BR-764
TXR-5042
1/26/83

005042

Date: January 26, 1983

Subject: EPA File Symbol: 464-LIO
Esteron BK Weed and Brush Killer

From: Delaris F. Graham
FHB/TSS E 1/26/83

To: Robert Taylor
Product Manager (25)

Applicant: Dow Chemical Company
P.O. Box 1706, 9008 Building
Midland, Michigan 48640

Active Ingredient:
2,4-Dichlorophenoxyacetic Acid, Butoxyethyl Ester 34.4%
Triclopyr (3,5,6-trichloro-2-pyridinyl-oxyacetic acid), Butoxethyl Ester 16.5%
Inert Ingredients 49.1%

Background: Submitted Acute Oral, Acute Dermal, Eye Irritation and Skin Irritation Studies. Data under accession number 249242. Cite all method of support. Studies conducted by Dow Chemical Company.

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Recommendation:
(1) FHB/TSS finds these data acceptable to support conditional registration of this product.

(2) An Acute Inhalation Study was not submitted and one must be submitted and/or cited.

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(3) The appropriate signal word is WARNING.

Label:
(1) The precautionary statements must be revised similar to following:

"May be fatal if absorbed through skin. Harmful if swallowed. Causes eye irritation. Do not get on skin, in eyes, or on clothing. Wear protective clothing and rubber gloves when handling. Wash thoroughly with soap and water after handling and before eating or smoking."

Review:
(1) Acute Oral Toxicity Study: Dow Chemical Company; July 20, 1982.

Procedure: Four groups consisting of 6M and 6F rats each received one of the following doses: 630, 1300, 2500 or 5000 mg/kg. Observations made for two weeks post treatment. Necropsy was performed on all surviving rats.

Results: At 1300 mg/kg, 1/6 M and 1/6 F died; at 2500 mg/kg, 2/6 M and 5/6 F died; at 5000 mg/kg, 6/6 M and 6/6 F died.

Toxic signs observed included lethargy, watery eyes, semiconsciousness, rapid shallow breathing, incoordination, palpebral closure.

No treatment-related lesions observed upon necropsy.

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LD50 for males was 2348 mg/kg (1645-3862 mg/kg, 95% confidence intervals). LD50 for females was 1742 mg/kg (1189-2692 mg/kg, 95% confidence interval).

Study Classification: Core Guideline Data.

Toxicity Category: III - CAUTION

(2) Acute Dermal Toxicity Study: Dow Chemical Company; July 20, 1982.

Procedure: Four groups consisting of 2M and 2F rabbits with intact skin received one of the following doses: 630, 1300, 2500 or 5000 mg/kg. Treated skin sites were placed under occlusive wrap for 24 hour exposure. Observations made frequently during exposure, and for the following two weeks. Necropsy was performed on all surviving animals.

Results: At 1300 mg/kg, 2/4 died; at 2500, 2/4 died; at 5000 mg/kg, 4/4 died.

Toxic signs observed included lethargy, decrease in food consumption, incoordination, diarrhea, labored respiration and semiconsciousness. Slight to marked redness, slight to moderate swelling and slight necrosis also observed.

Necropsy revealed small amount of scales or flakes adherent to regrowing fur, decreased abdominal adipose tissue. No other abnormalities noted as treatment related.

LD50 was 1796 mg/kg (1021-3143 mg/kg, 95% confidence interval).

Study Classification: Core Guideline Data

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Toxicity Category: II - WARNING

(3) Eye Irritation Study: Dow Chemical Company; July 20, 1982.

Procedure: Nine rabbits received 0.1 ml of the test material in one eye each. The treated eyes of three of the rabbits were rinsed for one minute, thirty seconds post treatment. Observations made at 1, 2, 3, 4 and 7 days post-treatment.

Results: No corneal opacity or iris irritation present. At day 1, 3/6 animals of the unwashed group and 1/3 of the washed group had conjunctive redness (2/6=1, 1/6=2) (1/3=1) and 1/6 chemosis (1/6=1). All irritation had cleared by 72 hours except for slight redness in 1/6 animals (1/6=1). Redness had cleared by day 7.

Study classification: Core Guideline Data.

Toxicity Category: III - CAUTION

(4) Skin Irritation Study: Dow Chemical Company; July 20, 1982.

Procedure: Six rabbits received 0.5 ml of the test material at intact and abraded skin sites under occlusive wrap for 24 hour exposure. Observations made at 24 and 72 hours.

Results: At 24 hours 6/6 erythema (1/6=1, 5/6=2) and edema (4/6=1, 1/6=2, 1/6=3). At 72 hours, 6/6 erythema (1/6=1, 2/6=2, 3/6=4) and 4/6 edema (3/6=1, 1/6=2). Primary Irritation Score was 2.50.

Study Classification: Core Guideline Data.
Toxicity Category: III - CAUTION

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