PM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: 17 August 1979

SUBJECT: 48 Hour LC_{50} Daphnia magna study with Paraquat-Cl_2 (239-2186 & 239-2422)

FROM: Ecological Effects Branch, HED

TO: Product Manager #25, Registration Division

The subject study was reviewed and found to be acceptable.

Robert W. Holst, Ph.D.,
Plant Physiologist

Richard Balcomb, Acting Head, Section #1

Clayton Bushong, Chief,
Ecological Effects Branch, HED

EPA FORM 1320-6 (REV. 3-76)

Chemcial: Paraquat

Formulation: 92.3% Paraquat dichloride salt technical (66.8% cation)

Citation: Wheeler, R.E. 1978. 48 hour acute static toxicity of paraquat dichloride salt (SX957) to 1st stage nymph water fleas (Dapnia magna Straus). Chevron Chemical Co. Richmond CA (CDL: 235419)

Reviewer: Robert W. Holst, Ph.D.
Plant Physiologist
Ecological Effects Branch, HED
HED/OPP/EPA 17 August 1979

Test Title: 48 hour acute Daphnia magna with Paraquat

Conclusion: The LC_{50} for Paraquat cation based on analytical concentration is 1.2226 ppm (CL 0.6753 - 2.2134 ppm)

Material and Methods: The standard EPA methods were followed.

Results: pH of the medium was 7.8 to 8.1, hardness 40 mg $CaCO_3$/L and Do was 96-99%. The LC_{50} for Paraquat dichloride salt (92.3% a.i) was 2.947 ppm (CL 2.415 - 3.439 ppm). The LC_{10} was 1.508 ppm (CL .861 - 1.957 ppm). The LC_{50} for Paraquat cation was 1.2226 ppm (CL 0.6753 - 2.2.34 ppm). The LC_{10} was 0.616 ppm (CL .353 - 797 ppm). The Paraquat dichloride salt LC_{50} and LC_{10} are based on the nominal concentration while the Paraquat cation LC_{50} and LC_{10} are based on analytical concentrations. Statistics were acceptable.

Validation: Core

2