9-24-91

Data Evaluation Record

1. Chemical: F6285 4F Herbicide
Shaughnessy No.:129081

2. Test Material: F6285 (94.3% a.i.)lot #31-89-1403; EF301-72; CAS#122836-35-5, a cream-colored powder.

3. Study type: Avian Single-Dose Oral LD_{50}

Test Species: Bobwhite quail (Colinus virginianus)

4. Study ID: Campbell, S., Lynn, Steven P., and Smith, Gregory J. F6285: An acute oral toxicity study with the Northern bobwhite. Wildlife International, 305 Commerce Drive, Easton, MD for the FMC Corporation. FMC project #A89-3089. Study ID#104-165. **MRID 419116-17.**

5. Reviewed by: Kathryn Valente
Biologist
EEB/EFED
Signature: Kathryn F. Valente
Date: 7/24/91

6. Approved by: Allen Vaughan
Acting Head, Section II
EEB/EFED
Signature: Allen W. Vaughan
Date: 9.24.91

7. Conclusions: The study is scientifically sound and meets the requirements for an avian acute oral LD_{50} study. With an LD_{50} of >2250 mg/kg, the test material is considered to be practically nontoxic to Northern bobwhite. The NOEL was determined to be 1350 mg/kg.

8. Recommendations: N/A

9. Background information: This study was submitted to support a request for an Experimental Use Permit.

10. Discussion of Individual Tests: N/A

11. Materials and Methods:
a. Test animals: Northern bobwhite were obtained from Fritts Quail Farm, Phillipsburg, New Jersey. The birds were 29 weeks of age and ranged in weight from 177-221 grams at test initiation. All test birds were acclimated to the caging and facilities for approximately three weeks prior to testing. The birds were maintained on a 8 hour light/16 hour dark photoperiod at 19.5° C+/- 1.3° C and average relative humidity of 42% +/-17%. The birds were fasted for at least 15 hours prior to dosing.

b. Dosing regime: The test substance was dissolved in corn oil and presented by oral gavage in the following nominal

concentrations: 0.0 (control), 292, 486, 810, 1350, and 2250 mg F6285/kg body weight.

c. Study design: Ten birds, five males and five females, were assigned to each treatment level, including the controls. Observations for mortality and sublethal effects were made for 14 days post dosing. Body weights were measured at test initiation, and on days 3, 7 and 14. Average estimated feed consumption was determined for each group for days 0-3, 4-7 and 8-14.

d. Statistics: Due to a lack of mortality, the normally used computer program of C. E. Stephan could not be used to calculate the LC_{50}. The LC_{50} was therefore estimated by visual inspection of the data.

12. Reported Results: Bobwhite were exposed to six nominal concentrations of F6285: 0, 292, 486, 810, 1350 and 2250 mg/kg body weight. No mortality was observed at any of the levels tested. One bird in the 2250 mg/kg treatment group exhibited signs of toxicity beginning 20 minutes post-dosing and lasting 2 hours and 10 minutes. These signs of toxicity were wing droop, lower limb weakness, loss of coordination and a ruffled appearance.

13. Study Author's Conclusions/Quality Assurance Report: The LD_{50} value was >2250 mg F6285. The no mortality level was 2250 mg/kg, and the NOEL was determined to be 1350 mg/kg due to the abnormal behavior observed in one bird at 2250 mg/kg.

Quality Assurance and Good Laboratory Practice statements were included in the report. Two exceptions to GLP were noted:

(1) Samples of the dose were not analyzed for concentration, homogeneity or stability

(2) Analyses to determine the purity, stability and composition of the compound have been completed 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 in accordance with protocols recommended by the Guidelines.
b. Statistical Analysis: The LD_{50} calculation could not be verified by computer program as there was no mortality. Estimation of the LC_{50} by visual inspection of the data supported the authors' conclusions.
c. Discussion/Results: The study is scientifically sound and in accordance with the Guidelines. The study is classified as core. With an LD_{50} of >2250 mg/kg, F6285 is considered to be practically nontoxic to northern bobwhite.
d. Adequacy of the study:
(1) Classification: Core
(2) Rationale: N/A
(3) Repairability: N/A