TDMS

DATA EVALUATION RECORD

CASE GS ___ _____ PM ___ ___/___/___

CHEM 105001 TERBUFOS

BRANCH EEB DISC ___

FORMULATION 15% Granular

FICHE/MASTER ID FEØTERØ6

CITATION: USEPA. 1976. Report on the toxicity of COUNTER 15G to Daphnia magna. (USEPA, CBIB, Beltsville, Md., Static jar test #922, 2/2/76, unpublished report)

SUBST. CLASS=

OTHER SUBJECT DESCRIPTORS
PRIM:

DIRECT REVIEW TIME=	(MH) START DATE	END DATE
4 hrs.	10/4/82	10/27/82

REVIEWED BY: James D. Felkel
TITLE: Wildlife Biologist
ORG: Ecological Effects Branch, Hazard Evaluation Division (TS-769)
LOC./TEL.: Crystal Mall #2, Room 1112, 703-557-3113

SIGNATURE: James D. Felkel DATE: 12/8/82

APPROVED BY:
TITLE:
ORG:
LOC/TEL:

SIGNATURE: DATE:

4 pages

DATA EVALUATON RECORD

1. Chemical: Terbufos (Shaughnessy No. 105001)

2. Formulation: 15% granular

3. Citation: USEPA. 1976. Report on the toxicity of COUNTER 15G to Daphnia magna. (USEPA, CBIB, Beltsville, Md., Static jar test #922, 2/2/76, unpublished report). MRID No. FE0TER06

4. Reviewed By: James D. Felkel, Wildlife Biologist
Ecological Effects Branch
Hazard Evaluation Division (TS-769)

5. Date Reviewed: October 27, 1982

6. Test Type: Freshwater invertebrate LC_{50}

A. Test Species: Daphnia magna

7. Reported Results: The 48-hour LC_{50} is 13 ppb (95% C.L. of 18.6-9.1 ppb).

8. Reviewer's Conclusions:

This study is scientifically sound and with an LC_{50} of 6.[illegible] (5.1-7.7) ppb indicates that Counter 15G is very highly toxic to rainbow trout. This study, if needed, meets the intent of proposed guidelines (7/10/78) for this formulation.

METHODS

Method TSD 1.206 is cited. Acetone was the diluent. Daphnids were from the Animal Biological Laboratory. Concentrations of 1.4-100 ppb, based on total formulation, were tested.

RESULTS

	LC_{50} (with 95% C.L.)
24 hours	7.1 (5.4 - 9.4) ppb
48 hours	13 (9.1 - 18.6) ppb

REVIEWER'S ANALYSIS

Methods used are generally consistent with proposed guidelines (7/10/78). EPA computer analysis (attached) indicates a 48-hour LC_{50} of 6.3 (5.1-7.7) ppb (probit method). Counter 15G is thus considered very highly toxic to daphnids.

CONCLUSIONS

1. Category: Core, for this formulation

2. Rationale: Study meets the intent of proposed guidelines for this formulation

3. Repairability: N/A

FELKEL TERBUFOS D. MAGNA LC50 156

CONC.	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB.(PERCENT
65	10	10	100	0.09765625
42	10	10	100	0.09765625
28	10	10	100	0.09765625
18	10	10	100	0.09765625
12	10	10	100	0.09765625
7.5	10	7	70	17.1875
4.9	10	1	10	1.074219
3.2	10	1	10	1.074219
2.1	10	0	0	0.09765625
1.4	10	0	0	0.09765625

THE BINOMIAL TEST SHOWS THAT 4.9 AND 12 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS, BECAUSE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS GREATER THAN 95 PERCENT.

AN APPROXIMATE LC50 FOR THIS SET OF DATA IS 6.566659

RESULTS CALCULATED USING THE MOVING AVERAGE METHOD

SPAN	G	LC50	95 PERCENT CONFIDENCE LIMITS	
8	0.07669346	6.242074	4.646185	8.089372

RESULTS CALCULATED USING THE PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT PROBABILITY
8	0.2176796	1	0.9077231

SLOPE = 6.589201
95 PERCENT CONFIDENCE LIMITS = 3.514934 AND 9.663468

LC50 = 6.246765
95 PERCENT CONFIDENCE LIMITS = 5.111403 AND 7.682318

LC10 = 4.007888
95 PERCENT CONFIDENCE LIMITS = 2.558135 AND 4.93595