UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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SUBJECT: Mutagenicity Study on Monitor Technical - Addition of Data to Files
EPA File Symbol 239-EULE or 2452 Shaughnessy#101201 CASWELL#378A

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## Recommendation

Presented data show that Monitor Technical did not induce dominant lethality in this study. However, it is recommended that a final conclusion on the acceptability of this study in meeting regulatory requirements be held in abeyance until Agency policy regarding mutagenicity testing requirements is promulgated.

* No RPAR criteria have been exceeded.

** The study reviewed herein was performed at Industrial Bio-Test Laboratories, Inc., and needs to be validated by the registrant.

## Review

Mutagenicity Study with Monitor Technical in Albino Mice (Industrial Bio-Test Laboratories, Inc., IBT No. E9517, 8/19/71, submitted by Chevron Chemical Co., 9/28/79, Acc. No. 241145).

1. Procedure

Charles River albino mice, 60-70 days old, were used. Four groups of 12 males each were given single intraperitoneal dosages of corn oil alone (vehicle control), 400 mg/kg ethyl methanesulfonate (EMS; positive control), 1 mg/kg, or 2 mg/kg of Monitor Technical (SX No. 171). Dosages of Monitor had been previously determined in a range-finding test. Each male was caged with 3 untreated virgin females immediately after dosing. At the end of 1 week, these females were replaced by another group of 3 untreated females. This procedure was repeated for 6 consecutive weeks. After 6 weeks of mating, the males were sacrificed.

Females were sacrificed at approximately 1 week following removal from the breeding cage. Numbers of implantation sites, resorption sites, and embryos were recorded.

2. Results

a. Range-Finding Test: The dosages used in the mutagenicity test were selected on the basis of symptoms of cholinesterase inhibition and deaths induced by higher dosages in this preliminary estimate.

b. Mortality: Two positive control males died.

c. Mating Index (No. animals pregnant/No. animals mated):

Low in positive control group at week 2. Otherwise unremarkable.

d. Mutagenicity Data: Positive control females exhibited a high number of early resorptions and low numbers of implantations and embryos during the first 2 weeks following treatment. Recovery in the positive control group was evident by week 3. Data on control and test groups were comparable, and a mutagenic effect of Monitor was not evident.

3. Conclusions

a. Classification: Supplementary Data (Provisional)

i. A final conclusion on the validity of this study towards satisfying regulatory requirements is deferred until mutagenicity testing guidelines are finalized.

ii. A mutagenic effect of Monitor was not demonstrated in this study; however, the dominant lethal test may not in itself be entirely indicative of mutagenic effects in mammalian cells in vivo.

iii. It is stated in the study report that corpora lutea estimates are based on a mean of 13.5 corpora lutea per mouse from "laboratory data." These data need to be explained in terms of the amount of data obtained, the period over which these data were obtained, and the variability within the data.

iv. Although the animals were given single dosings and responded to the positive control chemical, it is suggested that the sensitivity of this assay might have been improved if a multiple dosing regimen had been employed.

b. The data presented show that Monitor did not induce dominant lethality at dosages of 1 and 2 mg/kg.