

DATE: October 3, 1979
SUBJECT: Dioxins in Chlorophenols
REFERENCE:
TO: G. Roush

G. E. Paget



1. Pentachlorophenol containing 3,000 to 10,000 ppm total dioxin primarily, octachloro dibenzo dioxin could cause chloracne in exposed workers and produced a positive response in the chick edema factor study.
2. TCDD has not been found in Pentachlorophenol by either Monsanto or Dow.
3. 2,3,7,8 TCDD and mixed hexachloro dibenzo dioxins at dietary concentrations of 0.5ppb and 2.5ppb produced a positive chick edema response.
4. Orthochlorophenol, Parachlorophenol 2, 4-dichlorophenol pentachlorophenol feed stock and chlorophenol still residues at dietary concentrations of 1500 ppm were negative in the chick edema factor study in 1974. Some evidence of toxicity was observed with the still residue.
5. Based upon these negative responses and the 2,3,7,8 TCDD response, it was concluded that the tested chlorophenol materials contained less than 0.3ppm 2,3,7,8 TCDD activity.
6. The present total TCDD analysis in chlorophenol from Dayton (0.5ppm TCDD) are consistent with these negative responses and with the reported lack of chloracne in the chlorophenol workers.
7. The Nebraska report of 2.6ppm 2,3,7,8 TCDD in chlorophenol is not consistent with the biological assay or with the Dayton results.
8. It has been recommended to MICC that chick edema studies be conducted with the chlorophenol materials in question. These studies could detect 0.1 to 0.3ppm 2,3,7,8 TCDD activity. (attached)
9. If the Nebraska data are correct, then (1) the exposure to the chlorophenols must be much lower than those previously to pentachlorophenol (2) the previously bioassay results on chlorophenols must have been flawed, or the composition of that 1974 material was different, (3) the Dayton data must be grossly in error, and (4) previous MICC analysis (Jim Mieure) must have been in error.

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