, D. C.



8EHQ-96-13656

Attention: 8(e) Coordinator

Dear Sir:

In accordance with the provisions of Section 8(e) of the Toxic Substances Control Act, ARCO Chemical Company (ACC) is submitting the following information on ethyl-tert-butyl ether (ETBE), CAS #637-92-3.

ARCO Chemical Company has received information on preliminary histologic findings from a 90-day vapor inhalation toxicity study on ETBE with neurotoxicity evaluations in Fischer 344 rats. The purpose of the study was to evaluate the toxic effects resulting from repeated vapor inhalation exposure to ETBE. Neurotoxicological effects and cell replication also are being investigated. From preliminary findings on examination of tissues from only the high dose animals, the study pathologist has identified alterations in the bone marrow of female rats exposed to 5000 ppm of ETBE. These alterations have been identified as multifocal degeneration and necrosis in 2 of 11 and marked congestion in 11 of the 11 femoral bone marrows from the exposed females. Similar effects were not reported in the male rats exposed at the same dose level for the same period. No associated hematologic changes were apparent.

The study consists of three exposure groups per sex and an air-exposed control group. As indicated above, the effect was found in the females from the high dose group. The laboratory plans to examine the femurs from the female rats exposed at the low (500 ppm) and medium (1750 ppm) doses for the presence of the alteration described above.

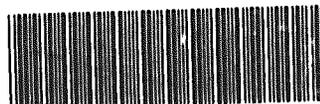
A copy of the final report will be submitted to your office when available.

Sincerely,

**Best Available Copy**

E. C. Capaldi  
EH&S Advisor

CC: TSCA Document Processing Center (7408) 2 - 1  
Attn: TSCA Section 8(d) Reporting



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