To: Product Manager 21 (Wilson)  
TS-767

Through: Dr. Gunter Zweig, Chief  
Environmental Fate Branch

Through: Mr. James Conlon, Acting Director  
Hazard Evaluation Division, TS-769

From: Review Section No. 1  
Environmental Fate Branch

Attached please find the environmental fate review of:

Reg./File No.: 100-EUP-62

Chemical: N-(2,6-dimethylphenyl)-N-(methoxyacetl) alanine methyl ester, Tradename: Ridomil 2E

Type Product: I,D,H,(F,) N,R,S, Fungicide

Product Name: Ridomil 2

Company Name: Ciba-Geigy Corp

Submission Purpose: Experimental Use permit: control of black shank on tobacco

Date in: 8-2-78

Date out:  

12-1-78
1.0 Introduction

1.1 Rodomil, CGA-48988

1.2 New Chemical - N-(2,6-dimethylphenyl)-N-(methoxyacetyl)
alanine methyl ester

1.3 Percent Active: 25%
2 lbs ai/gallon
EC formulation

1.4 Structure:

Mode of Action:
Fungicidal

1.5 Physical / Chemical Properties

Empirical Formula  \( \text{C}_{15} \text{H}_{21} \text{NO}_4 \)
Mol. wt.  279.34
Solubility 20°C  \( \text{H}_2\text{O} - 7100 \text{ ppm} \)
Vapor Pressure 20°C  \( 2.2 \times 10^{-6} \text{ mmHg} \).

1.6 A total of 860 lbs ai (430 gallons) are to be shipped covering 430A in 10 states east of the Mississippi (CN, FL, GA, MD, MO, NC, PA, SC, TN, VA) per 1 year - proposed EUF is for two years (for use on tobacco).
2.0 Directions for Use.

**Flue-Cured Tobacco**

<table>
<thead>
<tr>
<th>Rate of Ridomil 2E per acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease Level expected*</td>
</tr>
</tbody>
</table>

*Application*  
- Low
- Moderate
- High
- Very High

Broadcast before  
- or after harvesting

<table>
<thead>
<tr>
<th>1-qt.</th>
<th>2-qt.</th>
<th>4-qt.</th>
<th>6-qt.</th>
</tr>
</thead>
</table>
| Band (per 12,500  
  ft. of row)** |

*Fields where disease symptoms have occurred on less than 1% of plants have a low disease level; 1-6% loss is a moderate disease level; 7-25% loss is a high disease level; losses in excess of 25% are a very high disease level.

**A band application of 1, 2, 4 or 6 qts. per acre of tobacco (12,500 ft. of row) is equal to 2.6, 5.2, 10.3 or 15.5 fl. oz. per 1,000 ft. of row, respectively, for any row spacing.

Incorporate top 2-4" of soil immediately after application.

**Burley and Other Tobacco**

**Band Treatment:** Apply Ridomil 2E at 4 to 6 qts. per acre of tobacco (12,500 ft. of row) or 10.3 to 15.5 fl. oz. per 1,000 ft. of row. Apply in an 18-24 inch band over the row and incorporate into the top 3-4 inches of soil immediately after application with an appropriate incorporation implement.

**Broadcast Treatment:** Apply 4-6 qts. per acre. Incorporate in the top 3-4 inches of soil immediately after application with an appropriate incorporation implement.

**Rotational Corrs**

If replanting is necessary, tobacco may be replanted immediately. Do not make a second application of Ridomil 2E. Tobacco may be planted the year following treatment. Other crops may be planted 18 months following application.
2.1 Disposal

Keep out of lakes, streams or ponds. Do not contaminate water by cleaning of equipment or disposal of wastes.

3.0 Discussion of Data

Data will be reviewed for permit only.

<table>
<thead>
<tr>
<th>Environmental Parameter</th>
<th>Parent</th>
<th>Degradate/ metabolite</th>
<th>Other Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrolysis</td>
<td>Stable</td>
<td>1) N-2,6- dimethylphenyl</td>
<td>#Extreme pH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pH 5,7,9</td>
<td>1 and 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[&gt;200d; 5,7]</td>
<td>to t 1/2 &gt;28d</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[&gt;100d; 9]</td>
<td>acetyll-alanine and 3-7d.</td>
</tr>
<tr>
<td>Photolysis (Soil)</td>
<td>Stable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil (Aerobic)</td>
<td>35d.</td>
<td>1) N-(2,6- dimethylphenyl)</td>
<td>Bound residues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27% at 3D,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-N -(methoxy acetyl)-alanine</td>
<td>10% at 360d.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) 2,6-dimethylacetanilide</td>
<td></td>
</tr>
<tr>
<td>Soil (Anaerobic)</td>
<td>50-80d</td>
<td>Same</td>
<td>Bound residues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.0% at 58d.</td>
<td></td>
</tr>
</tbody>
</table>
Mobility
Both parent and degrade leach to the 15-30 cm depth in sandy soils. In loamy soils the parent and degrade leach to the 15 cm level. O.M. related.

Adsorption/ Desorption
Parent does not adsorb/desorb readily.

4.0 General Conclusions
Microbial action is important to the degradation and dissipation of this chemical.
Crop rotation interval of 18 mos. is satisfactory for this permit.

5.0 Recommendations
5.1 We have enough data to assess the environmental fate of this compound for the EUP.
5.2 Data has been reviewed/validated for the EUP only and has not been reviewed/validated for registration.
5.3 All Environmental Chemistry data in Section 3 Regulations will be required for registration (See attached sheet).

Robert F. Carsel
Environmental Fate Branch
Hazard Evaluation Division