9/20/1985

Date Out EAB: 9/20/85
Shaughnessy # 090501

TO: Bob Taylor
Product Manager
Registration Division
TS-767

FROM: Stuart Z. Cohen, Ph.D.
Ground-Water Team Leader
Exposure Assessment Branch
Hazard Evaluation Division

Attached please find the environmental fate review of:

Reg./File No.: 524-316

Chemical: alachlor

Type Product: H

Product Name:

Company Name: Monsanto

Submission Purpose: Company response to EPA letter on ground-water monitoring

ZBB Code: _____ ACTION CODE: 495

Date in: _____ EAB # 5829

Date Completed: 9/20/85 TAIS (level II) Days

Sent to HED 8/5/85 1 1/2

Deferrals To:

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

(1)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 20 1985

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

TO: Robert Taylor, PM 25
Fungicide/Herbicide Branch
Registration Division (TS-767C)

SUBJECT: Review of 5/29/85 Monsanto Letter on the Alachlor Ground-Water Study

FROM: Stuart Z. Cohen, Ph.D. SC
Ground-Water Team Leader
Exposure Assessment Branch, (TS-769C)

I have serious concerns about this letter. Monsanto informed us in this letter that they were conducting a key study with a protocol that had not been approved by us, a protocol which was general and did not describe actual well selection or well sampling or water analysis, and at the same time gave responses to some of my criticisms which were unacceptable. I voiced these same concerns in early June to Jim Akerman and Vickie Walters.

After a couple of months of negotiations with Monsanto, they submitted a preliminary protocol dated February 15. This preliminary protocol reflected the competent input of the Geraghty and Miller, Inc. ground-water consultants. It represented a significant improvement in Monsanto's approach to the study design, but was not meant to be complete. In addition, some of the concerns I raised would have been best addressed in a collegial atmosphere of scientific interchange, not in a letter saying "Attached are clarifications and comments in response to Dr. Stuart Cohen's letter..." and "Please note that the study is well underway, ...".

In addition to these general comments, I have some more specific comments. My comments follow the order of Monsanto's comments. "Page #" in Monsanto's and my comments refers to the page # of their February 15 proposal.

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1. We still need to be assured, particularly in peanut areas, that known high-use counties would be sampled.

2. Once again, I disagree with their statement on page 2. This is not a "worst case" study. I haven't yet reviewed their final protocol, but based on their correspondence through May 29, this is not a "worst case" study for the following reasons.

   1. Since depth to ground water or well screen is no longer a design variable (Braids, letter of 5/9/85 attached to Monsanto letter, p.4), it is possible that much of the sampling will be done in areas with deep ground water and/or well screens.

   2. Soil type is only one of the seven criteria which go into a consideration of ground-water vulnerability. The others are depth to ground water, recharge, impact of the vadose or unsaturated zone, aquifer media, topography, and the aquifer hydraulic conductivity. It was never planned for Monsanto to consider all seven criteria. However, they can hardly say they are in the most vulnerable environments by only considering one criterion.

   3. Nothing in their proposal indicates they would optimize sampling, in a statistically valid manner, such that wells would be sampled near alachlor use sites. "Near" could mean, say, a 1/4 mile radius.

3. When counties were eliminated due to lack of soils data, how thorough were the information searches? Were all possible repositories for such information contacted at the state and federal level, including, if appropriate, the USDA's two computerized soils data bases?

4. Some aspects of the statistical design section, pp.10-14, are still not clear. Will all six soil category areas be sampled in every county, or will only selected intra-county areas be targetted? I would imagine the latter is case. If so, how will those intracounty/soil areas be selected?

5. It is acceptable to remove wells from the sample which are obviously threatened by contamination from disposal pits, etc. It is unacceptable to allow for <u>substitutions</u> to be made in the field due to lack of information on well construction or due to inaccessibility. There are other ways to handle this which I will either mention in

my upcoming protocol review or in the upcoming meeting with Monsanto.

cc: D. Severn, C. Offutt
B. Litt