UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C 20460

006472

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

Date: October 19, 1984

Subject: EPA File Symbol 38167-E
Bladex - MSMA Post Emergent Herbicide

From: Deloris F. Graham
FHB/TSS

Applicant: Helena Chemical
Suite 3200, Clark Tower
5100 Poplar Avenue
Memphis, TN 38137

MRID 145491
MRID 145492
" 145493
" 145494
" 145495
" 145496

Active Ingredients:

2,4-chloro-6-(ethylamino)-s-triazin-2-yl amina-2-methylpropionitrile	17.18
Monosodium acid methanearsonate	37.80
Inert Ingredients.	45.02

Background: Submitted Acute Oral, Acute Dermal, Acute Inhalation, Eye Irritation, Skin Irritation, and Dermal Sensitization. Studies conducted by Stillmeadow, Inc. Data under accession numbers 253332 and 254808. "Owner Submission" method of support.

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

(2) Appropriate signal word is WARNING.

006472

1 of 4

006472

Label:
(1) The statement "Get medical attention" should be included with the "If swallowed" statement.

MRID 145491

Review:
(1) Acute Oral Toxicity Study: Stillmeadow, Inc.; Project No. 3192-83; February 8, 1984

Procedure: Four groups consisting of five male and female rats each received one of the following doses: 400, 500, 625, or 78 mg/kg. Observations made for 14 days after treatment. Necropsy performed on all animals.

Results: At 400 mg/kg, 1/5 M and 1/5 F died; at 500 mg/kg, 2/5 M and 3/5 F died; at 625 mg/kg, 4/5 M and 5/5 F died; at 78 mg/kg, 5/5 M and 4/5 F died. Toxic signs reported included activity decrease, blanching, body tremors, diarrhea, discharge from perianal area, epistaxis, hindlimb tremors, lacremation, lethargy, nasal discharge, piloerection, polyuria, rapid breathing, salviation, and soft stool. Necropsy reports revealed signs of diarrhea; stomach filled with dark green liquid; small intestine had red patches throughout; testes drawn into abdominal cavity; white spots throughout left lung; adrenal glands red; polyuria; yellow mucoid material in stomach and small intestines; serosal blood vessels pronounced on stomach cecum and other similar findings noted. LD50 for males reported to be 507 mg/kg, with confidence limits between 415 and 618 mg/kg. LD50 for females reported to be 477 mg/kg, with confidence limits between 375 and 606 mg/kg. LD50 for males and females combined was reported to be 494 mg/kg, with confidence limits between 429 and 569 mg/kg.

Study Classification: Core Guideline Data

Toxicity Category: II - WARNING

(2) Acute Dermal Toxicity Study: Stillmeadow, Inc., Project No. 3199-84; February 6, 1984

Procedure: Five males and five female rabbits received 2010 mg/kg of the test material at intact skin sites under occlusive wrap for 24-hour exposure. Observations were made at 1/2, 3 and 6 hours, 0, 7 and 14 days after treatment. Necropsy performed on all animals.

Results: 1/5 M, and 1/5 F died. Toxic signs reported included decreased defecation and polyuria. Necrosy revealed signs of polyuria, light yellow paste in small intestine; clear red liquid in urinary bladder; green-brown paste in cecum; serosal blood vessels pronounced on small intestine, red patches throughout cacum. LD50 reported to be greater than 2010 mg/kg.

006472

2

Study Classification: Core Guideline Data

Toxicity Category: III - CAUTION

(3) Acute Inhalation Toxicity Study: Stillmeadow, Inc., Project No. 3195-83; March 23, 1984

Procedure: Two groups consisting of five male and five female rats each were exposed for four hours to one of the following concentrations: 2.19 mg/l or 3.0 mg/l. Temperature ranged from 68 to 75°F and relative humidity from 73 to 95%. Particle size ranged from 2.477 to 2.850 micrometers with geometric standard derivation ranging from 1.894 to 2.0467. Observations were made frequently on day of exposure and at least once daily thereafter for 14 days. Necropsy performed on all animals.

Results: No mortalities reported. Toxic signs reported included activity decrease, body tremors, constricted pupils, dilated pulpils, exophthalmos, lacrimation, loose stool consistency, mucoid diarrhea, nasal discharge, piloerection polyuria, ptosis, rapid breathing, salivation, sensitivity to touch and swollen neck. Necropsy report revealed dicoloration of the lungs, lung adhered to other tissues, consolidation of lung, nodules of lungs, film on surface of lung, sediment in urinary bladder, urinary bladder distended with liquid, discoloration of adrenal glands, oviducts distended with liquid. LC50 reported to be greater than 3.0 mg/l.

Study Classification: Core Guideline Data.

Toxicity Category: III - CAUTION

(4) Eye Irritation Study: Stillmeadow, Inc.; Project No. 3193-83; January 18, 1984.

Procedure: Nine New Zealand rabbits received 0.1 ml of the test material in one eye each. The treated eyes of three of the rabbits were washed with deionized water for one minute thirty seconds after treatment. Observations made at 1, 24, 48 and 72 hours and 4 days after treatment.

Results: At 24 hours 2/6 animals of the unwashed group had iris irritation (2/6=5); no iris irritation present in 3/3 animals of the washed group 6/6 + 2/3 redness (6/6=1) (2/3=1); 6/6 + 1/3 chemosis (4/6=1, 2/6=2) (1/3=2); 2/6 discharge (2/6=1). At 72 hours all irritation cleared in unwashed and all except 1/3 in washed group, which had cleard by day 4.

Study Classification: Core Guideline Data.

Toxicity Category: III - CAUTION

(5) Skin Irritation Study: Stillmeadow, Inc.; Project No. 3194-83; December 29, 1983.

Procedure: Six rabbits received 0.5 ml of the test material at intact skin sites under occlusive wrap for four hours exposure period. Observations made at 1, 24, 48 and 72 hours after treatment.

Results: At 1 hours, 1/6 had slight erythema (1/6-1). No other irritation noted.

Study Classification: Core Guideline Data.

Toxicity Category: IV - CAUTION

(6) Dermal Sensitization Study: Stillmeadow, Inc.; Project No. 3346-84; August 24, 1984

Procedure: Two groups consisting of ten male guinea pigs each were treated with one of the following materials. Group I - 0.05% w/v solution of 2,4-dinitrochlorbenzene in ethanol, positive controls and Group II - 10.0% v/v solution of the test material in deionized water.

Ten 0.5 ml treatments of the appropriate material over a 22-day period were administered to one of the two groups. Two weeks after tenth application animals receiving a challenge dose. Observations made at 24 and 48 hours after treatment.

Results: In Group I (positive control), average score for initial treatment was reported to be 0.1 with 1.5 for virgin challenge site and 2.9 for original test site. Since virgin challenge site is significantly greater than initial treatment therefore considered as having produced a sensitivity reaction. In Group II (test material), average score for initial treatment reported to be 0.0 with 0.1 for virgin challenge site and 0.6 for original test site. Since virgin challenge site score is not significantly greater than initial treatment site it was determined that no sensitizing reaction occurred.

Study Classification: Core Guideline Data.

Toxicity Category: Non-sensitizing