Reviewed by : Whang Phang, Ph.D. Whang Phang 8/18/87
Section III, Toxicology Branch (TS-769c)
Secondary Reviewer: Marcia van Gemert, Ph.D. M. van Gemert 8/18/87
Section III, Toxicology Branch (TS-769c)

DATA EVALUATION REPORT

STUDY TYPE: Oral Oncogenicity Study-Rats

MRID NO.: 68075 TOX. CHEM. No.: 320

TEST MATERIAL: 2,4-DP (purity not specified)

SPONSOR: Amchem Products, Inc. (A Division of Union Carbide

TESTING FACILITY: CDC Research, Inc.

CITATION: Field, W. E.; Larson, E.J.; Valagene, E.; et al. (1980) Oncogenicity Study in Rats with 2,4-DP Acid: Study No. CDC-AM-001-77, Final rept. (Unpublished study recieved Feb 27, 1981 under 264-231; prepared by CDC Research, Inc., submitted by Union Carbide Agricultural Products Co., Inc., Ambler, PA.; CDL: 244476-A; 244477; 244478; 244479; 244480; 2444481)

CONCLUSION: This study was reviewed in 1982, but the evaluation was judged to be inadequate (Tox. Doc. No. 001995). Recently the study was re-evaluated by Dynamac, Inc. and approved by Toxicology Branch. The reviewer of Dynamac, Inc. found the study to have numerous deficiencies (Attachment). These deficiencies do not allow appropriate validation of the data and verification of the interpretation of the results.

It is recommended that the study be re-evaluated and deficiencies be corrected by the study authors. Only then can the study be properly reviewed and classified.

ATTACHMENT

EPA: 68-02-4225
TASK: 265-A
July 2, 1987

DATA EVALUATION RECORD

2,4-DP Acid

Oral Oncogenicity Study in Rats

STUDY IDENTIFICATION: Field, W. E. Oncogenicity study in rats with 2,4-DP acid. (Unpublished study No. CDC-AM-001-77 prepared by CDC Research Inc., Clarks Summit, PA, for Union Carbide, South Charleston, WV; dated April 18, 1980.) Accession No. 244476-244481.

APPROVED BY:

I. Cecil Felkner, Ph.D.
Department Manager
Dynamac Corporation

Signature: I. Cecil Felkner

Date: 7-2-87

2

1. CHEMICAL: 2,4-DP acid (EPA EST No. 1544EN--1,2,4DP Tech Acid).

2. TEST MATERIAL: 2,4DP acid; it purity, stability, and other physical descriptions were not reported.

3. STUDY/ACTION TYPE: Oral oncogenicity study in rats.

4. STUDY IDENTIFICATION: Field, W. E. Oncogenicity study in rats with 2,4-DP acid. (Unpublished study No. CDC-AM-001-77 prepared by CDC Research Inc., Clarks Summit, PA, for Union Carbide, South Charleston, WV; dated April 18, 1980.) Accession No. 244476-244481.

5. REVIEWED BY:

Brenda Worthy, M.T.
Principal Reviewer
Dynamac Corporation

Signature: Brenda Worthy
Date: 7-2-87

William L. McLellan, Ph.D.
Independent Reviewer
Dynamac Corporation

Signature: William L. McLellan
Date: 7-2-87

6. APPROVED BY:

I. Cecil Felkner, Ph.D.
Oncogenicity/Chronic Toxicity
Technical Quality Control
Dynamac Corporation

Signature: I Cecil Felkner
Date: 7-2-87

William Burnam, M.S.
EPA Reviewer and Deputy Chief

Signature: W J Burnam
Date: 7/7/87

Theodore Farber, Ph.D.
Chief of EPA Toxicology Branch

Signature: _____
Date: _____

3

7. CONCLUSIONS:

Because of major reporting deficiencies noted in the oral oncogenicity study in rats administered 2,4-DP acid, we cannot validate the study or adequately evaluate the findings; therefore, the conclusions of the study author that "the compound caused a mild nonspecific toxic effect at the high dose and was not oncogenic at the doses administered" cannot be verified.

8. RECOMMENDATIONS: It is recommended that the study author review the deficiencies listed under "Reviewers' Discussion and Interpretation of Study Results," and submit the required data; only then can the study be thoroughly evaluated and Core classified.

Items 9 through 13--see footnote 1.

14. REVIEWERS' DISCUSSION AND INTERPRETATION OF STUDY RESULTS:

The Pesticide Assessment Guidelines, Subsection F, USEPA, OPP, November 19, 1982, were proposed to ensure that toxicity studies were performed in an acceptable manner that would meet the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in support of pesticide registration.

We have reviewed the data submitted for 2,4-DP acid, which was orally administered to rats over a 2-year period, to assess the potential oncogenicity of the test material. Based on the 1982 USEPA guidelines and the Standard Evaluation Procedure of USPEA's Hazard Evaluation Division (EPA-540/9-85-012; June 1985), the following deficiencies were noted:

- The test material was not adequately described; therefore, if the technical grade of the test material was used, as guidelines specify, this is not indicated.
- Details of diet preparation were not described. Diet analysis for concentration, homogeneity, and stability was not reported; hence, we cannot assess either the appropriateness of the amount or the stability of the test material in the diets.
- Hematology parameters were not performed at the 12-month study interval.
- Only mean values were reported for food consumption and body weight data; without the standard deviations, we cannot assess the variability of these data.

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[1]Only items appropriate to this DER have been included.

4

- Individual data were not reported for clinical observations, food consumption, or body weight (exception: individual body weight data at termination were reported).

- The number of tissues examined/group was not reported. In particular, summary tabulation of nonneoplastic lesions could not be evaluated for mid- and low-dose groups; according to the protocol, only 21-25 tissues were examined whereas 45-50 tissues were examined for the control- and high-dose groups. The tabulation did not indicate which tissues were examined or how many tissues were examined. Individual handwritten pathology sheets were submitted, but a tissue inventory was not available.

- The percentage of animals displaying each type of lesion was not reported.

- No statistical methods were used to evaluate the data; therefore, we cannot compare test-group differences or similarities.

From the data submitted, we cannot validate the study or adequately evaluate the findings.

Items 15 and 16--see footnote 1.