

Shaughnessy No.: 090501

Date Out of EAB: JUL 2 1987

To: David Giamporcaro
Product Manager #79
Registration Division (TS-767)

From: Carolyn K. Offutt, Chief *Carolyn K. Offutt*
Environmental Processes and Guidelines Section
Exposure Assessment Branch
Hazard Evaluation Division (TS-769C)

Attached, please find the EAB review of...

Reg./File # : 090501
Chemical Name: Alachlor
Type Product : Herbicide
Product Name : Lasso
Company Name : Monsanto
Purpose : Review of 1985 Alachlor Monitoring Data (Surface Water)

Action Code: 870 EAB #(s) : 60608
Date Received: 5/15/86 TAIS Code: 61
Date Completed: 7/02/87 Total Reviewing Time: 2
Monitoring study requested: yes
Monitoring study voluntarily:

Deferrals to: Ecological Effects Branch
 Residue Chemistry Branch
 Toxicology Branch

ANALYSIS OF 1985 MONSANTO ALACHLOR MONITORING DATA

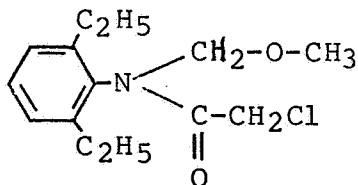
1. CHEMICAL:

Common Name: Alachlor

Trade Name: Lasso

Chemical Name: 2-chloro-2'6' diethyl-N-(methoxymethyl)
acetanilide

Structure:



2. TEST MATERIAL: NA

3. STUDY/ACTION TYPE: Review of 1985 Alachlor Monitoring Study

4. STUDY IDENTIFICATION:

Lauer, R. et al, A report entitled "Information to Support the Registration of Lasso Herbicides: Alachlor in Raw and Finished Drinking Water Derived from Surface Sources from 24 Community Water Systems Located in Regions of Extensive Lasso Use." Monsanto Agricultural Company May 2, 1986. Accession Nos. 262702 and 262703.

5. REVIEWED BY:

Harold R. Day
Chemist

Environmental Processes and Guidelines Section 7/2/87

Harold R. Day

6. APPROVED BY:

Carolyn K. Offutt, Chief

Environmental Processes and Guidelines Section
Exposure Assessment Branch, HED (TS-769)

Carolyn K. Offutt
7/2/87

7. CONCLUSIONS:

a. Monsanto's monitoring data represents alachlor occurrence in water treatment plants.

b. Treatment plants which draw their water from large water sources (Great Lakes, Mississippi River) do not represent alachlor in the named watershed.

c. The author's conclusions appear accurate.

8. RECOMMENDATIONS:

- a. The monitoring data should be considered in estimating alachlor occurrence in the Mid-west drinking water.
- b. Data from the treatment plants which draw water from large sources, i.e., The Great Lakes and Mississippi River should not be used as representing an alachlor use area.

9. BACKGROUND:

In response to a requirement in the November 1984 Registration Standard for Alachlor, Monsanto conducted a monitoring program for alachlor in raw and finished water from 24 conventional water treatment plants located in regions of high Lasso sales in seven states (Appendix A). Raw and finished water samples were collected daily from each plant for the calendar year. Daily samples were combined (composited) to form a weekly sample. Samples were screened for alachlor by capillary gas chromatography using electron capture detection. Samples exceeding 0.2 ppb were repeated using GC/MS. The detection limit was validated to 0.2 ppb.

10 DISCUSSION:

- a. Methods and Materials
- b. Results

Of the 24 water treatment plants monitored:

- 10 were less than 0.2 ppb
- 12 had annualized mean concentration (AMC) equal to or greater than 0.2 ppb but less than 0.5 ppb
- 1 had an AMC = 0.69 ppb
- 1 had an AMC = 1.4 ppb

c. Study Author's Conclusions

1. Alachlor composite samples rarely exceeded 2 ppb (2.6%).
2. Treatment did not significantly reduce alachlor concentrations.
3. Occurrence of alachlor is seasonal; maximum weekly concentrations were in May and June which are the peak Lasso application times.
4. Occurrence of alachlor was widely distributed and not necessarily correlated with high use areas.
5. Water plants which draw from the Great Lakes or from major Mid-West Rivers had undetectable alachlor levels.

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d. Reviewer's Comments and Conclusions:

1. The analytical method used is reasonable and the sample handling appears to conform to good laboratory practice in the handling of pesticide samples.
2. The percent recovery of alachlor from fortified water samples is within reasonable boundaries for the analytical method.
3. The plants monitored that draw water from the Mississippi River (Davenport), or from the Great Lakes (Toledo) do not really represent the hydrologic unit they were selected to measure. These areas draw water from a source that only marginally represents alachlor usage. This is borne out by the low values obtained from samples from these areas.
4. The monitoring program by Monsanto, except for sample locations, appears acceptable and well done.
5. Further review of the analytical results for 1985 will be made when the results for 1986 become available.

11. COMPLETION OF ONELINER: NA

12. CBI APPENDIX: NA

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Security Fund to be
disbursed (A)
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System	Action Code	Reference Number	Record Number	Survey Condition of Vegetative Description	Collection Locality (USE BLOCK)	Accession Number
7	870	V75773		Leafy twigs		26273
501				Flowering branch		
				Small branch		

100-443886-100

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SECRET

NAME BOX:

<input checked="" type="checkbox"/> Adverse Data (848,808)	<input checked="" type="checkbox"/> Product Specific Data (Registration) (655,656)
<input checked="" type="checkbox"/> Suspect Data (819,819)	<input checked="" type="checkbox"/> Clinical Data (Registration) (660,661)
<input checked="" type="checkbox"/> BI Data (849,851)	<input checked="" type="checkbox"/> Special Review Data (870,871)

NAME OF INDIVIDUAL STUDIES REQUESTED: _____
 NAME OF THE AGENCY REQUESTING STUDIES: _____
 REASON FOR REQUEST? (circle: yes or no) If yes, please identify the
 problem(s): _____

Journal of Management Studies, 20(6), 791-806.

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LEVEL OF REVIEW	
Investigation	Special Review/Other
Identification	
Biological Effects	
Respiratory Health	
Exposure Assessment	
Product Chemistry	
Toxicology	
Precautionary Labeling/Acute Tox.	
Science Support	
Economic Analysis	

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

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2 - Call of particular concern

3 = data necessary to
determine blood
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NOTE TO TSS:
 Return 1 copy to ASSTG

INCLUDE AN ORIGINAL AND FOUR (4) COPIES OF THIS COMPLETED FORM FOR EACH BRANCH CHECKED FOR REVIEW.