Shaughnessy No.: 128821
Date Out of EFGWB:
JUL -7 1989

TO: Taylor/J. Miller
Product Manager # 25
Registration Division (TS-767)

FROM:

Paul Mastradone, Section Chief
Environmental Chemistry Review Section #1
Environmental Fate and Groundwater Branch

THRU:

Henry Jacoby, Acting Chief
Environmental Fate and Groundwater Branch
Environmental Fate and Effects Division (TS-769C)

Attached please find the EFGWB review of:

Reg./File # : 241-286

Chemical Name: Imazapyr

Product Type : Herbicide

Product Name : ARSENAL

Company Name : American Cynamid

Purpose : EXPEDITE Review of protocol for aquatic field dissipation study. Review protocol for field dissipation study.

Date Received: 6-30-89 Action Code: 352

Date Completed: 7-5-89 EFGWB No. 90409, 90445

Total Reviewing Time (decimal days): 1.5

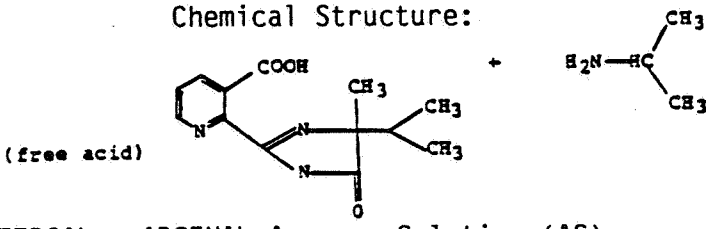
Deferrals to:
_____Ecological Effects Branch, EFED
_____Science Integration & Policy Staff, EFED
_____Non-Dietary Exposure Branch, HED
_____Dietary Exposure Branch
_____Toxicology Branch, HED

1.0 CHEMICAL: Common name: Imazapyr

Chemical name: 2-(4-isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)-nicotinic acid

Trade Name: ARSENAL (as the isopropylamine salt)

Chemical Structure:



2.0 TEST MATERIAL: ARSENAL Aqueous Solution (AS)

3.0 STUDY/ACTION TYPE:

Review protocol of the proposed field dissipation study submitted by American Cyanamid Company.

4.0 STUDY IDENTIFICATION:

Protocol No. HZ90DE01. Imazapyr Soil Dissipation Study.

5.0 REVIEWED BY:

Clinton Fletcher
Chemist, Review Section 1
EFGWB/EFED

Signature: Clinton Fletcher
Date: 7-7-89

6.0 APPROVED BY:

Paul Mastradone
Section Chief, Review Section 1
EFGWB/EFED

Signature: Paul J. Mastradone
Date: JUL -7

7.0 CONCLUSIONS:

7.1 EFGWB concludes that, overall, this protocol is scientifically sound. EFGWB notes the protocol proposes application to bare ground surface. whereas application according to label directions is normally applied to a vegetative cover.

7.2 EFGWB has comments on the protocol given in RECOMMENDATIONS, 8.0, below.

8.0 RECOMMENDATIONS:

8.1 Inform the registrant of the following comments:

1. Soil cores should be sectioned at 15 cm increments for the total 90 cm core length.

2. Storage stability data, including recovery, should be submitted for the period of time approximating the time samples are stored from sampling to extraction to analysis. Analytical method recovery data should also be provided.

3. If possible, field spiked samples should be included at each sampling event.

4. Irrigation should be used to supplement rainfall to provide the average of rainfall expected during a given month of the study as based on the monthly averages for 10, 20 or 40 year rainfall data.

5. Previous sampling sites must be marked such that they will not be inadvertently resampled during the course of the study.

6. Results should be correlated to rainfall or irrigation events if possible.

8.2 The registrant should be informed that the results of the study may trigger the requirement for the long term field dissipation study if the residues do not reach 50% dissipation in soil prior to recommended subsequent applications.

9.0 BACKGROUND:

The registrant submitted a protocol for conducting a field dissipation study to support the currently registered terrestrial uses of Imazapyr.

Briefly, the registrant proposes to apply Imazapyr (ARSENAL 2AS) to three (bare ground) field subplots at a rate of 1.5 lb. formulation per acre plus one control plot. Irrigation will be maintained throughout the study to reproduce rainfall patterns consistent with the average of the two year maximum over the ten year average.

Treated plot samples will be taken at random from each replication or subsampling area at 0 (before application), 0.1 (immediately after application), 3 (after irrigation), 7, 14, 30, 60, 90, 120, 180 and 360 days after treatment.

Six cores will be collected to the depth of 36 inches and each core will be uniquely identified as taken from each of three replications or subsampling areas.

The registrant proposes to analyze soil cores only for the parent compound since the available data indicate that Imazapyr is persistent and only minor amounts of any unidentified metabolites occur in the aerobic soil metabolism studies submitted. Metabolites corresponding to known standards have not been observed.

The complete protocol is attached.

10.0 DISCUSSION OF INDIVIDUAL STUDIES: N/A

11.0 COMPLETION OF ONE-LINER: N/A

12.0 CBI APPENDIX: N/A