UNDATED

DATA EVALUATION RECORD

1. **CHEMICAL:** Molinate.
Shaughnessey No. 041402.

2. **TEST MATERIAL:** Ordram:Propanil 3:3E; Lot No. NDH 3031; a dark-brown, viscous, fo liquid; purity not specified.

3. **STUDY TYPE:** Freshwater Fish Static Acute Toxicity Test. Species Tested: Bluegil Lepomis macrochirus)

4. **CITATION:** Bowman, J.H. 1986. Acute Toxicity of Ordram: Propanil 3:3E to Bluegi Lepomis macrochirus). Laboratory Project ID No. 35224. Prepared by Analytical Laboratories, Inc., Columbia, MO. Submitted by Stauffer Chemical Company, Ric EPA MRID No. 416136-02.

5. **REVIEWED BY:**

Mark A. Mossler, M.S. **Signature:**
Associate Scientist II
KBN Engineering and **Date:**
Applied Sciences, Inc.

6. **APPROVED BY:**

Louis M. Rifici, M.S. **Signature:**
Associate Scientist II
KBN Engineering and **Date:**
Applied Sciences, Inc.

Henry T. Craven, M.S. **Signature:**
Supervisor, EEB/HED
USEPA **Date:**

7. **CONCLUSIONS:** This study is scientifically sound and satisfies the guideline requ static acute toxicity test for freshwater fish. The 96-hour LC_{50} of Ordram: bluegill sunfish was 14 mg/L (based on nominal concentration of formulated produ Ordram:Propanil 3:3E is classified as slightly toxic to bluegill sunfish. The lack of mortality and sublethal effects, was estimated as 3.2 mg/L based concentration of formulated product.

8. **RECOMMENDATIONS:** N/A.

9. **BACKGROUND:**

10. **DISCUSSION OF INDIVIDUAL TESTS:** N/A.

11. **MATERIALS AND METHODS:**

A. **Test Animals:** Bluegill Sunfish (Lepomis macrochirus) were obtained from Os Catfisheries in Osage Beach, MO. The fish were maintained in culture 16-hour daylight photoperiod for at least 2 weeks prior to testing. The commercially available fish food daily with occasional supplements of n brine shrimp. The condition of the fish was monitored daily and recor

treatments were kept.

Mean weight and standard length of the control fish were 0.47 (±0.085) g mm. Biomass loading rate in the control was 0.31 g/L.

B. **Test System:** Vessels used in the test were 5-gallon glass containers fille soft reconstituted water (control) or test solution. The reconstituted w to yield a total hardness of 40-48 mg/L as $CaCO_3$, a total alkalinity of 20- $CaCO_3$, and an initial pH of 7.2-7.6. The vessels were kept in a water bath maintain 22°±1.0°C. The fish were acclimated to the dilution water and te and held without food for 48-96 hours prior to testing. The test conc prepared by adding appropriate amounts of test material directly to the tes

The bluegill sunfish were not fed during the test.

C. **Dosage:** Ninety-six-hour static test. Based on preliminary tests, seven no concentrations (1.0, 1.8, 3.2, 5.6, 10, 18, and 32 mg/L) and a dilution w used. The concentrations made were based on total product.

D. **Design:** Ten fish were randomly added to each test chamber within 30 minute solution preparation. All chambers were observed once every 24 hours for sublethal effects. Dead fish were removed from the chambers at each period.

Temperature, pH, and dissolved oxygen (DO) were measured in the dilut control, low, medium, and high test concentrations at 0, 48, and 96 hours.

E. **Statistics:** The 96-hour median lethal concentration (LC_{50}) and associated confidence interval (C.I.) was calculated using the moving average method.

12. **REPORTED RESULTS:** The mortality responses of the bluegill sunfish are given in T (attached). The 96-hour LC_{50}, based on nominal concentrations, was 14 mg/L (95% mg/L). Sublethal effects were observed in all concentra-tions greater than 3. the no-observed-effect concentration (NOEC) was 3.2 mg/L after 96 hours.

At test initiation, the DO of the control, low, and high concentrations were 104-106% of saturation. After 96 hours, oxygen levels in the control, 1.0, 5.6 chambers ranged from 48 to 61%.
The pH values ranged from 6.8 to 7.5 (Table 3, attached). The temperature throughout the test. The alkalinity and hardness of the test water was 24-26 a $CaCO_3$, respectively. Conductivity was 200 ?Mhos/cm.

13. **STUDY AUTHOR'S CONCLUSIONS/QUALITY ASSURANCE MEASURES:**
The author presented no conclusions.

Quality Assurance and Good Laboratory Compliance Statements were included in indicating that the study was conducted in accordance with FIFRA Good Laborat Standards set forth in 40 CFR Part 160.

14. **REVIEWER'S DISCUSSION AND INTERPRETATION OF STUDY RESULTS:**

A. **Test Procedure:** The test procedures were generally in accordance wit protocols recommended by the guidelines, but deviated from the SEP as

2 The acclimation period of the sunfish to the test conditions was 2 t

SEP recommends that the acclimation period to the test conditions two weeks.

The test temperature was not monitored every six hours as recommended

A 30-minute dawn and dusk simulation period is recommended in the transition period was not used in the study.

Each selected nominal concentration was between 55% and 57% of th highest concentration. The SEP recommends that each concentration b the next highest concentration.

The DO at test initiation ranged from 104 to 106% of saturation at SEP recommends that the DO be between 60 and 100% of saturation duri first 48 hours of the test.

B. **Statistical Analysis:** The reviewer used EPA's Toxanal program to cal the LC_{50} value and obtained the same results (see attached printout).

C. **Discussion/Results:** Results from the preliminary test indicated that was present in the 1.0 and 10 mg/l treatments within the first 24 ho the report did not state if this foam was present in the defini reviewer assumes that this foam was present due to the formulati within the test material that went into solution eventually. measurements would have been helpful to confirm the presence of material at stated nominal rates.

This study is scientifically sound and satisfies the guideline req static acute toxicity test. The 96-hour LC_{50} of 14 mg/L (based on no concentration of total product) classifies the formulation Ordram:Pr slightly toxic to bluegill sunfish. The NOEC can be estimated as 3. on nominal concentration of total product).

D. **Adequacy of the Study:**

(1) **Classification:** Core for the formulated product Ordram:Propanil 3:3E.

(2) **Rationale:** N/A.

(3) **Repairability:** N/A.

15. **COMPLETION OF ONE-LINER FOR STUDY:** Yes, 6-10-91.