10-8-91

Data Evaluation Record

1. Chemical: F6285 (2-(2,4-dichloro-5-methylsulfonylamidophenyl)-4-difluoromethyl-2,4-dihydro-5-methyl-3H-1,2,4-triazol-3-one)
Shaughnessy No.:129081

2. Test Material: F6285, 94.3% a.i., lot #21-89-1403, EF301-72, CAS#122836-35-5, a cream-colored powder.

3. Study type: Avian Dietary LC_{50}

Test Species: Bobwhite quail (Colinus virginianus)

4. Study ID: Beavers, Joann B., Grimes, Jennie, Smith, Gregory J., and Lynn, Steven P. F6285: A dietary LC_{50} study with the northern bobwhite. Performed by Wildlife International, 305 Commerce Drive, Easton, MD for the FMC Corporation. WI study ID #104-163. FMC study #A89-3091. **MRID 419116-18.**

5. Reviewed by: Kathryn Valente
Biologist
EEB/EFED
Signature: Kathryn J. Valente
Date: 10/7/91

6. Approved by: Allen Vaughan
Acting Head, Section II
EEB/EFED
Signature: Allen W. Vaughan
Date: 10.8.91

7. Conclusions: The study is scientifically sound and is classified as core. With an LC_{50} of >5620 ppm, the test material is considered to be practically non-toxic to the bobwhite. The NOEL was 5620 ppm.

8. Recommendations: N/A

9. Background information: This study was submitted in support of an Experimental Use Permit.

10. Discussion of Individual Tests: N/A

11. Materials and Methods:
a. Test animals: Bobwhite were obtained from Wildlife International's production flock. The birds were 10 days old at test initiation. All test birds were acclimated to the caging and facilities from the time of hatch until testing. The birds were maintained on a 16 hour light/8 hour dark photoperiod at 33° C+/- 2° C in the brooder compartment (23.4° C +/- 1° C average ambient temperature) and average relative humidity of 32% +/- 7%.

b. Dosing regime: The test substance was dissolved in acetone and mixed with corn oil into the basal diet (Wildlife International's Game Bird Ration) with a Hobart mixer. The concentration of corn oil in the test and control diets was 2%. One hundred Ml of acetone was used in the preparation of each of the test diets. There was no acetone added to the control diet. Nominal dietary test concentrations of F6285 used were 562, 1000, 1780, 3160 and 5620 ppm. Birds were maintained on the test diets for 5 days, followed by a 3 day post-exposure observation period during which the birds were maintained on the untreated basal diet.

c. Study design: Ten birds were assigned to each treatment level, including three control groups. The birds could not be differentiated by sex due to age. Observations for mortality and sublethal effects were made daily throughout the exposure and post-exposure periods. Individual body weights by group were measured at test initiation, on day 5 and at the end of the test, day 8. Average estimated feed consumption was determined for each group for days 0-5, and 6-8.

d. Statistics: The lack of mortality in this study prevented the calculation of an LC_{50} value using the computer program of Stephan et al, which normally calculates LC_{50} values using probit analysis, moving average method or the binomial probability method. An estimation of the LC_{50} was therefore made by visual inspection of the mortality data.

12. Reported Results: Bobwhite were exposed to five nominal concentrations of F6285: 562, 1000, 1780, 3160 and 5620 ppm. There was a single mortality (10%) at 1000 ppm, Two birds at 1000 ppm demonstrated toe-picking, a form of aggression, from the afternoon of day 1 until the morning of day 3. One of these birds was found dead on the morning of day 8. It was dehydrated and had foot lesions. A necropsy was performed on this bird, and it was found to have black/green lungs, a slightly pale liver, a flaccid gizzard and a green, dehydrated pectoral muscle. The death was determined to be unrelated to the treatment. All the control birds and one-half of the birds from each treatment were necropsied at the end of the study. One bird at the 5620 ppm level had pale, foam-filled caeca. All other necropsy findings were normal. Based on these observations, the LC_{50} was determined to be >5620 ppm, and the NOEL was determined to be 5620 ppm.

13. Study Author's Conclusions/Quality Assurance Report: The LC_{50} value was >5620 ppm. The NOEL was 5620 ppm.

Quality Assurance and Good Laboratory Practice statements were included in the report. There was one exception to the GLP noted: Analyses to determine the purity and stability of the test material, as well as to determine the composition of the test material, have been performed, but the results have not yet been reported.

14. Reviewer's Discussion and Interpretation of the Results:

a. Test Procedure: The test design and procedure were generally in accordance with protocols recommended by the Guidelines. There was no acetone added to the control diet, whereas 100 mL of acetone was added to each test diet; however, this is not expected to affect the results. Also, the control diets were made daily and presented to the birds fresh, while the treated diets were only made once and left in front of the birds throughout the entire exposure period; however, this is not expected to affect the results as the feed analysis has shown that the chemical is stable in the feed for the duration of the test period.

b. Statistical Analysis: The LC_{50} could not be directly calculated due to the lack of mortality. However, the study shows that the LC_{50} is greater than 5000 ppm, which is in accordance with the Guidelines.

c. Discussion/Results: The study is scientifically sound and generally in accordance with the Guidelines. The study is classified as core.

d. Adequacy of the study:
(1) Classification: Core
(2) Rationale: N/A
(3) Repairability: N/A