3-25-92
SECTION HEAD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

009382

MAR 25 1992

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM:

Subject: Review of Toxicology Studies with Methanearsonic Acid to support reregistration of the test substance. (Toxchem Number 582, HED Project No. 2-1208; Barcode number: D173830)

FROM: Steven L. Malish, Ph.D., Toxicologist S.L. Malish 3/15/92
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TO: Barbara Briscoe PM (51)/Betty Crompton PM Team Reviewer
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THRU: Elizabeth Doyle, Ph.D., Section Head E.A. Doyle 3/17/92
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and

Marcia van Gemert, Ph.D., Branch Chief M van Gemert 3/18/92
Tox. Branch II
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ACTION REQUESTED: Review of toxicology studies for reregistration requirements.

Study Summarized

MRID 421732-01, Oncogenicity Study - mouse (83-2); Core - guideline.

Methanearsonic acid was incorporated into the diet of 5 groups of 52 mice/sex/group at concentrations of 0, 1.8, 9.3, 38 and 83 mg/kg/day (males) and 0, 2.2, 12, 46 and 104 mg/kg/day (females) for 104 weeks.

No evidence of carcinogenicity was seen.

Mortality was not affected by treatment. In the high and high intermediate dose animals of both sexes, signs of toxicity occurred after 10-12 weeks of treatment. Loose and mucoid feces were seen at the high dose. A decrease in the mean body weight gain and an increase water intake occurred in the high dose of both sexes and the high-intermediate dose females. Food consumption was increased in the high dose females.

The colon, cecum and rectum showed a slight degree of diffuse cuboidal and squamous metaplasia in both sexes at the high dose versus the control.

The MTD (Maximum Tolerated Dose) = 83 mg/kg/day (Highest Dose Tested) - males; 46 mg/kg/day - females.

NOEL (No observed effect level) = 38 mg/kg/day (males); 12 mg/kg/day (females).

LOEL (Low observed effect level) for systemic toxicity = 83 mg/kg/day in males; 46 mg/kg/day in females.