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

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

July 30, 1990

MEMORANDUM

SUBJECT: EPA Reg. No./File Symbol 8329-GI
ULV Mosquito Devastaton 420

FROM: Olga Odiott O. Odiott E 8/3/90
Precautionary Review Section
Registration Support Branch
Registration Division (H75-05C)

TO: George La Rocca (PM 15)
Insecticide- Rodenticide Branch
Registration Division (H75-05C)

APPLICANT: Clarke Outdoor Spraying Co.
159 N. Garden Avenue
Roselle, Illinois 60172

FORMULATION FROM LABEL:

Active Ingredient(s):	% by wt.
Permethrin	4.00 %
Piperonyl Butoxide, Technical	20.00 %
Inert Ingredient(s):	76.00 %
Total	100.0%

C7501

BACKGROUND

Acute oral, acute dermal, acute eye, acute inhalation, skin irritation and skin sensitization studies were submitted to support Reg. No. 8329-GI. The studies were conducted at Cosmopolitan Safety Evaluation. MRID No. 414933-02 through 414933-06. [The acute inhalation study was not assigned a MRID number.] . It was assigned a MRID, you just didn't Look.

RECOMMENDATION

RSB/PRS finds the studies acceptable to support this registration.

The acute eye study was classified as core minimum data because the "discharge" criteria was not evaluated.

The skin sensitization study was classified as core minimun data because naive controls were not used.

LABELING

The signal word is Caution.

Delete the precautionary statements that appear beneath the Child hazard warning statements on the center panel of the label.

The Precautionary statements should read as follows:

"Harmful if absorbed through skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash throughly with soap and water after handling. Remove contaminated clothing and wash before reuse."

The Statements of practical treatment should read as follows;

"If on skin: Wash with plenty of soap and water. Get medical attention.
If inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.
If swallowed: Call a Physician or Poison Control Center. Do not induce vomiting."

DATA REVIEW FOR ACUTE ORAL TOXICITY TESTING (§81-1)

Product Manager: (15)
MRID No.: 414933-02
Testing Facility: Cosmopolitan Safety Evaluation
Author(s): Geoffrey R. Hopkins
Species: Sprague-Dawley albino rats
Age: young adult
Weight: 204-214 (♀) 260-270 (♂) gm
Source: Laboratory colony
Test Material: Biomist 4+20 UL-V (Desrotater 420)
Quality Assurance (40 CFR §160.12): attached.

Reviewer: O. Odiott
Report Date: Jan. 10, 1990
Report No. A2073
Observation Days (Post Exposure): (14); other ( )

Conclusion:

1. LD_{50} (mg/kg): Males = _____; Females = _____; Combined = _____
2. The estimated LD_{50} is 5.0 g/kg.
3. Tox. Category: IV. Classification: Guideline

Procedure (Deviations From §81-1): _____

Results:

Reported Mortality

DOSAGE (/kg)	(NUMBER KILLED/NUMBER TESTED) Males	Females	Combined
5.0 g/kg	0/5	1/5	1/10

Symptomology & Gross Necropsy Findings:

Perineal abdominal staining was observed up to day 1 after treatment. Animals appeared normal and gained weight throughout the rest of the test period. The one animal that died showed tremors and was found dead on day 2. At necropsy no abnormalities were noted for the surviving animals. Mottled liver and congested intestine were observed in the animal that died.

DATA REVIEW FOR ACUTE DERMAL TOXICITY TESTING (§81-2)

Product Manager: (15)
MRID No.: 414933-03
Testing Laboratory: Cosmopolitan Safety Evel.
Author(s): Geoffrey R. Robbins
Species: New Zealand albino Rabbit
Sex: 5 males, 5 females Wt.: 2.95 - 3.25 kg.
Test Material: Biomist 4+20 ULV (Devastator 420)
Quality Assurance (40 CFR §160.12): attached

Reviewer: O. Odiott
Report Date: 9 Jan. 1990
Report No. B 2073

Summary:

1. LD_{50} (mg/kg): Males = _____; Females = _____; Combined = _____;
2. The estimated LD_{50} is >2.0 g/kg.
3. Tox. Category: III. Classification: Guideline.

Procedure (Deviations From §81-2): _____

Results:

Reported Mortality

DOSAGE (/kg)	(NUMBER KILLED/NUMBER TESTED) Males	Females	Combined
2.0 g/kg.	0/5	0/5	0/10

Symptomology & Gross Necropsy Findings:

Very slight to well defined erythema and edema were observed up to 3 days after treatment. No other symptoms observed. No abnormalities observed at necropsy.

DATA REVIEW FOR ACUTE INHALATION TOXICITY TESTING (§81-3)

Product Manager: (15) 41542801 Reviewer: O. Odiott
MRID No.: not assigned Report Date: 23 Feb. 1990
Testing Laboratory: Cosmetic Safety Evaluation Report No. C2073
Author(s): Geoffrey R. Robbins
Species: Sprague-Dawley rats
Sex: 10 males & 10 females Weight: 201-209 (♀); 255-267 (♂) gm
Source: Laboratory colony
Test Material: Biomist 4 + 20 ULV (Devastator 420)
Quality Assurance (40 CFR §160.12): attached.

Summary:

1. LC_{50} (mg/kg): Males = _____; Females = _____; Combined = _____
2. The estimated LC_{50} is > 3.0 mg/l
3. Mean Concentration: _____
4. Tox. Category : III. Classification: Guideline

Procedure (Deviations From §81-2): _____

Results:

Exposure Concentration (mg/L)	Reported Mortality (NUMBER KILLED/NUMBER TESTED) Males	Females	Combined
3.0 mg/l	0/5	0/5	0/10
* 3.9 mg/l	1/5	1/5	2/10
*maximum attainable []			
MMAD = 0.6 μ & 0.8 μ			
respectively			

Symptomology & Gross Necropsy Findings:

Perineal staining, dorsal fur wet and matted; decreased locomotor activity. At necropsy; congested lungs with slight opaque areas over all lobes was observed in the 2 animals that died. Chromorhinorrhea and perineal staining was observed in these animals also. The remaining animals appeared normal.

DATA REVIEW FOR ACUTE EYE IRRITATION TESTING (§81-4)

Product Manager: (15)
MRID No.: 414933-04
Testing Laboratory: Cosmoderm Safety Eval.
Author(s): Geoffrey R. Robbins
Species: albino rabbit - new zealand type.
Sex: 3 males, 3 females Weight: 2.0-2.1 kg.
Source: Laboratory colony
Dosage: 0.1 ml
Test Material: Biomist 4+20 ULV (Devastator 420)
Quality Assurance (40 CFR §160.12): attached.

Reviewer: O. Odiott
Report Date: 22 Dec. 1989
Report No. D2073

Summary:

Tox. Category: IV Classification: Core minimum

Procedure (Deviation From §81-4): Discharge criteria was not evaluated.

Results:

	Observations (number "positive"/number tested)							
	Hour	Days						
	1	1	2	3	4	7	14	21
Cornea Opacity	0/6	0/6	0/6	0/6	—			
Iris	0/6	0/6	0/6	0/6	—			
Conjunctivae Redness	0/6	0/6	0/6	0/6	—			
Chemosis	0/6	0/6	0/6	0/6	—			
Discharge	—	—	—	—				

Comments:

DATA REVIEW FOR SKIN IRRITATION TESTING (§81-5)

Product Manager: (15) Reviewer: O. Odiott
MRID No.: 414933-05 Report Date: 28 Dec. 1989
Testing Laboratory: Cosmopolitan Safety Eval. Report No. E2073
Author(s): Geoffrey K. Rakburn
Species: New Zealand albino rabbit
Age: young adult
Sex: 4 females, 2 males
Weight: 2.1 – 2.3 Kg.
Dosage: 0.5 ml
Test Material: Biomist 4+20 ULV (Devastator 420)
Quality Assurance (40 CFR §160.12): attached.

Summary:

The Primary Irritation Index = 0.8

Toxicity Category: IV

Classification: Guideline

Procedure (Deviations From §81-5):

Results:

Very slight erythema on 4/6 animals, and very slight edema on 1/6 animals were observed at 72 hrs. Symptoms cleared by day 5.

Special Comments:

DATA REVIEW FOR SKIN SENSITIZATION TESTING (§81-6)

Product Manager: (15)
MRID No.: 414933-06
Testing Laboratory: Cosmopolitan Safety Eval.
Author(s): Geoffrey R. Robbins
Species: albino guinea pig
Sex: male
Weight: 326-356 gm
Source: Camm Research Lab Animals, Wayne, New Jersey.
Test Material: Biomet 4+20 ULV (Devostator 420)
Positive Control Material: 20% p-phenylenediamine in saline
Quality Assurance (40 CFR §160.12): Attached.

Reviewer: O. Odiott
Report Date: 31 Jan. 1990
Report No. F2073

Method: Buehler's

Summary:
1. This product is / (is not a dermal sensitizer.)
2. Classification: core minimum

Procedure (Deviation From §81-6): naive control groups were not included.

Results: 10 guinea pigs were treated with the undiluted test material (0.5ml) once a week for three weeks. Two weeks after the last induction period challenge was performed. Erythema(+) was observed after the first induction period. Upon challenge the same degree of erythema was observed. A positive control group was reported as periodically tested under the same conditions, and as showing a sensitizing response.