Shaugh. No. 090501

EAB Log Out Date: JAN 9 1987

Init.: CK

HB

To: Bob Taylor
Product Manager 25
Registration Division (TS-767)

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

Attached, please find the environmental fate review of:

Reg./File No.: 170753

Chemical: Alachlor

Type Product: Herbicide

Product Name: Lasso

Company Name: Monsanto

Submission Purposes: Ground Water contamination of alachlor in NY state

Action Code: 870

Date In: 4/2/86

EAB#: 6496

Date Completed: 1/9/87

TAIS (Level II) Days 1.0

Deferrals To:

____ Ecological Effects Branch

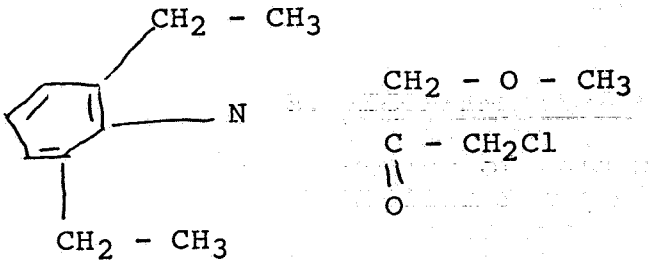
____ Residue Chemistry Branch

____ Toxicology Branch

EVALUATION OF ALACHLOR GROUND WATER MONITORING DATA FROM NEW YORK STATE

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:

Evaluation of ground water monitoring data submitted by William S. Neubeck of the New York State Department of Law.

4. STUDY IDENTIFICATION:

Title: Cover letter and attached "Site Description, Eagle Bridge, New York" sent to Mike McDavit on 3/19/86.
Author: William S. Neubeck
Hydrogeologist
State of New York
Department of Law
Albany, New york 12224
Identifying No: 170753
Issue Date: 3/19/86

5. REVIEWED BY:

Matthew N. Lorber, Agricultural Engineer Date 1/9/87
Environmental Processes and Guidelines Section/EAB/HED

6. APPROVED BY:

Carolyn K. Offutt, Chief Date 1/9/87
Environmental Processes and Guidelines Section/EAB/HED

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7. CONCLUSIONS:

The ground water of the village of Eagle Bridge is contaminated with atrazine and alachlor. Levels in 1985 averaged 2.3 ppb for atrazine, with a high reading of 9.1 ppb, and 1.1 ppb for alachlor, with a high of 5.5 ppb. These averages were from 11 wells sampled 4 times between March and December, 1985. Of all these samples, there were only 2 non-detects for alachlor and none for atrazine. William Neubeck claims that this contamination is due to a spill. His contention is supported by the evidence presented, although more detailed information would probably be required if this data became critical for the alachlor PD 2/3. See Discussion section for further details.

8. RECOMMENDATIONS:

Copies of this monitoring study will be retained in EAB files. William Neubeck's claim that the contamination is due to a spill is sufficient for the time being. He will be contacted should further information on this site be necessary.

9. BACKGROUND

Michael Moore of the State of New York Department of Law had requested William Neubeck, Hydrogeologist, also of the NY Dept of Law, to send a summary of the Eagle Bridge Village contamination of ground water by atrazine and alachlor to Mike McDavit of SRB. This data had been sent to EAB for review and relevence for the alachlor PD 2/3.

10. DISCUSSION

In describing the contamination history, William Neubeck states, "Groundwater beneath Eagle Bridge is contaminated with, primarily, two pesticides: atrazine and alachlor. The contamination was not the result of field application although many local fields receive them. In the case of the village, the contamination resulted from the disposal of pesticide and wash water to the surface soils in a limited area (see village map)." The spill area is behind a structure identified as "Agway", which is not identified in any other way, but is assumed to be, at least in part, an agricultural operation which uses large quantities of pesticides such that disposal of residues and wash water can occur nearby. Further evidence that the contamination comes from Agway is sampling in 1980 and 1985 of wells on the new and nearby old Agway site which show the highest levels of residues. Sampling in 1985 of the Old Agway site (within 200 feet of the current Agway site) showed residue levels of 109 ppb atrazine, 28 ppb metolachlor, and 16 ppb alachlor. Two samples in 1980 of a well on the current Agway site showed atrazine residues between 1400 and 1500 ppb.

Summaries of sampling results in 1980 and 1985 are attached to this data review. Results which were summarized in the Conclusions section above were from Attachment 1, where the analysis was performed by the Agway Lab of Ithaca, New York. Attachment 2 shows 1985 results from many of the same wells and sampling dates as those shown in Attachment 1. However, analyses in this case was performed by the New York State Department of Health (DOH) Lab in Albany, New York. As seen in this attachment, there were many non-detects (<1 ppb assumed to mean below detection limit of 1 ppb), although positive results were noted in many wells described as unused and screened in shallow ground water. Of particular note were the high levels of atrazine, metolachlor, and alachlor found in an unused well in the old Agway site. Also of note are findings of 40, 13, and 112 ppb metolachlor on 3/26/85. Attachment 3 shows split sample results of atrazine from the Agway lab and the NY state DOH lab. As seen, the NY state lab consistently showed lower positive results when results were above the detection limit of 1 ppb of the NY state lab. Specifically, the average of 10 positive results was 27.7 ppb for the Agway lab in comparison to 15.2 for the NY state lab. Attachment 4 shows results of atrazine only for: four sampling dates between 10/79 and 5/81 and 23 well sites (not all well sites tested on all dates). Significant contamination was noted at the Agway shallow well (40 ft), with two samples taken in 1980 listed at 1500 and greater than 1400 ppb. Also noteworthy were four samples from the "old" McNally well, located across the street from the Agway site, which averaged 240 ppb with a range of 52 to 400 ppb. Of the remaining 29 samples from several sites, 6 were not quantifiable and were listed as less than 0.2-0.5 ppb, and the average of the remaining 23 was 14.2 ppb with a range of 0.4 to 63.0 and a median (middle value) of 1.1 ppb.

RIN 2858-00

Alachlor EFED Review

Page____ is not included in this copy.

Pages 5 through 10 are not included.

The material not included contains the following type of information:

____ Identity of product inert ingredients.

____ Identity of product impurities.

____ Description of the product manufacturing process.

____ Description of quality control procedures.

____ Identity of the source of product ingredients.

____ Sales or other commercial/financial information.

____ A draft product label.

____ The product confidential statement of formula.

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____ FIFRA registration data.

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