

8/31/87

PK

Shaugh. No. 090501

EAB Log Out Date: AUG 25 1987

To: Robert J. Taylor  
Product Manager 25  
Registration Division (TS-767)

From: Matthew Lorber, Acting Team Leader ML  
Ground Water Team  
Exposure Assessment Branch, HED (TS-769)

Attached, please find the environmental fate review of:

Reg./File No.: 199107

Chemical: Alachlor

Type Product: Herbicide

Product Name: Lasso

Company Name: Monsanto

Submission Purposes: Review of well monitoring survey  
protocol amendments

Action Code: 495,496,496

Date In: 6/22/87

EAB#: 70836, 70837, 70838

Date Completed: 8/25/87

Total Reviewing Time: .2

Monitoring study requested: x

Monitoring study voluntarily:       

Deferrals To:

       Ecological Effects Branch

       Residue Chemistry Branch

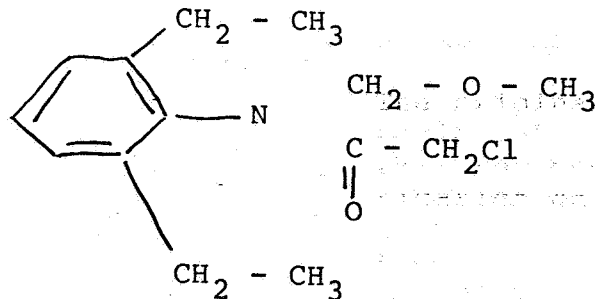
       Toxicology Branch

(1)

REVIEW OF ADDITIONS TO WELL MONITORING PROTOCOL

1. CHEMICAL:

Chemical name: 2-Chloro-2'6'diethyl-N-(methoxymethyl)-  
acetanilide  
Common name: Alachlor  
Trade name: Lasso  
Structure:



2. TEST MATERIAL:

Not applicable

3. STUDY/ACTION TYPE:

Review of amendments to well monitoring protocol

4. STUDY IDENTIFICATION:

Title: Additional information from Monsanto to the  
EPA pertaining to Monsanto's National Well Water  
Survey for alachlor. These documents are:  
- 5/19/87 letter and attachments from A. Klein  
to Director, RD (TS-767c) attn: R. Taylor  
- 6/15/87 letter and attached protocol from A. Klein  
to Director, RD (TS-767c) attn: R. Taylor  
- 7/6/87 letter and attachments from A. Klein  
to Director, RD (TS-767c) attn: R. Taylor

Author: Monsanto Agricultural Company  
700 Chesterfield Village Parkway  
St. Louis, MO 63198

Identifying No: 524-316, 524-316, 524-316

Record No: 200068, 200069, 200070

Submitted by: A.J. Klein

Issue Date: July 28, 1987 (date send to HED)

Accession No: N.A.

Reference Number: 82, 82, 82

5. REVIEWED AND APPROVED BY:

Matthew N. Lorber, Acting Team Leader  
Ground Water Team/EAB/HED

Matthew Lorber Date 8/15/87

6. CONCLUSIONS:

The additions meet with Agency approval, and have been copied and retained in EAB's files for future reference.

7. RECOMMENDATIONS:

Continue to send to EAB other submissions by Monsanto on their well water monitoring survey.

8. BACKGROUND:

The original protocol was submitted on July 25, 1987. In review of that original protocol by Stuart Cohen, he recommended that the protocol be accepted, although he also asked for clarification on some aspects of the protocol, including the proposed handling of temporal variations in the well sampling. Following a series of meetings and correspondences, the final protocol was approved in a letter from J. Auerbach to A. Klein dated 6/2/87.

9. DISCUSSION:

Each submission will be discussed separately:

- 5/19/87 letter: This letter briefly discusses points brought up during a meeting between Monsanto and Agency personnel on 5/5/87. Briefly, this letter reiterates agreements reached between Monsanto and the Agency during that meeting. Agreement was reached on:

- temporal stratification: There will be three "sub-surveys", ones dealing with high, medium, and low water table conditions. The Agency required that "highly vulnerable" counties be equally represented (and, in fact, oversampled) in each of these three subsurveys. This was stated in the letter and the attached temporal stratification discussion.
- cropping and use data: Monsanto agreed with the Agency's requirement to request cropping and alachlor use data from county extension agent's within 1/2 mile radius of each sampled well.
- well depth: Monsanto agreed to use the same methodology for verification of well depth as RTI is currently using for the National Pesticide Survey.
- submission of report: Monsanto agreed to submit the final report of the survey by December 1, 1989, although their wording left some question: "...Monsanto will make every effort to have the final report submitted to the Agency by December 1, 1989"

- 6/15/87 letter: This letter and attached protocol has already

been reviewed. Please see EAB review # 70794 dated 8/25/87.

- 7/6/87 letter: This letter includes the list of counties selected for the first stage of the survey. As an evaluation of these counties indicated, Monsanto oversampled highly vulnerable counties in each of the three "sub-surveys" (i.e., different water table conditions - high, medium, and low). These counties were evaluated for their vulnerability using the Agency's DRASTIC county-level evaluation done for the National Pesticide Survey. For the record, the following is a tabular summary for each sub-survey of the DRASTIC evaluations:

Vulnerability	Water Table							
	High		Medium		Low			
	# cntys	%	# cntys	%	# cntys	%	# cntys	%
High (>142)*	22	66	19	58	14	42		
Med (102-142)	10	30	12	37	18	54		
Low (<102)	1	3	2	6	1	3		

#### Statistics

High DRASTIC	202	198	200
Low DRASTIC	93	82	89
Average DRASTIC	148	150	151

\* numbers in parenthesis indicate DRASTIC scores which corresponds to high, medium, and low vulnerability, according to the scoring accomplished for the National Pesticide Survey.

As can be seen from this table, clearly highly vulnerable counties were oversampled, as the average DRASTIC score for all counties was higher than the "high" ranking score. As well, the average DRASTIC score within each sub-survey was nearly identical. Finally, in each sub-survey, the highly vulnerable counties were oversampled. For this reason, the choice of counties by Monsanto is acceptable to the Agency.