TO: Lois Rossi  
Product Manager 21  
Registration Division (H7505C)  
FROM: Patrick Holden, Chief  
Ground-Water Section  
Environmental Fate & Ground-Water Branch EFED (H7507C)  
THRU: Henry Jacoby, Chief (Acting)  
Environmental Fate & Ground-Water Branch EFED (H7507C)  

MAY 3 1989

Attached, please find the EFGWB review of:

Reg./File #:  
Chemical Name: Metalaxyl  
Type Product: Fungicide  
Company Name: Ciba-Geigy Corporation  
Purpose: Review proposed protocol for small-scale retrospective ground-water monitoring study.

Date Received: 3/17/89  
ACTION CODE: 177  
Date Completed: 4/21/89  
EFGWB #(s): 90457  
Monitoring study requested: X  
Total Review Time: 1 day  
Monitoring study voluntarily:  

Deferrals To:  
____ Biological Effects Branch  
____ Science Integration & Policy Staff, EFED  
____ Non-Dietary Exposure Branch, HED  
____ Dietary Exposure Branch, HED  
____ Toxicology Branch, HED
### Data Review Record

**1. Product Name**: Metalphos  
**Chemical Name**: EFED

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**Instructions**

**This Section Applies to Review of Studies Only**

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<tr>
<th>14. Check Applicable Box</th>
<th>15. No. of Individual Studies Submitted</th>
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<td>Adverse 6(a)(2) Data (405)</td>
<td>Generic Data (Reregistration)(660)</td>
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<td>Special Review Data (870)</td>
<td>Product Specific Data (Reregistration)(655)</td>
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<th>16. Have any of the above studies (in whole or in part) been previously submitted for review?</th>
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<td>Yes (Please identify the study(ies))</td>
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**Confidential Statement of Formula**  
(EPA Form 8570-4) Attached (Trade Secrets)  
**Label Attached**

EPA Form 8570-17 (Rev. 11-88)  
*White - Data Coordinator*  
*Yellow - Data Review Section*  
*Pink - PM/RM/DCI*  
*Green - Return with completed review*
REVIEW OF PROTOCOL FOR SMALL-SCALE RETROSPECTIVE GROUND-WATER MONITORING STUDY

1. CHEMICAL:

Chemical name: N-(2,6-Dimethylphenyl)-N-(methoxyacetyl)-alanine methyl ester
Common name: Metalaxyl
Trade name: Ridomil, Subdue, Apron, Proturf
Structure:

\[
\text{Structure Image}
\]

2. TEST MATERIAL:

Not Applicable.

3. STUDY/ACTION TYPE:

Review proposed protocol for small-scale retrospective ground-water monitoring study.

4. STUDY IDENTIFICATION:

Title: Small Scale Retrospective Study for Metalaxyl in Ground-Water Protocol.

Author(s): Roux Associates
The Huntington Atrium
775 Park Avenue, Suite 255
Huntington, New York 11743

Submitted for: Agricultural Division
Ciba-Geigy Corporation
Post Office Box 18300
Greensboro, NC 27419

Identifying No.: 100-628
Action Code: 177
Accession Number: not given
Record Number: 242077
Date Sent to EFED: 3/21/89

5. REVIEWED BY:

Elizabeth Behl
Signature: [Signature Image]
Hydrogeologist Consultant to
OPP/EFED/ERGMB/Ground-Water Section
Date: 4/28/89
7. CONCLUSIONS:

The data package is incomplete, and therefore, cannot be fully screened to complete the review of this protocol for the small-scale retrospective ground-water monitoring study. Three monitoring sites are proposed representing tobacco, citrus, and lettuce crops. The protocol asserts that the justification of the selection of the monitoring sites is contained in "the Sensitivity Analysis and Preliminary Site Selection reports that accompany this protocol" (p. 5, last sentence). Neither of these reports have yet been submitted to EPA. This information is required in order to approve the number and location of the monitoring sites. As per conversation with Mario Fiol (RD, 4/24/89) and Karen Stumpf (Ciba-Geigy, 4/25/89) these reports will be remitted to EPA as soon as possible.

The protocol is being returned. We are retaining a copy of the protocol in our EFGWB files for easy access in the future. When the registrant submits the above reports the protocol can be fully screened.

8. RECOMMENDATIONS:

1) The registrant should submit the ground water monitoring study protocol and all reports necessary to enable the reviewer to assess the protocol.

9. BACKGROUND:

Metalaxyl is a systemic fungicide registered since 1979 for use on over 100 agricultural crops, ornamentals and turf. Some principle uses are tobacco, ornamentals, turf, fruit, citrus, non-bearing nursery stock, seed treatment, vegetables and peanuts. It is applied to soil or foliage at rates ranging from 0.135 to 8.0 # a.i./acre. Methods of application include: foliar application, soil application (broadcast or band), drenching, sprinkler or drip irrigation, and soil mixing.

Metalaxyl is moderately stable to hydrolysis and photodegradation under normal environmental conditions. Results of laboratory and field leaching studies indicate that both the parent and the primary degrade (CGA-62826) can leach in most soils (Metalaxyl Registration Standard [FRSTR], 7/9/87). Tests indicate that metalaxyl is not oncogenic, mutagenic, or teratogenic, and that acute toxicity is low (memo: Barbehenn to Rossi, 7/17/87).

Metalaxyl has been reported in ground water in Florida and North Carolina, according to EPA's Pesticides in Ground Water Database (4/19/89). Data submitted to EPA for review are inadequate to determine leaching potential, yet laboratory studies indicate that the parent and major degrade can rapidly leach. Therefore, a small-scale retrospective ground-water study was required (Metalaxyl Registration Standard [FRSTR], 7/9/87).