

US EPA ARCHIVE DOCUMENT

DP BARCODE: D215088

CASE: 015420
SUBMISSION: S485859

DATA PACKAGE RECORD
BEAN SHEET

DATE: 06/12/95
Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 405 6(A) (2) ADVERSE DATA
RANKING : 20 POINTS (B)
CHEMICALS: 059101 Chlorpyrifos (ANSI) 42.8000%

ID#: 062719-00047 DOW DURSBAN TC TERMITICIDE CONCENTRATE
COMPANY: 062719 DOWELANCO
PRODUCT MANAGER: 19 DENNIS EDWARDS, JR. 703-305-6386 ROOM: CM2 207
PM TEAM REVIEWER: CARL ANDREASEN 703-305-5417 ROOM: CM2 201
RECEIVED DATE: 04/06/95 DUE OUT DATE: 06/15/95

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 215088 EXPEDITE: N DATE SENT: 05/09/95 DATE RET.: / /
CHEMICAL: 059101 Chlorpyrifos (ANSI)
DP TYPE: 001 Submission Related Data Package

CSF: N LABEL: N

| ASSIGNED TO | DATE IN | DATE OUT | ADMIN DUE DATE: 11/09/95 |
|----------------|----------|----------|--------------------------|
| DIV : EFED | 05/11/95 | / / | NEGOT DATE: 11/09/95 |
| BRAN: EFGB | 05/18/95 | 06/09/95 | PROJ DATE: / / |
| SECT: GTS | 05/18/95 | 06/07/95 | |
| REVR : PHANNAN | 05/18/95 | 05/24/95 | |
| CONTR: | / / | / / | |

* * * DATA REVIEW INSTRUCTIONS * * *

"Chlorpyrifos (MRID# 43606701)/Please send up for non-expedited review with a 180 day duedate./Thanks/Liz" Adverse data--contamination of wells after treatment with termiticide.

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

| DP BC | BRANCH/SECTION | DATE OUT | DUE BACK | INS | CSF | LABEL |
|-------|----------------|----------|----------|-----|-----|-------|
|-------|----------------|----------|----------|-----|-----|-------|

DP BARCODE: D215087

CASE: 015420
SUBMISSION: S485861

DATA PACKAGE RECORD
BEAN SHEET

DATE: 06/12/95
Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 405 6(A)(2) ADVERSE DATA
RANKING : 20 POINTS (B)
CHEMICALS: 059101 Chlorpyrifos (ANSI) 42.8000%

ID#: 062719-00047 DOW DURSBAN TC TERMITICIDE CONCENTRATE
COMPANY: 062719 DOWELANCO
PRODUCT MANAGER: 19 DENNIS EDWARDS, JR. 703-305-6386 ROOM: CM2 207
PM TEAM REVIEWER: CARL ANDREASEN 703-305-5417 ROOM: CM2 201
RECEIVED DATE: 04/06/95 DUE OUT DATE: 06/15/95

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 215087 EXPEDITE: N DATE SENT: 05/09/95 DATE RET.: / /
CHEMICAL: 059101 Chlorpyrifos (ANSI)
DP TYPE: 001 Submission Related Data Package

CSF: N LABEL: N
ASSIGNED TO DATE IN DATE OUT ADMIN DUE DATE: 11/09/95
DIV : EFED 05/12/95 / / NEGOT DATE: 11/09/95
BRAN: EFGB 05/18/95 06/09/95 PROJ DATE: / /
SECT: GTS 05/18/95 06/07/95
REVR : PHANNAN 05/18/95 05/24/95
CONTR: / / / /

* * * DATA REVIEW INSTRUCTIONS * * *

"Chlorpyrifos (MRID# 43606601)/Please send up for non-expedited review with a 180 day due date./Thanks/Liz" Adverse data-- contamination of wells after treatment with termiticide.

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC BRANCH/SECTION DATE OUT DUE BACK INS CSF LABEL

2

Date Out: 6/12/95

Chemical Code: 059101
 DP Barcode: D215087 & 215088

ENVIRONMENTAL FATE AND GROUND WATER BRANCH

Review Action

To: Dennis Edwards, PM #19
 Special Review and Reregistration Division (7508W)

From: Elizabeth Behl, Head
 Ground Water Technology Section
 Environmental Fate & Ground Water Branch/EFED (7507C)

Thru: Henry Jacoby, Chief
 Environmental Fate & Ground Water Branch/EFED (7507C)

E. Behl

Henry Jacoby 6/9/95

Attached, please find the EFGWB review of...

| | | | |
|---------------|--|-------------|------------------|
| Common Name: | Chlorpyrifos | Trade name: | Dursban; Lorsban |
| Company Name: | DowElanco | | |
| ID #: | 062719-00047 | | |
| Purpose: | Response to detections of chlorpyrifos in Indiana, Tennessee, Alabama, and Pennsylvania. | | |

| | | | |
|---------------|--------------|-------------|--------------|
| Type Product: | Action Code: | EFGWB #(s): | Review Time: |
| Herbicide | 405 | - | 1.5 days |

**STATUS OF STUDIES IN THIS PACKAGE:
 REQUIREMENTS**

STATUS OF DATA

ADDRESSED IN THIS PACKAGE:

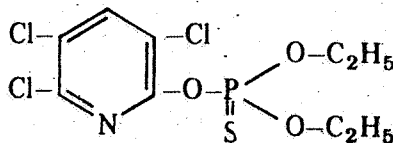
| Guideline # | MRID | Status ¹ |
|-------------|-------------------------|---------------------|
| None | 436066-01; 436067-01 | A |
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| Guideline # | Status ² |
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| None | S |
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1. CHEMICAL: Common name: Chlorpyrifos

Chemical name: O, O-diethyl-O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate

Structure:



2. TEST MATERIAL: N/A

3. STUDY/ACTION TYPE: 6(a)2 Action - Detection of chlorpyrifos in Indiana, Tennessee, Alabama, and Pennsylvania.

4. STUDY IDENTIFICATION: Letters from Ronald A. McCormick, Manager, Product Stewardship, DowElanco, to Office of Pesticide Programs, April 3, 1995.

5. REVIEWED BY: Patrick J. Hannan

Signature: *Patrick J. Hannan*

6. APPROVED BY: Elizabeth Behl, Head
OPP/EFED/EFGWB Ground Water Section

Signature: *EBehl*

7. CONCLUSIONS: Chlorpyrifos was found in a pond in Indiana at a concentration of 1,321 ppb; in a well in Tennessee, at 76 ppb; in a well in Alabama, at 56 ppb; and in a septic tank effluent pipe in Pennsylvania at 199 ppb.

8. RECOMMENDATIONS: Because the termiticide use of chlorpyrifos has resulted in numerous instances in which the levels of concern have been exceeded for ground water, EFGWB has recommended the following (EFGWB RED science chapter):

1. The registrant should propose label changes to prevent this contamination in the future. The registrant should revise the use pattern and/or the application rate to mitigate these concerns.

2. DowElanco's training program for pest control operators should be intensified to prevent further contamination of ground and surface water. This training should identify high risk areas and address methods for prevention, routine follow-up monitoring, and remediation.

3. Follow-up monitoring of ground and surface water in the vicinity of high-risk sites should be made mandatory because of the high levels of exposure that have been documented. The olfactory threshold described above and used by DowElanco in the past has not been an adequate alert for high chlorpyrifos residues in ground water. Residues in drinking water have been detected up to 70 times the one-day child health advisory, indicating that children could potentially be exposed to concentrations causing adverse effects.

4. There are significant differences between the two guidelines that DowElanco distributes to its personnel "to assist in contamination situations." The levels considered "acceptable" in drinking water supplies seem to vary depending on the manual that is distributed. It is important that DowElanco revise these manuals to ensure that they are internally consistent, and that they conform to the standards that the Agency finds adequate.

9. BACKGROUND: DowElanco received information regarding detections of chlorpyrifos in water following application of Dursban and/or Equity termiticides during the period of October 1, 1994, through March 31, 1995.

10. DISCUSSION: In the time frame of October 1 through December 31, 1994, there was a detection of chlorpyrifos in Pennsylvania; a sample taken from a septic line effluent pipe contained 199 ppb. This emptied into a stream which was sampled above and below the effluent pipe outlet; analyses of the stream showed a non-detectable amount above the outlet and < 1 ppb below the outlet.

From January 1 through March 31, 1995, three detections were noted. A pond in Indiana contained 1,321 ppb, a well in Tennessee contained 76 ppb, and a well in Alabama was found to have 56 ppb chlorpyrifos. The one-day HAL value of this compound for children is 30 ppb, and the lifetime HAL for adults is 20 ppb, so in all of the cases mentioned the concentrations exceeded the HAL.

Going back to 1992 there have been more than 35 incidents in which chlorpyrifos was detected in water, with concentrations ranging from 7 to >2000 ppb. In some of these cases there were also data to show that considerable periods of time were required for the concentrations to drop to non-detectable levels. In at least 7 cases more than two months were required for this abatement and the number is probably much higher than that because at least nine such cases were still ongoing at the time of the reporting.