114402

Date Out EAB: _____

TO: G. Werdig
Product Manager 50
Registration Division (TS-767)

FEB 8 1988

FROM: Patrick Holden, Team Leader PWH
Ground-Water Team
Exposure Assessment Branch/HED (TS-769C)

THRU: Paul Schuda, Chief
Exposure Assessment Branch/HED (TS-769C)

Attached please find the environmental fate review of:

Reg./File No.: _____

Chemical: Acifluorfen

Type Product: Herbicide

Product Name: Tackle

Company Name: Rhone-Poulenc

Submission Purpose: Protocol for a ground-water monitoring study (small-scale prospective)

ACTION CODE: _____

Date In: 1/5/88

EAB # 80275

Date Completed: 02/05/88

TAIS (level II) Days 2.0

Deferrals To:

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

Monitoring study requested by EAB: /X/

Monitoring study voluntarily conducted by registrant: / /

1

# REGISTRATION DIVISION DATA REVIEW RECORD

*Confidential Business Information — Does Not Contain National Security Information (E.O. 12065)* 44444

1. CHEMICAL NAME
ACIFLUORFEN

1-5-88 HH

| 2. IDENTIFYING NUMBER | 3. ACTION CODE | 4. ACCESSION NUMBER |
|---|---|---|
| 114402 | 400 | none |
| | | |
| | | |
| | | |
| | | |
| | | |

**TO BE COMPLETED BY PM**

5. RECORD NUMBER 241,219

6. REFERENCE NUMBER

7. DATE RECEIVED (EPA) 12/15/87

8. STATUTORY DUE DATE

9. PRODUCT MANAGER (PM) G.Werdig/B. Crampton

10. PM TEAM NUMBER 50

14. CHECK IF APPLICABLE

- ☐ Public Health/Quarantine
- ☐ Minor Use 1-5-88 HH
- ☐ Substitute Chemical
- ☐ Part of IPM
- ☐ Seasonal Concern
- ☐ Review Requires Less Than 4 Hours 2-5-88

**TO BE COMPLETED BY PCB**

11. DATE SENT TO HED/TSS [redacted]

12. PRIORITY NUMBER 29

13. PROJECTED RETURN DATE [redacted]

15. INSTRUCTIONS TO REVIEWER

A. HED
- ☐ Total Assessment - 3(c)(5)
- ☐ Incremental Risk Assessment - 3(c)(7) and/or E.L. Johnson memo of May 12, 1977.

B. SPRD (Send Copy of Form to SPRD PM)
- ☐ Chemical Undergoing Active RPAR Review
- ☐ Chemical Undergoing Active Registration Standards Review

C. ☐ BFSD
D. ☐ TSS/RD
E. ☐ Other

F. INSTRUCTIONS

protocols for a small scale prospective study for review

16. RELATED ACTIONS

17. 3(c)(1)(D)
- ☐ Use Any or All Available Information
- ☐ Use Only Attached Data
- ☐ Use Only the Attached Data for Formulation and Any or All Available Information on the Technical or Manufacturing Chemical.

18. REVIEWS SENT TO
- ☐ TB
- ☐ EEB
- ☐ EF
- ☐ PL
- ☐ RCB
- ☐ EFB
- ☐ CH
- ☐ BFSD

| 19. | To | TYPE OF REVIEW | NUMBER OF ACTIONS: Registration | Petition | EUP | SLN | Sec. 18 | Inert | MNR. USE | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| HED | | TOXICOLOGY | | | | | | | | |
| | | ECOLOGICAL EFFECTS | | | | | | | | |
| | | RESIDUE CHEMISTRY | | | | | | | | |
| | X | ENVIRONMENTAL DATE | | | | | | | | |
| RD/TSS | | CHEMISTRY | | | | | | | | |
| | | EFFICACY | | | | | | | | |
| | | PRECAUTIONARY LABELING | | | | | | | | |
| BFSD | | ECONOMIC ANALYSIS | | | | | | | | |

20. ☐ Label Submitted with Application Attached

21. ☐ Confidential Statement of Formula

22. ☐ Representative Labels Showing Accepted Uses Attached

23. Date Returned to RD (to be completed by HED)

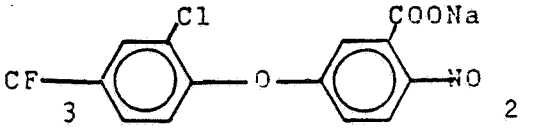
24. Include an Original and 4 (four) Copies of This Completed Form for Each Branch Checked for Review.

2

1. Chemical:

Common name: Acifluorfen, Tackle
Chemical: Sodium-5-(2-chloro-4-(trifluoromethyl)-phenoxy)-2-nitrobenzoate

Structure:




2. Test Material:

Not applicable.

3. Study/Action Type:

This is a protocol submission for the small-scale prospective ground-water monitoring study.

4. Study Identification:

Rhone-Poulenc Ag Company Protocol No. MEF-87-010 For a Small-Scale Prospective Ground-Water Monitoring Study with Acifluorfen Sodium, the Active Ingredient of Tackle Herbicide.

5. Reviewed by:

Catherine Eiden
Ground-Water Team

C.E.E. 2/5-/88

6. Approved by:

Patrick Holden, Team Leader P. Holden 2/8/88
Ground-Water Team

7. Conclusions:

The protocol has been reviewed and is generally accepted providing changes are made to the protocol. Each section in the "Detailed Protocol" requiring a change is referenced below.

Agronomic Details

The amount of rain/irrigation water should ideally equal a ten year average or up to 110% of that 10 year average. Added water and rainfall equalling or exceeding 1.5 times that 10 year average is not acceptable. This exaggerates the condition of wetness, producing conditions very favorable for acifluorfen's degradation. Therefore, the values for rainfall/irrigation should be as follows:

| MONTH | 10 year Average-<br>110% of Average |
|---|---|
| May | 3.92-4.31 |
| June | 3.47-3.82 |
| July | 3.43-3.77 |
| August | 3.77-4.15 |
| September | 3.76-4.14 |
| October | 1.87-2.06 |

___Agronomic Application

Should be the maximum recommended label use rate.

Sampling

A. Soil Sampling

2. Monthly samples are preferred. Part of the small-scale prospective study is to establish the half-life of parent and the pattern of formation and decline of degradation compounds, as well as to detect any movement of the compounds.

5. For clarification, immediate post-treatment samples should consist of sixteen 30 cm cores, 4 from each subplot analyzed individually. All other times, sixteen cores of 30 cm, sixteen cores of 30-60 cm, and sixteen cores of 60-120 cm will be collected. Then each subplot sample of 4 cores will be composited for a total of four 0-30 cm cores, four 30-60 cm cores, and four 60-120 cm cores for analysis. This accounts for a total of 12 cores per analysis. This procedure is acceptable.

8. The termination of soil sampling will depend upon establishing the following points:

1. the half-life of the parent compound,
2. the pattern of formation and decline of the degradates,
3. establishing a band of residue free soil 2 feet wide,
4. no detectable residues in the ground water,
5. no detectable leaching.

OR

1. the half-life of the parent compound,
2. the pattern of formation and decline of the degradates,
3. detectable leaching past the 4-6 feet depth.

Evidence of leaching will be reason to continue suction lysimeter and ground-water monitoring. If residues move beyond the 4 feet depth and are picked up in the suction-lysimeter samples, sampling emphasis should shift to the suction-lysimeters

and ground water. In this case, residues have obviously moved out of the zone of active microbial degradation and are available for further leaching. The suction-lysimeters are a part of the study design, because soil sampling beneath 4-6 feet is extremely difficult. The suction-lysimeters are meant to pick up where soil sampling becomes too difficult (4-6 feet).

B. Suction Lysimeter Water Samples

5. Sampling should occur within 24 hours after significant rainfall resulting in an effective infiltration of 0.5 inch. This will require someone near at hand on the field site with immediate access.

6. Any residue detection is reason to continue sampling until such time as the Agency and the registrant determine that the further collection of data adds nothing to understanding the leaching potential of the chemical(s).

C. Water Samples

5. Ground-water samples should be collected monthly unless the ground water is frozen during the winter months. Ground water deeper than a few feet is not expected to freeze. Monthly ground-water samples are expected.

6. Any residue detection is reason for continuation of sampling. Upon review of the data the Agency and the registrant will determine when the sampling is terminated. This may include evidence of no leaching and non-detectable residues in suction lysimeters and ground water or detections in ground water that remain steady over time or decrease over time.

Soil Sampling Processing

Analytical Methods

A 1 ppb minimum detection limit (MDL) in soil for parent and metabolites is acceptable, if it can be achieved.

A 0.1-1.0 ppb MDL for parent and metabolites in water is acceptable. The concentration of acifluorfen and metabolites in the water phase is more important in assessing the movement of the chemical in the vadose zone and its presence in ground water than the concentration in soil. Concentrate on a low MDL in water, preferrably 0.1 ppb for the parent and free acid and 1 ppb for the metabolites, if it can be achieved.

Appendix I

Section I Procedure

III. Why not use all threaded PVC? Is there a specific problem with well points and threaded PVC?

Section II

VI. If a pump is used to purge the well of standing ground water, measure pH, temperature, and conductivity of the effluent until they stabilize, rather than pumping 5 well volumes. This may require a lesser volume of water. When using a bailer the well volume method suffices as you have no stream of effluent to monitor.

Section III

Check over numbering of sections and steps. Something appears to be out of sequence.

8. Recommendation:

Include all changes into the protocol before proceeding with the study. Contact the Agency, if there are any specific problems.

9. Background:

Not applicable.

10. Discussion of Individual Studies:

See the attached protocol.

11. One-Liner:

Not applicable.

12. CBI:

No CBI included with this package.

**Acifluorfen**

Page _____ is not included in this copy.

Pages __7__ through __32__ are not included in this copy.

The material not included contains the following type of information:

_____ Identity of product inert ingredients.

_____ Identity of product inert impurities.

_____ Description of the product manufacturing process.

_____ Description of product quality control procedures.

_____ Identity of the source of product ingredients.

_____ Sales or other commercial/financial information.

_____ A draft product label.

_____ The product confidential statement of formula.

_____ Information about a pending registration action

__X__ FIFRA registration data.

_____ The document is a duplicate of page(s) _____

_____ The document is not responsive to the request.

The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.