ENVIRONMENTAL IMPACT ANALYSIS REPORT

NAME OF APPLICANT: Pfizer Inc.

ADDRESS: 235 East 42nd Street
New York, New York 10017

1. Describe the proposed action:

It is proposed that the applicant manufacture and market the FDA approved new animal drug morantel tartrate, an anthelmintic for cattle, in an orally administered sustained release bolus (Paratect). The chemical structure, biological composition and known pharmacological properties of the active ingredient are the same as for the currently marketed bolus/feed formulation, Rumatel® (NADA #'s 92-444 and 93-903). Directions for use provide for the oral administration of a single Paratect bolus to each weaned calf and yearling for the control of parasitic gastroenteritis throughout the summer grazing season. The Paratect bolus controls parasitic infection by preventing the build-up of infective larvae on the pasture and producing parasitologically 'safe' pastures. This is accomplished by preventing worm egg excretion during the first two to three months of the grazing season, breaking the life cycle of the parasitic infection. The Paratect bolus is composed of a steel cylinder outer housing with semi-permeable membranes and the approved anthelmintic, morantel tartrate.

2. Discuss the probable impact of the action on the environment (including primary and secondary consequences):

Production and utilization of the Paratect bolus which contains the anthelmintic morantel tartrate would not have a significant impact on the environment for several reasons:

Manufacture of the bulk drug will occur as described in the approved NADA's (#92-444 and 93-903). As deemed in the approval of those applications, the manufacture of the drug presents no adverse environmental impact. The bulk drug will be manufactured in Sandwich, England in an already operating general purpose organic synthesis Pfizer plant, equipped to meet current environmental standards for emissions discharged into the atmosphere and of effluents discharged into the receiving stream. The bulk drug would be formulated and boluses filled in an already operating pharmaceutical manufacturing plant in Sandwich, England and would not appreciably change the already negligible environmental impact of that operation. The Sandwich, England manufacturing plant meets all the requirements of the current good manufacturing practice (CGMP) regulations in Part 211 (21 CFR Part 211).

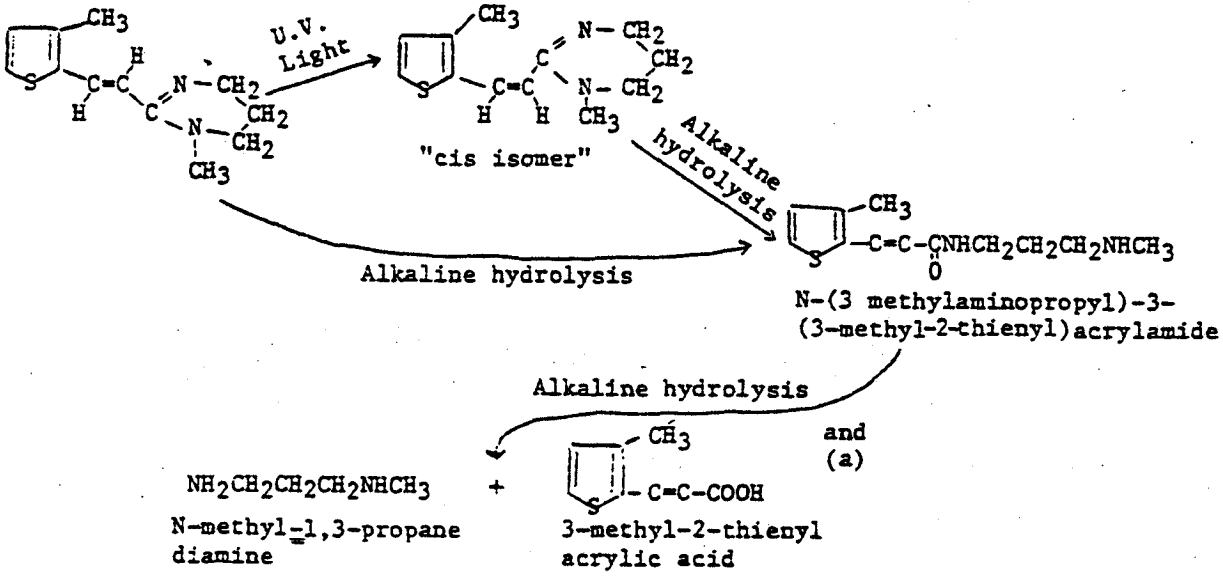
One Paratect bolus is to be orally administered to each weaned calf and yearling weighing at least 200 pounds body weight. The bolus is to be administered with a specially designed balling gun when animals are turned out onto spring pasture. The cost of

administering individual animal treatment by bolusing, and the time interval between treatment and reinfestation with economically significant worm burdens, dictates that cattle will receive only a single Paratect bolus per grazing season. The Paratect bolus is designed to release relatively small amounts of drug over an extended period of time, which precludes substantial concentrations of morantel tartrate entering into the environment, even in areas of dense cattle population.

Morantel tartrate does not concentrate or build up in the environment. Morantel rapidly undergoes isomerization to the biologically inactive "cis" isomer when exposed to long wavelength ultraviolet light. It has been demonstrated that this ultraviolet isomerization proceeds quite rapidly; therefore, it may be assumed that upon excretion the unchanged drug would be biologically inactivated by sunlight within a few hours or days. Also, under alkaline conditions, such as occur in cattle feces, morantel is converted to the amide degradation product which is biologically inactive. The pathways for amide degradation and ultraviolet isomerization of pyrantel are shown in Fig. 1.

Figure 1

Pathway of Environmental Inactivation of Morantel



Further degradation of both isomers can be expected through the action of bacteria and other soil saprophytes. Bacteria readily attach double bounds as well as metabolize amides.

The metabolism report provided in this document concludes that the metabolic profile of residues resulting from the administration of morantel tartrate at sustained and lower doses for several months via the Paratect bolus is not significantly different from that which results from a single therapeutic dose with Rumatel (NADA 93-903 and 92-444).

For further information on the environmental implications as of the use of morantel tartrate, required by 21 CFR §25.1(j) please refer to the approved New Animal Drug Application for Rumatel® bolus and Rumatel® Premix file November 1, 1979.

The proposed action would have minimal primary consequences and no secondary consequences on the environment.

3. Discuss the probable adverse environmental effects which cannot be avoided.

There are no significant adverse effects on the environment anticipated.

4. Evaluate alternatives to the proposed action.

In as much as no significant impact on the environment is anticipated, no alternatives appear necessary.

5. Describe the relationship between local short-term uses of the environment with respect to the proposed action and the maintenance and enhancement of long-term productivity.

The local short-term uses of the proposed action would have no effect on maintenance or enhancement of long-term productivity of the environment.

6. Describe any irreversible and irretrievable commitment of resources which would be involved in the proposed action should it be implemented.

There would be no major commitment of resources with implementation of the proposed action. Only the negligible amount of energy and raw materials consumed in the manufacturing process, none of which constitute a significant commitment of resources, would be required.

7. Discuss the objections raised by other agencies, organizations or individuals which are known to the applicant.

There have been no objections by other agencies, organizations or individuals which are known to the applicant.

8. If proposed action should be taken prior to 90 days from the circulation of a draft environmental impact statement, or 30 days from the filing of a final environmental impact statement, explain why.

No such action is proposed. We submit that the agency should find that there is no requirement for an Enivronmental Impact Statement.

9. Analyze whether the benefit to the public of the proposed action will outweigh the action's potential risks to the environment.

Because there is a continuing need for increased efficiency in cattle production in the United States, clearly the public will benefit from the proposed action. If the animal disease for which the action is proposed can be controlled, cattle would be produced more economically and efficiently. No significant risk to the environment is recognized.

Certification:

The undersigned applicant/petitioner certifies that the information furnished in this Environmental Impact Analysis Report is true, accurate, and complete to the best of his knowledge.

February 22, 1983
Date

Robert H. Ramsey
(Signature of responsible official)

Director, Animal Health Research
Title