

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE:

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SUBJECT: Ethylene dibromide (EDB) as an impurity in diquat formulations

FROM: R. J. Hummel, Chemist, Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

TO: H. Jacoby (Team 24) and Toxicology Branch

Thru: Chief, Chemistry Branch *QHX*

In their letter of 6/30/78, Chevron Chemical Company reports that the product Ortho Diquat Water Killer and other diquat formulations is contaminated with up to 5000 ppm EDB. In the future, they expect to be able to limit the amount of EDB to 100 ppm.

The terrestrial uses of diquat are limited to the dessication of several seed crops and to the prevention of tasseling in sugarcane. This latter use has a 90 day PHI. We would not expect residues of EDB on items of food or feed as a result of these uses.

The aquatic uses of diquat call for applications of 2 gal/surface acre. Assuming an average depth of 7 feet, the contamination with 5000 ppm EDB would lead to initial residues of 5 ppb EDB in treated water. Under these conditions but with only 100 ppm EDB contamination, initial residues of EDB would be ca. 0.1 ppb. As presently registered, treated water is not to be used for domestic purposes within 10 days of treatment. In the use proposed in PP# 5E1648, treated water is not to be used within 14 days of treatment or unless an approved method of analysis indicates less than 0.1 ppm diquat. Although there are no data, in view of the relatively high volatility of EDB, we would expect residues of EDB in treated water to decline significantly in the interval between treatment and use.

We defer to TOX as to the significance of the indicated levels of EDB residues.

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