28/APP#34211

[redacted]

24PP

DATE: September 8, 1999

SUBJECT: **TPTH: Revised Acute and Chronic (Non-Cancer and Cancer) Dietary Exposure Analyses for the HED Revised Risk Assessment.**
Chemical#: 083601. Case #: 0099. DP Barcode: D258010.

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THROUGH: Doug Dotson/Christina Swartz
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and

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TO: Loan Phan, Chemical Review Manager
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Action Requested

Acute probabilistic (Monte Carlo) and chronic (non-cancer and cancer) dietary exposure assessments were completed in conjunction with the HED preliminary risk assessment for the active ingredient triphenyltin hydroxide (TPTH) (S. Law, D254712-13, 4/14/99) on the following commodities: pecans, potatoes, sugar beets, meat and milk. Acute and chronic (non-cancer and cancer) dietary exposure and risk were above HED's level of concern (all population subgroups).

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Revised HED acute and chronic (non-cancer and cancer) dietary exposure estimates were required in concurrence with the review and evaluation of the registrant's submission of acute and chronic dietary exposure and risk analyses (S. Levy, D257154, 8/20/99, MRID #44852101). Furthermore, HED has revised the Residue Chemistry Chapter (C. Eiden, D255118, 08/25/99) in which new acute and chronic anticipated residues (ARs), processing factors and percent crop treated (%CT) information for meat and milk (See S. Levy, D257154, 8/20/99) were given. For comparison of dietary exposure, this memo shows the results from three acute and chronic (non-cancer and cancer) dietary exposure scenarios: 1) Dietary analyses which include all supported crops through reregistration, meat and milk; 2) Dietary analyses which include only meat and milk (sugar beets, pecans and potatoes are assumed to have zero residues, in accordance with TRAC policy paper #5, entitled "Assigning Values to Nondetected/Nonquantified Pesticide Residues in Human Health Dietary Exposure Assessments") and 3) Dietary analyses which include only pecans and potatoes (sugar beets, meat and milk, excluded).

Executive Summary

Acute and chronic (non-cancer and cancer) dietary exposure and risk estimates associated with the consumption of TPTH regulable residues representing the high-end (Tier I) of exposure in food (tolerance level residues without the use of %CT information) exceeded HED's level of concern for all population subgroups. Acute and chronic (non-cancer and cancer) dietary risk concerns prompted HED to conduct refined acute and chronic (non-cancer and cancer) dietary risk analyses for TPTH using the Dietary Exposure Evaluation Model (DEEM™).

Revised **acute** dietary exposure and risk are below HED's level of concern. At the 99.9th percentile exposure, the most highly exposed population subgroup in the first scenario was females 20+ years old, not pregnant, not nursing, with **34%** of the acute PAD (aPAD) consumed. In the second scenario that included only meat and milk, the most highly exposed population subgroup was females 20+ years old, not pregnant, not nursing, corresponding to **34%** aPAD. In the third scenario that excluded sugar beet commodities and meat and milk, the most highly exposed population subgroup was females 13-19 years old, not nursing, not pregnant, corresponding to **<1%** aPAD.

Revised **chronic (non-cancer)** dietary exposure and risk are below HED's level of concern. The most highly exposed population subgroup in the first scenario was children, 1-6 years old, with **4%** of the chronic PAD (cPAD) consumed. In the second scenario that included only meat and milk, the most highly exposed population subgroup was children 1-6 years old, corresponding to **4%** cPAD. In the third scenario that excluded sugar beet commodities and meat and milk, population subgroups consisting of children (1–12 years old) had exposures corresponding to **0.2%** cPAD. Exposure to infants corresponded to <0.1% cPAD.

In the first scenario, the carcinogenic risk estimate for TPTH is $\mathbf{1.1 \times 10^{-6}}$ for the general US population. In the second scenario which included only meat and milk, the carcinogenic risk estimate was $\mathbf{9.4 \times 10^{-7}}$ for the general US population. In the third scenario which excluded sugar

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beet commodities and meat and milk, the carcinogenic risk estimate was reduced to **8.7×10^{-8}** for the general US population.

Toxicological Information

For the acute dietary exposure risk assessment, the dose selected was the no observed adverse effect level (NOAEL) of 0.3 mg/kg/day; the uncertainty factor (UF) used to calculate the acute reference dose (RfD) was 100x. This included 10x for inter-species extrapolation and 10x for intra-species variation, resulting in an acute RfD of 0.003 mg/kg (See HIARC Document 11/13/98). **Females 13+ years old** is the population subgroup of concern for this risk assessment. The HED FQPA Safety Factor Committee has determined that the 10x FQPA Safety Factor should be **reduced to 3x** for acute dietary risk assessment for all populations that include infants and children. Application of the 3x FQPA Safety Factor resulted in the **acute Population Adjusted Dose (aPAD) of 0.001 mg/kg** for acute risk assessment (See FQPA Document, 12/17/98).

For the chronic (non-cancer) dietary exposure risk assessment, the dose selected was the NOAEL of 0.1 mg/kg/day; the UF used to calculate the chronic RfD was 300x. This included 10x for inter-species extrapolation, 10x for intra-species variation and an additional 3x for instability of the test material in the diet and potential for increased mortality near the LOAEL (LOAEL = 0.25 mg/kg/day). Application of these UFs results in a chronic RfD of 0.0003 mg/kg/day (See HIARC Document 11/13/98). The HED FQPA Safety Factor Assessment Review Committee determined that the additional **10x factor should be retained** for all populations which include infants and children. Application of the 10x FQPA Safety Factor resulted in the **chronic Population Adjusted Dose (cPAD) of 0.00003 mg/kg/day** for chronic dietary risk assessment (See FQPA Document, 12/17/98).

A cancer risk assessment is required for TPTH. The toxicology profile of TPTH demonstrates that TPTH is a B2 carcinogen with a cancer potency factor (Q_1^*) of 1.83 mg/kg/day^{-1} (Fisher and Pettigrew, 8/18/98, HED DOC. NO. 012819). See Table 1 for a summary of toxicological endpoints.

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Table #1: Summary of Toxicological Endpoints for TPTH.

EXPOSURE SCENARIO	DOSE (mg/kg/day)	ENDPOINT	STUDY
Acute Dietary	NOAEL= 0.3 mg/kg/day (100 UF) (3x FQPA)	Increased incidents of hyoid body and/or arches unossified in rabbit fetuses.	Oral Developmental toxicity - Rabbit (MRID No.: 40104801)
	Acute PAD = 0.001mg/kg for Females 13+		
	No acute oral endpoint identified for general population; risk assessment not required.		
Chronic Dietary	NOAEL= 0.1 mg/kg/day (300 UF) (10x FQPA)	Decreased white blood cells.	Chronic feeding study -Rat (Accession No.: 099050)
	Chronic PAD = 0.00003 mg/kg/day		
Carcinogenicity	Oral Q1* = 1.83 mg/kg/day $^{-1}$	TPTH is classified as a B2 Carcinogen - probable human carcinogen based on pituitary and testicular tumors in rats and liver tumors in mice.	

Residue Information

Tolerances for residues of TPTH are currently expressed in terms of TPTH *per se* (40 CFR §180.236). For purposes of tolerance enforcement, TPTH residues of concern in plant and livestock commodities have been determined to include TPTH and its regulable metabolites MPTH and DPTH (J. Doherty, PP#3F2823/FAB#3H5384, 10/28/83). Reregistration requirements for the magnitude of the residue in meat, milk, poultry and eggs are fulfilled. The livestock feed items used to estimate secondary residues in livestock commodities include sugar beet tops (beef cattle only), dried sugar beet pulp, sugar beet molasses, processed potato waste, and potato culls, where applicable for beef and dairy cattle in accordance with Table 1, OPPTS 860 Guidelines (August 1996).

Processing Studies

Data from a cooking study are available (C. Eiden, D255118, 8/25/99 MRID 41785204) pertaining to regulable residues of TPTH in/on fortified potato commodities prepared by domestic and commercial processes. Results for fried potatoes and chips were not reported. The following reduction factors were calculated: boiled potato without a peel = 0.004 X; boiled potato with a peel = 0.17 X (used for all boiled potato with peel food forms in these analyses); baked potato with a peel = 0.12 X (used for all baked potato with peel food forms in these analyses); and potato granules = 0.004 X. HED cannot confirm if residues in "baked potato without a peel" or "potato peel" concentrate or reduce. Therefore, a default value of 1 X was used for the "baked potato without a peel" and "potato peel, only" food forms in these analyses.

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Upon re-evaluation of the data (S. Levy, 08/20/99, D257154), the sugar beet processing study (MRID 41785203) was deemed unacceptable (1991 Reregistration Standard Update) and a new study was required. Nonetheless, the data on phenyltins indicate that residues reduce 0.14 X for molasses and reduce by 0.20 X for refined sugar beet sugar during processing. A new confirmatory study will be required.

Meat and Milk

The main livestock feed crop registered for TPTH is sugar beets. Sugar beet tops are removed from the root after harvesting and are left in the field until the field is plowed. During this time period, the sugar beet tops can be foraged by livestock.

There was disparity between HED's (previous assessment, S. Law, D254712-13, 4/14/99) and the registrant's dietary risk assessments. The preliminary judgement is that the greatest disparity between the two documents is not the toxicity endpoints used, but rather in how the feeding of sugar beet tops is addressed. HED's previous assessments assumed that all beet tops are fed to beef and dairy cattle and that this occurs for twelve months of the year.

The registrant has made a concerted effort to provide documentation on sugar beet leaf feeding practices. To this end the registrant has requested letters documenting the use of sugar beet leaves in the majority of the sugar beet regions. An HED Senior Plant Physiologist (Dr. Bernard Schneider) reviewed the TPTH Task Force response to use of sugar beet tops for livestock feed, and contacted various USDA Extension Agents in cooperation with USDA-IR-4, performed a literature search, and contacted sugar beet equipment dealers. He and other members of HED met with ChemSAC (7/21 and 8/18/99) and decided on the following approach:

HED concurs with the Task Force that sugar beet tops are not available for grazing 12 months of the year. It is more realistic for the **chronic** assessment to assume sugar beet tops would be available for grazing after harvest for up to one month before the field is plowed (1 month availability/12 months). Therefore, for the chronic dietary assessment, the percent of sugar beet treated, the percent of cattle that could feed on sugar beet tops, the temporal component, and the percent of sugar beet tops fed will be incorporated as "percent of crop treated" in the DEEM™ adjustment factor number 2 column in the chronic assessment:

% CT x % US cattle that could graze on sugar beet tops x (1 month availability/12 months) x % sugar beet tops fed =

0.35 (weighted average) x 0.12 x 0.08 x 0.8 = 0.003 %

However, for the **acute** assessment, it is not appropriate to take into account the temporal component or the % sugar beet tops fed because HED is concerned with dietary acute exposure over a short time period, not residues averaged out over a year.

Therefore, for the acute assessment, the %CT and the percent of cattle that could feed on sugar

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beet tops will be used probabilistically in all meat product residue distribution files in the acute assessment:

% CT x % US cattle that could graze on sugar beet tops =

0.44 (estimated maximum) x 0.12 = 0.05 %

This approach was used in these revised analyses for calculating anticipated residues (ARs) for beef cattle, goats, horses and sheep commodities. Note that dairy cattle are not fed sugar beet tops; therefore, the following approach and assumptions would not apply to dairy cattle (milk in DEEM™), nor for pork. For milk, the sugar beet %CT value was used in the adjustment factor #2 column in DEEM™ to refine the residue value (sugar beet pulp has the highest %CT value of all the feed items calculated into the dairy diet). For pork, the potato %CT value was used in the adjustment factor #2 column in DEEM™ to refine the residue value (processed potato culls are the only feed item calculated into the swine diet). Meat and milk ARs were calculated. The DEEM™ default processing factor of 1.92 was used for dried meat. Table 2 summarizes the residue information (reassessed tolerances and ARs) and %CT values.

Table 2. Tolerances, Percent Crop Treated and Anticipated Residues for TPTH.

Commodity	Tolerance Reassessment (ppm)[1,2]	% Crop Treated[3] (weighted average, estimated maximum)	Acute Anticipated Residue Value (ppm)[4]	Chronic Anticipated Residue Value (ppm)[5]
Pecan	0.05	35%, 56%	0.005	0.005
Sugar Beet	0.05	35%, 44%	0.004	0.004
Sugar beet, refined sugar	N/A[7]	Same as RAC	0.004	0.004
Molasses	N/A[7]	Same as RAC	0.004	0.004
Potato	0.05	13%, 23%	0.015	0.015
Potato, chips	N/A[7]	Same as RAC	0.015	0.015
Potato, baked	N/A[7]	Same as RAC	0.015	0.015
Potato, boiled	N/A[7]	Same as RAC	0.015	0.015
Potato, granules	N/A[7]	Same as RAC	0.015	0.015
Meat[6], muscle	0.5	See Residue Information Section/Meat and Milk	0.30	0.15
Meat[6], kidney	2.0	See Residue Information Section/Meat and Milk	1.0	0.55
Meat[6], liver	4.0	See Residue Information Section/Meat and Milk	3.16	1.65

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Meat[6], fat	0.2	See Residue Information Section/Meat and Milk	0.12	0.07
Swine meat, muscle	0.5	See Residue Information Section/Meat and Milk	0.0003	0.0003
Swine meat, kidney	2.0	See Residue Information Section/Meat and Milk	0.001	0.001
Swine meat, liver	4.0	See Residue Information Section/Meat and Milk	0.003	0.003
Swine meat, fat	0.2	See Residue Information Section/Meat and Milk	0.0001	0.0001
Milk[8]	0.06	See Residue Information Section/Meat and Milk	0.00003	0.00003
Milk, cream[8]	N/A	See Residue Information Section/Meat and Milk	0.00005	0.00005
Milk, skim[8]	N/A	See Residue Information Section/Meat and Milk	0.000008	0.000008

1: Expressed in terms of the combined residues of TPTH, and its metabolites MPTH and DPTH.

2: According to TPTH Chemistry Chapter (C. Eiden, D255118, 8/25/99.).

3: % Crop Treated Information from BEAD (Electronic Correspondence, 4/2/99, J. Faulkner). As per recent HED policy revision, the weighted average percent crop treated (%CT) in chronic dietary exposure analyses and the estimated maximum %CT was used for acute dietary exposure analyses.

4: AR calculated based on the addition of ½ the sum of LOQs (0.01 ppm) for each metabolite (TPTH, DPTH, and MPTH) for samples with non-detectable residues or based on the highest measured field trial result (value for pecans is based on total tin method - i.e., TPTH and its regulable metaboites plus any other form(s) of tin). If field trials were conducted at an exaggerated rate, the residue values were corrected for a 1x rate of application. For sugar beets, the rate of treatment was 2.9 lbs ai/A or 3.86x of the maximum labeled rate (0.75 lbs ai/A). For potatoes the treatment rate was the maximum labeled rate of 0.75 lbs ai/A (1x). For pecans the rate of treatment was 4.125 lbs ai/A or approximately 1x; the maximum labeled rate is 3.8 lbs ai/A (See Table A). Field trial data obtained from MRID #41267101 (reviewed by R. Perfetti, 1/10/90).

5: AR calculated based on the addition of ½ the LOQ of 0.01 ppm for each metabolite or average of field trial results If field trials were conducted at an exaggerated rate, the residue values were corrected for a 1x rate of application. For sugar beets, the rate of treatment was 2.9 lbs ai/A or 3.86x of the maximum labeled rate (0.75 lbs ai/A). For potatoes the treatment rate was the maximum labeled rate of 0.75 lbs ai/A (1x). For pecans the rate of treatment was 4.125 lbs ai/A or approximately 1x; the maximum labeled rate is 3.8 lbs ai/A (See Table A). Field trial data obtained from MRID #41267101 (reviewed by R. Perfetti, 1/10/90).

6: Meat includes cattle, goats, horses and sheep.

7: Covered by the respective raw agricultural commodity (RAC).

8: The "milk, cream" AR was used in DEEM™ for the food form milk-fat solids and the "milk, skim" AR was used for the milk-based water, milk non-fat solids and milk sugar (lactose) DEEM™ food forms. Note that there is some uncertainty concerning how to apply the different milk AR values to the four milk food forms. Using the "milk" AR for all milk food forms or various combinations (i.e., "milk" for milk non-fat solids) does not change the exposure significantly.

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Consumption Data

HED conducts dietary risk assessments using the Dietary Exposure Evaluation Model (DEEM™), which incorporates consumption data generated in USDA's Continuing Surveys of Food Intakes by Individuals (CSFII), 1989-1992. For acute dietary risk assessments, the entire distribution of single day food consumption events is combined with a single residue level (deterministic analysis) to obtain a distribution of exposure in mg/kg. For chronic dietary risk assessments, the three-day average of consumption for each sub-population is combined with residues in commodities to determine average exposure in mg/kg/day.

Results/Discussion

For comparison of dietary exposure, results from three acute and chronic (non-cancer and cancer) dietary exposure scenarios are presented: 1) Dietary analyses which include residue data for all supported crops through reregistration, meat and milk; 2) Dietary analyses which include residue data only for meat and milk (because all sugar beet, pecan and potato residues were assumed to be at one-half the limit-of-detection, zero residues were used, in accordance with TRAC policy paper #5, entitled "Assigning Values to Nondetected/Nonquantified Pesticide Residues in Human Health Dietary Exposure Assessments") and 3) For the informational purpose of showing the effect of omitting sugar beets and associated meat and milk residues, dietary analyses including pecans and potatoes only were presented (sugar beets, meat and milk, excluded).

Acute

HED's level of concern for acute dietary risk is greater than 100% acute PAD. Table 3 shows acute dietary exposure for all three scenarios for females 13+ years old, the population subgroup of concern. Results are presented at the 99.9th percentile. The complete lists of dietary exposures for all three scenarios are presented in Attachments 2, 4 and 6, respectively.

Table 3. Acute Dietary Exposure Results for TPTH.

Subgroups	99.9th Percentile Exposure (% acute PAD)	99.9th Percentile Exposure (% acute PAD)	99.9th Percentile Exposure (% acute PAD)
	Scenario 1[1]	**Scenario 2[3]**	**Scenario 3[2]**
Females (20+ years old/np/nn)	0.000339 (33.9 %)	0.000337 (33.7 %)	0.000002 (0.24 %)
Females (13-19 yrs/np/nn)	0.000127 (12.7 %)	0.000126 (12.6 %)	0.000006 (0.61 %)
Females (13+/preg/not nsg)	0.000225 (22.5 %)	0.000224 (22.4 %)	0.000001 (0.12 %)

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Females (13+ nursing)	0.000230 (23.0 %)	0.000230 (23.0 %)	0.000002 (0.16 %)
Females (13-50 years)	0.000194 (19.4 %)	0.000193 (19.3 %)	0.000003 (0.34 %)

1) Scenario 1: Dietary analysis which includes all reregistration supported crops, meat and milk.
2) Scenario 2: Dietary analyses which include only meat and milk (sugar beets, pecans and potatoes are assumed to have zero residues, in accordance with TRAC policy paper #5, entitled "Assigning Values to Nondetected/Nonquantified Pesticide Residues in Human Health Dietary Exposure Assessments").
3) Scenario 3: Dietary analysis which includes only pecans and potatoes (sugar beets, meat and milk not included).

The results of the acute analyses indicate that the acute dietary risk estimates associated with all three scenario uses of TPTH are **below the Agency's level of concern** (< 100% acute PAD) for females 13+ years old.

Chronic (non-cancer)

HED's level of concern for chronic dietary risk is greater than 100% chronic PAD. Table 4 shows chronic dietary exposure for all three scenarios for the U.S. population and population subgroups around the same degree of dietary exposure. The complete lists of dietary exposures for all three scenarios are presented in Attachments 8, 10 and 12, respectively.

Table 4. Chronic Dietary Exposure Results for TPTH.

Subgroups	**Exposure (% chronic PAD)**	**Exposure (% chronic PAD)**	**Exposure (% chronic PAD)**
	Scenario 1[1]	**Scenario 2[3]**	**Scenario 3[2]**
U.S. Population	0.000001 (2.1 %)	0.000001 (1.7 %)	0.000000 (0.2 %)
Non-nursing infants	0.000001 (1.8 %)	0.000000 (0.8 %)	0.000000 (0.0 %)
Children 1-6 years old	0.000001 (4.2 %)	0.000001 (3.5 %)	0.000000 (0.2 %)
Children 7-12 years old	0.000001 (2.9 %)	0.000001 (2.4 %)	0.000000 (0.2 %)
Males 13-19 years old	0.000001 (2.3 %)	0.000001 (1.9 %)	0.000000 (0.1 %)

1) Scenario 1: Dietary analysis which includes all reregistration supported crops, meat and milk.
2) Scenario 2: Dietary analyses which include only meat and milk (sugar beets, pecans and potatoes are assumed to have zero residues, in accordance with TRAC policy paper #5, entitled "Assigning Values to Nondetected/Nonquantified Pesticide Residues in Human Health Dietary Exposure Assessments").
3) Scenario 3: Dietary analysis which includes only pecans and potatoes (sugar beets, meat and milk not included).

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The results of the chronic analyses indicate that the chronic dietary risk estimates associated with all three scenario uses of TPTH are **below the Agency's level of concern** (< 100% chronic PAD) for the U.S. population and all population subgroups.

Cancer

In the first analysis, the carcinogenic risk estimate for TPTH is **1.1×10^{-6}** for the general US population. In the second analysis which included only meat and milk, the estimated carcinogenic risk estimate was **9.4×10^{-7}** for the general US population. In the third analysis which excluded sugar beet commodities and meat and milk, the estimated carcinogenic risk estimate was reduced to **8.7×10^{-8}** for the general US population.

List of Attachments

Attachment 1: Acute Residue Information for Scenario 1
Attachment 2: Acute DEEM™ Analysis for Scenario 1
Attachment 3: Acute Residue Information for Scenario 2
Attachment 4: Acute DEEM™ Analysis for Scenario 2
Attachment 5: Acute Residue Information for Scenario 3
Attachment 6: Acute DEEM™ Analysis for Scenario 3

Attachment 7: Chronic (non-cancer and cancer) Residue Information for Scenario 1
Attachment 8: Chronic (non-cancer) DEEM™ Analysis for Scenario 1
Attachment 9: Chronic (non-cancer and cancer) Residue Information for Scenario 2
Attachment 10: Chronic (non-cancer) DEEM™ Analysis for Scenario 2
Attachment 11: Chronic (non-cancer and cancer) Residue Information for Scenario 3
Attachment 12: Chronic (non-cancer) DEEM™ Analysis for Scenario 3

Attachment 13: Chronic (cancer) DEEM™ Analysis for Scenario 1
Attachment 14: Chronic (cancer) DEEM™ Analysis for Scenario 2
Attachment 15: Chronic (cancer) DEEM™ Analysis for Scenario 3

cc: S. Levy 9/8/99 (RRB3), S. Knizner 9/8/99 (RRB3), L. Richardson (CEB1)
RDI: Dietary SAC: C. Swartz 8/31/99, D. Dotson 8/30/99
S. Levy: 821E,CM#2: (703)305-0783:7509C:RRB3

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Attachment 1: Acute Residue Information for Scenario 1

U.S. Environmental Protection Agency Ver. 6.78
DEEM Acute analysis for TPTH 1989-92 data
Residue file name: C:\DEEM\TPTH\Refined\acuterefinedmeat.R96 Adjust. #2 used
Analysis Date 08-31-1999 Residue file dated: 08-31-1999/14:50:43/8
Reference dose (aRfD) = 0.001 mg/kg bw/day
Comment: The above RfD number (0.001) is the aPAD; Used AR's, AF's 1 and 2

Food Crop Grp		Food Name	RESIDUE (ppm)	Adj.Factors #1	Code #2
47	14	Pecans	0.005000	1.000	0.560
207	1C	Potatoes/white-whole			
		11-Uncooked	0.015000	1.000	0.230
		12-Cooked: NFS	0.015000	0.170	0.230
		13-Baked	0.015000	0.120	0.230
		14-Boiled	0.015000	0.170	0.230
		15-Fried	0.015000	0.170	0.230
		31-Canned: NFS	0.015000	0.170	0.230
208	1C	Potatoes/white-unspecified			
		31-Canned: NFS	0.015000	1.000	0.230
209	1C	Potatoes/white-peeled			
		12-Cooked: NFS	0.015000	0.004	0.230
		13-Baked	0.015000	0.004	0.230
		14-Boiled	0.015000	0.004	0.230
		15-Fried	0.015000	0.004	0.230
		32-Canned: Cooked	0.015000	0.004	0.230
		34-Canned: Boiled	0.015000	0.004	0.230
		42-Frozen: Cooked	0.015000	0.004	0.230
		43-Frozen: Baked	0.015000	0.004	0.230
		45-Frozen: Fried	0.015000	0.004	0.230
210	1C	Potatoes/white-dry			
		12-Cooked: NFS	0.015000	0.004	0.230
		14-Boiled	0.015000	0.004	0.230
		15-Fried	0.015000	0.004	0.230
		31-Canned: NFS	0.015000	0.004	0.230
		34-Canned: Boiled	0.015000	0.004	0.230
		42-Frozen: Cooked	0.015000	0.004	0.230
211	1C	Potatoes/white-peel only			
		13-Baked	0.015000	1.000	0.230
		15-Fried	0.015000	1.000	0.230
282	1A	Sugar-beet			
		98-Refined	0.004000	0.200	0.440
318	D	Milk-nonfat solids	0.000008	1.000	0.440
319	D	Milk-fat solids	0.000050	1.000	0.440
320	D	Milk sugar (lactose)	0.000008	1.000	0.440
321	M	Beef-meat byproducts	3.160000	1.000	0.050
322	M	Beef-other organ meats	3.160000	1.000	0.050
323	M	Beef-dried	0.300000	1.920	0.050
324	M	Beef-fat w/o bones	0.120000	1.000	0.050
325	M	Beef-kidney	1.000000	1.000	0.050
326	M	Beef-liver	3.160000	1.000	0.050
327	M	Beef-lean (fat/free) w/o bones	0.300000	1.000	0.050
328	M	Goat-meat byproducts	3.160000	1.000	0.050
329	M	Goat-other organ meats	3.160000	1.000	0.050
330	M	Goat-fat w/o bone	0.120000	1.000	0.050
331	M	Goat-kidney	1.000000	1.000	0.050
332	M	Goat-liver	3.160000	1.000	0.050
333	M	Goat-lean (fat/free) w/o bone	0.300000	1.000	0.050
334	M	Horsemeat	0.300000	1.000	0.050
336	M	Sheep-meat byproducts	3.160000	1.000	0.050
337	M	Sheep-other organ meats	3.160000	1.000	0.050
338	M	Sheep-fat w/o bone	0.120000	1.000	0.050
339	M	Sheep-kidney	1.000000	1.000	0.050
340	M	Sheep-liver	3.160000	1.000	0.050
341	M	Sheep-lean (fat free) w/o bone	0.300000	1.000	0.050

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342 M	Pork-meat byproducts	0.003000	1.000	0.230
343 M	Pork-other organ meats	0.003000	1.000	0.230
344 M	Pork-fat w/o bone	0.000100	1.000	0.230
345 M	Pork-kidney	0.001000	1.000	0.230
346 M	Pork-liver	0.003000	1.000	0.230
347 M	Pork-lean (fat free) w/o bone	0.000300	1.000	0.230
379 1A	Sugar-beet-molasses	0.004000	0.140	0.440
398 D	Milk-based water	0.000008	1.000	0.440

Attachment 2: Acute DEEM™ Analysis for Scenario 1

U.S. Environmental Protection Agency — Ver. 6.78
DEEM ACUTE analysis for TPTH — (1989-92 data)
Residue file: acuterefinedmeat.R96 — Adjustment factor #2 used.
Analysis Date: 08-31-1999/16:16:44 Residue file dated: 08-31-1999/14:50:43/8
Acute Reference Dose (aRfD) = 0.001000 mg/kg body-wt/day
Run Comment: The above RfD number (0.001) is the aPAD; Used AR's, AF's 1 and 2

Summary calculations:

	95th Percentile		99th Percentile		99.9th Percentile	
	Exposure	% aRfD	Exposure	% aRfD	Exposure	% aRfD
U.S. pop - all seasons:	0.000058	5.82	0.000116	11.58	0.000369	36.87
Females (13+/preg/not nsg):	0.000052	5.17	0.000067	6.74	0.000225	22.50
Females (13+/nursing):	0.000034	3.42	0.000066	6.56	0.000230	23.04
Females (13-19 yrs/np/nn):	0.000050	5.01	0.000080	8.03	0.000127	12.68
Females (20+ years/np/nn):	0.000042	4.24	0.000075	7.50	0.000339	33.90
Females (13-50 years):	0.000045	4.51	0.000076	7.59	0.000194	19.40

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Attachment 3: Acute Residue Information for Scenario 2

U.S. Environmental Protection Agency Ver. 6.78
DEEM Acute analysis for TPTH 1989-92 data
Residue file name: C:\DEEM\TPTH\Refined\acmeatmlkonly.R96 Adjust. #2 used
Analysis Date 09-01-1999 Residue file dated: 09-01-1999/08:58:03/8
Reference dose (aRfD) = 0.001 mg/kg bw/day
Comment: The above RfD number (0.001) is the a PAD; Used AR's, AF's 1 and 2

Food	Crop Grp	Food Name	RESIDUE (ppm)	Adj.Factors #1	#2	Code
318	D	Milk-nonfat solids	0.000008	1.000	0.440	
319	D	Milk-fat solids	0.000050	1.000	0.440	
320	D	Milk sugar (lactose)	0.000008	1.000	0.440	
321	M	Beef-meat byproducts	3.160000	1.000	0.050	
322	M	Beef-other organ meats	3.160000	1.000	0.050	
323	M	Beef-dried	0.300000	1.920	0.050	
324	M	Beef-fat w/o bones	0.120000	1.000	0.050	
325	M	Beef-kidney	1.000000	1.000	0.050	
326	M	Beef-liver	3.160000	1.000	0.050	
327	M	Beef-lean (fat/free) w/o bones	0.300000	1.000	0.050	
328	M	Goat-meat byproducts	3.160000	1.000	0.050	
329	M	Goat-other organ meats	3.160000	1.000	0.050	
330	M	Goat-fat w/o bone	0.120000	1.000	0.050	
331	M	Goat-kidney	1.000000	1.000	0.050	
332	M	Goat-liver	3.160000	1.000	0.050	
333	M	Goat-lean (fat/free) w/o bone	0.300000	1.000	0.050	
334	M	Horsemeat	0.300000	1.000	0.050	
336	M	Sheep-meat byproducts	3.160000	1.000	0.050	
337	M	Sheep-other organ meats	3.160000	1.000	0.050	
338	M	Sheep-fat w/o bone	0.120000	1.000	0.050	
339	M	Sheep-kidney	1.000000	1.000	0.050	
340	M	Sheep-liver	3.160000	1.000	0.050	
341	M	Sheep-lean (fat free) w/o bone	0.300000	1.000	0.050	
342	M	Pork-meat byproducts	0.003000	1.000	0.230	
343	M	Pork-other organ meats	0.003000	1.000	0.230	
344	M	Pork-fat w/o bone	0.000100	1.000	0.230	
345	M	Pork-kidney	0.001000	1.000	0.230	
346	M	Pork-liver	0.003000	1.000	0.230	
347	M	Pork-lean (fat free) w/o bone	0.000300	1.000	0.230	
398	D	Milk-based water	0.000008	1.000	0.440	

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Attachment 4: Acute DEEM™ Analysis for Scenario 2

U.S. Environmental Protection Agency Ver. 6.78
DEEM ACUTE analysis for TPTH (1989-92 data)
Residue file: acmeatmlkonly.R96 Adjustment factor #2 used.
Analysis Date: 09-01-1999/09:00:30 Residue file dated: 09-01-1999/08:58:03/8
Acute Reference Dose (aRfD) = 0.001000 mg/kg body-wt/day
Run Comment: The above RfD number (0.001) is the a PAD; Used AR's, AF's 1 and 2

Summary calculations:

	95th Percentile		99th Percentile		99.9th Percentile	
	Exposure	% aRfD	Exposure	% aRfD	Exposure	% aRfD
U.S. pop - all seasons:	0.000058	5.80	0.000116	11.60	0.000368	36.82
Females (13+/preg/not nsg):	0.000051	5.12	0.000067	6.68	0.000224	22.37
Females (13+/nursing):	0.000034	3.36	0.000065	6.45	0.000230	22.96
Females (13-19 yrs/np/nn):	0.000049	4.94	0.000080	7.96	0.000126	12.64
Females (20+ years/np/nn):	0.000042	4.21	0.000074	7.45	0.000337	33.66
Females (13-50 years):	0.000045	4.50	0.000076	7.57	0.000193	19.33

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Attachment 5: Acute Residue Information for Scenario 3

U.S. Environmental Protection Agency Ver. 6.78
DEEM Acute analysis for TPTH 1989-92 data
Residue file name: C:\DEEM\TPTH\acutepecpotonly.R96 Adjust. #2 used
Analysis Date 08-26-1999 Residue file dated: 08-26-1999/14:43:57/8
Reference dose (aRfD) = 0.001 mg/kg bw/day
Comment: The above RfD number (0.001) is the acute PAD; Used AR's, AF's 1 and 2

Food	Crop Grp	Food Name	RESIDUE (ppm)	Adj.Factors #1	Code #2
47	14	Pecans	0.005000	1.000	0.560
207	1C	Potatoes/white-whole			
		11-Uncooked	0.015000	1.000	0.230
		12-Cooked: NFS	0.015000	0.170	0.230
		13-Baked	0.015000	0.120	0.230
		14-Boiled	0.015000	0.170	0.230
		15-Fried	0.015000	0.170	0.230
		31-Canned: NFS	0.015000	0.170	0.230
208	1C	Potatoes/white-unspecified			
		31-Canned: NFS	0.015000	1.000	0.230
209	1C	Potatoes/white-peeled			
		12-Cooked: NFS	0.015000	0.004	0.230
		13-Baked	0.015000	0.004	0.230
		14-Boiled	0.015000	0.004	0.230
		15-Fried	0.015000	0.004	0.230
		32-Canned: Cooked	0.015000	0.004	0.230
		34-Canned: Boiled	0.015000	0.004	0.230
		42-Frozen: Cooked	0.015000	0.004	0.230
		43-Frozen: Baked	0.015000	0.004	0.230
		45-Frozen: Fried	0.015000	0.004	0.230
210	1C	Potatoes/white-dry			
		12-Cooked: NFS	0.015000	0.004	0.230
		14-Boiled	0.015000	0.004	0.230
		15-Fried	0.015000	0.004	0.230
		31-Canned: NFS	0.015000	0.004	0.230
		34-Canned: Boiled	0.015000	0.004	0.230
		42-Frozen: Cooked	0.015000	0.004	0.230
211	1C	Potatoes/white-peel only			
		13-Baked	0.015000	1.000	0.230
		15-Fried	0.015000	1.000	0.230

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Attachment 6: Acute DEEM™ Analysis for Scenario 3

U.S. Environmental Protection Agency Ver. 6.78
DEEM ACUTE analysis for TPTH (1989-92 data)
Residue file: acutepecpotonly.R96 Adjustment factor #2 used.
Analysis Date: 08-26-1999/14:46:00 Residue file dated: 08-26-1999/14:43:57/8
Acute Reference Dose (aRfD) = 0.001000 mg/kg body-wt/day
Run Comment: The above RfD number (0.001) is the acute PAD; Used AR's, AF's 1 and 2

Summary calculations:

	95th Percentile		99th Percentile		99.9th Percentile	
	Exposure	% aRfD	Exposure	% aRfD	Exposure	% aRfD
U.S. pop - all seasons:	0.000001	0.06	0.000001	0.15	0.000003	0.35
Females (13+/preg/not nsg):	0.000001	0.07	0.000001	0.11	0.000001	0.12
Females (13+/nursing):	0.000001	0.10	0.000002	0.16	0.000002	0.16
Females (13-19 yrs/np/nn):	0.000000	0.05	0.000001	0.13	0.000006	0.61
Females (20+ years/np/nn):	0.000001	0.06	0.000001	0.12	0.000002	0.24
Females (13-50 years):	0.000001	0.05	0.000001	0.13	0.000003	0.34

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Attachment 7: Chronic (non-cancer and cancer) Residue for Scenario 1

U.S. Environmental Protection Agency Ver. 6.76
DEEM Chronic analysis for TPTH 1989-92 data
Residue file: C:\DEEM\TPTH\Refined\chronicrefinedmeat2.R96 Adjust. #2 used
Analysis Date 09-01-1999 Residue file dated: 09-01-1999/09:29:11/8
Reference dose (RfD) = 0.00003 mg/kg bw/day
Comment:The above RfD number (0.00003) is the chronic PAD; Used AR's, AF's 1 and 2

Food Code	Crop Grp	Food Name	RESIDUE (ppm)	Adj.Factors #1	#2
47	14	Pecans	0.005000	1.000	0.350
207	1C	Potatoes/white-whole			
		11-Uncooked	0.015000	1.000	0.130
		12-Cooked: NFS	0.015000	0.170	0.130
		13-Baked	0.015000	0.120	0.130
		14-Boiled	0.015000	0.170	0.130
		15-Fried	0.015000	0.170	0.130
		31-Canned: NFS	0.015000	0.170	0.130
208	1C	Potatoes/white-unspecified			
		31-Canned: NFS	0.015000	1.000	0.130
209	1C	Potatoes/white-peeled			
		12-Cooked: NFS	0.015000	0.004	0.130
		13-Baked	0.015000	0.004	0.130
		14-Boiled	0.015000	0.004	0.130
		15-Fried	0.015000	0.004	0.130
		32-Canned: Cooked	0.015000	0.004	0.130
		34-Canned: Boiled	0.015000	0.004	0.130
		42-Frozen: Cooked	0.015000	0.004	0.130
		43-Frozen: Baked	0.015000	0.004	0.130
		45-Frozen: Fried	0.015000	0.004	0.130
210	1C	Potatoes/white-dry			
		12-Cooked: NFS	0.015000	0.004	0.130
		14-Boiled	0.015000	0.004	0.130
		15-Fried	0.015000	0.004	0.130
		31-Canned: NFS	0.015000	0.004	0.130
		34-Canned: Boiled	0.015000	0.004	0.130
		42-Frozen: Cooked	0.015000	0.004	0.130
211	1C	Potatoes/white-peel only			
		13-Baked	0.015000	1.000	0.130
		15-Fried	0.015000	1.000	0.130
282	1A	Sugar-beet			
		98-Refined	0.004000	0.200	0.350
318	D	Milk-nonfat solids	0.000008	1.000	0.350
319	D	Milk-fat solids	0.000050	1.000	0.350
320	D	Milk sugar (lactose)	0.000008	1.000	0.350
321	M	Beef-meat byproducts	1.650000	1.000	0.003
322	M	Beef-other organ meats	1.650000	1.000	0.003
323	M	Beef-dried	0.150000	1.920	0.003
324	M	Beef-fat w/o bones	0.070000	1.000	0.003
325	M	Beef-kidney	0.550000	1.000	0.003
326	M	Beef-liver	1.650000	1.000	0.003
327	M	Beef-lean (fat/free) w/o bones	0.150000	1.000	0.003
328	M	Goat-meat byproducts	1.650000	1.000	0.003
329	M	Goat-other organ meats	1.650000	1.000	0.003
330	M	Goat-fat w/o bone	0.070000	1.000	0.003
331	M	Goat-kidney	0.550000	1.000	0.003
332	M	Goat-liver	1.650000	1.000	0.003
333	M	Goat-lean (fat/free) w/o bone	0.150000	1.000	0.003
334	M	Horsemeat	0.150000	1.000	0.003
336	M	Sheep-meat byproducts	1.650000	1.000	0.003
337	M	Sheep-other organ meats	1.650000	1.000	0.003
338	M	Sheep-fat w/o bone	0.070000	1.000	0.003
339	M	Sheep-kidney	0.550000	1.000	0.003
340	M	Sheep-liver	1.650000	1.000	0.003
341	M	Sheep-lean (fat free) w/o bone	0.150000	1.000	0.003

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342	M	Pork-meat byproducts	0.003000	1.000	0.130
343	M	Pork-other organ meats	0.003000	1.000	0.130
344	M	Pork-fat w/o bone	0.000100	1.000	0.130
345	M	Pork-kidney	0.001000	1.000	0.130
346	M	Pork-liver	0.003000	1.000	0.130
347	M	Pork-lean (fat free) w/o bone	0.000300	1.000	0.130
379	1A	Sugar-beet-molasses	0.004000	0.140	0.350
398	D	Milk-based water	0.000008	1.000	0.350

Attachment 8: Chronic (non-cancer) DEEM™ Analysis for Scenario 1

U.S. Environmental Protection Agency Ver. 6.76
DEEM Chronic analysis for TPTH (1989-92 data)
Residue file name: C:\DEEM\TPTH\Refined\chronicrefinedmeat2.R96
Adjustment factor #2 used.
Analysis Date 09-01-1999/09:29:43 Residue file dated: 09-01-1999/09:29:11/8
Reference dose (RfD, CHRONIC) = .00003 mg/kg bw/day
COMMENT 1: The above RfD number (0.00003) is the chronic PAD; Used AR's, AF's 1 and 2

Total exposure by population subgroup

Population Subgroup	Total Exposure mg/kg body wt/day	Total Exposure Percent of Rfd
U.S. Population (total)	0.000001	2.1%
U.S. Population (spring season)	0.000001	2.0%
U.S. Population (summer season)	0.000001	2.1%
U.S. Population (autumn season)	0.000001	2.1%
U.S. Population (winter season)	0.000001	2.1%
Northeast region	0.000001	2.0%
Midwest region	0.000001	2.3%
Southern region	0.000001	2.2%
Western region	0.000001	1.9%
Hispanics	0.000001	2.5%
Non-hispanic whites	0.000001	2.0%
Non-hispanic blacks	0.000001	2.2%
Non-hisp/non-white/non-black)	0.000001	2.0%
All infants (< 1 year)	0.000000	1.5%
Nursing infants	0.000000	0.7%
Non-nursing infants	0.000001	1.8%
Children 1-6 yrs	0.000001	4.2%
Children 7-12 yrs	0.000001	2.9%
Females 13-19(not preg or nursing)	0.000001	1.8%
Females 20+ (not preg or nursing)	0.000000	1.5%
Females 13-50 yrs	0.000000	1.6%
Females 13+ (preg/not nursing)	0.000001	1.7%
Females 13+ (nursing)	0.000000	1.5%
Males 13-19 yrs	0.000001	2.3%
Males 20+ yrs	0.000001	2.0%
Seniors 55+	0.000000	1.5%
Pacific Region	0.000001	1.8%

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Attachment 9: Chronic (non-cancer and cancer) Residue Information for Scenario 2

U.S. Environmental Protection Agency Ver. 6.76
DEEM Chronic analysis for TPTH 1989-92 data
Residue file: C:\DEEM\TPTH\meatmilkonly.R96 Adjust. #2 used
Analysis Date 09-01-1999 Residue file dated: 09-01-1999/08:45:54/8
Reference dose (RfD) = 0.00003 mg/kg bw/day
Comment:The above RfD number (0.00003) is the chronic PAD; Used AR's, AF's 1 and 2

Food Code	Crop Grp	Food Name	RESIDUE (ppm)	Adj.Factors #1	#2
318	D	Milk-nonfat solids	0.000008	1.000	0.350
319	D	Milk-fat solids	0.000050	1.000	0.350
320	D	Milk sugar (lactose)	0.000008	1.000	0.350
321	M	Beef-meat byproducts	1.650000	1.000	0.003
322	M	Beef-other organ meats	1.650000	1.000	0.003
323	M	Beef-dried	0.150000	1.920	0.003
324	M	Beef-fat w/o bones	0.070000	1.000	0.003
325	M	Beef-kidney	0.550000	1.000	0.003
326	M	Beef-liver	1.650000	1.000	0.003
327	M	Beef-lean (fat/free) w/o bones	0.150000	1.000	0.003
328	M	Goat-meat byproducts	1.650000	1.000	0.003
329	M	Goat-other organ meats	1.650000	1.000	0.003
330	M	Goat-fat w/o bone	0.070000	1.000	0.003
331	M	Goat-kidney	0.550000	1.000	0.003
332	M	Goat-liver	1.650000	1.000	0.003
333	M	Goat-lean (fat/free) w/o bone	0.150000	1.000	0.003
334	M	Horsemeat	0.150000	1.000	0.003
336	M	Sheep-meat byproducts	1.650000	1.000	0.003
337	M	Sheep-other organ meats	1.650000	1.000	0.003
338	M	Sheep-fat w/o bone	0.070000	1.000	0.003
339	M	Sheep-kidney	0.550000	1.000	0.003
340	M	Sheep-liver	1.650000	1.000	0.003
341	M	Sheep-lean (fat free) w/o bone	0.150000	1.000	0.003
342	M	Pork-meat byproducts	0.003000	1.000	0.130
343	M	Pork-other organ meats	0.003000	1.000	0.130
344	M	Pork-fat w/o bone	0.000100	1.000	0.130
345	M	Pork-kidney	0.001000	1.000	0.130
346	M	Pork-liver	0.003000	1.000	0.130
347	M	Pork-lean (fat free) w/o bone	0.000300	1.000	0.130
379	1A	Sugar-beet-molasses	0.004000	0.140	0.350
398	D	Milk-based water	0.000008	1.000	0.350

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Attachment 10: Chronic (non-cancer) DEEM™ Analysis for Scenario 2

U.S. Environmental Protection Agency Ver. 6.76
DEEM Chronic analysis for TPTH (1989-92 data)
Residue file name: C:\DEEM\TPTH\meatmilkonly.R96 Adjustment factor #2 used.
Analysis Date 09-01-1999/11:01:35 Residue file dated: 09-01-1999/08:45:54/8
Reference dose (RfD, CHRONIC) = .00003 mg/kg bw/day
COMMENT 1: The above RfD number (0.00003) is the chronic PAD; Used AR's, AF's 1 and 2

Total exposure by population subgroup

Population Subgroup	Total Exposure mg/kg body wt/day	Total Exposure Percent of Rfd
U.S. Population (total)	0.000001	1.7%
U.S. Population (spring season)	0.000001	1.7%
U.S. Population (summer season)	0.000001	1.8%
U.S. Population (autumn season)	0.000001	1.7%
U.S. Population (winter season)	0.000001	1.7%
Northeast region	0.000000	1.6%
Midwest region	0.000001	1.9%
Southern region	0.000001	1.8%
Western region	0.000000	1.5%
Hispanics	0.000001	2.2%
Non-hispanic whites	0.000000	1.6%
Non-hispanic blacks	0.000001	1.8%
Non-hisp/non-white/non-black)	0.000001	1.7%
All infants (< 1 year)	0.000000	0.7%
Nursing infants	0.000000	0.5%
Non-nursing infants	0.000000	0.8%
Children 1-6 yrs	0.000001	3.5%
Children 7-12 yrs	0.000001	2.4%
Females 13-19(not preg or nursing)	0.000000	1.4%
Females 20+ (not preg or nursing)	0.000000	1.2%
Females 13-50 yrs	0.000000	1.3%
Females 13+ (preg/not nursing)	0.000000	1.4%
Females 13+ (nursing)	0.000000	1.1%
Males 13-19 yrs	0.000001	1.9%
Males 20+ yrs	0.000000	1.7%
Seniors 55+	0.000000	1.3%
Pacific Region	0.000000	1.5%

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Attachment 11: Chronic (non-cancer and cancer) Residue for Scenario 3

U.S. Environmental Protection Agency Ver. 6.76
DEEM Chronic analysis for TPTH 1989-92 data
Residue file: C:\DEEM\TPTH\chronicpecanspot.R96 Adjust. #2 used
Analysis Date 09-01-1999 Residue file dated: 08-25-1999/16:06:30/8
Reference dose (RfD) = 0.00003 mg/kg bw/day
Comment:The above RfD number (0.00003) is the chronic PAD; Used AR's, AF's 1 and 2

Food Code	Crop Grp	Food Name	RESIDUE (ppm)	Adj.Factors #1	#2
47	14	Pecans	0.005000	1.000	0.350
207	1C	Potatoes/white-whole			
		11-Uncooked	0.015000	1.000	0.130
		12-Cooked: NFS	0.015000	0.170	0.130
		13-Baked	0.015000	0.120	0.130
		14-Boiled	0.015000	0.170	0.130
		15-Fried	0.015000	0.170	0.130
		31-Canned: NFS	0.015000	0.170	0.130
208	1C	Potatoes/white-unspecified			
		31-Canned: NFS	0.015000	1.000	0.130
209	1C	Potatoes/white-peeled			
		12-Cooked: NFS	0.015000	0.004	0.130
		13-Baked	0.015000	0.004	0.130
		14-Boiled	0.015000	0.004	0.130
		15-Fried	0.015000	0.004	0.130
		32-Canned: Cooked	0.015000	0.004	0.130
		34-Canned: Boiled	0.015000	0.004	0.130
		42-Frozen: Cooked	0.015000	0.004	0.130
		43-Frozen: Baked	0.015000	0.004	0.130
		45-Frozen: Fried	0.015000	0.004	0.130
210	1C	Potatoes/white-dry			
		12-Cooked: NFS	0.015000	0.004	0.130
		14-Boiled	0.015000	0.004	0.130
		15-Fried	0.015000	0.004	0.130
		31-Canned: NFS	0.015000	0.004	0.130
		34-Canned: Boiled	0.015000	0.004	0.130
		42-Frozen: Cooked	0.015000	0.004	0.130
211	1C	Potatoes/white-peel only			
		13-Baked	0.015000	1.000	0.130
		15-Fried	0.015000	1.000	0.130

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Attachment 12: Chronic (non-cancer) DEEM™ Analysis for Scenario 3

U.S. Environmental Protection Agency Ver. 6.76
DEEM Chronic analysis for TPTH (1989-92 data)
Residue file name: C:\DEEM\TPTH\chronicpecanspot.R96
Adjustment factor #2 used.
Analysis Date 09-01-1999/09:50:01 Residue file dated: 08-25-1999/16:06:30/8
Reference dose (RfD, CHRONIC) = .00003 mg/kg bw/day
COMMENT 1: The above RfD number (0.00003) is the chronic PAD; Used AR's, AF's 1 and 2

Total exposure by population subgroup

Population Subgroup	Total Exposure mg/kg body wt/day	Total Exposure Percent of Rfd
U.S. Population (total)	0.000000	0.2%
U.S. Population (spring season)	0.000000	0.1%
U.S. Population (summer season)	0.000000	0.1%
U.S. Population (autumn season)	0.000000	0.2%
U.S. Population (winter season)	0.000000	0.2%
Northeast region	0.000000	0.2%
Midwest region	0.000000	0.2%
Southern region	0.000000	0.1%
Western region	0.000000	0.1%
Hispanics	0.000000	0.1%
Non-hispanic whites	0.000000	0.2%
Non-hispanic blacks	0.000000	0.2%
Non-hisp/non-white/non-black)	0.000000	0.1%
All infants (< 1 year)	0.000000	0.0%
Nursing infants	0.000000	0.0%
Non-nursing infants	0.000000	0.0%
Children 1-6 yrs	0.000000	0.2%
Children 7-12 yrs	0.000000	0.2%
Females 13-19(not preg or nursing)	0.000000	0.2%
Females 20+ (not preg or nursing)	0.000000	0.1%
Females 13-50 yrs	0.000000	0.1%
Females 13+ (preg/not nursing)	0.000000	0.2%
Females 13+ (nursing)	0.000000	0.2%
Males 13-19 yrs	0.000000	0.1%
Males 20+ yrs	0.000000	0.2%
Seniors 55+	0.000000	0.1%
Pacific Region	0.000000	0.1%

23824

Attachment 13: Chronic (cancer) DEEM™ Analysis for Scenario 1

U.S. Environmental Protection Agency — Ver. 6.76
DEEM Chronic analysis for TPTH — (1989-92 data)
Residue file name: C:\DEEM\TPTH\Refined\chronicrefinedmeat2.R96
Adjustment factor #2 used.
Analysis Date 09-01-1999/09:30:21 — Residue file dated: 09-01-1999/09:29:11/8
Q* = 1.83
COMMENT 1: The above RfD number (0.00003) is the chronic PAD; Used AR's, AF's 1 and 2

Total exposure by population subgroup

Population Subgroup	Total Exposure mg/kg body wt/day	Lifetime risk (Q*= 1.83)
U.S. Population (total)	0.000001	1.14E-06

Attachment 14: Chronic (cancer) DEEM™ Analysis for Scenario 2

U.S. Environmental Protection Agency — Ver. 6.76
DEEM Chronic analysis for TPTH — (1989-92 data)
Residue file name: C:\DEEM\TPTH\meatmilkonly.R96 — Adjustment factor #2 used.
Analysis Date 09-01-1999/11:05:10 — Residue file dated:09-01-1999/08:45:54/8
Q* = 1.83
COMMENT 1: The above RfD number (0.00003) is the chronic PAD; Used AR's, AF's 1 and 2

Total exposure by population subgroup

Population Subgroup	Total Exposure mg/kg body wt/day	Lifetime risk (Q*= 1.83)
U.S. Population (total)	0.000001	9.40E-07

23864

[redacted]

Attachment 15: Chronic (cancer) DEEM™ Analysis for Scenario 3

U.S. Environmental Protection Agency — Ver. 6.76
DEEM Chronic analysis for TPTH — (1989-92 data)
Residue file name: C:\DEEM\TPTH\chronicpecanspot.R96
Adjustment factor #2 used.
Analysis Date 09-01-1999/09:53:01 — Residue file dated: 08-25-1999/16:06:30/8
Q* = 1.83
COMMENT 1: The above RfD number (0.00003) is the chronic PAD; Used AR's, AF's 1 and 2

Total exposure by population subgroup

Population Subgroup	Total Exposure mg/kg body wt/day	Lifetime risk (Q*= 1.83)
U.S. Population (total)	0.000000	8.65E-08

24624