

10/21/94

MEMORANDUM

SUBJECT: Waiver of Laboratory Volatility Requirement (163-2) for Propanil

TO: Walter Waldrop, PM 71 and Eric Feris, PM Team Reviewer
Reregistration Division (7508W)

FROM: Alex T. Clem, Environmental Scientist
Environmental Chemistry, Review Section 3, EFGWB

THRU: Akiva D. Abramovitch, Head
Environmental Chemistry, Review Section 3, EFGWB

Henry Jacoby, Chief
EFGWB

Alex Clem
Akiva Abramovitch
Henry Jacoby
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EFGWB waives the laboratory volatility requirement (163-2) for propanil. Volatilization of the contact herbicide propanil is not significant. In numerous required laboratory studies¹ with radiolabeled propanil in well-trapped systems, some which were purged regularly for up to one year, volatility was never an issue. Trapped organics, which may have included other compounds as well as propanil, were less than 3% of the total under the most revealing conditions.

Results of the above indirect or collateral experiments are consistent *prima facie* with the experimentally determined vapor pressure for radiolabeled propanil of 9×10^{-7} mm Hg (1×10^{-4} Pa) at 25 °C². The relationship between the experimentally determined vapor pressures at temperatures from 25 to 70 °C (MRID 00143618, Rothman, 1980) are in good agreement with the thermodynamically derived Clausius-Clapeyron equation, lending additional credibility to the measured values.

Rapid degradation of propanil under typical environmental conditions, which would leave little remaining to volatilize after about one or two weeks, also reduces opportunity to dissipate through the air.

If incident reports on damage by propanil to non-target crops, especially prune orchards

¹Satisfactory studies include hydrolysis, aqueous photolysis, aerobic soil, aerobic aquatic, and anaerobic aquatic metabolism. Soil photolysis was not completely satisfactory for technical reasons, but did show volatilization to be insignificant.

²A vapor pressure of 4×10^{-5} torr which is in the one-liner data base could not be traced or validated and has been replaced with the value given above. The vapor pressure of the technical grade of propanil is considerably higher at approximately 9×10^{-4} mm Hg (1×10^{-1} Pa), but, since this material is a complex mixture, should not be confused with that of purified propanil.

located in proximity to rice fields³ in the Sacramento Valley of California are correct, then spray drift rather than volatilization is likely responsible. Spray drift and droplet size spectrum data have not yet been submitted by Rohm and Haas. These reregistration requirements may be pursued through the Spray Drift Task Force.

CONCLUSION AND RECOMMENDATIONS

Based on ample indirect evidence from lab studies and measured vapor pressure, volatilization of propanil is not significant and EFGWB waives the lab volatility requirement. Incident reports on damage to off-site, non-target plants may be more reasonably attributed to spray drift. Spray drift studies should be concluded for reregistration.

³95-99% of propanil is said to be used on rice.

DP BARCODE: D209437

REREG CASE # 0226

CASE: 818688
SUBMISSION: S477063

DATA PACKAGE RECORD
BEAN SHEET

DATE: 11/16/94
Page 1 of 1

*** CASE/SUBMISSION INFORMATION ***

CASE TYPE: REREGISTRATION ACTION: 614 DATA WAIVER REQUEST
CHEMICALS: 028201 Propanil 100.00 %

ID#: 028201

COMPANY:

PRODUCT MANAGER: 71 WALTER WALDROP 703-308-8062 ROOM: CS1 2C3

PM TEAM REVIEWER: ERIC FERIS 703-308-8048 ROOM: CS1 3N5

RECEIVED DATE: 11/16/94 DUE OUT DATE: 01/25/95

*** DATA PACKAGE INFORMATION ***

DP BARCODE: 209437 EXPEDITE: Y DATE SENT: 11/16/94 DATE RET.: / /

CHEMICAL: 028201 Propanil

DP TYPE: 001 Submission Related Data Package

CSF: N LABEL: N

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 01/05/95
DIV : EFED	2/06/94	/ /	NEGOT DATE: / /
BRAN: EFGB	/ /	/ /	PROJ DATE: / /
SECT: IO	/ /	/ /	
REVR :	/ /	/ /	
CONTR:	/ /	/ /	

*** DATA REVIEW INSTRUCTIONS ***

LIST A REREGISTRATION CASE

In response to a 7/94 DCI, the registrants are requesting a waiver from the 163-2 requirement. Please determine if the waiver is appropriate.

*** DATA PACKAGE EVALUATION ***

No evaluation is written for this data package

*** ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION ***

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
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