DATE: IN _____ OUT _____   IN 8/13/75 OUT 9/10/75   IN _____ OUT _____

      FISH & WILDLIFE   ENVIRONMENTAL CHEMISTRY   EFFICACY

FILE OR REG. NO. ___239-1663_____

PETITION OR EXP. PERMIT NO. _____

DATE DIV. RECEIVED _____

DATE OF SUBMISSION _____

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCT(S): I, D, (H,)F, N, R, S _____

PRODUCT MGR. NO. ___24_____

PRODUCT NAME(S) __ORTHO Diquat Water Weed Killer_____

COMPANY NAME ___Chevron Chemical Co._____

SUBMISSION PURPOSE __Revision in labeling, expansion of use and change in use directions__

CHEMICAL & FORMULATION ___(6,7-dihydrodipyrido(1,2-2:2',1'-C)

              Pyrazinedium dibromide - Diquat 35.3

1.0 Recommendation

1.1 Adequate data are available to assess environmental chemistry hazards. We can accept this registration.

1.2 Accumulation study on catfish is still needed as previously requested in connection with PP No. 1F1101. The following protocol is recommended to obtain the data:

Protocol for Fish Accumulation Study on Catfish (using radiolabeled material)

   a. A sandy loam soil is to be treated in such a manner that catfish would be exposed to 0.01 ppm and 1.0 ppm if practical. The pesticide is to be aged in the soil for 30 days before exposure, and kept under water for aquatic uses.

   b. Catfish are to be exposed to treated soil for 30 days. If a plateau has not been reached then exposure should be extended for an additional 30 days.

   c. The rate of residue dissipation is to be determined by placing the catfish in pesticide-free environment at the end of the exposure time.

   d. Residue determinations of edible tissue are needed throughout the study. When a plateau level is reached or at an interval of high residues in the edible tissue, determination for polar and nonpolar extractables is needed along with determination of tissue-incorporated residues.

   e. Determination for residues in viscera should be made at several intervals to correspond with tissue sampling.

   f. Accumulation factors should be recorded.

   g. Determination for the amount of residue present in water and soil should be made at each fish sampling.

   h. Identification of the residues in fish are needed at plateau level, at highest accumulation level and about the 14th day during withdrawal.

All radiolabeled studies should be supported with the following information:

    a. Sample calculations:

    b. Counting efficiencies:

    c. Counting time:

    d. Background levels;

    e. Probable error with scintillation techniques.

2.0 Introduction

2.1 See Environmental Chemistry Reviews of 3/6/75 and 4/9/74 for Dequat dibromide. Also see Evaluation for Encapsulated Copper Sulfate in Ponds, Lakes, etc. and Review of PP 1F1073.

3.0 Directions for Use

3.1 FOR CONTROL OF SUBMERSED AND FLOATING WEEDS IN SLOWLY MOVING OR QUIESCENT FRESH WATER. Apply ORTHO Diquat Water Weed Killer in accordance with the following table·

AQUATIC WEED	GALLONS PER SURFACE ACRE APPLIED BY INDICATED APPLICATION METHOD	
SUBMERSED	SURFACE SPRAY	BOTTOM PLACEMENT
Bladderwort	2	2
Coontail	2	2
Elodea	-	2
Naiad	2	2
Watermilfoil	2	2
Hydrilla	-	2
Pondweed (Potamogeton spp) Except P. robbinsii and Richardsonii	2	-

FLOATING		
Pennywort	1/2 - 3/4	-
Salvinia	1/2 - 3/4	-
Water Hyacinth	1/2 - 3/4	-
Water Lettuce	1/2 - 3/4	-
Duckweed	1 - 2	-

FLOATING WEEDS: (Except Duckweed) - Apply in 150 to 200 gallons of water plus 1 pint ORTHO X-77 Spreader per acre as an overall surface spray. For aerial application to water Lettuce use 7.5 to 10 gallons of water per acre plus 1 pint ORTHO X-77 Spreader per 100 gallons spray solution.

Duckweed Control - Apply as an overall surface spray in 50 to 150 gallons of water per acre. Use ORTHO X-77 Spreader at the rate of 1 pint per 100 gallons spray per acre. Care should be taken to thoroughly cover all plants on water and on damp marginal areas. Reinfestation of duckweed occurs readily from untreated areas. Retreated with ORTHO Diquat Water Weed Killer may be necessary to obtain season long control.

SUBMERSED WEEDS: Apply by surface application as for floating weeds or by bottom placement. For bottom placement inject just above bottom of body of water with weighted trailing hoses. Add 3-5 pounds of elemental copper from a product labeled for aquatic herbicide use, per surface acre to spray solution for control of hydrilla and coontail.

4.0 Conclusions

4.1 Sufficient 70-15 data are available to assess that with the imposed label limitation of 14 days before use of treated water for overhead irrigation of crops is adequate to prevent hazards to irrigated rotational crops.

The fish accumulation study is still needed.

Ronald E. Hey. Jr.   3/10/75
3/5/75

Environmental Chemistry Section
Samuel F. Howard

PETITION SUBMISSION REVIEW FORM

PETN NR.	RCPT DATE	☐ NEW ☒ AMEND	DATE DUE	PM NR
XREF NR(s)		CHEM.		

ENTER NUMBER OF HOURS SPENT IN REVIEW BELOW

BRANCH OR FUNCTION	PROFESSIONAL MANHOURS	TOT	CLERICAL M/H	TOT
E E E, Branch 70-15 239-1663	28			
			SUBTOTALS	
			STANDARD COST	
			TOTALS	

2-

SCIENTIFIC REVIEW LOG

Product Manager: _____

Type of Pesticide: (circle)   I   R   H   F   D

Reg. No. EUP No. or Petition No.	Type of Review (x)	Type of Registration Action (x)	Rec'd. in Office	Rec'd. in Branch/ Section	Reviewer Assignment, Date	Review Initiation, Date	Review Completion, Date	Final Typing, Submitted	Final Typing, Completed
239-1663 Diquat	( )Efficacy ( )Fish & Wildlife ( )Environmental Chem. ( )Human Safety ( )Toxicology ( )Chemistry ( )Label Chemistry	( )New--Routine ( )New--Significant New Use ( )New--New Chemical ( )Amend.--Label Revision ( )Amend.--Added Uses Without Data (X)Amend.--Added Uses With Data ( )Resubmission-- Without Data ( )Resubmission--With Data		8/13/75		8/18/75	9/6/75	9/11/75	9/15/75