DATA EVALUATION REPORT

ECOLOGICAL EFFECTS BRANCH

EFED Document

1. Chemical: Tilt

   Shaughnessy No.: 122101

2. Formulation: 3.6E 41.8% a.i.   MRD #0013292 8

3. Study ID: LeBlanc, Gerald. 1983. Acute Toxicity of Tilt 3.6E to Rainbow Trout (Salmo gairdneri). Prepared by EG&G Bionomics for Ciba-Geigy. Data Acc. No. 072209. Reference 9.

4. Study Type: 96-hour LC50, Rainbow Trout

5. Review By: Daniel Rieder
               Wildlife Biologist   Date: 11/17/84
               EEB/HED   Review Time 3 Hrs

6. Reported Conclusions:

   96-hour LC50 = 2.5 ppm Tilt
   95% C.L. 2.2 - 2.9 ppm

   Review Calculation:

   96-hour LC50 = 1.0 ppm * measured 100% a.i.
   95% C.L. 0.9 - 1.2 ppm
   * Binomial Test

7. Reviewer's Conclusions: This study is scientifically sound and fulfills guideline requirements for a cold water fish LC50. The results show that CGA 64250 is moderately toxic to trout. Note that concentrations were measured.

8. Methods:

Test Organism: Rainbow trout (Salmo gairdneri); 10 per level; wet weight 0.5 (0.33-0.72) grams; total length of 39 (35-45) mm; source a commercial fish supplier in Montana.

Test Material: Tilt 3.6E (41.8% a.i.); concentrations measured (at 0 hour); measured test levels 3.7, 2.1, 1.2, 0.9 and 0.7 ppm (100% ai).

Test Conditions: Temperature 12+1°C; 19.6 liter glass containers with 15 liter; untreated control; not aerated; DO and pH measured.

9. Results:

Concentrations

Tilt 3.6E Nominal	CGA-64250 Measured	Conditions pH	DO mg/l	Organisms Tested	Mortality
10	3.7	7.1	8.3	10	10
6	2.1	7.0	8.7	10	10
3.6	1.2	7.0	5.7	10	10
2.2	0.9	7.0	6.5	10	0
1.3	0.7	7.0	8.1	10	0
Control	<0.005	7.0	8.5	10	0

96-hr LC_{50} = 2.5 ppm Tilt 3.6E
95% C.L. 2.2-2.9 ppm Tilt 3.6E

10. Statistics:

The reported LC50 was estimated by binomial probability.

11. Reviewer's Evaluation:

The study fulfills guideline requirements and shows CGA-64250 to be moderately toxic to fish.

12. Conclusion:

Category: Core

Rationale: This study was categorized core in spite of the test material since the test concentrations were measured.

122101 DATA ACC NO 072209 REF 9 TILT RAINBOW TROUT LC500
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CONC.	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB.(PERCENT)
3.7	10	10	100	.0976563
2.1	10	10	100	.0976563
1.2	10	10	100	.0976563
.9	10	0	0	.0976563
.7	10	0	0	.0976563

THE BINOMIAL TEST SHOWS THAT .9 AND 1.2 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 1.03923

WHEN THERE ARE LESS THAN TWO CONCENTRATIONS AT WHICH THE
PERCENT DEAD IS BETWEEN 0 AND 100, NEITHER THE MOVING AVERAGE
NOR THE PROBIT METHOD CAN GIVE ANY STATISTICALLY SOUND RESULTS.

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