254754
RECORD NO.

SHAUGHNESSEY NO. REVIEW NO.

EEB REVIEW

DATE: IN 11-9-89 OUT FEB 26 1990

FILE OR REG. NO. 103089

PETITION OR EXP. PERMIT NO.

DATE OF SUBMISSION 10-30-89

DATE RECEIVED BY EFED 11-9-89

RD REQUESTED COMPLETION DATE 2-8-90

EEB ESTIMATED COMPLETION DATE 2-8-90

RD ACTION CODE/TYPE OF REVIEW 157

TYPE PRODUCT(S): I, D, H, F, N, R, S MPCA

DATA ACCESSION NO(S).

PRODUCT MANAGER NO. S.Lewis(21)

PRODUCT NAME(S) SMP-1 Pseudomonas cepacia

COMPANY NAME Stine Microbial Products

SUBMISSION PURPOSE Nontarget data waiver requests

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.

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

FEB 26 1990 OFFICE OF PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Stine Microbial Products Pseudomonas cepacia nontarget data waiver request

FROM: Zig Vaituzis, Microbiologist
Ecological Effects Branch (H7507-C)
Environmental Fate and Effects Division

Zig. Vaituzis 2/26/90

THRU: Raymond W. Matheny, Head Section 1
Ecological Effects Branch (H7507-C)
Environmental Fate and Effects Division

Raymond W. Matheny 2/27/90

James W. Akerman, Chief
Ecological Effects Branch (H7507-C)
Environmental Fate and Effects Division

James W. Akerman 2/27/90

TO: Susan Lewis (PM-21)
Fungicide/Herbicide Branch
Registration Division (H7505-C)

BACKGROUND

Stine Microbial Products (SMP) of Madison Wisconsin is developing a naturally occuring Pseudomonas cepacia isolated from agricultural soil as a plant root colonizing microbial pesticide for control of plant root diseases. SMP is requesting a waiver of some ecological effects data. Specifically, SMP wants waivers for one avian species, avian respiratory testing and aquatic nontarget data development.

P.cepacia is normally found throughout the world in soils and aqueous environments containing decaying organic matter. Certain strains of P.cepacia are opportunistic human pathogens as well as pathogens of onions (also possibly garlic and orchid).

The SMP end use product consists of live cells of P.cepacia carried [redacted] for in-furrow application. No spray applications will be made. This mode of application does not increase exposure of most nontarget species above that occuring in the ecosystem to indigenous soil and water strains of P.cepacia.

INERT INGREDIENT INFORMATION IS NOT INCLUDED

Avian testing

P.cepacia is not known to be an avian pathogen. A literature search did not turn up any cases of avian infection caused by P.cepacia. This fact, coupled with the soil incorporation of the product, as well as the natural occurrence of P.cepacia in soils, may be used to waive the mallard duck oral testing requirement. The bobwhite quail oral pathogenicity/ toxicity study will suffice for avian risk assessment.

The avian inhalation test is a conditional requirement for microbes known to be related to avian pathogens. P. cepacia does not fall in this category. Avian inhalation testing is not required for this product.

Aquatic organisms

In-furrow soil incorporation of P.cepacia precludes any significant runoff into aquatic environments. Any runoff from this mode of application would not exceed that constantly occurring after rain since P.cepacia colonizes soils and water bodies in nature. In addition, horizontal movement of P.cepacia strains after in-furrow application is limited to several inches of soil, and the post-harvest persistence of the test strain P.cepacia is comparable to the level of natural P.cepacia strains in uninoculated soils.

In light of the above considerations the aquatic nontarget data requirements may be waived.

CONCLUSIONS

The nontarget aquatic organism testing may be waived for in-furrow applications [redacted] with Pseudomonas cepacia cells. The mallard duck study may also be waived. A bobwhite quail 5 day gavage study should be performed since this is the most likely wildlife species to be exposed to significant numbers of P.cepacia after in furrow application.

INERT INGREDIENT INFORMATION IS NOT INCLUDED