

US EPA ARCHIVE DOCUMENT

See 1 File

Shaughnessy No.: 035201

Date Out of EAB: DEC 18 1985

Signature: JML

To: WM. Miller
Product Manager # 16
Registration Division (TS-767C)

From: Emil Regelman, Acting Chief
Review Section 3
Exposure Assessment Branch
Hazard Evaluation Division (TS-769C)

Attached please find the EAB review of...

Reg./File# : 201-142

Chemical : Dicrctophos

Type Product: Insecticide

Product Name: Bidrin

Company Name: Shell Oil Co.

Purpose : Response to registration standard; request review of test protocols; request extension of time for data submission.

ACTION CODE(s): 352

EAB # (s): 6061

Date Received : 10/22/85

TAIS Code: 44

Date Completed: 12-17-85

Total Reviewing Time: 1.5 Day

Monitoring requested : _____

Monitoring voluntarily Done: _____

Deferrals To:

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

12263
10/22/85

REGISTRATION DIVISION DATA REVIEW RECORD

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

1. CHEMICAL NAME
Dicortophos

2. IDENTIFYING NUMBER <i>201-142</i>	3. ACTION CODE <i>352</i>	4. ACCESSION NUMBER	TO BE COMPLETED BY PM
			5. RECORD NUMBER <i>160598</i>
			6. REFERENCE NUMBER <i>8</i>
<i>note to EAB: This involves response to Registration Std. Please write to Hudson Boyd as he reviewed the Std. A copy of our 9/10/85 response to Shell 8/8 letter is attached.</i>			7. DATE RECEIVED (EPA) <i>10/16/85</i>
			8. STATUTORY DUE DATE
			9. PRODUCT MANAGER (PM) <i>M. H. P. L. man</i>
			10. PM TEAM NUMBER <i>16</i>

14. CHECK IF APPLICABLE

<input type="checkbox"/> Public Health/Quarantine	<input type="checkbox"/> Minor Use	<input checked="" type="checkbox"/> Protocol	TO BE COMPLETED BY PCB
<input type="checkbox"/> Substitute Chemical	<input type="checkbox"/> Part of IPM	<i>All</i>	11. DATE SENT TO HED/TSS <i>10-22-85</i>
<input type="checkbox"/> Seasonal Concern	<input type="checkbox"/> Review Requires Less Than 4 Hours		12. PRIORITY NUMBER <i>49</i>
			13. PROJECTED RETURN DATE <i>11-22-85</i>

15. INSTRUCTIONS TO REVIEWER

A. HED Total Assessment - 3(c)(5)
 Incremental Risk Assessment - 3(c)(7) and/or E.L. Johnson memo of May 12, 1977.

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

C. BFSD
D. TSS/RD
E. Other

F. INSTRUCTIONS
Shell proposes that certain environmental fate studies be conducted under natural, rather than lab, conditions. Shell also maintains that results of soil metabolism studies are needed prior to

16. RELATED ACTIONS
*Design of the field dissipation study.
Do you agree with Shell's proposals and protocols?*

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 BFSD

19. To	TYPE OF REVIEW	NUMBER OF ACTIONS							
		Registration	Petition	EUP	SLN	Sec. 18	Inert	MNR. USE	Other
HED	TOXICOLOGY								
	ECOLOGICAL EFFECTS								
	RESIDUE CHEMISTRY								
	<input checked="" type="checkbox"/> ENVIRONMENTAL DATA								<i>Protocol</i>
RD/TSS	CHEMISTRY								
	EFFICACY								
	PRECAUTIONARY LABELING								
BFSD	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.
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1. CHEMICAL:

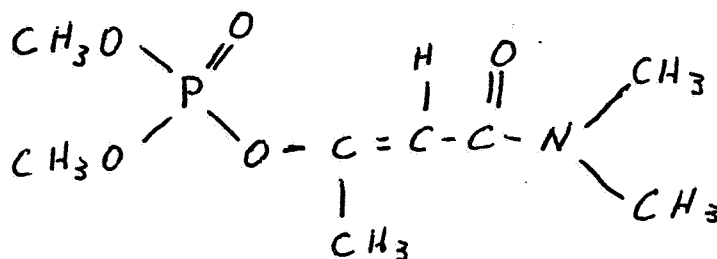
Common Name: Dicrotophos (BSI, ISO)

Chemical Name: Dimethyl cis - 2 - dimethyl - carbamoyl - 1 - methylvinyl phosphate.

Dimethyl phosphate ester of 3 - hydroxy-N, N-dimethyl-cis - crotonamide.

Trade Name: Bidrin, Carbicron, Ektafos, SD 3562

Structure:



FORMULATIONS:

7.5 and 8.0 lb. a.i./gal soluble concentrate/liquids (SC/L) and 86% a.i. ready to use (RTU). The SC/L formulations are applied by aerial or ground equipment and the RTU formulation is applied to ornamental trees by a specialized trunk injector.

2. TEST MATERIAL:

No tests were conducted.

3. STUDY ACTION TYPE:

Registrant requests:

- An extension of time to perform required tests.
- Permission to conduct certain tests under natural rather than laboratory conditions.
- Review and approval/disapproval of proposed test protocols.

4. STUDY IDENTIFICATION:

- Letter dated 10/15/85 advising that ¹⁴C-N N-dimethyl acetoacetamide, a precursor for the radiosynthesis of ¹⁴C-dicrotophos would not be available in time to complete the required environmental fate studies by the dates last specified by EPA. Letter also explained why the registrant prefers to conduct the tests under natural rather than artificial conditions.

b. Proposed protocols as follows:

No. PPL-22-016-85. Aqueous hydrolysis of ^{14}C -SD 3562 (Dicotophos)

No. PPL-22-017-85. Aqueous photolysis of ^{14}C -SD 3562 (Dicotophos) under natural sunlight.

No. PPL-22-018-85. Photodegradation of ^{14}C -SD 3562 (Dicotophos) on soil surfaces under natural sunlight.

No. PPL-22-019-85. Aerobic soil metabolism of ^{14}C -SD 3562 (Dicotophos)

No. PPL-22-020-85. Anaerobic soil metabolism of ^{14}C -SD 3562 (Dicotophos)

No. PPL-22-021-85. No. PPL-22-021-85. Soil adsorption and desorption of ^{14}C -SD 33562 (Dicotophos).

No. PPL-22-022-85. Soil mobility of SD 3562 (Dicotophos) and its soil degrades.

5.0 REVIEWED BY:

Hudson Boyd
Chemist, Review Section #3
EAB/HED/OPP

Signature: Hudson L Boyd

Date: 12-17-85

6.0 APPROVED BY:

Emil Regelman
Acting Chief
Review Section #3
EAB/HED/OPP

Signature: Emil Regelman

Date: DEC 18 1985

7.0 CONCLUSION:

7.1 No test data were submitted from which to draw conclusions.

7.2 With the exception of proposed protocol No. PPL-22-017-85, Aqueous Photolysis of ^{14}C -SD 3562 (Dicotophos) under Natural Sunlight, the protocols are acceptable.

8.0 RECOMMENDATIONS:

8.1 Deny the request for time extensions.

Registrant has known of requirements for over 3 years.

8.2 Approve all protocols except PPL-22-017-85

8.3 Allow the registrant to perform the aqueous photodegradation study in natural sunlight provided means are established to maintain a constant temperature of $25 \pm 1^\circ\text{C}$ and to prevent volatilization of the test material.

9.0 BACKGROUND:

9.1 The registration standard guidance package was prepared in April 1982 and a 3(c)(2)(B) letter issued June 30, 1982, stating test requirements. Subsequently the registrant requested and was granted certain waivers, VIZ., volatility (lab and field), long term soil dissipation, and field accumulation aquatic non-target species studies. In April 1983 a revised submitted due date was set forth by the EPA and restated to the registrant in June 1985.

9.2 The registrant has stated, as the rationale for conducting studies under natural rather than laboratory conditions that their experience with tests for the environmental fate of other organophosphate compounds shows that natural conditions are more rigorous, i.e., produce more rapid decomposition, shorter residual half-life, and more extensive degradation.

10. DISCUSSION OF INDIVIDUAL TESTS OR RESULTS:

Without temperature controls, photosynthesis tests conducted on the roof of a building near Modesto, CA., as proposed by the registrant (PPL-22-017-85), could not define the kinetics of the reaction as required by the EPA Guidelines for Registration.

11. COMPLETION OF ONE LINER:

A one liner was not initiated.

12. CBI APPENDIX:

No CBI is involved, therefore, no appendix.