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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 20 1990

MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: SACB Review of Supplemental Information Submitted by Mycogen Corporation to Support an EUP Application for MYX7275 (I.D. No. 53219 -G, -U, -E, -A, -L, and -G; Record No. 257,655 through 257,660, MRID No. none assigned; HED Project No. 0-0463; Caswell No. 714G).

TO: Phil Hutton/Willie Nelson (PM-17)
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FROM: J. Thomas McClintock, Ph.D., Microbiologist
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and
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THROUGH: Reto Engler, Ph.D., Chief
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2/16/90

R.D. Sjoblad 2/16/90

2/16/90

ACTION REQUESTED: On December 7, 1989 Mycogen Corporation met with the Agency and presented information on the fixative concentration in MYX 7275, and amount used in the test material for the acute dermal toxicity study, and on human exposure to the chemical fixative ingredients. The data/information that formed the basis of the presentation were designed to respond to SACB's questions on: a) the fixative concentration as determined by direct measurement or validation of the questionable assumption of [redacted] solubility; b) a discussion of the potential for toxin formation and identification of the components causing adverse effects; c) the basis for the OSHA threshold limit value (TLV) for [redacted] in the air; d) the description of the test material in the dermal toxicity study; e) [redacted] on MYX7275-treated crops; and, f) occupational and dietary exposure levels. HED/SACB received the Mycogen data/information package on 1/10/90 for complete review.

BACKGROUND: MYX7275 10% flowable is a formulation of the delta endotoxin of Bacillus thuringiensis var. kurstaki (B.t.k.) encapsulated within killed Psuedomonas fluorescens cells: [redacted]

MANUFACTURING PROCESS INFORMATION IS NOT INCLUDED

QUALITY CONTROL MEASURES INFORMATION IS NOT INCLUDED

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SACB CONCLUSIONS: The analytical methods used for quantification of [redacted] in the formulated product were inadequately described. Assay sensitivity, selectivity, and reproducibility were not documented, too few samples were analyzed, and there was wide variability between samples and within replicate subsamples. Also, it was not clear whether [redacted] was quantified in the product. Therefore, the data were inadequate to substantiate Mycogen's claim that the fixative material is "...not of toxicological significance..." when present in MYX7275. For the same reasons, Mycogen has not adequately demonstrated that "...[redacted] levels in the end-use product and on crops are insignificant relative to normal dietary requirements...", nor have they demonstrated that pulmonary exposure during handling/application of the product would fall within acceptable limits.

Mycogen has clarified the nature of the test material used in the rabbit dermal toxicity study with chemical fixative by stating that the [redacted] as the test material is [redacted]. Mycogen still has not adequately addressed the cause of lethality/toxicity in rodents in the acute intravenous study.

SACB believes that under the conditions of the proposed EUP that appropriate protective clothing (i.e., appropriate respiratory tract covering) could be worn to adequately protect workers during product handling and application. However, an adequate monitoring program should be put in place as part of the EUP to evaluate potential for exposure of workers/applicators to [redacted] via the pulmonary route.

Since the rabbit dermal toxicity study with [redacted] showed only mild toxic effects, SACB would not recommend a requirement for protective clothing for the skin.

For the reasons stated above, SACB would recommend, also as part of the EUP program, that [redacted] residues be determined on the treated crops. Alternatively, Mycogen may wish to provide an adequately documented submission to the Agency to serve as a scientifically acceptable basis for their claim that [redacted] residues on crops from the EUP program would be well within toxicologically safe limits.

Bacillus Thuringiensis A.I. 6409

Page _____ is not included in this copy.

Pages 3 through 7 are not included in this copy.

The material not included contains the following type of information:

_____ Identity of product inert ingredients.

_____ Identity of product impurities.

✓ Description of the product manufacturing process.

✓ Description of 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.

_____ 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.
