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

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OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM

Subject: 92-MI-0001. Specific Exemption (Section 18)
for pendimethalin (Prowl® Herbicide) on
onions

Chemistry Branch No.: 9505
Chemical No. : 108501
DP Barcode: D175204
MRID : None

From: R. W. Cook, Chemist *RW Cook*
Tolerance Petition Section I
Chemistry Branch - Tolerance Support
Health Effects Division (H-7509C)

Through: Robert S. Quick, Section Head *Robert S. Quick*
Tolerance Petition Section I
Chemistry Branch - Tolerance Support
Health Effects Division (H-7509C)

To: Rebecca Cool, PM Team 41
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The Michigan Department of Agriculture is again requesting specific exemption for the use of pendimethalin to control prostate spurge in onions and for preemergence suppression of broadleaf weeds and grasses in 1992. Previously, we have considered 89-MI-01 (see F. Toghrol review of 5/9/89), 91-MI-02 (see F. Toghrol review of 2/20/91). A similar request was submitted by the State of Oregon (see 89-OR-09, F. Toghrol, 3/28/89). More recently, we have considered PP1E3965, an IR-4 petition proposing tolerances of 0.1 ppm resulting from the use of pendimethalin on onions (see G. Herndon review of 7/10/91).

Tolerances are currently established under 40 CFR 180.361 (a) for residues of pendimethalin and its metabolite 4-[(1-ethylpropyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol on rice grain at 0.05 ppm and other raw agricultural commodities (including beans, corn grain, cottonseed, peanuts and potatoes at 0.1 ppm. Tolerances (with regional registration) are also currently established under 40 CFR 180.361 (c) for residues of pendimethalin and its metabolite 4-[(1-ethylpropyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol on garlic at 0.1 ppm. In 40 CFR 180.361 (b), tolerances are established for residues of

pendimethalin and its metabolites 4-[(1-ethylpropyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol and 3-[(1-ethylpropyl)amino]-6-methyl-2,4-dinitrobenzyl alcohol in peanut hulls at 0.25 ppm.

The petitioner reports that the manufacturer has been contacted and supports this application, but there is no letter from the manufacturer in the submission.

The herbicide proposed for use is Prowl® 4E Herbicide, EPA Reg. No. 241-243, a product of American Cyanamid Corporation. The specific exemption provides for use on a maximum of 8000 acres at 1 - 2 pounds active ingredient per acre in 10 - 30 gallons of water by ground equipment with a maximum of 3 applications per growing season. First application is after onions are seeded or transplanted, and additional applications when onions are well established but before weeds emerge. Application in Michigan under this specific exemption may occur only between April 15, 1992 and July 30, 1992. The specific exemption provides that application not occur within 45 days of harvest. The proposed specific exemption provides a maximum of 6 pounds per acre (48,000 pounds active ingredient in the state per year), the same maximum amount proposed in 91-MI-02 (see F. Toghrol review of 2/20/91 in this regard).

The specific exemption in 91-MI-02 was for 2 or 3 ground applications of Prowl® 4E at 2 to 4 quarts per acre, with a maximum of 4 pounds active ingredient per acre per year.

No plant or animal metabolism data are presented in this Section 18 proposal. We have recently concluded that the plant metabolism of pendimethalin is not adequately understood for the purposes of establishing permanent tolerances on onions using similar rates (PP1E3965, 7/10/91). However, for the limited duration and limited acreage included herein, we consider the residue of concern to be pendimethalin and its metabolite 4-[(1-ethylpropyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol.

There are no residue data presented in this proposal. Residue data considered in the above mentioned IR-4 petition indicated no detectable residues (<0.05 ppm) in Michigan onions from 2 applications of 2 or 4 lbs. a.i./A (the first application preemergent and the second application at 45 days prior to harvest)

Adequate analytical methods are available for enforcement purposes in PAM II. Analytical standards for pendimethalin and its metabolite are available from the EPA Repository at Research Triangle Park, NC.

Meat, Milk, Poultry and Eggs

There are no animal feed items involved in the production of

onions, therefore, secondary residues of pendimethalin and its metabolite are not expected in meat, milk, poultry, and eggs as a result of this section 18 request.

Conclusions:

1. For the proposes of this section 18 only, we consider the residues of concern to be pendimethalin and its metabolite 4-[(1-ethylpropyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol.
2. The analytical methods described in PAM II are adequate for enforcement purposes. Analytical standards for pendimethalin and its metabolite are available from the EPA Repository at Research Triangle Park, NC.
3. The available residue data indicate that residues of pendimethalin and its metabolite 4-[(1-ethylpropyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol are not expected to exceed 0.1 ppm.
4. No secondary residues of pendimethalin or its metabolite 4-[(1-ethylpropyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol are expected in meat, milk, poultry, and eggs, since onion production does not involve animal feed stuffs.
5. No Craven Laboratory data were used in support of this submission.

Recommendations

Tox considerations permitting, provided no more than 3 applications are used at 2 pounds active ingredient per acre and a Preharvest interval of 45 days is imposed, CBTS has no objections to this section 18. An agreement should be made with the FDA regarding the legal status of the treated onions in commerce.

cc: RF, Circ. Section 18 F, C. Furlow (FOD/PIB), R. Cook, D. Edwards, R. Griffin
RDI:RSQ:3/10/92:RAL:3/10/92
H7509C:CBTS:TPSI:rwcook:3/9/92:Rm810H