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To: . Mr. W. Kuhn

Date: December 10, 1975

From: . M. A. Manzelli

Subject: . ALTOSID® Update

I. INTRODUCTION

In 1973, when the Entomological Laboratory was in the formative stage, one of its proposed objectives was as follows:

"To develop a chemical treatment for the control of the cigarette beetle, a major pest of stored tobacco." It was understood at that time that any insect growth control agent developed for this purpose would have to meet these qualifications, among others:

A. Be innocuous to stored, unprocessed tobacco

B. Be non-toxic to mammals

C. Leave no objectionable residue in the processed tobacco or in its smoke

Our early trials with a number of candidate compounds did not produce any promising lead, and not until a survey of current entomological literature revealed the existence of ALTOSID® did we initiate a successful experimental program, following receipt of this insect growth regulator (IGR).

ALTOSID®, also known as methoprene, has the chemical name isopropyl 11-methoxy-3,7,11-trimethyldodeca-2, 4-dienoate, and is produced by the Zoecon Corporation of Palo Alto, California. It behaves as a juvenile hormone, and in use it prevents the immature feeding forms of a number of insects from developing into normal adults.

Based on studies conducted or sponsored by Zoecon on the safety of ALTOSID® to domestic animals, this IGR has been characterized as a benign pesticide, perhaps being the safest pesticide in use today. Its acute oral LD_{50} levels for rats and dogs are more than 34,600 and 5,000 - 10,000 mg/kg, respectively. Neither mutagenic nor teratogenic effects have been observed at very high dosages for extended