



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

EFGWB # 91-0080  
DP BARCODE D157022  
Chemical Barcode # 814851  
Shaughnessy # 084301  
case # 2030

OFFICE OF  
PESTICIDES AND TOXIC  
SUBSTANCES

Jan 18, 1991

Revision of 11/29/90 Memo

MEMORANDUM

SUBJECT: Review of Phase IV Package for Benfluralin aka Benefin

TO: Amy Rispin, Chief  
Science Analysis and Coordination Staff  
Environmental Fate and Effects Division (H7507C)

FROM: E. Brinson Conerly, Chemist  
Environmental Fate and Ground Water Branch  
Environmental Fate and Effects Division (H7507C)

THRU: Hank Jacoby, Chief  
Environmental Fate and Ground Water Branch  
Environmental Fate and Effects Division (H7507C)

*EBC* 1/18/91

The Phase IV review package for Benfluralin (Benefin) was provided to EFGWB on 10/31/90. The package contained the following:

four studies, three of which appear to be new submissions and are currently in review. They are:

aqueous photolysis -- two studies; one previously reviewed, one new

soil photolysis

leaching and adsorption/desorption

two summaries of previously submitted studies:

hydrolysis -- there is a DER in EFGWB files. The study was declared to be acceptable. It should probably not have been accepted since it lacks degradate identification.

fish bioaccumulation -- no DER is on file. A waiver of this requirement was requested by the applicant, who acknowledged that there would be accumulation. This request was denied [SMC 9/5/85]. A study has been submitted and is in review.

There was no explicit description of the use pattern, but one study alludes to "agronomic crops and turf".

The LUIS report, received 11/26, indicates that the uses are terrestrial food, feed, and non-feed, including commercial, recreational, and domestic lawns and turf.

The current status of data requirements as related to the indicated uses is given in the attached table.

Chemical Code : 814851/2030, Shaughnessy # 084301  
Pesticide Type : Herbicide  
Uses: Terrestrial Food, Terrestrial Non-Food

Reviewer: E.8. Conerly  
Date: 11/30/90

	Submitted Studies/ Addendums	DER/Addendum Review/Summary Identification	DER/Addendum Review/Summary Review Conclusions	Additional Data/Info Required?
160-5. Chemical Identity				NO <sup>1</sup>
<u>DEGRADATION-LAB:</u>				
161-1. Hydrolysis	MRID 001488-74	EAB 5586 7/8/85 EBC 9/16/86	SATISFIED DNS/Salv/Supp	YES <sup>2</sup>
<u>Photodegradation:</u>				
161-2. In Water	MRID 415138-13 MRID 415138-14	EAB 80698 6/28/88	DNS/Salv/Supp REVIEWABLE	YES
161-3. On Soil	MRID 416138-15		REVIEWABLE	
161-4. In Air	none			no <sup>3</sup>
<u>METABOLISM-LAB:</u>				
162-1. Aerobic Soil	none			SWBSubmitted
162-2. Anaerobic Soil	none			SWBSubmitted
162-3. Anaerob. Aquat.	none			SWBSubmitted
<u>MOBILITY:</u>				
163-1. Leaching and Adsorp./Desorp.	MRID 416138-16		REVIEWABLE	
163-2. Volatil.(Lab)	none			no <sup>3</sup>
163-3. Volatil.(Field)	none			no
<u>DISSIPATION-FIELD:</u>				
164-1. Terrestr.(Soil)	none			SWBSubmitted
164-2. Aquat.(Sediment)	none			NA
164-3. Forestry	none			NA
164-4. Combin./Tank Mix	none			NA
164-5. Long Term Terr.	none			RESERVED <sup>4</sup>
164-5. Long Term Aqua.	none			NA

<sup>1</sup> The applicant stated in the submission that new studies on certain chemical data would be performed. However, the EFGWB one-liner presently contains all the required information (some apparently gleaned from reference publications).

<sup>2</sup> This study was originally accepted without degrade identification. If the applicant can provide acceptable supplemental information, this study would become acceptable. Otherwise, a new study is required.

<sup>3</sup> Vapor pressure is sufficiently low that this requirement is not applicable.

<sup>4</sup> Not currently being imposed.

	<u>Submitted Studies/ Addendums</u>	<u>DER/Addendum Review/Summary Identification</u>	<u>DER/Addendum Review/Summary Review Conclusions</u>	<u>Additional Data/Info Required?</u>
<u>ACCUMULATION STUDIES:</u>				
165-1. Conf. Rot. Crops	none			YES
165-2. Field Rot. Crops	none			RESERVED <sup>5</sup>
165-3. Irrigated Crops	none			NA
165-4. Fish (Lab)	MRID 402784-01	EAB 6123 12/27/85 and SMC memo 9/5/85		Study in review
165-5. Aqua. Non-target Organ.(Field)	none			RESERVED <sup>6</sup>
<u>SPRAY DRIFT:</u>				
201-1. Droplet Spect.	none			YES
202-1. Field Spray Drift Evaluation	none			YES
<u>GROUNDWATER MONITORING:</u>				
166-1. Small Prospect.	none			RESERVED <sup>7</sup>
166-2. Small Retrospect.	none			RESERVED <sup>8</sup>
166-3. Large Retrospect.	none			RESERVED <sup>9</sup>
<u>SURFACE WATER MONITORING:</u>				
167-1. Field Runoff	none			RESERVED <sup>10</sup>
167-2. Surface Water Monitoring	none			RESERVED <sup>11</sup>

<sup>5</sup> Required when confined rotational crop studies indicate uptake.

<sup>6</sup> Required when toxicity and other data, e.g. mobility and persistence, indicate the need.

<sup>7</sup> May be imposed if routine laboratory and field data indicate risk to ground water, or if contamination has been detected.

<sup>8</sup> May be imposed in routine laboratory and field data indicate risk to ground water, or if contamination has been detected.

<sup>9</sup> Required if small scale studies indicate the need.

<sup>10</sup> May be imposed if routine laboratory and field data indicate risk to surface water, or if contamination has been detected.

<sup>11</sup> May be imposed if routine laboratory and field data indicate risk to surface water, or if contamination has been detected.

KEY:

- 1) Addendum(EFGWB#/Date) = placed in the second column to indicate that a review (having the indicated EFGWB# and date) of the addendum identified by MRID# in the first column/same row is in the file.
- 2) DER(EFGWB#/Date) = placed in the second column to indicate that a data evaluation record for the study identified by MRID# in the first column/same row is in the file attached to a review with the indicated EFGWB# and date.
- 3) DNS/Salv./Supp. = placed in the third column to indicate that the study or addendum identified by MRID# in the first column/same row does not satisfy (DNS) the data requirement, but could possibly be salvageable (Salv.) to do so with the submission of additional information or limited data. The results of the study can be used for supplemental information (Supp.).
- 4) DNS/Salv./NSupp. = placed in the third column to indicate that the study or addendum identified by MRID# in the first column/same row does not satisfy (DNS) the data requirement, but could possibly be salvageable (Salv.) to do so with the submission of additional information or limited data. The results of the study should not be used for supplemental information (NSupp.).
- 5) DNS/NSalv./Supp. = placed in the third column to indicate that the study or addendum identified by MRID# in the first column/same row does not satisfy (DNS) the data requirement, does not appear to be salvageable (NSalv.) to do so with the submission of additional information or limited data. The results of the study can be used for supplemental information (Supp.).
- 6) DNS/NSalv./NSupp. = placed in the third column to indicate that the study or addendum identified by MRID# in the first column/same row does not satisfy (DNS) the data requirement, and does not appear to be salvageable (NSalv.) to do so with the submission of additional information or limited data. The results of the study should not be used for supplemental information (NSupp.).
- 7) DNPS/Salv./Supp. = placed in the third column to indicate that the study or addendum identified by MRID# in the first column/same row does not partially satisfy (DNPS) the data requirement, but could possibly be salvageable (Salv.) to do so with the submission of additional information or limited data. The results of the study can be used for supplemental information (Supp.).
- 8) DNPS/Salv./NSupp. = placed in the third column to indicate that the study or addendum identified by MRID# in the first column/same row does not partially satisfy (DNPS) the data requirement, but could possibly be salvageable (Salv.) to do so with the submission of additional information or limited data. The results of the study should not be used for supplemental information (NSupp.).
- 9) DNPS/NSalv./Supp. = placed in the third column to indicate that the study or addendum identified by MRID# in the first column/same row does not partially satisfy (DNPS) the data requirement and does not appear to be salvageable (NSalv.) to do so with the submission of additional information or limited data. The results of the study can be used for supplemental information (Supp.).
- 10) DNPS/NSalv./NSupp. = placed in the third column to indicate that the study or addendum identified by MRID# in the first column/same row does not partially satisfy (DNPS) the data requirement, and does not appear to be salvageable (NSalv.) to do so with the submission of additional information or limited data. The results of the study should not be used for supplemental information (NSupp.).
- 11) Dropped Uses(codes) = placed in the second column to indicate that there are no DERs or summaries available for the study identified by MRID# in the first column/same row, but that the registrant has indicated in their Phase III response that all uses for which the data requirement is applicable will be dropped. Verify through the LUIS report that the uses have been dropped.
- 12) MRID#/MRID#A = placed in the first column to indicate that the study and addendum (A) whose MRID#s immediately precede and succeed the "/", respectively, are coupled. If a MRID# was not assigned to the addendum, substitute the date of submission for the MRID# followed by an "A" to indicate that its an addendum. If neither a MRID# or submission date is available, but the addendum was submitted as part of the Phase III response, substitute "Phase IIIA" for "MRID#A".
- 13) NA = placed in last (4th) column to indicate that the data requirement is not applicable to the uses listed in the LUIS report.
- 14) No = placed in the final (4th) column to indicate that no additional information or data is needed to completely satisfy an applicable data requirement. Identify in a footnote any studies that individually only partially satisfied the data requirement, but combined completely satisfies

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the data requirement. If the data requirement is not applicable to any of the uses listed in the LUIS report, use the "NA" designation defined above instead of "No".

- 15) No Information = placed in the second column to indicate that no DER or summary is available for the study identified by MRID# in the first column/same row, and that the registrant has not indicated in their Phase III response that they will submit another study or will drop uses to make the data requirement not applicable.
- 16) None = placed in the first column to indicate that the registrant did not list any studies or addendums in their Phase II and/or III responses for the given data requirement. In addition, EFGWB has no record of any studies or study/addendum combinations satisfying or partially satisfying the data requirement.
- 17) Not Reviewable = placed in the third column to indicate that based upon a review of the summary identified by MRID# in the second column/same row, EFGWB concludes that the study identified by MRID# in the first column/same row will not satisfy or partially satisfy the data requirement and appears not to be salvageable to do so. Therefore, the study should not be reviewed.
- 18) Reviewable = placed in the third column to indicate that based upon a review of the summary identified by MRID# in the second column/same row, EFGWB concludes that the study identified by MRID# in the first column/same row may possibly satisfy or partially satisfy the data requirement, or could possibly be salvageable to do so. Therefore, the study should be reviewed.
- 19) Reserved = placed in the final (4th) column to indicate that the data requirement is being held in reserve. Indicate in a footnote what information is needed to decide whether or not to impose the data requirement.
- 20) SIReview = placed in the final (4th) column to indicate that one or more studies is currently in review.
- 21) Study Withdrawn = placed in the second column to indicate that there are no DERs or summaries available for the study identified by MRID# in the first column/same row, but that the registrant has indicated in their Phase III response that another study will be submitted.
- 22) Summary(MRID#) = placed in the second column to indicate that a DER is not available for the study identified by MRID# in the first column/same row, but that a study summary with the indicated MRID# was submitted as part of the Phase III response. If a summary is submitted for a study which also has a DER, identify the DER in the second column instead of the summary. (Note that the MRID# of the summary is not the same as the MRID# of the study it summarizes).
- 23) SWB Submitted = placed in the final (4th) column to indicate that one or more studies will be submitted by the registrant as indicated in their Phase III response.
- 24) Waived = placed in the final (4th) column to indicate that the data requirement has been waived. Identify the reason for the waiver and the EFGWB's/date of EFGWB's waiver recommendation in a footnote.
- 25) Yes = placed in the final (4th) column to indicate that additional information and/or data are needed to satisfy the data requirement. Specify in a footnote what additional information and/or data are needed.

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