Sec. 1 Files

Shaughnessy No: 029001

EAB Logout Date: APR 14 1986

Init.: SMC

To: Ingrid Sunzenauer
Product Manager 28
Registration Division (TS-767)

From: Samuel M. Creeger, Chief SMC
Environmental Chemistry Review Section 1
Exposure Assessment Branch
Hazard Evaluation Division (TS-769C)

Attached, please find the EAB review of:

Reg./File No.: 464-511

Chemical: Telone

Type Product: Soil Fumigant

Product Name: Telone II; dichloropropene; 1,3-D

Company Name: Dow Chemical Company

Submission Purpose: Requested by RD for assessment of potential for ground water contamination.

Date In: 3-27-86 Action Code: 800

Date Completed: 4-14-86 EAB No.: 6471

	TAIS (Level II)	Days
Deferrals To:	65	0.5

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

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SPEC. REV.

REGISTRATION DIVISION DATA REVIEW RECORD

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

HED

1. CHEMICAL NAME: telone II

3/27/86

2. IDENTIFYING NUMBER	3. ACTION CODE	4. ACCESSION NUMBER	TO BE COMPLETED BY PM
029001	800	------	5. RECORD NUMBER 170332
			6. REFERENCE NUMBER
			7. DATE RECEIVED (EPA)
			8. STATUTORY DUE DATE
			9. PRODUCT MANAGER (PM) 28, sunzenauer
			10. PM TEAM NUMBER

14. CHECK IF APPLICABLE

- ☐ Public Health/Quarantine
- ☐ Minor Use
- ☐ Substitute Chemical
- ☐ Part of IPM
- ☐ Seasonal Concern
- ☐ Review Requires Less Than 4 Hours

AY

TO BE COMPLETED BY PCB

11. DATE SENT TO HED/TSS: 03/27/86

12. PRIORITY NUMBER

13. PROJECTED RETURN DATE

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

SRB would like EAB to assign someone to assess telone II's potential for gound water contamination. An assessment is needed for the policy group meeting, the RS, and the Special Review. THe assessment is needed mid-April.

16. RELATED ACTIONS

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								
HED		ECOLOGICAL EFFECTS								
HED		RESIDUE CHEMISTRY								
HED		ENVIRONMENTAL DATE X								X
RD/TSS		CHEMISTRY								
RD/TSS		EFFICACY								
RD/TSS		PRECAUTIONARY LABELING								
BFSD		ECONOMIC ANALYSIS								

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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 14 1986

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCE

MEMORANDUM

SUBJECT: Telone II - Potential for ground water contamination by.
RD Data Review Record No. 170332

FROM: Hudson L. Boyd, Chemist
Review Section #3
Exposure Assessment Branch
Hazard Evaluation Division (TS-769C)

THRU: Samuel M. Creeger, Supervisory Chemist
Review Section 1
Exposure Assessment Branch
Hazard Evaualation Division (TS-769C)

TO: Ingrid Sunzenauer
Product Manager #28
Registration Division (TS-767C)

Pursuent to your request dated March 27, 1986, we have reviewed the available information for Telone II and its potential for contamination of ground water. A summary of EAB's discussions and conclusions is as follows:

Telone: Discussion of ground water contamination potential for the Registration Standard.

Telone is applied at high application rates (up to at least 360 pounds per acre) by shank injection into the soil for nematode control. The technical chemical consists mostly of 1,3-dichloropropene (1,3-D) but also contains much smaller amounts of 1,2-dichloropropane (1,2-D) and other chlorinated materials. Given the high application rate, use of Telone can result in the introduction of substantial quantities of these other materials into the soil.

Registrants have not submitted acceptable studies on the hydrolysis, soil persistence or soil mobility of any of the components of Telone. However, there is a considerable body of information in the open scientific literature on 1,3-D and 1,2-D. Though not reviewed in depth for this Standard, this body of information

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suggests that 1,3-D does not have potential to reach ground water but that 1,2-dichloropropane does. A 1983 review of available information by the California State Water Resources Control Board surveyed findings of 1,2-D and 1,3-D in ground water in California and concluded that the many findings of 1,2-D in both shallow and deep wells through the State appeared to be related to agricultural use of nematocides. None of the sites which were positive for 1,2-D in this review showed detectable levels of 1,3-D. A more recent study reported in the open literature indicated that, even under the extremely vulnerable soil and aquifer conditions found on Long Island, detectable levels of 1,3-D and 1,2-D appeared only at an application rate of 170 pounds per acre; no materials were detected (less than 2 ppb) at the 115 pound-per-acre rate. 1,2-D but not 1,3-D has also been reported in ground water in New York and Maryland.

In spite of the one finding of 1,3-D under Long Island conditions, it appears that 1,3-D does not have significant potential to reach ground water; but 1,2-D clearly does. There are no data on the chemical properties or environmental fate, and no monitoring information available concerning the other components or degradates of Telone. (A related chemical, 1,2,3-trichloropropane (TCP), has leached to ground water in Hawaii, but it is not known whether a soil fumigant product was the source of the TCP). EAB thus cannot provide a more quantative estimate of the leaching potential or likely ground water contamination levels of any of the components of Telone.

To allow a valid assessment of the potential for ground water contamination by Telone, separate determinations of the chemical and physical properties (solubility, vapor pressure, and octanol-water partition coefficient) are needed in addition to the required environmental fate studies.

cc: David Severn
Stuart Cohen
Telone Registration Standard File