

SUBJECT: Meeting with Ciba-Geigy about Registration Requirements
for DUAL (CGA-24705).

DATE: May 17, 1977

ATTENDENTS:

<u>Registrant</u>	<u>PM</u>	<u>Environmental Safety</u>
Mr. L. C. Newly	H. Jacoby	H. Craven
Mr. Jack Norton		R. Felthousen
Mr. John Barnett		

Mr. J. Norton presented slides showing accumulation of DUAL in bluegill sunfish (study conducted by Bionomics). Maximum bioaccumulation occurred in the non-edible tissue ($\approx 550x$). Whole fish residues were calculated to be $78x$. This value was determined by assuming that 90% of a fish is edible tissue while only 10% of a fish is non-edible tissue. Obviously, calculating whole fish residues in this manner biases the accumulation factor in favor of edible tissue levels (which are usually lower than non-edible levels). If, however, a 7:3 ratio (edible/non-edible tissue) was used, a whole fish accumulation factor of $180x$ would be calculated. It's important that this is kept in mind when evaluating whole fish residues calculated on the basis of ratios.

Mr. Norton also mentioned that results of a channel catfish bioaccumulation study as well as a food chain accumulation study will be submitted in the near future.

Mr. Newly wanted to know if chronic fish reproduction studies would be required prior to registration. He cited an agency letter allowing two years to generate the needed data. Mr. Craven informed the registrant that this was an administrative decision and as such not germane to environmental safety (see attached memo from H. Jacoby on minutes of this meeting).

Mr. Craven expressed Environmental Safety's concerns about chronic toxicity of DUAL. Some of these concerns include:

1. DUAL's solubility in water (520 ppm).
2. DUAL's adsorption and absorption with soil.
3. DUAL's half-life is greater than 200 days.

Other concerns involve the fact that the amended submission calls for aerial application and that the Rainbow Trout LC50 study failed to express ~~Confidence~~ Intervals.

Mr. Craven justified Environmental Safety's concern about chronic toxicity by pointing out that DUAL is not simply persistent under one type of condition but under numerous conditions. In addition, the mechanisms for entrance into an aquatic for a chemical such as DUAL are many.

Mr. J. Barnett wanted to know what protocol and what exposure levels should be used. H. Craven informed him that the Columbia Testing Lab protocol, as outlined in the proposed guidelines would be acceptable. He informed Mr. Barnett that the testing lab usually establishes a no effect level and that chronic studies are conducted at concentrations below this level (Note: The levels used in the Chronic studies should approach those expected to be found in the environment).

Mr. Newly presented a copy of letter, sent out by the Special Registrations Section, stating that secondary poisoning studies to predatory fish, birds and mammals would be required prior to registration. A review of our files (100-EUP-44) showed that these comments were originally made by N. Cook and reiterated by R. Felthousen. It should be pointed out that these comments were not included in the conclusion section of the reviews but merely in the discussion section (Apparently the Special Registrations Section thought Registration was conditional on these studies). In addition, see attached memo from H. Jacoby on minutes of meetings.


R. Felthousen, Associate Specialist
Environmental Safety
Efficacy and Ecological Effects Branch

HTC
5/21/77