Shaughnessy Number: 128857

Date out of EFGWB: SEP 11 1992

To: Lewis/Fairfax
Product Manager 21
Registration Division (H7505C)

From: Akiva Abramovitch, Section Head
Environmental Fate Review Section #3
Environmental Fate and Ground Water Branch
Environmental Fate and Effects Division (H7507C)

Thru: Hank Jacoby, Chief
Environmental Fate and Ground Water Branch
Environmental Fate and Effects Division (H5707C)

Attached, please find the EFGWB review of...

Reg./File #: 707-225, -221

Chemical Name: Myclobutanil

Type Product: Fungicide

Company Name: Rohm and Haas

Purpose: submission of residue accumulation/dissipation data on turf

Date Received: 7/23/92

Action Code: _____ EFGWB #(s): 92-1172 Total Review Time: _____ days

EFGWB Guideline/MRID/Status Summary Table: The review in this package contains...

161-1		162-4		164-4		166-1	
161-2		163-1		164-5		166-2	
161-3		163-2		165-1		166-3	
161-4		163-3		165-2		167-1	
162-1		164-1		165-3		167-2	
162-2		164-2		165-4		201-1	
162-3		164-3		165-5		202-1	

Y = Acceptable (Study satisfied the Guideline)/Concur
P = Partial (Study partially satisfied the Guideline, but additional information is still needed)
S = Supplemental (Study provided useful information, but Guideline was not satisfied)
N = Unacceptable (Study was rejected)/Non-Concur

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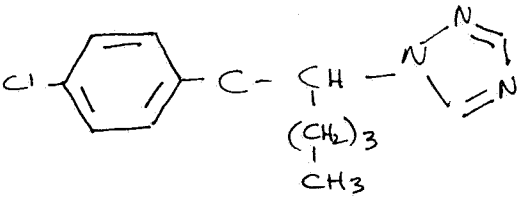
1. CHEMICAL:

chemical name:	α-butyl-α(4-chlorophenyl)-1H-1,2-triazole-1-propanenitrile
common name:	Myclobutanil
trade name:	Systhane, Rally
structure:	
CAS #:	66871-89-0
Shaughnessy #:	128857

2. TEST MATERIAL: n.a.

3. STUDY/ACTION TYPE: submission of residue accumulation/dissipation on turf

4. STUDY IDENTIFICATION:

Ding, N., and Zogorski, W.J. RH-3866 40 W Residue Accumulation/Dissipation Study on Turfgrasses (RAR 91-0025, 91-0046, 91-0067. sponsosred by Rohm and Haas, performed by Centre Analytical Laboratory, State College, PA, and Rohm and Haas Company, Spring House, PA

5. REVIEWED BY:

Typed Name:	E. Brinson Conerly-Perks
Title:	Chemist, Review Section 3
Organization:	EFGWB/EFED/OPP

E. B. Conerly-Perks
9/9/92

6. APPROVED BY:

Typed Name:	Akiva Abramovitch
Title:	Head, Review Section 3
Organization:	EFGWB/EFED/OPP

Akiva Abramovitch
SEP 9 1992

7. CONCLUSIONS:

The submission contains no reviewable data, since experimental procedures used to obtain the data are only summarized. A reviewable study must contain a full description of experimental procedure, proper controls, and analyses of other media such as soil.

Rohm and Haas desires to demonstrate that birds (e.g. ducks) living on golf courses do not encounter significant exposure from Myclobutanil treatment of turf, and that a study on the effects of Myclobutanil on their reproduction is not needed. The submitted data are intended to show that, **using practices common to golf course greens**, Myclobutanil residues do not accumulate on the grass. The registrant makes the implicit assumption that the top part of the grass intercepts all or most of the chemical and therefore represents the exposure risk. However, there is no specific information in the study as to residues in any medium other than grass, e.g. soil or water, to demonstrate that the assumption is true. The data do appear to be consistent with lack of accumulation in the grass, since concentrations in the clippings do decrease. These observations are likely to result from the physical removal of the portion of grass that the treatment has reached (by mowing, and subsequently taking away the clippings) and not from any actual chemical transformation. If mowing and clipping removal are carefully done, this might be effective in

mitigating the exposure, However, the animals could be exposed through some means other than the grass, and this material does not provide any means of assessing these possibilities.

8. RECOMMENDATIONS:

There are none at this time. The surface-water team is performing a review of a run-off study, and will provide an separate review document containing their comments. The EFGWB data base is relatively complete. A study has previously been required on field dissipation as a condition of registration and should be submitted promptly.

9. BACKGROUND:

Myclobutanil appears to be resistant to most environmental breakdown processes. In laboratory studies, it appears to be mobile. To date, available field dissipation data are inconclusive *re* mobility. Field studies now in progress are expected to clarify the need for additional data. Because the compound has limited use, imposition of further data requirements is deferred until these field studies are received and evaluated.

In a previous review (EBC 11/8/88), EFGWB reserved any further data requirement on triazole, and deferred to the Residue and Toxicology Branches for an assessment of the dietary risk potential of myclobutanil and its triazole metabolite.

The status of data requirements is as follows:

hydrolysis -- satisfied (MRID# 001416-79, ER 3/26/85; additional information dated 11/26/85, discussed in JHJ 3/5/86) -- stable at pHs 5, 7, 9

photolysis in water -- satisfied (MRID# 405288-01, EBC 4/12/88; added info MRID# 403198-01, EBC12/22/87 and MRID# 406415-01, EBC 8/24/88) -- stable to photolysis in water

photolysis in soil -- satisfied (Acc# 266121, EBC 5/22/87; additional info Rec # 214084, EBC 4/12/88) -- extrapolated $t_{\frac{1}{2}}$ ca. 143 days

aerobic soil metabolism -- satisfied (MRID# 001416-80, ER 3/26/85; additional information dated 11/26/85, JHJ 3/5/86; additional information Rec# 265748, JHJ 5/19/87)-- $t_{\frac{1}{2}}$ 61-71 days -- major product is 1,2,4-triazole up to ca 15%, with CO_2 and unextractables in lesser amounts

anaerobic soil metabolism -- satisfied (MRID# 001416-80, ER 3/26/85; additional information Rec # 214085, EBC 4/12/88)-- resistant to anaerobic metabolism -- no detectable degradation after 60 days

leaching

parent -- satisfied -- (MRID 001416-81, ER 3/26/85; additional

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discussion JHJ 3/5/86) -- moderately mobile in five soils: clay loam, sand, silt loam, sandy loam, clay -- k_ds 1.46 - 9.77 for adsorption, 0.47-4.18 for desorption

aged compound -- satisfied -- (MRID# 406415-02, EBC 8/24/88; additional information MRID 408915-01, EBC 3/20/89) -- 1,2,4-triazole is highly mobile in five different soils: sand, sandy loam, silty clay loam, clay loam, and silty clay -- k_ds of adsorption, ca. 0.7 - 0.8, k_ds of desorption, ca. 0.8 - 7.9

terrestrial field dissipation -- not satisfied (Acc# 265749, EBC4/12/88; additional information, MRID# 403198-01, EBC 11/10/88)-- the submitted study was deemed unacceptable for a number of reasons. Additional discussion did not resolve the problems. EFGWB has recommended a field dissipation study on myclobutanil as a condition of registration, after the applicant obtains approval for the protocol.

fish bioaccumulation -- waived (Acc# 264484, JHJ 5/19/87), due to low k_{ow}s for parent and degradates. The compound is not expected to bioaccumulate.

10. DISCUSSION OF INDIVIDUAL TESTS OR STUDIES: n.a.

11. COMPLETION OF ONE-LINER: no information added

12. CBI APPENDIX: n.a.

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