MEMORANDUM

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SUBJECT: ADDENDUM to Trichlorfon Qualitative Risk Assessment Based On Charles River CD-1 Mouse Dietary Study

P.C. Code 057901

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Background

An oncogenicity feeding study in Charles River CD-1 mice was conducted by Mobay Corporation, Health, Environment, Safety and Plant Management, Corporate Toxicology Department, Stilwell, Kansas, for Mobay Corporation, Agricultural Chemicals Division, Kansas City, Missouri, and issued July 28, 1988 (Study No. 85-271-01; MRID Nos. 407824-01 and 408443-01).

The study design allocated groups of 50 mice per sex to dose levels of 0, 300, 900, and 2700 ppm of Trichlorfon for 104 weeks.

A statistical evaluation (REVISED Trichlorfon Qualitative Risk Assessment Based On Charles River Fisher 344 Rat and Charles River CD-1 Mouse Dietary Studies, L. Brunsman, 7/13/94, HED Document No. 012931) presented analyses of tumors presented in the DER (Data Evaluation Report Addendum, M. Morrow, 6/9/92, HED Document No. 009626). It has since come to EPA's attention that statistical significance is attained when the mammary gland tumors of female mice are combined.

Tumor Analyses

Female mice had significant trends for mammary gland adenocarcinomas and combined adenomas, adenocarcinomas and adenoacanthomas, both at $p < 0.01$. There was also a significant trend for mammary gland adenoacanthomas at $p < 0.05$. Female mice

showed a significant difference in the pair-wise comparison of the 2700 ppm dose group with the controls for mammary gland combined adenomas, adenocarcinomas and adenoacanthomas at $p < 0.05$.

These statistical analyses were based upon Peto's prevalence test since there was a statistically significant positive trend for mortality in female mice with increasing doses of Trichlorfon. See Table 1 for tumor analysis results.

Table 1. Trichlorfon - Charles River CD-1 Mouse Study

Female Mammary Gland Tumor Rates+ and
Peto's Prevalence Test Results (p values)

	Dose (ppm)			
	0	300	900	2700
Adenomas (%)	0/36 (0)	1/39 (3)	0/29 (0)	2a/32 (6)
p =	0.068	0.296	-	0.088
Adenocarcinomas (%)	1/42 (2)	1/41 (2)	0/41 (0)	4b/41 (10)
p =	0.008**	-	-	0.121
Adenoacanthomas (%)	0/32 (0)	0/33 (0)	0/26 (0)	2c/24 (8)
p =	0.010*	-	-	0.159
Combined (%)	1/42 (2)	2/41 (5)	0/41 (0)	8/41 (20)
p =	0.000**	-	-	0.014*

+Number of tumor bearing animals/Number of animals examined, excluding those that died or were sacrificed before observation of the first tumor.

aFirst mammary gland adenoma observed at week 91, 2700 ppm.

bFirst mammary gland adenocarcinoma observed at week 76, 2700 ppm.

cFirst mammary gland adenoacanthoma observed at week 101, 2700 ppm.

Note: Significance of trend denoted at control.

Significance of pair-wise comparison with control denoted at dose level.

If *, then $p < 0.05$. If **, then $p < 0.01$.

References

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