FILE OR REG. NO. 279-3053 and 279-3054

DATE: IN 4/15/87 OUT 4/24/87

PETITION OR EXP. PERMIT NO.

DATE DIV. RECEIVED 2/25/87

DATE OF SUBMISSION 2/23/87

DATE SUBMISSION ACCEPTED

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

DATA ACCESSION NO(S).

PRODUCT MGR. NO. 25

PRODUCT NAME(S) Command 4EC and Command 6EC

COMPANY NAME FMC Corp.

SUBMISSION PURPOSE Revised labeling for sprayer cleanup.

CHEMICAL & FORMULATION 2-(2-chloroethyl)methyl-4,4'-
dimethyl-3-isoxazolidinone,

47.1% liquid (4lb/a/gal) and

64.3% liquid (6lb/a/gal).
Efficiency Review

200.0 Introduction

200.1 Use of weed control in soybeans

200.2 Background: This submission is
   a request to revise directions for spray
   cleanup after use of Command YEC or 6EC.
   The original label directions for spray cleanup
   were indicated as being impractical in
   previous reviews. Data were submitted
   to substantiate adequacy of cleanup
   procedure, as revised.

201.0 Data Summary

A 100 gallon spray tank was half filled
with water, 5pts of Command YEC were added
and the tank was then filled. The mixture was
recirculated as in a spraying operation.

The tank was drained then rinsed three
times with rinse volumes of 12.5, 25 or 50
gallons of water. Water was recirculated for
15 minutes following each rinse. Two
replicates were run. In an additional
study, an adjacent went added to the rinse
water. The concentration of active ingredient
in the rinse water samples was measured
by HPLC and also bioassayed using two-
corn varieties, oats, wheat and velvetleaf. Velvetleaf is the most sensitive plant species to command.

The addition of adjacent to the rinse water did not appreciably reduce concentrations in subsequent rinses below those obtained with water alone. Rinsing with greater volumes of water was no more effective in reducing the total amount of command than the lowest volume tested. The concentrations were higher and phytotoxicity was greater with the low volume rinses but when diluted to equivalent amounts, concentration and phytotoxicity ratings were nearly equal. This implies that total amount of residue removed was the same regardless of volume and that the noted effects were only due to greater dilution.

The data submitted indicated that moderate injury might be obtained on several crops from the first rinse. Consequently, the water from the first rinse must be disposed of by applying to the field and incorporating into the soil as for the original spray. The second rinse had low levels of command and plant assays indicated little or no phytotoxicity to crop plants. Slight injury would be
detected on the most sensitive plant (velvetleaf). Therefore, the cleanup procedure for the second rinse recommends that the rinse water be utilized as part of the diluent for subsequent applications of preplant and POST products on any crop. The dilution should be sufficient to reduce phytotoxicity to undetectable levels.

The sprayer cleanup recommendations submitted appear to be adequate to prevent phytotoxicity from reuse of the sprayer following Command applications.

The study utilized Command 4 EC in the test. The residue in the rinse water for the 6 EC formulation would be expected to be slightly higher. But the relative phytotoxicity of active ingredient should follow the same pattern as for the 4 EC. It is not likely that there would be sufficient amounts of Command left in the sprayer to cause damage to crop plants if either formulation of the recommended sprayer cleanup directions are followed.

203.6 Conclusions and Recommendations

The proposed sprayer cleanup directions
It was noted that the same directions were included for both the YEC and 6EC formulations. Since the first page of the attachment includes the product name, ensure that the correct product name appears on labeling for each product.

C. Scoble
TSS, FHB
RD (TS-767C) 4/29/87