

US EPA ARCHIVE DOCUMENT

Date Out: OCT 28 1996

Chemical Code: 081901  
DP Barcode: D229629

**ENVIRONMENTAL FATE AND GROUND WATER BRANCH**

**Review Action**

To: Walter Waldrop, PM # 71  
Special Review and Reregistration Division (7508W)

From: Elizabeth Behl, Section Head  
Ground Water Technology Section  
Environmental Fate & Ground Water Branch/EFED (7507C)

Thru: Henry Jacoby, Chief  
Environmental Fate & Ground Water Branch/EFED (7507C)

*Elizabeth Behl*  
*Henry Jacoby* 10/28/96

Attached, please find the EFGWB review of...

Common Name:	Chlorothalonil	Trade name:	Bravo
Company Name:	ISK Biosciences		
ID #:			
Purpose:	Evaluate intermin report for ground-water study in NC on peanuts		

Type Product:	Action Code:	EFGWB #(s):	Review Time:
Fungicide	606		1 day

**STATUS OF STUDIES IN THIS PACKAGE:**

Guideline #	MRID	Status <sup>1</sup>
166-1	440915 01	

**STATUS OF DATA REQUIREMENTS  
ADDRESSED IN THIS PACKAGE:**

Guideline #	Status <sup>2</sup>
166-1	

<sup>1</sup>Study Status Codes: A=Acceptable U=Upgradeable C=Ancillary I=Invalid.  
<sup>2</sup>Data Requirement Status Codes: S=Satisfied P=Partially satisfied N=Not satisfied R=Reserved W=Waived.

MEMORANDUM

1996

FROM: James K. Wolf, Ph.D. *JKW*  
Soil Physicist  
Ground Water Section  
Environmental Fate and Ground Water Branch (7507C)

TO: Walter Waldrop PM # 71  
Reregistration Branch (7508W)

THRU: Elizabeth Behl  
Section Head  
Ground Water Section  
*EBehl*  
Henry Jacoby  
Chief  
*Henry Jacoby 10/28/96*  
Environmental Fate and Ground Water Branch (7507C)

RE: Review of interim report for small-scale prospective  
ground-water monitoring study for chlorothalonil (166-  
1).

DP Barcode D229629. Submission S511182. Interim  
report submitted by ISK in support of reregistration of  
chlorothalonil. PC Code: 081901; MRID 440915-00, 01

**GENERAL COMMENTS**

The progress report, through April 1996, for small-scale ground-water monitoring study being conducted in North Carolina as part of the data requirements for chlorothalonil is acceptable. It should be stated that this does not reflect an EFGWB acceptance (or rejection) of the study results or any interpretations included in the report.

Data demonstrates leaching of the bromide tracer and several of the degradates in the soil (soil and soil-pore water samples) and the detection of metabolite SDS-46851 and bromide ion in ground water. The maximum concentration of SDS-46851 reported is 10.1  $\mu\text{g/L}$ . No other occurrences of chlorothalonil residues were reported in water wells for the period of the Progress report.

**SPECIFIC COMMENTS AND DISCUSSION**

The registrant identified the following two issues in their cover letter of MRID # 440915-00 dated August 21, 1996:

1. Meeting with the Agency to discuss finalizing the study, and
2. Indicating that soil sampling will be extended until September 1996 and that water sampling until December 1996.

The information submitted in the interim report suggest that it is premature to discuss the finalizing or discontinuing ground-water monitoring. Although this interim report does a good job of presenting results following the last chlorothalonil and second bromide applications it is difficult to evaluate the results from the entire study. For example, because time scales were different in earlier interim reports, it is difficult to superimpose the spatial-depth-time patterns of bromide leaching from the first bromide application. This problem will most likely be taken care in the final report.

Figures 10 to 12 indicates that most of the bromide from the second application has leached below the 3, 6, and 9-foot lysimeters by December 1995. Figure 13 shows that once bromide was detected in the shallow well in cluster 1 (upgradient wells) that the bromide concentration remains essentially constant with time (period of report). Figures 14 and 15 suggest that the bromide concentrations in the two downgradient well clusters are still increasing as of March 1996.

Figures 16, 17, and 18 show the concentration of chlorothalonil degradate SDS-46851 in the three suction lysimeter clusters (with 3, 6, and 9-foot depths) over time. From these figures it appears that the degradate SDS-46851 has leached below the sampling depths (9 feet) of the suction lysimeters. Figures 19, 20, and 21 depict the SDS-46851 concentrations in the different monitoring wells (by depth and cluster) over time. Comparing the lysimeter graphs with the monitoring well graphs one can note that chlorothalonil residues (SDS-46851) were being detected in ground water at the same time considerable residue concentrations were still being found in the suction lysimeters. Therefore the residues in ground water are most likely from earlier chlorothalonil applications (earlier than those reflected in the lysimeters). In general, the concentrations of SDS-46851 in the monitoring wells are remaining somewhat constant or may still be increasing. Thus, there is evidence that although the residues have leached below 9 feet (found in lysimeters from later applications) they have not yet reached ground water. No SDS-46851 residues were reported in the lysimeters at any cluster or depth during the 1996 reporting period and for some of 1995. A few soil samples had concentrations  $\geq 0.005$  mg/L, but most were below detection limits. Therefore, it is premature to consider finalizing the study and too early to discontinue sampling ground-water monitoring wells. Data submitted in this interim report indicates that the registrant can make a case to discontinue soil sampling in September 1996 and sampling the suction lysimeters in December 1996 as proposed in the cover letter.

**RECOMMENDATIONS:**

1. The interim report should be accepted.
2. The registrant may discontinue collecting and analyzing any further soil and suction lysimeter samples.
3. Ground-water monitoring should continue.