9-14-94

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

SEP 14 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: **Trifluralin Reregistration.** Clarification of magnitude of the residue sample storage information requirement.
CBRS No.: None
DP Barcode No.: D207243
MRID No.: None
Chemical No.: 036101
Reregistration Case No.: 0179

Bonnie Cropp-Kohlligian

FROM: Bonnie Cropp-Kohlligian, Environmental Scientist
Reregistration Section I
Chemistry Branch II: Reregistration Support
Health Effects Division [7509C]

THRU: Paula A. Deschamp, Section Head
Reregistration Section I
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TO: Walter Waldrop/ Connie Childress [PM-71]
Reregistration Branch
Special Review and Reregistration Division [7508W]

The Trifluralin Reregistration Standard Science Chapter dated 7/12/85 and the Trifluralin Product and Residue Reregistration Update completed 10/29/91 required sample storage information to validate existing crop field trial and processing data. These magnitude of the residue data comprise a substantial portion of the total magnitude of the residue data base available for tolerance and risk assessments and are primarily from older studies conducted ca.

20-30 years ago. This additional required information remains outstanding. Receipt of this storage information is vital to tolerance reassessment and would dramatically increase our confidence with respect to risk assessment.

In preparation of the Residue Chemistry Chapter for the Trifluralin Reregistration Eligibility Decision (RED) Document, CBRS has prepared a very detailed summary of the magnitude of the residue data/submissions for which sample storage intervals and/or conditions information is/are required (see Appendix I). The registrant should submit the required sample storage information along with sufficient raw data or other evidence to substantiate the information. CBRS notes that since some of the available storage stability data reviewed in the Trifluralin Update (10/29/91) demonstrated the effects of elevated temperatures (4°C to room temperature) on trifluralin residues in/on stored "nonperishable" commodities (dried beans, field corn grain, cottonseed, flax seed, peanut nutmeats and hulls, soybeans, sunflower seeds, and wheat straw and grain), there is a distinct possibility that "nonperishable" magnitude of the residue test samples may have been stored under similar conditions/intervals. Information concerning any magnitude of the residue test samples which may have been stored at temperatures above freezing is of particular concern since available storage stability data indicate the potential for trifluralin residue instability in these cases and the need to correct for trifluralin residue decline during sample storage.

CBRS recommends that this review should be forwarded to the registrant in its entirety.

cc: BLCKohlligian (CBRS), Trifluralin Reg. Std. File, Trifluralin Update File, Trifluralin SF, RF, Circulate.

RDI: PDeschamp:9/8/94 MMetzger:9/12/94 EZager:9/12/94

7509C:CBRS:BLCKohlligian:CM#2:Rm 805B:703-305-7462:9/7/94.

2

APPENDIX I. SUMMARY OF AVAILABLE TRIFLURALIN STORAGE STABILITY DATA. [Note: **Bolded** references were reviewed in the Trifluralin Residue Chemistry Science Chapter of the Registration Standard dated 7/12/85 and denote those magnitude of the residue studies for which sample storage conditions/intervals information is required.]

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Alfalfa forage and hay	**00093637, 00105691, and 00105726**	3-215; NS [a]
	00143667 00155395	26; frozen 211; frozen
	42466001-42466008	9-238 (forage); ≤-6 C 15-210 (hay); ≤-6 C
Alfalfa seed	42466001-42466008	135-155; ≤-6 C
Almond	**00105675** **00105726**	4-127; NS NS
Apricots	**00105675 and 00105677**	24-130; NS
Asparagus	**00105696** **00105702**	NS NS
Barley forage and straw	**00070736** **00105704**	NS NS
Barley, grain	**00070736** **00105704**	NS NS
Beans, dry	**00022376** **00105669** **00105726**	NS NS NS
Beans (including Adzuki, guar, and mung)	None; residue data from dry beans were translated.	
Beans (including lima)	**00033086** **00105669** **00105726**	NS frozen; NS NS
Beans (including snap)	00022376 **00033086** 00057547 **00105669**	4; frozen NS 489-500; frozen NS
Beans, forage and hay	**00022376** **00105669**	NS NS
Broccoli	**00105650 and 00105749**	7-133; NS
Brussels sprouts	**00105749**	7 or 112; NS
Cabbage	**00105650 and 00105749**	8-91; NS

(continued; footnotes follow)

APPENDIX I (*continued*).

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Cantaloupe	**00093555 and 00105726**	5-145; NS
Carrots	**00093554** **00033087**	8-150; NS NS
Cauliflower	**00105749**	7-65; NS
Celery	**00093549** **00105670**	NS 4-133; NS
Cherries	42430803	165-225; ≤-10 C
Citrus fruits	**00105677**	3-76; NS
Collards	**00105724**	9-166; NS
Corn, forage and fodder	**00032811** **00105726** 42472301	NS NS 252-321 (forage); ≤-6 C 149-172 (fodder); ≤-6 C
Corn, grain	**00032811** **00105726**	NS NS
	42403201	550; 100 days at ≤-10 C and 450 days at ≤-20 C
	42448201	116-142; ≤-10 C
Corn, silage	42472301	129-185; ≤-6 C
Corn, processed fractions	42403201	450; ≤-20 C
Cottonseed	00093190	250; -23 C
	00105669 **00105713** **00105726** **00105729** **00105751** **00105780** **00105781**	9-560; NS
	00105731	51-197; NS
	42354501	243; ≤-20 C
Cottonseed, processed fractions (hulls, meal, soapstock, crude oil, and refined oil)	42354501	177-331; ≤-20 C
Cucumber	**00093555**	7-107; NS
Flax seed	**00084581**	NS
Garlic	**00105678**	29-630; NS
Grapes	**00105678**	5-149; NS

(continued; footnotes follow)

APPENDIX I (*continued*).

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Grapes, processed fractions (raisins)	**00105678**	NS
Hops, green	**00105678**	68-162; NS
Kale	**00105724**	107-172; NS
Mustard greens	**00105724**	107-171; NS
Mustard, seed	**00067371**	NS
	42430801	270; ≤-10 C
Nectarines	None; residue data from apricots and peaches were translated.	
Okra	**00105669**	NS
Onions, dry bulb	**00120263**	NS
Onions, green	42448202	25-212; ≤-10 C
Oranges	42642601	304; -20 C
Orange, processed fractions (dried pulp, wet peel, molasses, oil, and juice)	42642601	303-367; -20 C
Peaches	**00105675 and 00105667**	6-148; NS
Peanuts, nutmeats, hay, and hulls	**00026049**	170-202; NS
	00059531	18-72; NS
	00067222	NS
	00105646	31-86; NS
	42430804	213; ≤-10 C
Peanuts, vines and hay	42472302	109-131 (hay); ≤-18 C 112-245 (vines); ≤-18 C
Peanuts, processed fractions (hulls, meal, soapstock, crude oil, and refined oil)	42430804	89-258; ≤-10 C
Peas, field	**00105669**	NS
Peas, succulent and dried	**00105669** **00105755**	NS NS
Peas, vines	**00105669**	NS
Pecans	**00105675**	4-127; NS
Peppermint	**00105683**	69-227; NS
Peppers	**00105750**	9-50; NS
Plums	**00105675 and 00105735**	9-270; NS

(continued; footnotes follow)

5

APPENDIX I (*continued*).

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Potatoes	**00022257** **00093574** **00105733** **00105734** **00133939**	4-507; NS (except four samples described as frozen)
Potatoes, processed fractions	42514501	Potato samples for processing were stored in a potato cellar for 40 days. [b]
Rape seed	00047639	≈300; frozen
Safflower seed	**00067371**	NS
	00105726 **00105750**	30-90; NS
Sorghum, forage and fodder	**00105704**	NS
Sorghum, grain	**00105704** **00105726** 42325001	NS NS 187; ≤-20 C
Sorghum, processed fractions (flour and starch)	42325001	113-119; ≤-20 C
Soybeans	00022793	3-4; frozen
	00030932	NS
	00067433	NS; frozen
	00094410	NS; frozen
	00096361	NS
	00104423	NS
	00105655	NS
	00105669	NS
	00105717	NS
	00105720	NS
	00105725	NS
	00105746	NS
	00124904	NS
	00128308	NS
	42448203	175; ≤-20 C

(continued; footnotes follow)

APPENDIX I (*continued*).

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Soybeans, forage, hay, and straw	00022793	3-4; frozen with dry ice
	00030932	NS
	00067433	NS
	00096361	NS
	00105720	NS
Soybeans, processed fractions (hulls, meal, grain dust, soapstock, crude oil, and refined oil)	42448203	243; ≤-10 C
Spearmint	**00105683**	70-213; NS
Squash, summer	42354502	146-210; ≤-15 C
Sugar beets, roots	**00057546**	NS
	00105648	NS
	00105666	NS
	00105757	NS
	42448204	97; ≤-10 C
Sugar beets, tops	**00057546**	NS
	00105648	NS
	00105666	NS
	00105757	NS
Sugarcane	**00105668**	10-100; NS
	00105730	NS
	00105674	NS
	00105727	6-50; NS
	41306701	80; frozen
Sunflower seeds	**00057545**	137-614; NS
	00067371	NS
	00067430	106-219; -30 C
	00105673	30-58; NS
	42430805	195; ≤-10 C
Sunflower, processed fractions	42430805	141-317; ≤-10 C
Tomatoes	**00105710**	127-162; NS
	00105726	9-77; NS
	00105750	9-77; NS
Turnip greens	**00105724**	NS
Turnips, roots	None; residue data from radishes and sugar beets were translated.	
Walnuts	**00105675**	4-127; NS
Watermelon	**00105670**	34-145; NS
Wheat forage and straw	**00070736**	NS
	00105681	126-190; NS (forage)
		41-239; NS (straw)

(continued; footnotes follow)

APPENDIX I (*continued*).

Commodity	Field Trial/Processing Study	
	MRID	Range of Storage Interval (days); Conditions
Wheat grain	**00070736** **00105681** **00105726** 42430806	NS 41-239; NS NS 234; ≤-10 C
Wheat, processed fractions (bran, middlings, shorts, and flour)	42430806	192-202; ≤-10 C

[a] NS = not specified. Information pertaining to storage interval/condition is either missing or lacking from the Trifluralin Science Chapter, 7/12/85 or the Trifluralin Product and Residue Chemistry Reregistration Standard Updates, 10/29/91.

[b] Storage stability data were not submitted. However, potato processed commodities had been processed according to typical commercial practices and residue levels reported for processed commodities were considerably higher than the theoretical maximum concentration of residues in potato commodities.

8