US EPA ARCHIVE DOCUMENT

CASWELL FILE

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

MAR 12 1992

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM

SUBJECT: RfD Exceeders Project: Dietary Exposure Analysis of Naled Using Anticipated Residues

FROM: Stephen A. Schaible
Dietary Exposure Section
HED/SACB (H7509C)

TO: Jack Housenger, Acting Chief
Special Review Branch
Special Review and Reregistration Division (H7508W)

THROUGH: James P. Kariya, Chief
Dietary Exposure Section
Health Effects Division

As part of the RfD Exceeders Project, Dietary Exposure Section was requested by SRRD to conduct a DRES chronic analysis for exposure to naled from its registered uses, using anticipated residues generated by CBRS and percent of crop treated data supplied by BEAD.

Toxicological Endpoints

A reference dose (RfD) of 0.002 mg/kg body weight/day was used in this analysis, based on a no observed effect level (NOEL) of 0.20 mg/kg bwt/day and an uncertainty factor of 100. The RfD is based on a two year feeding study in rats which demonstrated as effects inhibition of brain cholinesterase and slight inhibition of red blood cell and plasma cholinesterase. This RfD has been approved by both HED (3/17/87) and Agency (4/15/87) reference dose committees.

Residue Information

Food uses considered in this analysis were the published uses of naled as listed in the 40 CFR 180.215. Percent crop treated information was supplied by BEAD in the form of an updated Table II-1 to the PQUA dated 10/18/91 (this updated table was not sent with the original memo). For the purpose of this analysis, the percent of crop treated value in the PQUA for the commodity "grapevine" was assumed to apply to the "grape" commodities in DRES and the PQUA listing of "cole crops" was assumed to correlate with the DRES crop group "Brassica leafy vegetables".

Anticipated residues used in the analysis were generated by CBRS (D. McNeilly memo dated 2/27/92). In the memo, residue

Printed on Recycled Paper

values were given for naled, its metabolite dichlorvos (DDVP), and the total residue (naled and DDVP) expressed as naled equivalents (DES used these values in the analysis). In many cases, expected residues after cooking were supplied by Chemistry Branch, based on information in the DDVP Reg. Std. suggesting that cooking reduces naled and DDVP residues by around 90% (D. McNeilly memo, 2/27/92). These residues were incorporated into the analysis where appropriate, and in cases where it was not clear whether a commodity had been cooked or not, the residue value for the raw commodity (the higher residue) was assumed.

Based on a tomato separation study and citrus processing information, CBRS assumed that there was no concentration of naled residues in processed commodities. Given this assumption, all concentration factors in DRES were turned off for this analysis. Other assumptions made in the analysis were that the residues reported for cattle meat, fat, and meat byproducts also applied to goat, hog, horse, and sheep, and that the residue reported for "celery, untrimmed" in the CBRS memo should be used in the DRES analysis for celery. A summary of the residue information used in this analysis is attached as Table 1.

DRES Analysis

The DRES routine chronic exposure analysis used percent crop treated information and anticipated residues to estimate the Anticipated Residue Contribution (ARC) for the overall U.S. population and 22 population subgroups. The ARC for the overall U.S. population from published tolerances is 0.000566 mg/kg bwt/day, which represents 28% of the RfD. Non-nursing infants less than one year old are the subgroup most highly exposed, and the only subgroup for which the exposure still exceeds the RfD. The ARC for this subgroup is 0.002523 mg/kg bwt/day, or 126% of the RfD. Peaches are the main contributor of risk to this subgroup, the ARC from use of naled on this commodity accounting for approximately 90% of the RfD. A summary of the TMRCs, the ARCs, and their representations as percentages of the RfD for the overall U.S. population and the 22 population subgroups is attached as Table 2.

Attachments

cc: DES, CBRS, P.Parsons, E.Budd, Caswell #586

TABLE 1

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 586 DATE: 03/02/92 PAGE: 1

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Naled (Dibrom) Caswell #586 CAS No. 300-76-5 A.I. CODE: 034401 CFR No. 180.215	2yr feeding- rat NOEL= 0.2000 mg/kg 0.00 ppm LEL= 2.0000 mg/kg 0.00 ppm ONCO: Negative- 2 species.	Doses by gavage. Inhibition of brain ChE, slight inhibition of RBC, plasma ChE at 10 mg/kg. No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.002000 EPA RfD= 0.002000	Developmental tox- rabbit (Core-Supplementary) UF of 100 due to brain ChE inhibition.	HED complete 05/19/86. EPA verified 07/22/86. HED reassess 03/17/87. EPA verified 04/15/87. On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
01014AA	GRAPES-FRESH	10 RAW-FRESH OR NFS		P 0.500000	0.020000		0.10	0.000020
01014AA	GRAPES-FRESH	21 COOKED-NFS		P 0.500000	0.020000		0.10	0.000020
01014AA	GRAPES-FRESH	31 COOKED-FRESH OR CANNED		P 0.500000	0.020000		0.10	0.000020
01014DA	GRAPES-RAISINS	10 RAW-FRESH OR NFS		P 0.500000	0.020000C		0.10	0.000020
01014DA	GRAPES-RAISINS	21 COOKED-NFS		P 0.500000	0.020000C		0.10	0.000020
01014DA	GRAPES-RAISINS	22 COOKED-FRESH-BAKED		P 0.500000	0.020000C		0.10	0.000020
01014JA	GRAPES-JUICE	10 RAW-FRESH OR NFS		P 0.500000	0.020000C		0.10	0.000020
01014JA	GRAPES-JUICE	15 RAW-FRESH OR CANNED		P 0.500000	0.020000C		0.10	0.000020
01014JA	GRAPES-JUICE	21 COOKED-NFS		P 0.500000	0.020000C		0.10	0.000020
01016AA	STRAWBERRIES	10 RAW-FRESH OR NFS		P 1.000000	0.260000		100.00	0.260000
01016AA	STRAWBERRIES	21 COOKED-NFS		P 1.000000	0.260000		100.00	0.260000
01016AA	STRAWBERRIES	70 RAW-FROZEN		P 1.000000	0.260000		100.00	0.260000
02002AA	GRAPEFRUIT-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	7F0532	P 3.000000	0.020000		0.10	0.000020
02002AB	GRAPEFRUIT-PULP	10 RAW-FRESH OR NFS	7F0532	P 3.000000	0.020000		0.10	0.000020
02002AB	GRAPEFRUIT-PULP	21 COOKED-NFS	7F0532	P 3.000000	0.020000		0.10	0.000020
02002JA	GRAPEFRUIT-JUICE	15 RAW-FRESH OR CANNED	7F0532	P 3.000000	0.020000C		0.10	0.000020
02002JA	GRAPEFRUIT-JUICE	31 COOKED-FRESH OR CANNED	7F0532	P 3.000000	0.020000C		0.10	0.000020
02004AA	LEMONS-UNSPEC	10 RAW-FRESH OR NFS	7F0532	P 3.000000	0.180000		0.10	0.000180
02004AA	LEMONS-UNSPEC	22 COOKED-FRESH-BAKED	7F0532	P 3.000000	0.180000		0.10	0.000180
02004AB	LEMONS-PULP	10 RAW-FRESH OR NFS	7F0532	P 3.000000	0.180000		0.10	0.000180
02004AB	LEMONS-PULP	31 COOKED-FRESH OR CANNED	7F0532	P 3.000000	0.180000		0.10	0.000180
02004HA	LEMONS-PEEL	10 RAW-FRESH OR NFS	7F0532	P 3.000000	0.180000		0.10	0.000180
02004HA	LEMONS-PEEL	21 COOKED-NFS	7F0532	P 3.000000	0.180000		0.10	0.000180
02004JA	LEMONS-JUICE	10 RAW-FRESH OR NFS	7F0532	P 3.000000	0.180000C		0.10	0.000180
02004JA	LEMONS-JUICE	15 RAW-FRESH OR CANNED	7F0532	P 3.000000	0.180000C		0.10	0.000180
02004JA	LEMONS-JUICE	21 COOKED-NFS	7F0532	P 3.000000	0.180000C		0.10	0.000180
02004JA	LEMONS-JUICE	31 COOKED-FRESH OR CANNED	7F0532	P 3.000000	0.180000C		0.10	0.000180
02006AA	ORANGES-UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	7F0532	P 3.000000	0.060000		0.10	0.000060
02006AB	ORANGES-PULP	10 RAW-FRESH OR NFS	7F0532	P 3.000000	0.060000		0.10	0.000060
02006AB	ORANGES-PULP	21 COOKED-NFS	7F0532	P 3.000000	0.060000		0.10	0.000060
02006HA	ORANGES-PEEL	21 COOKED-NFS	7F0532	P 3.000000	0.060000		0.10	0.000060
02006HA	ORANGES-PEEL	22 COOKED-FRESH-BAKED	7F0532	P 3.000000	0.060000		0.10	0.000060
02006HA	ORANGES-PEEL	31 COOKED-FRESH OR CANNED	7F0532	P 3.000000	0.060000		0.10	0.000060
02006JA	ORANGES-JUICE	15 RAW-FRESH OR CANNED	7F0532	P 3.000000	0.060000C		0.10	0.000060
02006JA	ORANGES-JUICE	31 COOKED-FRESH OR CANNED	7F0532	P 3.000000	0.060000C		0.10	0.000060
02008AA	TANGERINES	10 RAW-FRESH OR NFS	7F0532	P 3.000000	0.060000		0.10	0.000060
02008JA	TANGERINE-JUICE	15 RAW-FRESH OR CANNED	7F0532	P 3.000000	0.060000C		0.10	0.000060
03001AA	ALMONDS	10 RAW-FRESH OR NFS	5F1614	P 0.500000	0.040000		100.00	0.040000
03001AA	ALMONDS	21 COOKED-NFS	5F1614	P 0.500000	0.040000		100.00	0.040000
03001AA	ALMONDS	22 COOKED-FRESH-BAKED	5F1614	P 0.500000	0.040000		100.00	0.040000

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Naled (Dibrom) Caswell #586 CAS No. 300-76-5 A.I. CODE: 034401 CFR No. 180.215	2yr feeding- rat NOEL= 0.2000 mg/kg 0.00 ppm LEL= 2.0000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Doses by gavage. Inhibition of brain ChE, slight inhibition of RBC, plasma ChE at 10 mg/kg. No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.002000 EPA RfD= 0.002000	Developmental tox- rabbit (Core-Supplementary) UF of 100 due to brain ChE inhibition.	HED complete 05/19/86. EPA verified 07/22/86. HED reassess 03/17/87. EPA verified 04/15/87. On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
03009AA	WALNUTS	10 RAW-FRESH OR NFS		P 0.500000	0.020000		100.00	0.020000
03009AA	WALNUTS	21 COOKED-NFS		P 0.500000	0.020000		100.00	0.020000
03009AA	WALNUTS	22 COOKED-FRESH-BAKED		P 0.500000	0.020000		100.00	0.020000
05004AA	PEACHES-FRESH	10 RAW-FRESH OR NFS		P 0.500000	0.870000		100.00	0.870000
05004AA	PEACHES-FRESH	21 COOKED-NFS		P 0.500000	0.870000		100.00	0.870000
05004AA	PEACHES-FRESH	31 COOKED-FRESH OR CANNED		P 0.500000	0.870000		100.00	0.870000
05004AA	PEACHES-FRESH	51 COOKED-CANNED		P 0.500000	0.870000		100.00	0.870000
05004DA	PEACHES-DRIED	10 RAW-FRESH OR NFS		P 0.500000	0.870000C		100.00	0.870000
05004DA	PEACHES-DRIED	21 COOKED-NFS		P 0.500000	0.870000C		100.00	0.870000
08020AA	HOPS	21 COOKED-NFS		P 0.500000	0.008000		100.00	0.008000
10002AA	CANTALOUPES-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	7F0532	P 0.500000	0.050000		100.00	0.050000
10002AB	CANTALOUPES-PULP	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.050000		100.00	0.050000
10002AB	CANTALOUPES-PULP	21 COOKED-NFS	7F0532	P 0.500000	0.050000		100.00	0.050000
10003AA	CASABAS	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.050000		100.00	0.050000
10004AA	CRENSHAWS	00 NOT SPECIFIED (NO CONSUMPTION)	7F0532	P 0.500000	0.050000		100.00	0.050000
10005AA	HONEYDEW MELONS	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.050000		100.00	0.050000
10007AA	PERSION MELONS	00 NOT SPECIFIED (NO CONSUMPTION)	7F0532	P 0.500000	0.050000		100.00	0.050000
10008AA	WATERMELON	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.050000		100.00	0.050000
10008AA	WATERMELON	21 COOKED-NFS	7F0532	P 0.500000	0.050000		100.00	0.050000
10010AA	CUCUMBERS	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.100000		100.00	0.100000
10010AA	CUCUMBERS	11 RAW-FRESH-PICKLED,CORNED,OR CURED	7F0532	P 0.500000	0.100000		100.00	0.100000
10010AA	CUCUMBERS	21 COOKED-NFS	7F0532	P 0.500000	0.100000		100.00	0.100000
10011AA	PUMPKIN	21 COOKED-NFS	7F0532	P 0.500000	0.050000		100.00	0.050000
10011AA	PUMPKIN	22 COOKED-FRESH-BAKED	7F0532	P 0.500000	0.050000		100.00	0.050000
10011AA	PUMPKIN	62 COOKED-FRESH OR FROZEN-BAKED	7F0532	P 0.500000	0.050000		100.00	0.050000
10013AA	SQUASH-SUMMER	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.070000		100.00	0.070000
10013AA	SQUASH-SUMMER	21 COOKED-NFS	7F0532	P 0.500000	0.007000		100.00	0.007000
10014AA	SQUASH-WINTER	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.070000		100.00	0.070000
10014AA	SQUASH-WINTER	21 COOKED-NFS	7F0532	P 0.500000	0.007000		100.00	0.007000
10014AA	SQUASH-WINTER	31 COOKED-FRESH OR CANNED	7F0532	P 0.500000	0.007000		100.00	0.007000
11001AA	EGGPLANT	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.100000		100.00	0.100000
11001AA	EGGPLANT	21 COOKED-NFS	7F0532	P 0.500000	0.010000		100.00	0.010000
11001AA	EGGPLANT	25 COOKED-FRESH-FRIED	7F0532	P 0.500000	0.010000		100.00	0.010000
11003AA	PEPPERS,SWEET	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.100000		100.00	0.100000
11003AA	PEPPERS,SWEET	21 COOKED-NFS	7F0532	P 0.500000	0.010000		100.00	0.010000
11003AB	CHILI PEPPERS	00 NOT SPECIFIED (NO CONSUMPTION)	7F0532	P 0.500000	0.100000		100.00	0.100000
11003AD	PEPPERS-OTHER	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.100000		100.00	0.100000
11003AD	PEPPERS-OTHER	21 COOKED-NFS	7F0532	P 0.500000	0.010000		100.00	0.010000
11003AD	PEPPERS-OTHER	51 COOKED-CANNED	7F0532	P 0.500000	0.010000		100.00	0.010000
11004AA	PIMIENTOS	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.100000		100.00	0.100000

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Naled (Dibrom) Caswell #586 CAS No. 300-76-5 A.I. CODE: 034401 CFR No. 180.215	2yr feeding- rat NOEL= 0.2000 mg/kg 0:00 ppm LEL= 2.0000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Doses by gavage. Inhibition of brain ChE, slight inhibition of RBC, plasma ChE at 10 mg/kg. No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.002000 EPA RfD= 0.002000	Developmental tox- rabbit (Core-Supplementary) UF of 100 due to brain ChE inhibition.	HED complete 05/19/86. EPA verified 07/22/86. HED reassess 03/17/87. EPA verified 04/15/87. On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
11004AA	PIMIENTOS	21 COOKED-NFS	7F0532	P 0.500000	0.010000		100.00	0.010000
11004AA	PIMIENTOS	31 COOKED-FRESH OR CANNED	7F0532	P 0.500000	0.010000		100.00	0.010000
11005AA	TOMATOES-WHOLE	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.030000		100.00	0.030000
11005AA	TOMATOES-WHOLE	21 COOKED-NFS	7F0532	P 0.500000	0.003000		100.00	0.003000
11005AA	TOMATOES-WHOLE	31 COOKED-FRESH OR CANNED	7F0532	P 0.500000	0.003000		100.00	0.003000
11005JA	TOMATOES-JUICE	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.030000C		100.00	0.030000
11005JA	TOMATOES-JUICE	21 COOKED-NFS	7F0532	P 0.500000	0.003000C		100.00	0.003000
11005RA	TOMATOES-PUREE	10 RAW-FRESH OR NFS	7F0532	P 0.500000	0.030000C		100.00	0.030000
11005RA	TOMATOES-PUREE	21 COOKED-NFS	7F0532	P 0.500000	0.003000C		100.00	0.003000
11005RA	TOMATOES-PUREE	31 COOKED-FRESH OR CANNED	7F0532	P 0.500000	0.003000C		100.00	0.003000
11005RA	TOMATOES-PUREE	32 COOKED-FRESH OR CANNED-BAKED	7F0532	P 0.500000	0.003000C		100.00	0.003000
11005RA	TOMATOES-PUREE	51 COOKED-CANNED	7F0532	P 0.500000	0.003000C		100.00	0.003000
11005TA	TOMATOES-PASTE	21 COOKED-NFS	7F0532	P 0.500000	0.003000C		100.00	0.003000
11005TA	TOMATOES-PASTE	22 COOKED-FRESH-BAKED	7F0532	P 0.500000	0.003000C		100.00	0.003000
11005TA	TOMATOES-PASTE	31 COOKED-FRESH OR CANNED	7F0532	P 0.500000	0.003000C		100.00	0.003000
11005UA	TOMATOES-CATSUP	21 COOKED-NFS	7F0532	P 0.500000	0.003000C		100.00	0.003000
13002AA	CELERY	10 RAW-FRESH OR NFS		P 3.000000	0.570000		100.00	0.570000
13002AA	CELERY	21 COOKED-NFS		P 3.000000	0.060000		100.00	0.060000
13005AA	BROCCOLI	21 COOKED-NFS	7F0532	P 1.000000	0.010000		0.30	0.000030
13005AA	BROCCOLI	31 COOKED-FRESH OR CANNED	7F0532	P 1.000000	0.010000		0.30	0.000030
13005AA	BROCCOLI	63 COOKED-FRESH OR FROZEN-BOILED	7F0532	P 1.000000	0.010000		0.30	0.000030
13006AA	BRUSSEL SPROUTS	21 COOKED-NFS	7F0532	P 1.000000	0.010000		0.30	0.000030
13006AA	BRUSSEL SPROUTS	23 COOKED-FRESH-BOILED	7F0532	P 1.000000	0.010000		0.30	0.000030
13007AA	CABBAGE	10 RAW-FRESH OR NFS	7F0532	P 1.000000	0.090000		0.30	0.000270
13007AA	CABBAGE	11 RAW-FRESH-PICKLED,CORNED,OR CURED	7F0532	P 1.000000	0.090000		0.30	0.000270
13007AA	CABBAGE	21 COOKED-NFS	7F0532	P 1.000000	0.010000		0.30	0.000030
13008AA	CAULIFLOWER	10 RAW-FRESH OR NFS	7F0532	P 1.000000	0.090000		0.30	0.000270
13008AA	CAULIFLOWER	21 COOKED-NFS	7F0532	P 1.000000	0.010000		0.30	0.000030
13009AA	COLLARDS	51 COOKED-CANNED		P 3.000000	0.010000		0.30	0.000030
13009AA	COLLARDS	63 COOKED-FRESH OR FROZEN-BOILED		P 3.000000	0.010000		0.30	0.000030
13010AA	CABBAGE-CHINESE	10 RAW-FRESH OR NFS	7F0532	P 1.000000	0.090000		0.30	0.000270
13010AA	CABBAGE-CHINESE	21 COOKED-NFS	7F0532	P 1.000000	0.010000		0.30	0.000030
13011AA	KALE	63 COOKED-FRESH OR FROZEN-BOILED		P 3.000000	0.070000		0.30	0.000210
13013AA	LETTUCE-LEAFY	10 RAW-FRESH OR NFS	7F0532	P 1.000000	0.640000		100.00	0.640000
13016AA	FENNEL	00 NOT SPECIFIED (NO CONSUMPTION)		P 3.000000	0.570000		100.00	0.570000
13020AA	LETTUCE-UNSPEC	10 RAW-FRESH OR NFS	7F0532	P 1.000000	0.640000		100.00	0.640000
13024AA	SPINACH	10 RAW-FRESH OR NFS	7F0532	P 3.000000	0.300000		100.00	0.300000
13024AA	SPINACH	21 COOKED-NFS	7F0532	P 3.000000	0.030000		100.00	0.030000
13024AA	SPINACH	31 COOKED-FRESH OR CANNED	7F0532	P 3.000000	0.030000		100.00	0.030000
13025AA	SWISS CHARD	10 RAW-FRESH OR NFS	7F0532	P 3.000000	0.100000		100.00	0.100000

9

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Naled (Dibrom) Caswell #586 CAS No. 300-76-5 A.I. CODE: 034401 CFR No. 180.215	2yr feeding- rat NOEL= 0.2000 mg/kg 0.00 ppm LEL= 2.0000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Doses by gavage. Inhibition of brain ChE, slight inhibition of RBC, plasma ChE at 10 mg/kg. No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.002000 EPA RfD= 0.002000	Developmental tox- rabbit (Core-Supplementary) UI of 100 due to brain ChE inhibition.	HED complete 05/19/86. EPA verified 07/22/86. HED reassess 03/17/87. EPA verified 04/15/87. On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
13025AA	SWISS CHARD	31 COOKED-FRESH OR CANNED	7F0532	P 3.000000	0.100000		100.00	0.100000
13025AA	SWISS CHARD	63 COOKED-FRESH OR FROZEN-BOILED	7F0532	P 3.000000	0.100000		100.00	0.100000
13026AA	TURNIPS-TOPS	10 RAW-FRESH OR NFS	7F0532	P 3.000000	0.040000		100.00	0.040000
13026AA	TURNIPS-TOPS	21 COOKED-NFS	7F0532	P 3.000000	0.004000		100.00	0.004000
13026AA	TURNIPS-TOPS	31 COOKED-FRESH OR CANNED	7F0532	P 3.000000	0.004000		100.00	0.004000
13045AA	LETTUCE-HEAD	10 RAW-FRESH OR NFS	7F0532	P 1.000000	0.640000		100.00	0.640000
13045AA	LETTUCE-HEAD	21 COOKED-NFS	7F0532	P 1.000000	0.640000		100.00	0.640000
15001AA	BEANS-DRY-GRT NO	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.500000	0.050000		100.00	0.050000
15001AB	BEANS-DRY-KIDNEY	21 COOKED-NFS		P 0.500000	0.005000		100.00	0.005000
15001AB	BEANS-DRY-KIDNEY	31 COOKED-FRESH OR CANNED		P 0.500000	0.005000		100.00	0.005000
15001AC	BEANS-DRY-LIMA	21 COOKED-NFS		P 0.500000	0.005000		100.00	0.005000
15001AD	BEANS-DRY-NAVY	21 COOKED-NFS		P 0.500000	0.005000		100.00	0.005000
15001AD	BEANS-DRY-NAVY	31 COOKED-FRESH OR CANNED		P 0.500000	0.005000		100.00	0.005000
15001AE	BEANS-DRY-OTHER	21 COOKED-NFS		P 0.500000	0.005000		100.00	0.005000
15001AE	BEANS-DRY-OTHER	25 COOKED-FRESH-FRIED		P 0.500000	0.005000		100.00	0.005000
15001AE	BEANS-DRY-OTHER	31 COOKED-FRESH OR CANNED		P 0.500000	0.005000		100.00	0.005000
15001AF	BEANS-DRY-PINTO	21 COOKED-NFS		P 0.500000	0.005000		100.00	0.005000
15002AA	BEANS-SUCC-LIMA	10 RAW-FRESH OR NFS		P 0.500000	0.010000		100.00	0.010000
15002AA	BEANS-SUCC-LIMA	21 COOKED-NFS		P 0.500000	0.001000		100.00	0.001000
15003AA	BEANS-SUCC-GREEN	21 COOKED-NFS		P 0.500000	0.001000		100.00	0.001000
15003AB	BEANS-SUCC-OTH	10 RAW-FRESH OR NFS		P 0.500000	0.010000		100.00	0.010000
15003AB	BEANS-SUCC-OTH	21 COOKED-NFS		P 0.500000	0.001000		100.00	0.001000
15003AC	BEANS-SUCC-WAX	21 COOKED-NFS		P 0.500000	0.001000		100.00	0.001000
15009AA	PEAS SUCC-GARDEN	21 COOKED-NFS		P 0.500000	0.003000		100.00	0.003000
15009AA	PEAS SUCC-GARDEN	31 COOKED-FRESH OR CANNED		P 0.500000	0.003000		100.00	0.003000
15013AA	MUNG BEANS	10 RAW-FRESH OR NFS		P 0.500000	0.050000		100.00	0.050000
15013AA	MUNG BEANS	21 COOKED-NFS		P 0.500000	0.005000		100.00	0.005000
15022AA	BEANS-DRY-BROAD	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.500000	0.050000		100.00	0.050000
15022AB	BEANS-SUCC-BROAD	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.500000	0.010000		100.00	0.010000
15023AA	BEANS-DRY-PIGEON	21 COOKED-NFS		P 0.500000	0.005000		100.00	0.005000
15027AA	BEANS-UNSPEC	21 COOKED-NFS		P 0.500000	0.005000		100.00	0.005000
15030AA	BEANS-DRY-HYAC	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.500000	0.050000		100.00	0.050000
15030AB	BEANS-SUCC-HYAC	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.500000	0.010000		100.00	0.010000
15031AA	BLKEYE PEAS-DRY	21 COOKED-NFS		P 0.500000	0.005000		100.00	0.005000
15032AA	BEANS-DRY	21 COOKED-NFS		P 0.500000	0.005000		100.00	0.005000
15032AA	BEANS-DRY	31 COOKED-FRESH OR CANNED		P 0.500000	0.005000		100.00	0.005000
16003AA	MUSHROOMS	10 RAW-FRESH OR NFS	1E1100	P 0.500000	0.050000		100.00	0.050000
16003AA	MUSHROOMS	21 COOKED-NFS	1E1100	P 0.500000	0.050000		100.00	0.050000
16003AA	MUSHROOMS	31 COOKED-FRESH OR CANNED	1E1100	P 0.500000	0.050000		100.00	0.050000
16003AA	MUSHROOMS	53 COOKED-CANNED-BOILED	1E1100	P 0.500000	0.050000		100.00	0.050000

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 586 DATE: 03/02/92

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Naled (Dibrom) Caswell #586 CAS No. 300-76-5 A.I. CODE: 034401 CFR No. 180.215	2yr feeding- rat NOEL= 0.2000 mg/kg 0.00 ppm LEL= 2.0000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Doses by gavage. Inhibition of brain ChE, slight inhibition of RBC, plasma ChE at 10 mg/kg. No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.002000 EPA RfD= 0.002000	Developmental tox- rabbit (Core-Supplementary) UF of 100 due to brain ChE inhibition.	HED complete 05/19/86. EPA verified 07/22/86. HED reassess 03/17/87. EPA verified 04/15/87. On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
24004AA	RICE-ROUGH	21 COOKED-NFS	7F0532	P 0.500000	0.045000		100.00	0.045000
24004AA	RICE-ROUGH	23 COOKED-FRESH-BOILED	7F0532	P 0.500000	0.045000		100.00	0.045000
24004AB	RICE-MILLED	21 COOKED-NFS	7F0532	P 0.500000	0.045000		100.00	0.045000
24004AB	RICE-MILLED	22 COOKED-FRESH-BAKED	7F0532	P 0.500000	0.045000		100.00	0.045000
24004AB	RICE-MILLED	23 COOKED-FRESH-BOILED	7F0532	P 0.500000	0.045000		100.00	0.045000
24004AB	RICE-MILLED	31 COOKED-FRESH OR CANNED	7F0532	P 0.500000	0.045000		100.00	0.045000
25002SA	BEET SUGAR	10 RAW-FRESH OR NFS		P 0.500000	0.040000		100.00	0.040000
25002SA	BEET SUGAR	21 COOKED-NFS		P 0.500000	0.004000		100.00	0.004000
25002SA	BEET SUGAR	22 COOKED-FRESH-BAKED		P 0.500000	0.004000		100.00	0.004000
25002SA	BEET SUGAR	31 COOKED-FRESH OR CANNED		P 0.500000	0.004000		100.00	0.004000
27003OA	COTTONSEED-OIL	18 PROCESSED OIL	7F0532	P 0.500000	0.030000		100.00	0.030000
27003WA	COTTONSEED-MEAL	18 PROCESSED OIL	7F0532	P 0.500000	0.030000		100.00	0.030000
27008AA	SAFFLOWER-SEED	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.500000	0.040000		100.00	0.040000
27008OA	SAFFLOWER-OIL	18 PROCESSED OIL		P 0.500000	0.040000		100.00	0.040000
43058AA	WINE AND SHERRY	10 RAW-FRESH OR NFS		P 0.500000	0.020000		0.10	0.000020
43058AA	WINE AND SHERRY	21 COOKED-NFS		P 0.500000	0.020000		0.10	0.000020
50000DB	MILK-NON-FAT SOL	10 RAW-FRESH OR NFS		P 0.050000	0.014000		100.00	0.014000
50000DB	MILK-NON-FAT SOL	21 COOKED-NFS		P 0.050000	0.001400		100.00	0.001400
50000DB	MILK-NON-FAT SOL	51 COOKED-CANNED		P 0.050000	0.001400		100.00	0.001400
50000FA	MILK-FAT SOLIDS	10 RAW-FRESH OR NFS		P 0.050000	0.014000		100.00	0.014000
50000FA	MILK-FAT SOLIDS	21 COOKED-NFS		P 0.050000	0.001400		100.00	0.001400
50000FA	MILK-FAT SOLIDS	51 COOKED-CANNED		P 0.050000	0.001400		100.00	0.001400
50000SA	MILK SUG (LACT)	21 COOKED-NFS		P 0.050000	0.001400		100.00	0.001400
50000SA	MILK SUG (LACT)	51 COOKED-CANNED		P 0.050000	0.001400		100.00	0.001400
53001BA	BEEF-MEAT BYP	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53001BA	BEEF-MEAT BYP	26 COOKED-FRESH-PICKLED,CORNED,OR CURED		P 0.050000	0.013600		100.00	0.013600
53001BB	BEEF-OTH ORGAN	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53001BB	BEEF-OTH ORGAN	51 COOKED-CANNED		P 0.050000	0.013600		100.00	0.013600
53001DA	BEEF-DRIED	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53001FA	BEEF-FAT	10 RAW-FRESH OR NFS		P 0.050000	0.136000		100.00	0.136000
53001FA	BEEF-FAT	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53001FA	BEEF-FAT	22 COOKED-FRESH-BAKED		P 0.050000	0.013600		100.00	0.013600
53001FA	BEEF-FAT	23 COOKED-FRESH-BOILED		P 0.050000	0.013600		100.00	0.013600
53001FA	BEEF-FAT	24 COOKED-FRESH-BROILED		P 0.050000	0.013600		100.00	0.013600
53001FA	BEEF-FAT	25 COOKED-FRESH-FRIED		P 0.050000	0.013600		100.00	0.013600
53001KA	BEEF-KIDNEY	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53001LA	BEEF-LIVER	25 COOKED-FRESH-FRIED		P 0.050000	0.013600		100.00	0.013600
53001LA	BEEF-LIVER	31 COOKED-FRESH OR CANNED		P 0.050000	0.013600		100.00	0.013600
53001MA	BEEF-LEAN	10 RAW-FRESH OR NFS		P 0.050000	0.136000		100.00	0.136000
53001MA	BEEF-LEAN	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600

L4

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Naled (Dibrom) Caswell #586 CAS No. 300-76-5 A.I. CODE: 034401 CFR No. 180.215	2yr feeding- rat NOEL= 0.2000 mg/kg 0.00 ppm LEL= 2.0000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Doses by gavage. Inhibition of brain ChE, slight inhibition of RBC, plasma ChE at 10 mg/kg. No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.002000 EPA RfD= 0.002000	Developmental tox- rabbit (Core-Supplementary) UF of 100 due to brain ChE inhibition.	HED complete 05/19/86. EPA verified 07/22/86. HED reassess 03/17/87. EPA verified 04/15/87. On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
53001MA	BEEF-LEAN	22 COOKED-FRESH-BAKED		P 0.050000	0.013600		100.00	0.013600
53001MA	BEEF-LEAN	23 COOKED-FRESH-BOILED		P 0.050000	0.013600		100.00	0.013600
53001MA	BEEF-LEAN	24 COOKED-FRESH-BROILED		P 0.050000	0.013600		100.00	0.013600
53002BA	GOAT-MEAT BYP	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.050000	0.136000		100.00	0.136000
53002BB	GOAT-OTH ORGAN	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.050000	0.136000		100.00	0.136000
53002FA	GOAT-FAT	23 COOKED-FRESH-BOILED		P 0.050000	0.013600		100.00	0.013600
53002FA	GOAT-FAT	25 COOKED-FRESH-FRIED		P 0.050000	0.013600		100.00	0.013600
53002KA	GOAT-KIDNEY	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.050000	0.136000		100.00	0.136000
53002LA	GOAT-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.050000	0.136000		100.00	0.136000
53002MA	GOAT-LEAN	23 COOKED-FRESH-BOILED		P 0.050000	0.013600		100.00	0.013600
53002MA	GOAT-LEAN	25 COOKED-FRESH-FRIED		P 0.050000	0.013600		100.00	0.013600
53003AA	HORSE	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.050000	0.136000		100.00	0.136000
53005BA	SHEEP-MEAT BYP	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53005BB	SHEEP-OTH ORGAN	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53005FA	SHEEP-FAT	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53005KA	SHEEP-KIDNEY	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53005LA	SHEEP-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.050000	0.136000		100.00	0.136000
53005MA	SHEEP-LEAN	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53005MA	SHEEP-LEAN	31 COOKED-FRESH OR CANNED		P 0.050000	0.013600		100.00	0.013600
53006BA	PORK-MEAT BYP	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53006BB	PORK-OTH ORGAN	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53006BB	PORK-OTH ORGAN	26 COOKED-FRESH-PICKLED,CORNED,OR CURED		P 0.050000	0.013600		100.00	0.013600
53006FA	PORK-FAT	10 RAW-FRESH OR NFS		P 0.050000	0.136000		100.00	0.136000
53006FA	PORK-FAT	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53006FA	PORK-FAT	23 COOKED-FRESH-BOILED		P 0.050000	0.013600		100.00	0.013600
53006FA	PORK-FAT	25 COOKED-FRESH-FRIED		P 0.050000	0.013600		100.00	0.013600
53006FA	PORK-FAT	26 COOKED-FRESH-PICKLED,CORNED,OR CURED		P 0.050000	0.013600		100.00	0.013600
53006KA	PORK-KIDNEY	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53006LA	PORK-LIVER	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53006LA	PORK-LIVER	25 COOKED-FRESH-FRIED		P 0.050000	0.013600		100.00	0.013600
53006MA	PORK-LEAN	21 COOKED-NFS		P 0.050000	0.013600		100.00	0.013600
53006MA	PORK-LEAN	25 COOKED-FRESH-FRIED		P 0.050000	0.013600		100.00	0.013600
53006MA	PORK-LEAN	26 COOKED-FRESH-PICKLED,CORNED,OR CURED		P 0.050000	0.013600		100.00	0.013600
55008BA	TURKEY-BYP	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55008BA	TURKEY-BYP	26 COOKED-FRESH-PICKLED,CORNED,OR CURED		P 0.050000	0.003000		100.00	0.003000
55008LA	TURKEY ORGAN	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55008LA	TURKEY ORGAN	25 COOKED-FRESH-FRIED		P 0.050000	0.003000		100.00	0.003000
55008MA	TURKEY W/O SKIN	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55008MA	TURKEY W/O SKIN	31 COOKED-FRESH OR CANNED		P 0.050000	0.003000		100.00	0.003000
55008MA	TURKEY W/O SKIN	62 COOKED-FRESH OR FROZEN-BAKED		P 0.050000	0.003000		100.00	0.003000

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Naled (Dibrom) Caswell #586 CAS No. 300-76-5 A.I. CODE: 034401 CFR No. 180.215	2yr feeding- rat NOEL= 0.2000 mg/kg 0.00 ppm LEL= 2.0000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Doses by gavage. Inhibition of brain ChE, slight inhibition of RBC, plasma ChE at 10 mg/kg. No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.002000 EPA RfD= 0.002000	Developmental tox- rabbit (Core-Supplementary) UF of 100 due to brain ChE inhibition.	HED complete 05/19/86. EPA verified 07/22/86. HED reassess 03/17/87. EPA verified 04/15/87. On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
55008MB	TURKEY+SKIN	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55008MB	TURKEY+SKIN	25 COOKED-FRESH-FRIED		P 0.050000	0.003000		100.00	0.003000
55008MC	TURKEY-UNSPEC	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55013BA	POULTRY,OTH-BYP	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.050000	0.030000		100.00	0.030000
55013LA	POULTRY,ORGAN	25 COOKED-FRESH-FRIED		P 0.050000	0.003000		100.00	0.003000
55013MA	POULTRY,OTHER	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55014AA	EGGS-WHOLE	10 RAW-FRESH OR NFS		P 0.050000	0.030000		100.00	0.030000
55014AA	EGGS-WHOLE	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55014AA	EGGS-WHOLE	22 COOKED-FRESH-BAKED		P 0.050000	0.003000		100.00	0.003000
55014AA	EGGS-WHOLE	23 COOKED-FRESH-BOILED		P 0.050000	0.003000		100.00	0.003000
55014AA	EGGS-WHOLE	25 COOKED-FRESH-FRIED		P 0.050000	0.003000		100.00	0.003000
55014AB	EGGS-WHITE ONLY	10 RAW-FRESH OR NFS		P 0.050000	0.030000		100.00	0.030000
55014AB	EGGS-WHITE ONLY	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55014AB	EGGS-WHITE ONLY	22 COOKED-FRESH-BAKED		P 0.050000	0.003000		100.00	0.003000
55014AB	EGGS-WHITE ONLY	62 COOKED-FRESH OR FROZEN-BAKED		P 0.050000	0.003000		100.00	0.003000
55014AB	EGGS-WHITE ONLY	81 COOKED-FROZEN		P 0.050000	0.003000		100.00	0.003000
55014AC	EGGS-YOLK ONLY	10 RAW-FRESH OR NFS		P 0.050000	0.030000		100.00	0.030000
55014AC	EGGS-YOLK ONLY	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55014AC	EGGS-YOLK ONLY	25 COOKED-FRESH-FRIED		P 0.050000	0.003000		100.00	0.003000
55014AC	EGGS-YOLK ONLY	31 COOKED-FRESH OR CANNED		P 0.050000	0.003000		100.00	0.003000
55015BA	CHICKEN-BYP	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.050000	0.030000		100.00	0.030000
55015LA	CHICKEN-ORGAN	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55015LA	CHICKEN-ORGAN	25 COOKED-FRESH-FRIED		P 0.050000	0.003000		100.00	0.003000
55015LA	CHICKEN-ORGAN	26 COOKED-FRESH-PICKLED,CORNED,OR CURED		P 0.050000	0.003000		100.00	0.003000
55015MA	CHICKEN-W/O SKIN	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55015MA	CHICKEN-W/O SKIN	22 COOKED-FRESH-BAKED		P 0.050000	0.003000		100.00	0.003000
55015MA	CHICKEN-W/O SKIN	25 COOKED-FRESH-FRIED		P 0.050000	0.003000		100.00	0.003000
55015MA	CHICKEN-W/O SKIN	31 COOKED-FRESH OR CANNED		P 0.050000	0.003000		100.00	0.003000
55015MA	CHICKEN-W/O SKIN	53 COOKED-CANNED-BOILED		P 0.050000	0.003000		100.00	0.003000
55015MB	CHICKEN+SKIN	21 COOKED-NFS		P 0.050000	0.003000		100.00	0.003000
55015MB	CHICKEN+SKIN	25 COOKED-FRESH-FRIED		P 0.050000	0.003000		100.00	0.003000

TABLE 2

TOLERANCE ASSESSMENT SYSTEM ROU.... CHRONIC ANALYSIS

DATE: 03/02/92

CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Naled (Dibrom) Caswell #586 CAS No. 300-76-5 A.I. CODE: 034401 CFR No. 180.215	2yr feeding- rat NOEL= 0.2000 mg/kg 0.00 ppm LEL= 2.0000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Doses by gavage. Inhibition of brain ChE, slight inhibition of RBC, plasma ChE at 10 mg/kg. No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.002000 EPA RfD= 0.002000	Developmental tox- rabbit (Core-Supplementary) UF of 100 due to brain ChE inhibition.	HED complete 05/19/86. EPA verified 07/22/86. HED reassess 03/17/87. EPA verified 04/15/87. On IRIS.

POPULATION SUBGROUP	TOTAL TMRC (MG/KG BODY WEIGHT/DAY) CURRENT TMRC*	NEW TMRC**	NEW TMRC AS PERCENT OF RFD	DIFFERENCE AS PERCENT OF RFD	EFFECT OF ANTICIPATED RESIDUES ARC	%RFD
U.S. POPULATION - 48 STATES	0.010464	0.010464	523.179400	0.000000	0.000566	28.31825
U.S. POPULATION - SPRING SEASON	0.010478	0.010478	523.921950	0.000000	0.000575	28.76845
U.S. POPULATION - SUMMER SEASON	0.010048	0.010048	502.392600	0.000000	0.000707	35.32580
U.S. POPULATION - FALL SEASON	0.010485	0.010485	524.247350	0.000000	0.000483	24.15675
U.S. POPULATION - WINTER SEASON	0.010831	0.010831	541.566800	0.000000	0.000499	24.93620
NORTHEAST REGION	0.012565	0.012565	628.226200	0.000000	0.000600	30.00670
NORTH CENTRAL REGION	0.010251	0.010251	512.566250	0.000000	0.000580	28.98360
SOUTHERN REGION	0.008838	0.008838	441.892400	0.000000	0.000464	23.20870
WESTERN REGION	0.010745	0.010745	537.242100	0.000000	0.000676	33.79105
HISPANICS	0.013371	0.013371	668.553650	0.000000	0.000656	32.79120
NON-HISPANIC WHITES	0.010092	0.010092	504.620850	0.000000	0.000581	29.02520
NON-HISPANIC BLACKS	0.010973	0.010973	548.659300	0.000000	0.000423	21.12810
NON-HISPANIC OTHERS	0.014806	0.014806	740.318500	0.000000	0.000620	30.98890
NURSING INFANTS (< 1 YEAR OLD)	0.009590	0.009590	479.487650	0.000000	0.001305	65.25610
NON-NURSING INFANTS (< 1 YEAR OLD)	0.022845	0.022845	1142.246450	0.000000	0.002523	126.17195
FEMALES (13+ YEARS, PREGNANT)	0.008564	0.008564	428.175900	0.000000	0.000452	22.60910
FEMALES 13+ YEARS, NURSING	0.008802	0.008802	440.082000	0.000000	0.000554	27.70535
CHILDREN (1-6 YEARS OLD)	0.026015	0.026015	1300.766500	0.000000	0.001084	54.18805
CHILDREN (7-12 YEARS OLD)	0.015265	0.015265	763.271500	0.000000	0.000804	40.18960
MALES (13-19 YEARS OLD)	0.008995	0.008995	449.726000	0.000000	0.000478	23.90480
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)	0.008424	0.008424	421.201350	0.000000	0.000454	22.68975
MALES (20 YEARS AND OLDER)	0.006758	0.006758	337.924300	0.000000	0.000403	20.17450
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)	0.008130	0.008130	406.524400	0.000000	0.000456	22.79310

*Current TMRC does not include new or pending tolerances.
**New TMRC includes new, pending, and published tolerances.

6