



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

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ACEPHATE

20 MAY 1986

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Chevron Chemical Company's Comments on
the Draft Registration Standard for
Acephate dated September 1985
(Record No. 171863; RCB No. 822)

FROM: William J. Hazel, Ph.D., Chemist
Residue Chemistry Branch
Hazard Evaluation Division (TS-769C)

W. J. Hazel

TO: William H. Miller, PM 16
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Registration Division (TS-767C)

THRU: Charles L. Trichilo, Ph.D., Chief
Residue Chemistry Branch
Hazard Evaluation Division (TS-769C)

[Signature]

Chevron Chemical Company has submitted its [public] comments on the draft Guidance Document for the Reregistration of Acephate dated September 1985. Residue Chemistry Branch (RCB) will respond only to those comments involving a discrepancy and/or a criticism of EPA's approach.

Regulatory Position and Rationale

3a. Mint hay. In response to EPA's request for additional data supporting a lower mint hay tolerance, Chevron replied that a permanent label restriction against feeding spent mint hay to livestock was an appropriate alternative.

RCB response. Based on available information, including letters from university experts submitted by Chevron, we feel that a livestock feeding restriction is a practical alternative to the original request for additional data noted in the Guidance Document. This is because EPA required this data only because the milk tolerance for acephate may be exceeded under the current registered conditions for use on mint. It is apparent that

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current agricultural practices dictate that most mint oil is distilled on the farm of origin. As a consequence, the spent mint hay is now under grower control and, thus, is subject to a livestock feeding restriction.

- 3b. Grass hay. In response to EPA's request for data supporting a lower grass hay tolerance, Chevron replied that data contained within PP#1F2449 (submitted November 21, 1980) supported a 3 ppm tolerance (the tolerance established in 40 CFR 180.108 is 15 ppm). This implies that Chevron believes that additional grass hay data are not necessary.

RCB response. We do not agree with Chevron's position. All or most samples analyzed under PP#1F2449 were succulent grass containing 31 to 87 percent moisture and not grass hay which typically contains about 10 percent moisture. Although the current tolerances of 15 ppm in or on grass and grass hay are supported, RCB must reiterate the request for hay data supporting a lower tolerance. As currently registered, residues in or on grass hay are likely to result in tolerance-exceeding residues in milk assuming that residue levels extrapolated from 21-day succulent grass samples roughly approximate the true residues found in grass hay.

At this time, RCB would also like to express concern for the contribution of acephate residues in or on succulent grass to the diet of dairy animals. Since the livestock dietary intake data are on a dry weight basis, the maximum succulent grass residue of 2.9 ppm multiplied by a 3.3X dry-down factor results in 9.6 ppm on a dry weight basis, similar to the extrapolated grass hay levels. Note that the dairy animal's diet may consist of up to 70 percent grass or grass hay. As a result, a permanent dairy animal feeding/grazing restriction may be considered for both treated grass and hay grown in pastures. This may be a practical solution since, generally, dairy farmers pasture their animals on their own land and have control over pesticide treatment and movement of animals from one location to another. On the other hand, dairy animals are not generally allowed to graze on open rangeland largely due to the milking schedule; therefore, a feeding/grazing restriction for dairy animals is not necessary for rangeland. As another alternative, pregrazing and preharvest intervals longer than 21 days may be proposed although additional residue data would be required for both grass and grass hay at intervals greater than

21 days posttreatment. An additional consideration may be to cancel the use on pastures while retaining the use on rangeland.

Note that Chevron plans to conduct a feeding study to determine residues in milk.

Comments on Data Guideline Sections

158.125. Residue Chemistry

171-3. Interim mint hay livestock feeding restriction

Chevron contends that the interim spent mint hay feeding restriction is unnecessary because little, if any, mint hay is fed to dairy cattle.

RCB response. A letter submitted by Chevron on March 29, 1985, from Chuck Stanger to Dr. A.P. Appleby of Oregon State University, indicated that about 30 percent of the spent mint hay resulting from mint crops in southwest Idaho and eastern Oregon was used for feed. Other sources indicated no knowledge of spent mint hay used as feed. We feel that use of spent mint hay as a feed item, while minimal, does still occur and that an interim feeding restriction is justified (as well as a permanent label restriction).

171-3. Interim grass hay livestock feeding restriction.

Chevron contends that the interim grass hay feeding restriction is not necessary (no reason was given).

RCB response. We continue to believe that the interim feeding restriction is appropriate as the Guidance Document presents it: "Do not graze or feed grass hay to dairy animals." We interpret this as meaning that succulent grass may not be grazed and that hay may not be fed.

171-4. Magnitude of the residue in beans.

Chevron cited a green bean canning study (Moherrek and Leary, 1973, MRID 00014782) as being ignored in the Guidance Document and implied that this study should suffice for the boiling study requested in the Guidance Document. If the study was inadequate, a reason should be given.

RCB response. The bean canning study was not ignored by EPA but, rather, was noted in footnote 10, p. 38 of the draft Guidance Document as being an inadequate canning study. Regardless, the reduction of residue in beans study currently underway (noted in the subject submission) should satisfy both the boiling and canning requirements. Refer to the May 14, 1985 memorandum by W.J. Hazel (RCB) for a detailed assessment of the available data.

171-4. Magnitude of the residue in soybeans.

Chevron mentioned several soybean processing studies that were discussed in the January 27, 1982 Residue Chemistry Chapter but ignored in the draft Guidance Document. If inadequate, Chevron requests an explanation.

RCB response. The listed processing studies were not ignored by EPA and, in fact, are considered adequate to demonstrate that food additive tolerances are not required for processed products of soybeans. However, the available processing studies are not adequate to demonstrate the dietary exposure to acephate residues in refined oil or defatted flour, as noted in the May 14, 1985 memorandum by W.J. Hazel. It was noted in this memorandum that the "worst case" estimate will be used if the data on refined oil and defatted flour are not submitted.

171-4. Magnitude of the residue in grass and grass hay.

Chevron notes that the Residue Chemistry Chapter (January 27, 1982) declares that the meat and milk tolerances are supported and that the 3 ppm feeding level represents the maximum level in the diet of dairy animals. Chevron also notes the contradictory statement in footnote 7, p. 37 of the draft Guidance Document: "... the established tolerance. . . in milk is likely to be exceeded if maximum levels of spent mint hay or grass hay are included in the dairy animal diet."

RCB response. Refer to 3a and 3b under Regulatory Position and Rationale (this review) for details of the issues surrounding this discrepancy. The problem here appears to be an incomplete collection of RCB reviews in chronological order which were later incorporated into the draft Guidance Document. In this case, the relevant memoranda are the October 5, 1984 addendum by C.L. Trichilo and the August 7, 1985 memorandum by W.J. Hazel.

These memoranda fully explain any discrepancies and/or revisions made to the Residue Chemistry Chapter.

Note to the PM: Many of the problems encountered with these Chevron public comments could be avoided by sending all addenda to the Science Chapters to recipients of the Chapters.

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