

US EPA ARCHIVE DOCUMENT

FILE

125401

Date Out EFB: **11 APR 1984**

TO: Robert Taylor
Product Manager
Registration Division
TS-767

FROM: Samuel Creeger, Chief *SM*
Review Section No. 1
Exposure Assessment Branch
Hazard Evaluation Division

Attached please find the environmental fate review of:

Reg./File No.: 279-EUP-293

Chemical: FMC 57020

Type Product: Herbicide

Product Name: FMC 57020 4 EC

Company Name: FMC Chemical Co.

Submission Purpose: Protocol review of field dissipation study.

ZBB Code: ?

ACTION CODE: 450

Date in: 3/29/84

EFB # 4263

Date Completed: 4/10/84

TAIS (level II) Days

67

0.5

Deferrals To:

Ecological Effects Branch

Residue Chemistry Branch

Toxicology Branch

XX
116

1.0 INTRODUCTION

FMC Chemical Co. has submitted a protocol for the short term field dissipation study for eventual registration of the herbicide FMC 57020 4 EC. It is currently being tested under an experimental use permit. This protocol was developed in response to the OPP/FMC pre-registration meeting held 2/27/84. At that meeting EAB requested FMC submit a more complete protocol for review. The protocol handed out was too brief for EAB comment at that time. EAB did provide additional comments on the protocol which should be included.

2.0 DISCUSSION

2.1 Complete protocol is attached to this review.

2.2 FMC has incorporated EAB comments into the protocol:

- Soil will be a loamy sand (70-85% sand) with approximately 1% organic matter. The one-half acre plot will be a soil typical of soybean cultivation on Maryland's eastern shore.
- FMC 57020 4 EC will be soil incorporated to 3-4 inch depth.
- Two 2-inch rainfall events will be simulated by irrigation applied 4 and 9 days after herbicide application.
- In addition, 0.5 inch rainfall events will be simulated by irrigation at intervals during the 60 day study. (Amount of water added by irrigation will be co-ordinated with natural rainfall.)
- Soil will be sampled in one foot increments: 0-1, 1-2, 2-3, 3-4 feet segments. Soil textural class of each one foot segment will be provided.
- Soil samples will be analyzed for parent FMC 57020 and the anaerobic soil metabolite FMC 65317.
- Field plot will be held contingent upon the results of the 60 day study. If necessary, additional cores at lower depths can be taken and/or duration of study can be extended if needed.
- Basic environmental and hydrology data will be supplied.

3.0 Conclusion

3.1 The FMC protocol appears to be adequate. The previous EAB comments were incorporated into the study. If the study is conducted according to the protocol revised to include the points listed in 3.2, below, it should provide adequate data about leaching for the parent FMC 57020 and the anaerobic soil metabolite under field conditions.

Information available indicate that the average rainfall for the Maryland eastern shore is 3 - 3.5 inches per month for the period April to June. Thus, the amount of irrigation water to be applied to supplement the natural rainfall is adequate.

The registrant has provided a contingency for additional samples to be taken if needed. If residues are found at the four foot depth, then soil must be sampled at additional one foot increments.

3.2 FMC should be informed that the following additional points must be added to the protocol:

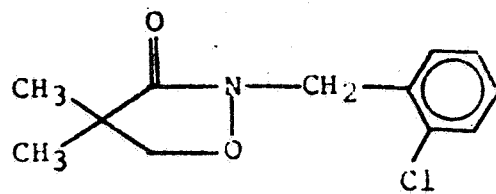
- The soil plot must be moistened with the equivalent of 2 inches of rainfall 2 to 3 days before FMC 57020 is applied.
- The sampling schedule should be revised to include sampling two days after the 2 inch irrigation application (i.e., at days 6 and 11 post application).
- The soil profile, including pH and percent organic matter, must be submitted in addition to the soil textural classification of the one foot soil segments.
- The analytical methods used, including recovery data, should be included in the report.
- Soil samples are to be stored in a manner that precludes degradation of residues.



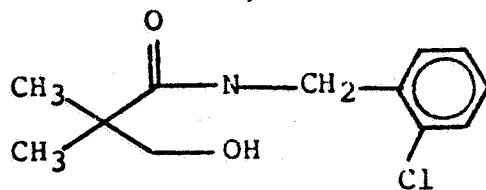
Clinton Fletcher
Review Section No. 1
Exposure Assessment Branch
Hazard Evaluation Division

Chemical:

FMC 57020



FMC 65317



Command exposure assessment review

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