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RECORD NO.

128994
SHAUGHNESSEY NO

REVIEW NO.

EEB REVIEW

DATE: IN 5-23-90 OUT JUL 13 1990

FILE OR REG. NO: 524-UGN

PETITION OR EXP. NO.

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TYPE PRODUCT(S) herbicide

DATA ACCESSION NO(S)

PRODUCT MANAGER, NO. (23)

PRODUCT NAME(S) MON 7200 MON 15100

COMPANY NAME Monsanto Agricultural Company

SUBMISSION PURPOSE Review response to EEB review

SHAUGHNESSEY NO.	CHEMICAL	% A.I.
	dithiopyr	

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

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

JUL 13 1990

MEMORANDUM

SUBJECT: Response to registrant response of Review of Freshwater Invertebrate Toxicity Study: MRID 410015-14

FROM: James W. Akerman, Branch Chief,
Ecological Effects Branch
Environmental Fate and Effects Division (H7507C)

TO: Joanne Miller, PM-23
Fungicide-Herbicide Branch
Registration Division (H7505C)

We have received Monsanto's response to EEB's review of the acute toxicity of Mon 7200 to Daphnia magna MRID No. 410015-14. EEB expressed four discrepancies with the study. The first two regarding test temperature and measurement of the test temperature have been resolved by the registrant's response. However, there were two other major concerns expressed by EEB. The first involved poor percent recovery of the test samples and the second and most important is that the study authors did not obtain a valid dose-response curve (please see the attached DER for specific details, section 14a.). Monsanto has completed a number of toxicity studies with Dithiopyr and has used a solvent in each of them because a solvent was necessary due to the low solubility of Dithiopyr in water. However, for this particular study Monsanto contends that a solvent is not necessary, because of the low water solubility. The purpose of the LC_{50} study is not to assess a compound's toxicity in relation to it's water solubility but to

provide a valid dose response curve; consequently , solvent(s) may be required to achieve this. Without a dose response curve and accurate LC_{50} EEB can not use such data to support the registration of a pesticide. These data are used to establish acute toxicity levels of the active ingredient and to assess potential impact to invertebrates by comparing toxicity information with measured or estimated pesticide residues in the freshwater environment.

The study reported an LC_{50}value of > 1.1 mg/l for 90.7% ai. with no confidence intervals. The agency allows a "greater than" LC_{50}estimation when the value exceeds 100 mg/l (ppm). For the above reasons, EEB's position regarding the study remains the same. Another study using an appropriate solvent (with a solvent control) is required.