

Worker Safety

Shaughnessy No.: 032201

Date out of EAB: DEC 17 1987

To: Richard Mountfort
Product Manager 23
Registration Division (TS 767C)

From: Therese Dougherty, Chief
Environmental Chemistry Review Section #1
Exposure Assessment Branch
Hazard Evaluation Division (TS 769C)

Thru: Paul F. Schuda, Chief
Exposure Assessment Branch/HED (TS-769C)

Attached, please find the EAB review of...

Reg./File # 239-2505

Chemical Name: Diquat Dibromide

Type Product: Herbicide

Company Name: Chevron Chemical Company

Purpose: Responses to registration standard: Glove permeability, spray drift and questions on the soil dissipation study sampling scheme.

Date Received: 3/12/87 9/16/87

Action Code: 660

Date Completed: 12/14/87

EAB # (s): 700150, 70320, 70957,

Monitoring Study Requested:

Total Reviewing Time: 2.0 days
(Fate Only)

Monitoring Study Volunteered:

Deferrals to: Ecological Effects Branch

 Residue Chemistry Branch

 Toxicology Branch

REGISTRATION APPLICATION (Chloron Chemical)

2. IDENTIFYING NUMBER 239-1663	3. ACTION CODE 350	4. ACCESSION NUMBER —	TO BE COMPLETED BY PM
			5. RECORD NUMBER 20286
			6. REFERENCE NUMBER 27
			7. DATE RECEIVED (EPA) 9/11/87
			8. STATUTORY DUE DATE
			9. PRODUCT MANAGER (PM) Mountford
			10. PM TEAM NUMBER 23

14. CHECK IF APPLICABLE:	TO BE COMPLETED BY PCB
<input type="checkbox"/> Public Health/Quarantine	<input type="checkbox"/> Minor Use
<input type="checkbox"/> Sublethal Chemical	<input type="checkbox"/> Part of IPM
<input type="checkbox"/> Seasonal Chemical	<input type="checkbox"/> Review Requires Less Than 4 Hours
	11. DATE SENT TO HED/TSS 9-16-87
	12. PRIORITY NUMBER 49
	13. PROJECTED RETURN DATE 12-3-87

15. INSTRUCTIONS TO REVIEWER:

A. HED: EPA Assessment - 3(a)(8)
 Environmental Risk Assessment - 3(a)(7) and/or S.L. Johnson memo of Mar 12, 1977.

B. SPRD: (Send Copy of Form to SPRD PM)
 Chemical Undergoing Active RPAR Review
 Chemical Undergoing Active Registration Standards Review.

C. BFS/D
D. TSS/RD
E. Other

F. INSTRUCTIONS:

Have reviewed questionnaire for in-progress soil description study (re: soil depth requirements)

16. RELATED ACTIONS: ATTN: Paul Mastrotone

17. 3(c)(1)(D): Use Any or All Available Information Use Only Attached Data Use Only the Attached Data for Formulation and Any or All Available Information on the Technical or Manufacturing Chemical.

18. REVIEWS SENT TO: TB EEB EF PL RCB EFB CH BFS/D

19. To	TYPE OF REVIEW	NUMBER OF ACTIONS							
		Registration	Petition	EUP	SLN	Sec. 18	Inert	MNR. USE	Other
HED	TOXICOLOGY								
	ECOLOGICAL EFFECTS								
	RESIDUE CHEMISTRY								
	ENVIRONMENTAL DATA	1							
RD/TSS	CHEMISTRY								
	EFFICACY								
	PRECAUTIONARY LABELING								
BFS/D	ECONOMIC ANALYSIS								

20. <input type="checkbox"/> Label Submitted with Application Attached	21. <input type="checkbox"/> Confidential Statement of Formula	22. <input type="checkbox"/> Representative Labels Showing Accepted Uses Attached	23. Date Returned to RD (to be completed by HED)	24. Include an Original and 4 (four) Copies of This Completed Form for Each Branch Checked for Review.
--	--	---	--	--

(RD PROVIDE)
SHAUGHNESSY NO.

G

NAME: **DIQUAT DIBROMIDE**

Identifying Number	Action Code	Reference Number	Record Number	Study Guideline or Narrative Description	Reg. Std. Review Submission Criteria (SEE BELOW)	Accession Number	(HFD/BUD/TSS Complete) Study found to be Acceptable (A)/ Unacceptable(U) for review or reviewer comment
51-1663	660	23	18487	Residue intervals and protective clothing	2.		

PRODUCT MANAGER (PM) or REVIEW MANAGER (RM) AND NUMBER: *Richard M. Wentfort, Inc. 13* PM/RM TEAM MEMBER AND NUMBER: *Charles Hill, Team 73*

DATE RECEIVED (EPA): *10/31/86* RD BRANCH CHIEF INITIALS:

CHECK APPLICABLE BOX:

Adverse 6(a)(2) Data (405,406) Product Specific Data (Reregistration) (655,656)

Suspect Data (415,416) Generic Data (Reregistration) (660,661) *Refer to Tox review dated 12/10/86*

IBT Data (485,486) Special Review Data (870,871)

NUMBER OF INDIVIDUAL STUDIES SUBMITTED: _____

HAVE ANY OF THE ABOVE STUDIES (in whole or in part) BEEN PREVIOUSLY SUBMITTED FOR REVIEW? (circle: yes or no) If yes, please identify the study(ies):

LATED ACTIONS:

INSTRUCTIONS: *New acute data reviewed by Tox Sigals. Get it rather than get it done w/ toxicity. Please reconsider the following:*

- Are residue intervals required for farmworkers/manipulative workers?*
- Is a 14-day swimming period interval still required?*
- Are protective clothing in standard need to be revised?*

TO BE COMPLETED BY RSRB

DATE SENT TO HED/BUD/TSS: *12-16-86*

PRIORITY NUMBER: *50*

PROJECTED RETURN DATE: *2-13-87*

DATE RETURNED TO RD (HED/BUD/TSS PROVIDE):

REVIEWS SENT TO:

HED: SIS TB RCB EAB EEB RD: TSS BUD: EAB SSB

ATTN: Paul Mastrolone, Jim Adams, Kent Luchini

TO:	TYPE OF REVIEW	NUMBER OF ACTIONS		
		Reregistration	Special Review	Other
	Toxicology			
	Ecological Effects			
	Residue Chemistry			
	<input checked="" type="checkbox"/> Exposure Assessment	1		
	Product Chemistry			
	Efficacy			
	Precautionary Labeling/Acute Tox.			
	Science Support			
	Economic Analysis			

FOR DATA SUBMITTED UNDER A REGISTRATION STANDARD: Review Submission Criteria

Policy Note #31

1 = data which meet 6(a)(2) or meet 3(c)(2)(B) flagging criteria

2 = data of particular concern

3 = data necessary to determine tiered testing requirements

NOTE TO TSS: Return 1 Copy To RSRB

INCLUDE AN ORIGINAL AND FOUR (4) COPIES OF THIS COMPLETED FORM FOR EACH BRANCH CHECKED FOR REVIEW.

REGISTRATION DIVISION DATA REVIEW RECORD
 -TO BE USED FOR REVIEW OF STUDIES PPA ONLY-

(RED PROVIDE)
 PAGE No.:

Confidential Business Information—
 Does Not Contain National Security Info. (E.O. 12065)

LEGAL NAME: **DIQUAT DIBROMIDE**

(RD PROVIDE)
 SHAGNESSY NO.
 0320

Identifying Number	Action Code	Reference Number	Record Number	Study Guideline or Narrative Description	Reg. Std. Review Submission Criteria (SEE BELOW)	Accession Number	(RED/BUD/TSS Complete) Study found to be Acceptable (A)/ Unacceptable (U) for review or reviewer comment
392525	66D	6	191411	Glove Permeability	2	4006880	
				Spray Drift U	2	40064502	
				Droplet Spectrum	2	40064501	

PRODUCT MANAGER (PM) or REVIEW MANAGER (RM) AND NUMBER:

Richard Mountfort, PM 23

PM/RM TEAM MEMBER AND NUMBER:

Christene Rice, Team 23

DATE RECEIVED (EPA):

2/11/87

RD BRANCH CHIEF INITIALS:

[Signature]

CHECK APPLICABLE BOX:

- Adverse 6(a)(2) Data (405,406) Product Specific Data (Reregistration) (655,656)
 Suspect Data (415,416) Generic Data (Reregistration) (660,661)
 IBT Data (485,486) Special Review Data (870,871)

NUMBER OF INDIVIDUAL STUDIES SUBMITTED:

HAVE ANY OF THE ABOVE STUDIES (in whole or in part) BEEN PREVIOUSLY SUBMITTED FOR REVIEW? (circle: yes or no) If yes, please identify the study(ies):

TO BE COMPLETED BY RSEB

DATE SENT TO RED/BUD/TSS: **3-12-87**

PRIORITY NUMBER: **20**

PROJECTED RETURN DATE: **5-12-87**

DATE RETURNED TO RD (RED/BUD/TSS PROVIDE):

CAUSED ACTIONS:

Pending review on reentry/protection data

INSTRUCTIONS:

Please consider these in conjunction with pending review for 90-day response issues. The droplet spectrum study should be of concern to TOX since they are suggested to consider whether 21-day inhalation is required.

REVIEWERS SENT TO:

Attn: Paul Mastrorone, Kurt Lunclik

RED: SIS TB RCB EAB EEB

RD: TSS

BUD: EAB TSSB

TO:	TYPE OF REVIEW	NUMBER OF ACTIONS			FOR DATA SUBMITTED UNDER A REGISTRATION STANDARD: Review Submission Criteria
		Reregistration	Special Review	Other	
	Toxicology				Policy Note #31 1 = data which meet 6(a)(2) or meet 3(c)(2)(B) flagging criteria 2 = data of particular concern 3 = data necessary to determine tiered testing requirements NOTE TO TSS: Return 1 Copy To RSEB
	Ecological Effects				
	Residue Chemistry				
	Exposure Assessment	3			
	Product Chemistry				
	Efficacy				
	Precautionary Labeling/Acute Tox.				
	Science Support				
	Economic Analysis				

INCLUDE AN ORIGINAL AND FOUR (4) COPIES OF THIS COMPLETED FORM FOR EACH BRANCH CHECKED FOR REVIEW.

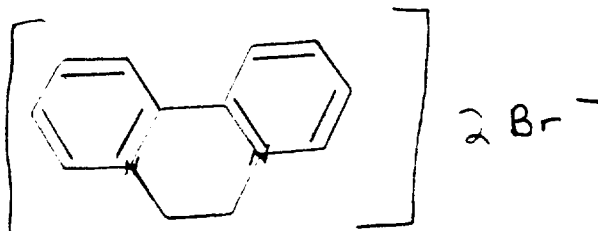
1. CHEMICAL: Common Name: Diquat

Chemical Name: 6,7-dihydrodipyrido (1,2-a:2', 1'-c) pyrazidiinium dibromide

Trade Name: Diquat Dibromide

Submitter: Chevron Chemical Company

Structure:



2. TEST MATERIAL: See individual study DER's for specifics.

3. STUDY /ACTION TYPE: Responses to registration standard: Glove permeability
Spray drift and questions on field dissipation study.

4. STUDY IDENTIFICATION:

All studies submitted by: Chevron Chemical Company, Richmond California

Iwamoto, R.H. 1987. Permiability of protective gear. Submitted in support of registration of Ortho Diquat concentrate.

Akesson, N.B. N. Raubach and R.E. Cowden. 1986. Diquat droplet size spectrum study. UC-Davis study #8700514. Submitted by Chevron Chemical Co. to fulfill registration standard requirements

Akesson, N.B. 1986. Field tests for application of diquat by aircraft UC-Davis study #8700442. Submitted by Chevron Chemical Co. to fulfill Registration standard requirement.

5. ASSEMBLED AND ENVIRONMENTAL FATE DATA REVIEWED BY:

Paul Mastradone, Ph.D
Chemist
EAB/HED/OPP

Signature:

Paul J. Mastradone

Date:

DEC 4 1987

6. ENVIRONMENTAL FATE REVIEW APPROVED BY:

Therese Dougherty^T, Chief
ECRS#1
EAB/HED/OPP

Signature:

Therese M. Dougherty

Date:

DEC 17 1987

7. CONCLUSIONS:

- A. This review contains several data submissions sent to the exposure assessment Branch for review. Because reviews from several sections and disciplines were combined on the Registration Review Data Record forms, this 12 point summary form combines these study reviews and a recent submission regarding a soil dissipation study to aid in final tracking of these submissions. Individual 12 point summary sheets accompany the spray drift and glove permeability studies. Conclusions for these are found in the individual reviews.
- B. EAB concurs with the registrant's request to limit the soil sampling depths in the soil dissipation studies with diquat as noted in the appended letter. This concurrence was conveyed from Dr. Holst to Mr. J. C. White on August 8, 1987.
- C. Reentry questions should be resubmitted to EAB as a separate review. Similarly, future data on spray drift and protective clothing should be separated from environmental fate data as the reviewers for these items are in separate sections of EAB.

8. RECOMMENDATIONS:

- A. The individual recommendations for the spray drift data and the glove permeability are noted in the individual reviews.
- B. EAB recommends that the registrant proceed with sampling as proposed in the appended letter.
- C. EAB recommends that future reviews for the various sections of the branch be forwarded as such. This will aid in tracking and determining whether all reviews are forwarded to appropriate reviewers.
- D. Reentry data included in this package should be submitted to EAB as a separate review item.

9. BACKGROUND:

- A. The data reviewed and the soil sampling scheme for the soil dissipation study discussed in these reviews is in response to the registration standard for diquat.

10. DISCUSSION OF INDIVIDUAL STUDIES:

See individual DER's

11. COMPLETION OF ONE LINER:

One liner not updated at this time.

12. CBI APPENDIX:

No CBI included in these reviews.