US EPA ARCHIVE DOCUMENT

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

MAY 8 1989

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: 400-EUP-AT. Request for an EUP to use Terraclor^{R} 4F (PCNB) on peanuts. MRID No. 410025-07. DEB No. 5217.

FROM: Linda S. Propst, Chemist
Dietary Exposure Branch
Health Effects Division (H7509C)

THRU: Andrew R. Rathman, Section Head
Special Registration Section 1
Dietary Exposure Branch
Health Effects Division (H7509C)

TO: Susan Lewis, PM Team 21
Fungicide-Herbicide Branch
Registration Division (H7505C)

Uniroyal Chemical Company is requesting an Experimental Use Permit which will authorize use of Terraclor^{R} 4F (PCNB) on peanuts. This EUP will involve 6,250 lbs. of active to be used on 625 acres of peanuts grown in the states of Georgia, North Carolina, Virginia, Oklahoma, and Texas. This request is for an 18 month period from May, 1989 until October, 1990 to permit use in two growing seasons.

An interim tolerance of 1.0 ppm has been established to cover residues of pentachloronitrobenzene (PCNB) on peanuts (40 CFR 180.319). There is no tolerance to cover residues of PCNB on peanut hulls.

The Residue Chemistry Chapter of the Pentachloronitrobenzene Registration Standard was published June 20, 1986.

The primary purpose for requesting this EUP is for the generation of additional residue data to support the conversion of the current interim tolerance to a permanent tolerance on peanuts.

[redacted]

PENDING REGISTRATION INFORMATION IS NOT INCLUDED

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[redacted]

Residue data submitted with this request were generated in field trials conducted in Virginia, Oklahoma, and Georgia. Data reflect residues of PCNB, its metabolites, and impurities [hexachlorobenzene (HCB), pentachlorobenzene (PCB), pentachloroaniline (PCA), and methyl pentachlorophenyl sulfide (MPCPS)] resulting on peanuts (nutmeats) and peanut hulls from the application of Terraclor® 2EC or Terraclor® 4F through irrigation equipment.

In the Virginia field trials peanuts were treated with 5 lbs. active per acre of Terraclor 4F or Terraclor 2EC through small-scale irrigation equipment at pegging and again 45 days before harvest. Peanuts were dug and large samples were run through harvesting machine from which grab samples were taken. The peanuts were shelled with a sheller and grab samples of nut meats and hulls were taken for shipment to the analytical laboratory. In the Virginia test, HCB, PCA, PCB, and MPCPS residues in nuts and hulls resulting from 2 EC and 4F treatments were not detectable (<0.005 ppm). The highest PCNB residues found in nutmeats were 0.008 ppm from treatment with 2EC and [redacted]

In the Georgia field studies, peanuts were treated with 2 EC applied through a commercial pivot irrigation system using 5.0 lbs. active per acre at pegging and again at late pegging. Peanuts were dug 45 days after the last treatment and allowed to field dry for 5 to 7 days. Treated and untreated peanuts were harvested separately. Grab samples from each were taken separately and shelled. The nut and hull samples were frozen for shipment to the analytical laboratory. Maximum residues from this study on nutmeats were 0.25 ppm for PCNB, .047 ppm PCB, .006 ppm HCB, .072 ppm PCA and .040 MPCPS. On peanut hulls, maxiumum residues were 0.7 ppm PCNB, .14 ppm PCB, .005 ppm HCB, .21 ppm PCA, and .16 ppm MPCPS.

The peanuts from two field trials conducted in Oklahoma were treated with side by side applications of 2EC and 4F using the maximum recommended rates at pegging and again when nearly full grown. The peanuts were dug and allowed to field dry. After drying they were harvested 50 and 41 days after the last treatment. They were separated into nutmeats and hulls and shipped to the analytical laboratory. Results of samples from the two Oklahoma tests show all untreated samples to be contaminated. Levels of PCNB exceed levels in the treated samples.

The peanut samples were analyzed utilizing the method "Determination of 5-Ethyoxy-3-Tri chloromethyl-1, 2, 4-thiadiazole and pentachloronitrobenzene and their metabolites in Peanut Oil", CAM-6-70.

DEB's Conclusions and Recommendations

Dietary Exposure Branch has no objections to the granting of this EUP, providing the registrant submit a petition requesting temporary tolerances of 1 ppm and 2 ppm to cover combined residues of PCNB (to include parent, PCB, HCB, PCA, and MPCPS) occurring on peanuts and peanut hulls, respectively as a result of this EUP.

Since the metabolism studies requested in the PCNB Registration Standard remain outstanding, the registrant should be informed that additional metabolites may need to be regulated in future PCNB tolerances.

cc: Circulation, Reading File, Reviewer, PCNB Reg. Std. File, Branch Chief, PMSD/ISB
RDI: A. R. Rathman, 5/7/89; E. Zager, 5/7/89
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