File

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
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

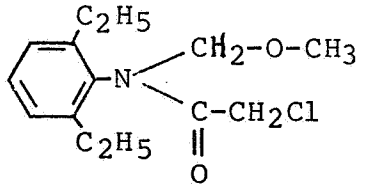
____ Toxicology Branch

(1)

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

6. APPROVED BY:

Carolyn K. Offutt, Chief
Environmental Processes and Guidelines Section
Exposure Assessment Branch, HED (TS-769) 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 exceeeding 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.

3

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 hyrologic 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

TO BE USED FOR REVIEW OF STUDIES PER SHOT

Confidential Business Information --
Does Not Contain National Security Info. (E.O. 12065)

5/15/86

CHEMICAL NAME: Alachlor

Action Code	Reference Number	Report Number	Study Guideline / Narrative Description	Reg. Std. Review Submission Criteria (see below)	Accession Number	Studies Found to be Acceptable (A) / Unacceptable (U)
870			Surface water monitoring study; Ground water		262785	

DATE RECEIVED (EPA): 5/8/86

CHECK APPLICABLE BOX:

- [ ] Adverse 6(a)(2) Data (804,805)
- [ ] Suspect Data (815,816)
- [ ] Product Specific Data (Reregistration) (655,656)
- [ ] Generic Data (Reregistration) (660,661)
- [x] Special Review Data (870,871)

DATE SENT TO RSB/EAB/TSB: 5-13-86

COMMENTS:

Review data in conjunction with the PD2/3

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

TYPE OF REVIEW	Reregistration	Special Review	Other
Toxicology			
Ecological Effects			
Residue Chemistry			
Exposure Assessment		✓	
Product Chemistry			
Efficacy			
Precautionary Labeling/Acute Tox.			
Science Support			
Economic Analysis			

1 = data that meet 6(a)(2) criteria
2 = data of particular concern
3 = data necessary to determine tiered testing requirements

NOTE TO TSS: Return 1 Copy To RSB

EAB 60 608