

Appendix Q

Use Verification Correspondence

This Appendix consists of three components:

1. Use Verification Memo from SRRD and RD confirming the LUIS label analysis for trifluralin and adding any additional information to the LUIS summary (dated March 18, 2009).
2. Memo from EFED to SRRD, RD, and BEAD outlining modeling scenarios and application rates/timings proposed for use in this endangered species risk assessment. This memo requests a response to confirm that the enclosed scenarios would adequately encompass all labeled uses for California (dated June 8, 2009).
3. Responses from SRRD to EFED confirming proposed modeling scenarios (dated June 29, 2009 and July 1, 2009).

The use scenarios outlined in the EFED memo are those that were used with a few exceptions:

- The incorporated granular, ground applications for citrus, grape, fruit, tree nuts, onion, sugar beet and wheat were not modeled. In general, incorporating pesticides in soil decreases run-off and results in lower EECs. Also, granular applications for these scenarios are applied at equal or lower rates than EC applications resulting in lower EECs.
- The CA Residential scenario was inadvertently left out of Table 1 in the memo from EFED to SRRD, RD, and BEAD. The CA Residential scenario is modeled in the assessment.
- In the memo from EFED, it was stated that cole crops, corn, cucurbits, lettuce, potato and tomato scenarios would be modeled as both a liquid application with no soil incorporation and as granular with soil incorporation. After further label review, EFED determined the aforementioned crops should be modeled with soil incorporation regardless of formulation. Since maximum application rates were the same for liquid and granular formulations, liquid formulations were modeled because they experience greater spray drift than granular formulations, resulting in higher, and hence more conservative, EECs.



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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

PC Code: 036101

DATE: March 18, 2009

SUBJECT: Verification Memorandum for Trifluraline for Red Legged Frog Assessment

FROM: Jude Andreassen, Chemical Review Manager
Special Review Branch or Reregistration Branch # 1
Special Review & Reregistration Division (7508P)
AND
Phillip Errico, RLF Team Leader
Herbicide Branch, Registration Division (7505P)

Jude Andreassen

P. Errico

THRU: Thomas Moriarty, Team Leader
Special Review Branch or Reregistration Branch # 1
Special Review & Reregistration Division (7508P)

Thomas Moriarty

TO: Rafael Prieto
Usage and Label Use Team
Biological Economic and Analysis Division (7503P)

This memorandum serves to provide additional information on the use pattern of trifluralin not captured in the LUIS process. RD and SRRD's role in the verification process are to fill information gaps and provide division appropriate expertise as outlined in the LUIS Verification SOP for RD and SRRD.

SRRD provides information and status regarding changes to the chemical use (such as application parameters, cancellations, or label language) that occurred as a result of the reregistration process. RD provides information regarding changes to the chemical use that may have occurred after the date of the LUIS label extraction. In the case a "Data Doer Only"¹ report was conducted, the CRM and PM will ensure that all highest application rates are reflected on the EFED Spreadsheet. The CRM and PM have drafted the "Registration and Reregistration Verification" section of this memo to clarify knowledge gaps a risk assessor may encounter while using the data contained in the LUIS report.

Finally, if further clarification is needed please contact Rusty Wasem and Phil Errico.

¹ This type of LUIS report is conducted when the AI of interest has more than 50 products. This report will contain: 1. Products actively registered to the data doer; 2. All technical registrations regardless of registrant; 3. All active California special local needs (SLN) registrations.

Registration and Reregistration Verification

Date and Scope of the RED

- The RED for trifluralin was signed in April 1996. A Tolerance Reassessment Progress and Risk Management Decision (TRED) was completed on August 31, 2004.
- The trifluralin RED fate section stated that there are insufficient data on the major trifluralin degradates. Degradates were listed, but none of them were considered to be of toxicological concern.
- The human health and ecological risk assessments in the RED and TRED only assessed trifluralin per se.
- Trifluralin's RED and TRED only covered trifluralin (PC 036101, CAS 1582-09-8)

Required Through the RED Process

- There were no cancelled uses in the reregistration process, and all uses were determined to be eligible for reregistration.
- There were no rate changes that occurred as part of the reregistration process.

Required label language:

- The following language was required through the RED process:
 - "This product may cause skin sensitization reactions in some people."
 - For all end-use products: "This pesticide is extremely toxic to freshwater marine and estuarine fish and aquatic invertebrates, including shrimp and oyster. Do not apply in a manner which will directly expose canals, lakes, streams, ponds, marshes, or estuaries to aerial drift. Do not contaminate water when disposing of equipment washwaters."
 - For non-homeowner products: "Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark."
 - For homeowner products: "Do not apply directly to water."
 - The RED required a 12-hour Restricted-Entry Interval (REI) for agricultural end-use products that are not soil-incorporated.
 - For non-WPS occupational and residential uses, label directions requiring waiting until sprays dried or dusts settled.

- Spray Drift Language for each product that can be applied aerially (Does not apply to forestry applications, public health uses or to applications using dry formulations):
 - The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
 - Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
- Mitigation has been implemented on the labels.

Product Reregistration

- Product Reregistration for trifluralin was completed in 2006, and all labels have been approved by the registration division.

Status of BEAD's LUIS Report

- A data doer report was conducted for trifluralin.² The entire set of trifluralin products registered by the main data doer/technical grade AI (TGAI) producing registrant for trifluralin, DOW Agrosiences (EPA Co. #62719), are included in the LUIS report for trifluralin. In addition, all of the technical trifluralin products registered by the three other TGAI producing registrants for trifluralin, AGAN (EPA Co. #11603), Industria Prodotti Chimici (EPA Co. #33660), and Atanor S.A. (EPA Co. #46146) are also included in the LUIS report for trifluralin. All of the California Section 24(c) registrations for trifluralin are also included in the LUIS report. It is unlikely that a rate, use, or formulation exists on the market that is not supported by one of the data doing or TGAI producing registrant. Therefore SRRD believes all highest application rates, uses, and formulations are reflected in the LUIS report.
- All approved formulations of trifluralin are included in the LUIS report and this has been verified by checking against the RED for all approved formulations.

Registration Division Review

- No new actions have occurred since the PRD Date that impact the use or application of the active ingredient (including new uses, deletion of uses, changes to application parameters, etc.).
- No application rates have changed since the RED.
- There are no pending new uses for triflurallin.

² "Data Doer" LUIS reports are partial LUIS reports conducted when the AI of interest has more than 50 products. This LUIS report at a minimum will contain data for the said AI on all section 3 registrations for technical grade/manufacturing use products, all section 3 registrations held by the primary data doer, and all state specific Section 24(c) registrations for any registrant. Depending on the number of product registrations held by the primary data doer, the LUIS report may include the data from the products of any registrant holding a Section 3 registration to produce a technical grade/manufacturing use product.



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

OFFICE OF PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

036101

June 8, 2009

MEMORANDUM

SUBJECT: Confirmation of California modeling scenarios for trifluralin assessment

FROM: Christine Hartless, Wildlife Biologist
Marie Janson, Environmental Scientist
Robert A. Miller, Environmental Protection Specialist
Nancy Andrews, Branch Chief
ERB1, Environmental Fate and Effects Division (7507P)

[Handwritten signatures: Christine Hartless, Marie Janson, Robert A. Miller, Nancy Andrews]

TO: Jude Andreassen, Chemical Review Manager
Special Review Branch or Reregistration Branch # 1
Review & Reregistration Division (7508)

Phillip Errico, RLF Team Leader
Herbicide Branch, Registration Division (7505P)

Rafael Prieto
Usage and Label Use Team
Biological Economic and Analysis Division (7503P)

For trifluralin, EFED has received and reviewed the LUIS report from BEAD (run date March 24, 2009) and the verification memo from SRRD and RD (signed March 18, 2009) in preparation for conducting an endangered species risk assessment in response to two legal actions: *Center for Biological Diversity (CBD) vs. EPA et al.* (Case No. 02-1580-JSW(JL)) and (*Center for Biological Diversity (CBD) vs. EPA et al.* (Case No. 07-2794-JCS)).

EFED has prepared a set of scenarios for use in estimating environmental concentrations of trifluralin as a result of product application (Table 1) based on information provided in the LUIS report, the verification memo, and additional sources (e.g., California PUR data, crop profiles).

Please confirm that this summary table adequately represents the labeled uses of trifluralin in California. We would appreciate a response no later than June 30, 2009, in

order for us to complete our risk assessment on time. If EFED does not receive a response by June 30, 2009, we will assume that this set of scenarios correctly characterizes the labeled uses of trifluralin in California.

Table 1. Trifluralin Uses Proposed to be Assessed in California							
General crop category (date of first application, mm/dd) ⁴	Representative Crops	Formulation ¹	Application Method	Soil Incorporation (Y/N) ⁵	Maximum Single Application Rate	Max Number of Applications per Year (Minimum Interval)	Representative label
<i>Orchard Uses</i>							
Avocado (03/01)	Avocado	G ¹	Ground	N	4.0	3 ² (60)	Snapshot 2.5 TG 062719-00175
Citrus (03/01)	Grapefruit, lemon, orange, tangelo, tangerine	G	Ground	N	4.0	3 ² (60)	Snapshot 2.5 TG 062719-00175
		EC	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan HFP 062719-00250
Grapes and berries (03/01)	Blackberry, blueberry, boysenberry, currant, dewberry, elderberry, gooseberry, grapes, kiwi fruit, loganberry, mulberry, raspberry (black, red)	G	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
		G	Ground	N	4.0	3 ² (60)	Snapshot 2.5 TG 062719-00175
Grapes (03/01)	Grapes	EC	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan HFP 062719-00250
		G	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
Olive (03/01)	Olive	G	Ground	N	4.0	3 ² (60)	Snapshot 2.5 TG 062719-00175
Stone and pome fruit (03/01)	Apples, apricot, cherry, fig, fruits unspecified, nectarine, peach, pear, plum, pomegranate, prune	G	Ground	N	4.0	3 ² (60)	Snapshot 2.5 TG 062719-00175
		EC	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan HFP 062719-00250
		G	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131

Table 1. Trifluralin Uses Proposed to be Assessed in California							
General crop category (date of first application, mm/dd) ⁴	Representative Crops	Formulation ¹	Application Method	Soil Incorporation (Y/N) ⁵	Maximum Single Application Rate	Max Number of Applications per Year (Minimum Interval)	Representative label
Tree nuts (01/01)	Almond, filbert, macadamia, pecan, pistachio, tree nuts, (English/black) walnut	G	Ground	N	4.0	3 ² (60)	Showcase 062719-00516
		EC	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan HFP 062719-00250
		G	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131

Table 1. Trifluralin Uses Proposed to be Assessed in California							
General crop category (date of first application, mm/dd) ⁴	Representative Crops	Formulation ¹	Application Method	Soil Incorporation (Y/N)	Maximum Single Application Rate	Max Number of Applications per Year (Minimum Interval)	Representative label
<i>Agricultural Uses</i>							
Alfalfa (03/15)	Alfalfa, clover	G	Aerial Ground	Y	2.0	2 (60)	Treflan TR-10 Granules 062719-00131
		EC	Aerial Ground	N	2.0	1 ³ (NA)	Treflan HFP 062719-00250
Cole Crop (Broccoli, brussels spouts, collards, crambe, kale, kohlrabi, lesquerella, mustard, canola/rape) (03/01)	Broccoli, brussels spouts, collards, crambe, kale, kohlrabi, lesquerella, mustard, canola/rape	G	Aerial Ground	Y	1.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
Corn (Corn field, kenaf, sunflower) (09/05)	Corn (Corn field, kenaf, sunflower)	G	Aerial Ground	Y	1.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
Curcubits and melons (Melons, cantaloup, cucumber, watermelons) (11/20)	Curcubits and melons (Melons, cantaloup, cucumber, watermelons)	G	Aerial Ground	Y	1.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
Lettuce (Chicory, endive) (04/01)	Lettuce (Chicory, endive)	G	Aerial Ground	Y	1.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
Potato (white/Irish, turnip) (09/05)	Potato (white/Irish, turnip)	G	Aerial Ground	Y	1.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
Tomato (Eggplant, tomato, okra) (04/20)	Tomato (Eggplant, tomato, okra)	G	Aerial Ground	Y	1.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
Cotton (01/01)	Cotton	EC	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan HFP 062719-00250

Table 1. Trifluralin Uses Proposed to be Assessed in California							
General crop category (date of first application, mm/dd) ⁴	Representative Crops	Formulation ¹	Application Method	Soil Incorporation (Y/N)	Maximum Single Application Rate	Max Number of Applications per Year (Minimum Interval)	Representative label
		G	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
Onion (11/01)	Onion (dry bulb) Radish, onion (dry bulb)	G	Aerial Ground	Y	0.6	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
		EC	Aerial Ground	Y	0.8	1 ³ (NA)	Treflan HFP 062719-00250
		G	Ground	N	2.0	1 ³ (NA)	Turf Fertilizer – contains Team Pro 0.86% 062719-00289
Rangeland Hay (03/01)	Bermuda grass for seed, pastureland, sudan grass	EC	Aerial Ground	Y	0.8	1 ³ (NA)	Treflan HFP 062719-00250
Sugar Beet (05/15)	Sugar beet	G	Aerial Ground	Y	0.8	1 ² (NA)	Treflan TR-10 Granules 062719-00131
		EC	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan HFP 062719-00250
		G	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
Row Crop (05/15)	Asparagus, beans succulent (lima), beans (mung), beans succulent (snap), carrot, celery, guar, lupine, lentil, peas(southern), peas (succulent), pepper, sugar cane	EC	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan HFP 062719-00250
		G	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan TR-10 Granules 062719-00131


Table 1. Trifluralin Uses Proposed to be Assessed in California							
General crop category (date of first application, mm/dd) ⁴	Representative Crops	Formulation ¹	Application Method	Soil Incorporation (Y/N)	Maximum Single Application Rate	Max Number of Applications per Year (Minimum Interval)	Representative label
Wheat (12/15)	Barley, flax, safflower, sorghum, unspecified grains, wheat	EC	Aerial	Y	1.3	1 ³ (NA)	Treflan HFP 062719-00250
		G	Ground	Y	1.3	1 ³ (NA)	Treflan TR-10 Granules 062719-00131
Non-agricultural Uses							
Nursery (01/01)	Ornamental and/or shade trees, ornamental ground cover, ornamental herbaceous plants, greenhouse, ornamental lawns and turf, ornamental non-flowering plants, ornamental woody shrubs and vines	G	Ground	N	4.0	3 (60)	Snapshot 2.5 TG 062719-00175
		EC	Ground	N	4.0	3 ² (60)	Treflan EC 062719-00097
Right-of-way (03/01)	Fencerows, hedgerows, industrial areas, paved areas, private roads/sidewalks, uncultivated areas/soils, outdoor buildings	G	Ground	N	4.0	3 ² (60)	Showcase 062719-00516

Table 1. Trifluralin Uses Proposed to be Assessed in California							
General crop category (date of first application, mm/dd) ⁴	Representative Crops	Formulation ¹	Application Method	Soil Incorporation (Y/N)	Maximum Single Application Rate	Max Number of Applications per Year (Minimum Interval)	Representative label
Turf (03/01)	Golf course turf, recreational, residential lawns, commercial/industrial lawns	G	Ground	N	1.5	2 (60)	Turf Fertilizer – contains Team Pro 0.86% 062719-00289
Forestry (01/01)	Christmas tree plantations	G	Ground	N	4.0	3 ² (60)	Showcase 062719-00516
	Cottonwood (forest/shelterbelt), poplar	EC	Aerial Ground	Y	2.0	1 ³ (NA)	Treflan HFP 062719-00250
¹ EC = Emulsifiable Concentrate, G = Granular							
² Maximum number of applications per year is not specified on label or in LUIS Report. For this assessment it is assumed that a maximum of 3 applications of 4 lbs ai at a minimum of 60 day intervals is applied. This application rate is comparable to numerous annual maximum application rates for granular nursery and orchard uses.							
³ The LUIS Report listed many of the number of applications per year and maximum lbs ai per year as NA (not available). EFED looked at the representative label (next column) and inferred that a single application per crop cycle was intended as a specific time in the growing cycle of the crop was provided for trifluralin application.							
⁴ First application dates are estimated based on analysis of the California PUR database, crop profiles, and general knowledge about California cropping patterns.							
⁵ Y – Soil incorporation is required within 24 hours. N soil incorporation is greater than 24 hours or not at all.							

From: John Pates/DC/USEPA/US
To: Christine Hartless/DC/USEPA/US@EPA, Marie
Janson/DC/USEPA/US@EPA, Robert Miller/DC/USEPA/US@EPA

Date: Monday, June 29, 2009 04:00PM

Subject: trifluralin

History:  This message has been replied to and forwarded.

To All,

This email is in response to your memo dated June 8, 2009 regarding confirmation of the California modeling scenarios for conducting an endangered species risk assessment for trifluralin. After reviewing the information presented in the memo, it's my understanding that the summary table adequately represents the labeled uses of trifluralin in California. If I hear anything contrary to this, then I will notify you ASAP.

Thanks

John W. Pates, Jr.
Chemical Review Manager
Office of Pesticide Programs
Special Review and Reregistration Division
Reregistration Branch I

ONE POTOMAC YARD
2777 South Crystal Drive
Arlington, VA 22202
(703)308-8195

From: Christine Hartless/DC/USEPA/US
To: John Pates/DC/USEPA/US@EPA
cc: Marie Janson/DC/USEPA/US@EPA, Robert Miller/DC/USEPA/US@EPA

Date: Wednesday, July 01, 2009 10:33AM
Subject: Re: trifluralin: CA modeling scenarios

thanks for the update....

Christine Steible Hartless, Wildlife Biologist
 Environmental Fate and Effects Division
 Office of Pesticide Programs, U.S. EPA
 Phone: 703-305-5636

▼ John Pates---07/01/2009 08:57:54 AM---HI Everyone, Regarding my last email (6/29) on trifluralin, I'd like to add the following informatio

From: John Pates/DC/USEPA/US
To: Christine Hartless/DC/USEPA/US@EPA, Marie Janson/DC/USEPA/US@EPA, Robert Miller/DC/USEPA/US@EPA
Date: 07/01/2009 08:57 AM
Subject: trifluralin: CA modeling scenarios

HI Everyone,

Regarding my last email (6/29) on trifluralin, I'd like to add the following information that I just received.

There is no tolerance for trifluralin in/on raspberries, either alone or as part of any crop grouping. A tolerance may be established either on raspberries, or as part of the crop groups, Crop Group 13. Berries Group, or Crop Group 13-07. Berry and Small Fruit Crop Group. There are no other crop groups containing raspberries at the present time.

John W. Pates, Jr.
 Chemical Review Manager
 Office of Pesticide Programs
 Special Review and Reregistration Division
 Reregistration Branch I

ONE POTOMAC YARD
2777 South Crystal Drive
Arlington, VA 22202
(703)308-8195