6-12-79 Schmitt Chemistry CM#2 Rm 810

TITLE 40--PROTECTION OF ENVIRONMENT

CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY

[PP 6F1830/R207]

SUBCHAPTER E--PESTICIDE PROGRAMS

PART 180--TOLERANCES AND EXEMPTIONS FROM TOLERANCES FOR PESTICIDE CHEMICALS IN OR ON RAW AGRICULTURAL COMMODITIES

Chlorpyrifos

AGENCY: Office of Pesticide Programs, Environmental Protection Agency (EPA).

ACTION: Final Rule.

SUMMARY: This rule establishes tolerances for residues of the insecticide chlorpyrifos on sorghum grain at 0.75 part per million (ppm) sorghum fodder at 6 ppm, and sorghum forage at 1.5 ppm. The regulation was requested by Dow Chemical Co. This rule establishes maximum permissible levels for residues of chlorpyrifos on sorghum grain, fodder, and forage.

EFFECTIVE DATE: Effective on the date of publication in the FEDERAL REGISTER.

FOR FURTHER INFORMATION CONTACT: Mr. Frank Sanders, Product Manager (PM) 12, Registration Division (TS-767), Office of Pesticide Programs, EPA, 401 M Street, SW, Washington, DC 20460 (202/426-9425).

SUPPLEMENTARY INFORMATION: On September 1, 1976, notice was given (41 FR 36834) that Dow Chemical Co., PO Box 1706, Midland, MI 48640, had filed a pesticide petition (PP 6F1830) with the EPA. This

petition proposed that 40 CFR 180.342 be amended to establish tolerances for combined residues of the insecticide chlorpyrifos (O,O-diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate) and its metabolite 3,5,6-trichloro-2-pyridinol in or on the raw agricultural commodities sorghum grain at 0.75 ppm, and sorghum fodder and forage at 1.5 ppm.

Subsequently, the petitioner amended the petition by increasing the proposed tolerance on sorghum fodder from 1.5 ppm to 6 ppm. Since sorghum fodder is not a human food item, the higher tolerance will not result in a potential increase in exposure of humans to chlorpyrifos residues. Thus, the tolerances are not being proposed at this time to provide an opportunity for public comment. No comments were received in response to this notice of filing. (A related document concerning the establishment of a feed additive tolerance for residues of chlorpyrifos on sorghum grain milling fractions appears elsewhere in today's FEDERAL REGISTER).

The data submitted in the petition and other relevant material have been evaluated. The toxicology data considered in support of the proposed tolerances included a two-year rat feeding/oncogenicity study and a dog feeding study with a no-observed-effect level (NOEL) of 0.1 milligram (mg)/kilogram (kg) of body weight. Studies on delayed neurotoxicity and reproduction showed negative potentials. Based on the two-year chronic rat feeding study with the 0.1 mg/kg bw NOEL on cholinesterase activity and using a safety factor of 10, the acceptable daily intake (ADI) for man is 0.01 mg/kg bw/day.

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The theoretical maximum residue contribution (TMRC) in the human diet from the proposed tolerances and tolerances which have previously been established for residues of chlorpyrifos on a variety of raw agricultural commodities at levels ranging from 0.01 ppm to 1.5 ppm does not exceed the ADI. A food additive regulation (21 CFR 193.85) has previously been established for chlorpyrifos in food-handling establishments. Feed additive tolerances have also been established (21 CFR 561.98) for residues of chlorpyrifos in dried sugar beet pulp at 1 ppm and sugar beet molasses at 3 ppm.

Desirable data that are lacking from the petition are a lifetime oncogenicity study and a teratology study. In a letter of February 17, 1978, and January 31, 1979, the petitioner indicated that the lifetime oncogenicity study is expected to be completed in May, 1979 and the teratology study is expected to be completed in late 1979. The petitioner also agreed to voluntarily delete the use of chlorpyrifos on sorghum from the label should the lifetime oncogenicity and teratology studies be found to exceed the risk criteria for chronic toxicity in 40 CFR 162.11. Although the oncogenicity evaluation of chlorpyrifos is not complete, it is concluded that based on the available data, the risks are acceptable since the absence of an oncogenic potential is shown in the two-year rat feeding/oncogenicity study.

The metabolism of chlorpyrifos is adequately understood, and an adequate analytical method (gas chromatography) is available for enforcement purposes. No actions are currently pending against

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continued registration of chlorpyrifos nor are there any other relevant considerations involved in establishing the proposed tolerances. The established tolerances for residues of chlorpyrifos in milk, meat, poultry, and eggs are adequate to cover the proposed uses.

The pesticide is considered useful for the purpose for which tolerances are sought, and it is concluded that the tolerances of 0.75 ppm on sorghum grain, 6 ppm on sorghum fodder, and 1.5 ppm on sorghum forage established by amending 40 CFR 180.342 will protect the public health. It is concluded, therefore, that the tolerances be established as set forth below.

Any person adversely affected by this regulation may, within 30 days after publication in the FEDERAL REGISTER, file written objections with the Hearing Clerk, Environmental Protection Agency, Rm. M-3708 (A-110), 401 M St., SW, Washington, DC 20460. Such objections should be submitted in triplicate and specify the provisions of the regulation deemed to be objectionable and the grounds for the objections. If a hearing is requested, the objections must state the issues for the hearing. A hearing will be granted if the objections are supported by grounds legally sufficient to justify the relief sought.

Under Executive Order 12044, EPA is required to judge whether a regulation is "significant" and therefore subject to the procedural requirements of the Order or whether it

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may follow other specialized development procedures. EPA labels these other regulations "specialized". This regulation has been reviewed, and it has been determined that it is a specialized regulation not subject to the procedural requirements of Executive Order 12044.

Effective on the date of publication in the FEDERAL REGISTER Part 180 is amended as set forth below.

Dated: 1979

Deputy Assistant Administrator
for Pesticide Programs

Statutory Authority: Section 408(d)(2) of the Federal Food, Drug, and Cosmetic Act [21 U.S.C. 346a(d)(2)].

cc: TS-766 (EJohnson, Rm. E-539)
TS-767 (DCampt, Rm. E-347)
TS-769 (RSchmitt, Rm. E-108)
TS-767 (PM 12/Petition File)

FRS/EGross/eg/rm405ET/x54854/TS-757/4-25-79

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Part 180, Subpart C, section 180.342, is amended by alphabetically inserting sorghum grain at 0.75 ppm, sorghum fodder at 6 ppm, and sorghum forage at 1.5 ppm in the table to read as follows:

Section 180.342 Chlorpyrifos; tolerances for residues.

* * * * *

Commodity:	Parts per million
* * *	* * *
Sorghum, fodder	6
Sorghum, forage	1.5
Sorghum, grain	0.75
* * *	* * *

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1.0 Introduction

1.1 Other names for chlorpyrifos are Lorsban, Dursban, DOWCO 179, ENT 27311.

1.2 Percent Active - Lorsban 4E: 40.7% chlorpyrifos and 22.8% aromatic petroleum derivative solvent.

1.3 For use on sorghum to control midge.

1.4 See other reviews for chlorpyrifos:

6720-EAA	8/3/76
9782-LU	6/11/76
9198-GT	6/10/76
299-172	5/3/76
464-448, 449, 523	5/2/76
5G-1595	3/13/76
464-448	12/6/75
3F 1306	4/2/74
3F 1306	2/15/73
464-ULN	
464-LRT	8/13/75
464-368	8/13/75
6F 1673	10/6/75
464-EXP	3/5/74
464-EXP	3/26/74
464-LRN	3/4/74
464-EXP	3/20/74
4F 1445	3/04/74
3F 1370	5/18/73

2.0 Directions for Use

2.1 Method and Time of Application: Ground or aerial application as a broadcast, foliar spray. First treatment when 30 to 50 percent of the seed heads are in bloom and midge adults are present. A second and third treatment at 3-day intervals as needed but not to exceed 3 applications.

2.2 Dosage: One quarter (0.25) pound of chlorpyrifos per acre per treatment (equivalent to one-half pint of Lorsban 4E per acre).

2.3 Restrictions: Do not use treated crop for forage or silage within 14 days after last treatment or for fodder within 70 days after last treatment.

2.4 Do not contaminate water by cleaning of equipment or disposal of wastes.

2.5 Do not reuse empty container. Crush or perforate it and bury it in an area away from water supplies.

3.0 Discussion of Data

3.1 Hydrolysis Studies

The following studies were reviewed and accepted on 5/2/74:

22. Meikle, R. W. and C. R. Youngson. 1971. Hydrolysis Rate of DOWCO 179 in Water. Agricultural Research, The Dow Chemical Company, Walnut Creek, California. August (unpublished report GS-1154).

Submitted March 20, 1972.

27. Schaefer, C. H. and E. F. Dupras, Jr. 1970. Factors Affecting the Stability of DURSBAN in Polluted Waters. J. Econ. Entomol. 63 (3) 701-705.

Submitted March 20, 1972.

5. Pesticide Petition No. 3F1306)

Meikle, R. W. 1972. Hydrolysis rate of chlorpyrifos in buffered distilled water. Ag-Organics Res., Dow Chemical U.S.A., Walnut Creek, CA. Dec. 15. Submitted April 2, 1974 under cover letter from R. W. Morgan (Dow) to Charles L. Smit (EPA).

3.2 Microbial Studies

The following studies were submitted on March 20. They were reviewed and accepted on 2/15/73.

28. Sivasithamparam, K. 1969. Some Effects of an Insecticide ("DURSBAN") and a Weedicide ("LINURON") on the Microflora of a Submerged Soil. Proc. Ceylon Ass. Advmt. Sci. 25(1):1-8.

11. Hirakoso, S. 1969. Inactivating Effeects of Micro-Organisms on Insecticidal Activity of DURSBAN. Japan J. Exp. Med. 39(1):17-20. (Also World Health Organization WHO/VBC/68.63. 1-6).

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6. Getzin, L. W. and I. Rosefield. 1968. Organophosphorus Insecticide Degradation by Heat-Labile Substances in Soil. J. Agr. Food Chem. 16(4):598-601.

3.3 Adsorption Studies

The following studies were reviewed and accepted on 4/2/74.

2. (Pesticide Petition No. 3F1306)

Hamaker, J. W. 1974. Adsorption of 3,5,6-trichloro-2-pyridinol by soils. Ag-Organics Res., Dow Chemical U.S.A., Walnut Creek, CA. Feb. 25. Submitted April 2, 1974 under cover letter from R. W. Morgan (Dow) to Charles L. Smith (EPA).

3. (Pesticide Petition No. 3F1306)

Hamaker, J. W. 1972. Adsorption of chlorpyrifos by soil slurries. Ag-Organics Res., Dow Chemical U.S.A., Walnut Creek, CA. May 8. Submitted April 2, 1974 under cover letter from R. W. Morgan (Dow) to Charles L. Smith (EPA).

3.4 Leaching, Persistence, Degradation, and Decomposition

3.4.1 The following studies were submitted on March 20, 1972. They were reviewed and accepted on 5/2/74.

7. Harris, C. R. 1969. Laboratory Studies on the Persistence of Biological Activity of Some Insecticides in Soils. J. Econ. Entomol. 62(6):1437-1441.

5. Dishburger, H. J., J. R. Rice and J. Pennington. 1969b. Determination of Residues of Dursban Insecticide and Its Oxygen Analog in Soil by Gas Chromatography. Agriculture Department, the Dow Chemical Company, Lake Jackson, Texas. November 15. (unpublished report TA-439).

20. McKellar, R. L., H. J. Wetters and H. J. Dishburger. 1972a. Residues of Chlorpyrifos, its Oxygen Analog, and 3,5,6-Trichloro-2-Pyridinol in Soil from Turkey Pens Treated with DURSBAN 25W Insecticide. Ag-Organics Department, Dow Chemical U.S.A., Midland, Michigan. February 29. (unpublished report GH-C 532).

21. McKellar, R. L., J. H. Wetters and H. J. Dishburger. 1972b. Residues of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol in Soil from Corn Fields Treated with DURSBAN Insecticides. Ag-Organics Department, Dow Chemical U.S. Midland, Michigan. April 12. (unpublished report GH-C 543).

13. Hurlbert, S. H., M. S. Mulla, H. O. Keith, W. E. Westlake and M. E. Dusch. 1970. Biological Effects and Persistence of DURSBAN in Freshwater Ponds. J. Econ. Entomol. 63(1): 43-52.

38. Thiegs, B. J. 1966. Degradation of [^{14}C] DURSBAN in Soil. Bioproducts Department, The Dow Chemical Company, Midland Michigan. July 28. (unpublished report).

26. Schaefer, C. H. and E. Dupras, Jr. 1969. The Effects of Water Quality, Temperature and Light on the Stability of Organophosphorus Larvicides Used for Mosquito Control Proc. & Papers of the 37th Ann. Conf. of the Calif. Mosquito Control Assn., Inc. 37:67-75. January 27-29.

3.4.2 The following study was accepted on 5/2/74.

7. (Pesticide Petition No. 3F1306)

Smith, G. N., Y. Taylor, and B. S. Watson. 1972. A leaching study of chlorpyrifos in soil. Chem. Biol. Res., The Dow Chemical Co., Midland, MI. Nov. 14. Submitted April 2, 1974 under cover letter from R. W. Morgan (Dow) to Charles L. Smith (EPA).

3.4.3 This study was not accepted as a leaching study on 2/15/73.

37. Thiegs, B. J. 1964. Decomposition and Leaching of DURSBAN-Cl^{36} in Soil. Bioproducts Department, the Dow Chemical Company, Midland, Michigan. April 6. (unpublished report).

3.5 Volatility Studies

29. Smith, G. N. 1966. Basic Studies on DURSBAN Insecticide. DOWN TO EARTH 22(2):3-7.

Submitted on March 20, 1972. Reviewed and accepted on 2/15/73.

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3.6 Photodegradation Studies

The following studies were submitted on March 20, 1972 and were reviewed and accepted on 2/15/73.

30. Smith, G. N. 1968. Ultraviolet Light Decomposition Studies with DURSBAN and 3,5,6-Trichloro-2-Pyridinol. J. Econ. Entomol. 61(3):793-799.

Studies were done on glass slides and in a 50% methyl alcohol and 50% water solution.

31. Smith, G. N. and Y. Taylor. 1972. Photodecomposition of DOWCO 179 (0,0-Diethyl 0-3,5,6-Trichloro-2-Pyridyl Phosphorothioate) in the Aerodynamotron. Chemical Biology Research, The Dow Chemical Company, Midland, Michigan. February 8. (unpublished report NBE-3).

3.7 Fish Accumulation Studies

32. Smith, G. N., B. S. Watson and F. S. Fischer. 1966. The Metabolism of [^{14}C] 0,0-Diethyl 0-(3,5,6-Trichloro-2-Pyridyl) Phosphorothioate (DURSBAN) in Fish. J. Econ. Entomol. 59(6):1464-1475.

Submitted on March 20, 1972. Reviewed and accepted on 2/15/73.

3.8 Stability in Dipped Vats

39. Wade, L. L. 1972. The Efficacy and Stability of "DURSBAN" Insecticide in Dipping Vats for Control of the Southern Cattle Tick. The Practicing Nutritionist 6(1):4-5.

Submitted on March 20, 1972. Reviewed and accepted on 2/15/73.

3.9 Lab Testing Soil

40. Whitney, W. K. 1967. Laboratory Tests with DURSBAN and Other Insecticides in Soil. J. Econ. Entomol. 60(1):68-74.

Submitted on March 20, 1972. Reviewed and accepted on 2/15/73.

3.10 Dursban dripping into flowing water by drip method for irrigation.

25. Mulla, M. S., H. A. Darwazeh, A. F. Geib and W. E. Westl. 1969. Control of Pasture Aedes Mosquitoes by Dripping Larvicides into Flowing Water, with Notes on Residues in a Pasture Habitat. J. Econ. Entomol. 62(2):365-370.

Submitted on March 20, 1972. Reviewed and accepted on 2/15/73.

3.11 Persistence in Salt Marsh Habitat

17. Ludwig, P. D., H. J. Dishburger, J. C. McNeill, Jr., W. O. Miller and J. R. Rice. 1968. Biological Effects and Persistence of DURSBAN Insecticide in a Salt-Marsh Habitat. J. Econ. Entomol. 61 (3):626-633.

Submitted on March 20, 1972. Reviewed and accepted on 2/15/73.

3.12 Insecticide in Temporarily Submerged Soils.

23. Mestres, R., C. Chevallier, J. A. Rioux, J. Cousserans and G. Sinegre. 1971. Penetration de Deux Insecticides dans les Sols Halomorphes Temporairement Submerges. Trav. Soc. Pharm. Montpellier 31(2):159-166.

6. (Pesticide Petition No. 3F1306)

Mestres, R., C. Chevallier, J. A. Rioux, J. Cousserans and G. Sinegre. 1971. Penetration of two insecticides into holomorphous soil temporarily submerged. Trav. Soc. Pharm. Montpellier 31(2):155-166, a translation of the original article by Phil Fisher (Dow). Submitted April 2, 1974 under cover letter from R. W. Morgan (Dow) to Charles L. Smith (EPA).

Reviewed and accepted on 5/2/74.

3.13 Mosquito Control

3. Dishburger, H. J. and J. R. Rice. 1967. DURSBAN Residues in Water, Soil-Silt, and Oysters Following Aerial Application of a Granular Formulation for Mosquito Control. Bioproducts Research Laboratory, The Dow Chemical Company, Lake Jackson, Texas. September 21. (unpublished report TA-379).

Submitted on March 20, 1972. Reviewed and accepted on 2/15/73.

3.14 19. Mann, H. D. and M. C. Ivey. 1971. Report of Residue Analysis. Pesticide Chemicals Research Branch, Entomology Research Division, Agricultural Research Service, U.S.D.A. Kerrville, Texas. September 17. (unpublished report PCK-71-1).

Residues of Dursban, its oxygen analog, and 3,5,6-trichloro-2-pyridinol in turkeys in a pen with treated soil were determined using gas chromatography. Residues of Dursban and small residues of 3,5,6-trichloro-2-pyridinol were found in skin, liver, and kidney tissues.

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3.15 The following referenced reports are not required by environmental chemistry:

1. Branson, D. R. and N. H. Litchfield. 1971. Absorption, Excretion and Distribution of O,O-Diethyl O-3,5,6-Trichloro-2,6-C^{14}-2-pyridyl Phosphorothioate (C^{14}-DOWCO 179) in Rats. Chemical Biology Research. The Dow Chemical Company, Midland, Michigan. April 23. (unpublished report NBA-9).

2. Claborn, H. V., S. E. Kunz and H. D. Mann. 1970. Residues of DURSBAN in the Body Tissues of Turkeys Confined in Pens Containing Treated Soil. J. Econ. Entomol. 63(2):422-424.

4. Dishburger, H. J., J. R. Rice, W. S. McGregor and J. Pennington. 1969a. Residues of DURSBAN Insecticide in Tissues from Turkeys Confined on Soil Treated for Chigger Control. J. Econ. Entomol. 62(1):181-183.

8. Harris, C. R. and H. J. Svec. 1968a. Toxicological Studies on Cutworms. I. Laboratory Studies on the Toxicity of Insecticides to the Dark-Sided Cutworm. J. Econ. Entomol. 61(3):788-793.

9. Harris, C. R. and H. J. Svec. 1968b. Toxicological Studies on Cutworms. III. Laboratory Investigations on the Toxicity of Insecticides to the Black Cutworm, with Special Reference to the Influence of Soil Type, Soil Moisture, Method of Application, and Formulation on Insecticide Activity. J. Econ. Entomol. 61(4):965-969.

10. Harris, C. R., H. J. Svec and W. W. Sans. 1968c. Toxicological Studies on Cutworms. II. Field Studies on the Control of the Dark-Sided Cutworm with Soil Insecticides J. Econ. Entomol. 61(4):961-965.

12. Hunt, L.M., B. N. Gilbert and J. E. Schlinke. 1969. Rapid Gas Chromatographic Method for Analysis of O,O-Diethyl O-3,5,6-Trichloro-2-Pyridyl Phosphorothioate (DURSBAN) in Turkey and Chicken Tissues. J. Agr. Food Chem. 17(6):1166-1167.

14. Kenaga, E. E. 1971a. An Evaluation of the Safety of DOWCO 179 to Birds in Areas Treated for Insect Control Agricultural Department, The Dow Chemical Company, Midland, Michigan. June 16. (unpublished report GH-R 9)

15. Kenaga, E. E. 1971b. Some Physical, Chemical and Insecticidal Properties of Some O,O-Dialkyl O-(3,5,6-Trichloro-2-Pyridyl) Phosphates and Phosphorothioates. Bull. Wld. Hlth Org. 44:225-228.

24. Miller, W. O. 1969. Results from Treatment of Ornament Plants with Foliage Sprays of DURSBAN Insecticide. Agricultural Department, The Dow Chemical Company, Wayside, Mississippi. June 17. (unpublished report GH-P 606).

33. Smith, G. N., B. S. Watson and F. S. Fischer. 1967a. Investigations on DURSBAN Insecticide. Uptake and Translocation of [^{36}Cl] O,O-Diethyl O-3,5,6-Trichloro-2-Pyridyl Phosphorothioate and [^{14}C] O,O-Diethyl O-3,5,6-Trichloro-2-Pyridyl Phosphorothioate by Beans and Corn. J. Agr. Food Chem. 15(1):127-131.

34. Smith, G. N., B. S. Watson and F. S. Fischer. 1967b. Investigations on DURSBAN Insecticide. Metabolism of [^{36}Cl] O,O-Diethyl O-3,5,6-Trichloro-2-Pyridyl Phosphorothioate in Rats. J. Agr. Food Chem. 15(1):132-138.

35. Smith, G. N., B. S. Watson and F. S. Fischer. 1967c. Investigations on DURSBAN Insecticide. Metabolism of O,O-Diethyl O-3,5,6-Trichloro-2-Pyridyl Phosphorothioate and 3,5,6-Trichloro-2-Pyridino in Plants. J. Agr. Food Chem. 15(5):870-877.

36. Steelman, C. D., A. R. Colmer, L. Cabes, H. T. Barr and B. A. Tower 1967. Relative Toxicity of Selected Insecticides to Bacterial Populations in Waste Disposal Lagoons. J. Econ. Entomol. 60(2): 467-468.

41. Winterlin, W. L., K. Mollanen and W. E. Burgoyne. 1968. Residues of DURSBAN Insecticide Following Mosquito Control Applications. DOWN TO EARTH 24(2):34-37.

16. Kenaga, E. E., W. R. Whiteney, J. L. Hardy and A. E. Doty. 1965. Laboratory Tests with Dursban Insecticides. J. Econ. Entomol. 58(6):1043-1050.

18. Macek, K. J. 1971. Tables 1 and 2 from DURSBAN Manuscript under review. Private Communication.

3.16 Full Reports of Investigations Made with Respect to the Safety of the Pesticide Chemical

The following reports dealing with metabolism in animals were included in Pesticide Petition No. 3F1306 and are cited in this report:

Branson, D. R. and H. N. Wass, 1970. Comparative Metabolism of Insecticides. I. Preliminary Studies of Ring Labeled O,O-Diethyl-O-(3,5,6-Trichloro-2-Pyridyl) Phosphorothioate Breakdown in Rat Liver Microsomes. The Dow Chemical Co., Midland, MI. March 17. (unpublished report R-582).

Gutenmann, W. H., L. E. St. John, Jr., and D. L. Lisk. 1968. Metabolic Studies with O,O-Diethyl O-(3,5,6-trichloro-2-Pyridyl) Phosphorothioate (Dursban) Insecticide in a Lactating Cow. J. Agr. Food Chem. 16, 1:45-47.

Branson, D. R. and N. H. Litchfield. 1971. Absorption, Excretion and Distribution of 3,5,6-Trichloro-2,6-C^{14}-2-Pyridinol in Rats. The Dow Chemical Co., Midland, MI. April 23 (unpublished report MBA-10).

Smith, G. N., Y. S. Taylor, and B. S. Watson. 1970. An Analytical Method for the Determination of 3,5,6-Trichloro-2-Pyridinol in Animal Tissues and the Metabolism of the Pyridinol in Rats. The Dow Chemical Co., Midland, MI. July 30. (unpublished report OL-3132).

4.0 Summary

The following studies were previously accepted:

1. Hydrolysis
2. Microbial
3. Adsorption
4. Leaching persistence, degradation, and decomposition
5. Volatility
6. Photodegradation
7. Fish Accumulation
8. Stability in Dipped Vats
9. Lab Testing Soil
10. Dursban dripping into flowing water by drip method for irrigation
11. Persistence in Salt Marsh Habitat
12. Insecticide in Temporarily Submerged Soils
13. Mosquito Control

5.0 Recommendations

5.1 We do not concur with the proposed use because the following, which are required under Sec. 3, have not been submitted or referenced:

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1. Photodegradation on soil.
2. Photodegradation on surfaces
3. Decline curve studies (field dissipation)
4. Rotational crop study
5. Anaerobic soil study
6. Laboratory leaching study on degradates

5.2 The following study was not made available for review.

1. (Pesticide Petition No. 3F1306, Volumes XI and XII)

Kenaga, E. E. 1972. The environmental fate of chloropyrifos as related to EPA PR Notice 70-15. Ag-Organics Dept., Midland, MI. March 20, (plus appended references 1-41). Submitted August 28, 1972. The appended references include the following:

5.3 No environmental chemistry data have been submitted or referenced on aromatic petroleum derivative solvents. We concur with the use of this solvent in this formulation because the pesticide or product, relating to an evaluation of the effects on man or the environment, is fundamentally different from the properties considered by the agency in the establishment of data requirements of the Registration guidelines and therefore the data are not germane to determine if the pesticide(s) or product(s) will generally cause unreasonable adverse effects on man or the environment.

R D Ney 10/12/76

Ronald E. Ney, Jr. 10/12/76

Nancy Dodd 10/18/76

Nancy Dodd 10/8/76
Environmental Chemistry Section
Efficacy and Ecological Effects Branch

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