

US EPA ARCHIVE DOCUMENT

SHAUGHNESSEY NO.
101201

REVIEW NO.

EEB BRANCH REVIEW

DATE: IN 8-1-84 OUT 9-19-84

FILE OR REG. NO. 239-2404

PETITION OR EXP. PERMIT NO. _____

DATE OF SUBMISSION 3-27-84

DATE RECEIVED BY HED 7-30-84

RD REQUESTED COMPLETION DATE 10-15-84

EEB ESTIMATED COMPLETION DATE 10-8-84

RD ACTION CODE/TYPE OF REVIEW 336/Amendment

TYPE PRODUCT(S): I, D, H, F, N, R, S Insecticide

DATA ACCESSION NO(S). _____

PRODUCT MANAGER NO. W. Miller (16)

PRODUCT NAME(S) Monitor 4 Spray

COMPANY NAME Chevron Chemical Company

SUBMISSION PURPOSE Proposed Registration of Safflower Use

(California and Arizona only)

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.
<u>101201</u>	<u>Methamidophis</u>	<u>40%</u>
_____	<u>Inert Ingredients</u>	<u>60%</u>
_____	_____	_____

100 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

Chevron requests registration of Monitor 4 Spray for use on safflowers.

100.2 Formulation Information

Active Ingredients	By weight
Methamidophos (o,s-dimethyl phosphoramidothioate)	40.0%
Inert Ingredients	60.0%

100.3 Application Methods, Directions, Rates

Safflower = for control of Aphids, Armyworms, Loopers and Lygus (California and Arizona only) - Apply 1 to 2 pints (0.5 to 1.0 lb. active ingredient) per acre. Apply as needed prior to bloom. Do not apply during bloom period. Do not apply within 30 days of harvest. Do not graze treated areas of feed treated foliage or crop residues to livestock.

100.4 Target Organism

Aphids, Armyworms, Loopers and Lygus

100.5 Precautionary Labeling

ENVIRONMENTAL HAZARDS - This product is toxic to birds and other wild-life. Birds and other wildlife in treated areas may be killed, Do not apply directly to water. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment, or disposal of wastes.

This product is highly toxic to bees exposed to direct treatment or residues on crops. Protective information may be obtained from your Cooperative Agricultural Extension Service.

101 Hazard Assessment

101.1 Discussion

Monitor 4 Spray is presently registered on cotton, potatoes, cabbage, broccoli, brussel sprouts and cauliflower. These crops are grown on about 20,000,000 acres at 1 lb. of active per acre.

This hazard assessment will be concerned with the application of monitor on safflower only in California and Arizona. The reasons for this are: 1) The label statement for Monitor 4 Spray on safflower states

"(California and Arizona only)"; 2) Phone discussions with Joan Edwards (PM team 16/RD), and Don Dye, (Coordinator, Regulatory Affairs/Chevron Chemical Company) confirmed that the intent of the label is to restrict Monitor 4 Spray usage on safflowers to the states of Arizona and California.

Safflowers are grown on about 75,000 acres in Arizona and California.

101.2 Likelihood of Adverse Effects on Non-target Organisms

Some of the information given below is taken from the Registration Standard for methamidophos (D. Urban, March, 1982) and from the section 18 for use on safflower (L. Zucker, June, 1984)

The hazards of Monitor to non-targets have been discussed extensively in previous reviews and therefore will not be reiterated in depth. In summary, Monitor is highly toxic to both aquatic invertebrates and avian species, but only slightly toxic to fish. In addition, reproduction studies with avian species indicate significant reproductive impairment occurred at 5 ppm.

Application of methamidophos at a rate of 1.0 lb/acre would leave expected residues ranging from 7 ppm to 240 ppm on typical avian and mammalian dietary matter. As discussed in the Registration Standard, the residue levels following a 1 lb./acre application would exceed laboratory devised LC50's.

A bird kill in Wisconsin resulted when Monitor was aerially sprayed on cabbage. At least 14 birds were reported dead or dying around the sprayed cabbage field. Brain cholinesterase activity tests and chemical analysis of gastrointestinal tracts of the birds verified the cause of death as methamidophos.

101.3 Endangered Species Consideration

Refer to L. Zucker's EEB sec. 18 review of 6-18-84 involving the use of monitor on safflowers for list of endangered species and counties where safflowers are grown.

101.4 Adequacy of Labeling

The registrant should be advised, as recommended in past actions with Monitor, the general bee precaution statement on the product label should be amended to read as follows:

"ENVIRONMENTAL HAZARDS: This product is highly toxic to bees exposed to direct treatment or residues on blooming crops needs. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area."

102 Conclusions

Based on available data, EEB concludes that the proposed use provides for significant risks to exposed populations of non-target bird, mammal and aquatic invertebrates species, including Federally Endangered/Threatened species.

As required, formal consultation is being initiated with the Office of Endangered Species.

Note: The registrant is reminded that EEB still requires, as stated in the Registration Standard (1982) a small field study for registration of Monitor (methamidophos).

Ken Clark
Agronomist
Ecological Effects Branch/HED

Ken Clark 9/20/84

Raymond Matheny
Section Head 1
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Summer Cook for 9.20.84



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

27 SEP 1984

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

TO: W. Miller, PM 16
Registration Division, TS-767C

THRU: Raymond Matheny *RWM*
Head, Section 1
EEB/HED

THRU: Clayton Bushong *CB*
Chief
EEB/HED

SUBJECT: Amendment to K. Clark's review of Monitor 4 Spray (Reg no. 239-2404)
for use in safflower 9/19/84.

An informal consultation with Jay Sheppard, of the Office of Endangered Species, revealed that, in Mr. Sheppard's opinion, there is no effect to endangered species in the proposed use of Monitor 4 Spray on safflower. Therefore, a formal consultation with OES is not required.

Ken Clark
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