

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES**MEMORANDUM**

DATE: March 29, 2007

SUBJECT: **Flufenacet – Revised Memorandum:** Acute and Chronic Aggregate Dietary Exposure and Risk Assessments for the Proposed Section 3 Registration on Wheat, Sweet Corn and Grass Grown for Seed. Petition Number: 6F04631.

PC Code: 121903

Decision Number: 303540

DP Number: 338504

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Estimates of U.S. field corn and soybean acreage presented in the previous flufenacet dietary exposure memorandum (S. Stanton; D334695; 12/12/06) were incorrect. They have been corrected in this document. The revisions do not affect the acute or chronic dietary exposure estimates, and no other changes have been made to the document.

Executive Summary

Acute and chronic dietary risk assessments were conducted using the Dietary Exposure Evaluation Model (DEEM-FCID™), Version 2.03, which uses food consumption data from the U.S. Department of Agriculture's Continuing Surveys of Food Intakes by Individuals (CSFII) from 1994-1996 and 1998. The analyses were performed to support the proposed FIFRA sec. 3 registration of the herbicide, flufenacet, on wheat, sweet corn and grass grown for seed.

Flufenacet is currently registered for food use under FIFRA sec. 3 on field corn and soybean and under FIFRA sec. 18 on wheat. Permanent and temporary tolerances for these commodities have been established under 40 CFR sec. 180.527. Tolerances have also been established to cover secondary residues in livestock (cattle, goat, hog, horse and sheep) and indirect or inadvertent residues in alfalfa, clover, cereal grains (except rice) and grasses (forage, fodder and hay) that may occur as a result of the registered uses (i.e., residues in rotational crops).

Partially refined, Tier 3 acute probabilistic and chronic dietary (food + drinking water) exposure assessments were conducted for all existing and proposed food uses of flufenacet. Anticipated residues for many crops (field corn, soybean, sweet corn and wheat) were developed using field trial data. Anticipated residues for livestock commodities were derived using available feeding and metabolism studies in conjunction with the anticipated dietary burden to ruminants, swine and poultry. Tolerance level residues were used to assess flufenacet exposure from the remaining commodities (i.e., cereal grains). Acute and chronic exposure estimates for all commodities were further refined using percent crop treated (%CT) data, following the guidance provided in HED SOP 99.6 (*Classification of Food Forms with Respect to level of Blending*; 8/20/99). Projected %CT data were used to refine anticipated residues for the new food uses (sweet corn and wheat). Available processing data were used to refine anticipated residues for cereal grains and corn. For all other processed commodities, DEEM (ver. 7.81) default processing factors were assumed.

Estimated drinking water concentrations (EDWCs) were provided by EFED (R. Parker; DP Num: 318616, 318629; 10/04/06) and incorporated directly into the DEEM analyses. For the acute assessment, the entire 30-year distribution of estimated daily surface water concentrations for the Ohio corn crop scenario was used in a probabilistic analysis. For the chronic assessment, the estimated 1-in-10 year annual mean residue in surface water was used as a point estimate in a deterministic analysis.

Acute Dietary Exposure Results

Based on the assumptions described above, estimated acute dietary exposure is below HED's level of concern for the U.S. population and all population subgroups. Combined dietary exposure from food and drinking water at the 99.9th percentile of exposure is estimated to be 0.000514 mg/kg/day for the general U.S. population, equivalent to 30% of the acute Population Adjusted Dose (aPAD). The population subgroup with the highest estimated acute dietary exposure is infants, less than 1 year old, with an estimated exposure at the 99.9th percentile of

0.001514 mg/kg/day, equivalent to 89% of the aPAD. The major contributor to dietary exposure for all population subgroups is drinking water. Estimated acute dietary exposure from food alone is less than or equal to 13% of the aPAD for the general U.S. population and all subgroups.

Chronic Dietary Exposure Results

Chronic dietary exposure estimates for food and drinking water combined are well below HED's level of concern. Using the DEEM-FCID software, chronic dietary exposure is estimated at 0.000049 mg/kg/day for the general U.S. population (2.9% of the chronic Population Adjusted Dose (cPAD)) and 0.000156 mg/kg/day (9.2% of the cPAD) for infants <1 year old, the population subgroup with the highest estimated chronic dietary exposure to flufenacet. As with the acute assessment, the major contributor to estimated chronic dietary exposure is drinking water. Estimated chronic dietary exposure from food alone represents less than 1% of the aPAD for the general U.S. population and all subgroups.

I. Introduction

Dietary risk assessment incorporates both exposure and toxicity of a given pesticide. For acute and chronic assessments, the risk is expressed as a percentage of a maximum acceptable dose (i.e., the dose which HED has concluded will result in no unreasonable adverse health effects). This dose is referred to as the population adjusted dose (PAD). The PAD is equivalent to the point of departure (POD; e.g., NOAEL, LOAEL) divided by the appropriate uncertainty or safety factors.

For acute and non-cancer chronic exposures, HED is concerned when estimated dietary risk exceeds 100% of the PAD. References which discuss the acute and chronic risk assessments in more detail are available on the EPA/pesticides web site: "Available Information on Assessing Exposure from Pesticides, A User's Guide," 6/21/2000, web link: <http://www.epa.gov/fedrgstr/EPA-PEST/2000/July/Day-12/6061.pdf>; or see SOP 99.6 (8/20/99).

The most recent HED dietary risk assessment for flufenacet was conducted by William D Wassell (Memo, dated 05/14/03; DP Num 289838) to support a FIFRA §18 emergency exemption request for the use of flufenacet on wheat.

II. Food Residue Information

Residues of Concern: The nature of flufenacet residues in plants is understood for the existing and proposed commodities, based on adequate studies using a preplant application to corn and soybeans and a postemergence application to corn and wheat. The Metabolism Assessment Review Committee (MARC) concluded in a meeting on 7/16/97 that the residues of concern in plants for both tolerance expression and risk assessment are parent and the metabolites containing the 4-fluoro-*N*-methylethyl benzenamine moiety.

The nature of the residue in livestock is also understood, based on adequate goat and poultry metabolism studies using ¹⁴C-labeled parent and plant metabolites. The metabolism of flufenacet and its plant metabolites is similar in ruminants and poultry. Based on the results of these studies, the MARC (DP Num: 241928, N. Dodd, 12/18/97) concluded that the residues of concern in ruminants and poultry for the tolerance expression are parent and the metabolites containing the 4-fluoro-*N*-methylethyl benzenamine moiety. The dietary risk assessment for

livestock commodities should also include thiadone related residues, glycoside conjugate (THNG) and the malonylalanine conjugate of thiadone.

The MARC also concluded at its 7/16/97 meeting that thiadone residues should be included, along with parent flufenacet, in the drinking water risk assessment.

Tolerances: Permanent tolerances have been established for flufenacet and its metabolites containing the 4-fluoro-*N*-methylethyl benzenamine moiety in/on raw agricultural commodities [field corn forage (0.4 ppm), grain (0.05 ppm), and stover (0.4 ppm); and soybean seed (0.1 ppm)] under 40 CFR §180.527(a); and at 0.1 ppm for indirect or inadvertent residues in/on alfalfa and clover; cereal grains (crop group 15), except rice; and forage, fodder and straw of cereal grains (crop group 16), except rice; and the forage, fodder and hay of grass (crop group 17) under 40 CFR 180.527(d). In addition, time-limited tolerances have been established in connection with Section 18 emergency exemption under 40 CFR 180.527(b) for livestock commodities at 0.05 ppm in fat and meat of cattle, goats, hogs, horses, and sheep; 0.10 ppm in meat byproducts except kidney of cattle, goats, hogs, horses, and sheep; and 0.50 ppm in kidney of cattle, goats, hogs, horses, and sheep and for wheat forage (10 ppm), grain (1.0 ppm), hay (2.0 ppm) and straw (0.50 ppm). These time-limited tolerances are set to expire on 6/30/07. No tolerances have been established for milk, eggs or poultry commodities.

Based on its review of data submitted with the current petition, including additional residue data to support a revised use pattern for field corn, HED has determined that tolerances for flufenacet and its metabolites should be revised as shown in Table 1 (A. Acierto; 11/29/06; DP Num: 288564 & 288565). Where appropriate, the tolerance levels were determined using the Tolerance/MRL Harmonization Spreadsheet.

Table 1. Recommended Tolerances for Flufenacet	
Commodity	Recommended Tolerance (ppm)
§180.527(a). Tolerances for the combined residues of the Herbicide, <i>N</i> -(4-fluorophenyl)- <i>N</i> -(1-methylethyl)-2-[[5-(trifluoromethyl)-1,3,4-thiadiazol-2-yl]oxy]acetamide and its metabolites containing the 4-fluoro- <i>N</i> -methylethyl benzenamine moiety.	
Corn, field, forage	0.45
Corn, field, grain	0.05
Corn, field, stover	0.30
Corn, sweet, forage	0.45
Corn, sweet, kernel plus cob with husks removed	0.05
Corn, sweet, stover	0.30
Soybean, seed ¹	0.05
Wheat, bran	0.80
Wheat, forage	6.0
Wheat, grain	0.60
Wheat, hay	1.2
Wheat, straw	0.35
Cattle, kidney	0.05

Table 1. Recommended Tolerances for Flufenacet	
Commodity	Recommended Tolerance (ppm)
Goat, kidney	0.05
Hog kidney	0.05
Horse, kidney	0.05
Sheep, kidney	0.05
40CFR 180.527(c). <i>N</i> -(4-fluorophenyl)- <i>N</i> -(1-methylethyl)-2-[[5-(trifluoromethyl)-1,3,4-thiadiazol-2-yl]oxy]acetamide and its metabolites containing the 4-fluoro- <i>N</i> -methylethyl benzenamine moiety, with regional registration.	
Grass, forage	7.0
Grass, hay	0.4
40CFR 180.527(d). <i>N</i> -(4-fluorophenyl)- <i>N</i> -(1-methylethyl)-2-[[5-(trifluoromethyl)-1,3,4-thiadiazol-2-yl]oxy]acetamide and its metabolites containing the 4-fluoro- <i>N</i> -methylethyl benzenamine moiety for indirect or inadvertent residues	
Alfalfa, forage	2.0
Alfalfa, hay	2.0
Alfalfa, seed	0.10
Clover, forage	2.0
Clover, hay	2.0
Cereal, grain, crop group 15, except rice	0.10
Cereal, grain, forage, fodder, and straw, crop group 16, except rice	2.0
Grass, forage, fodder and hay, crop group 17	2.0

¹ The available soybean data support the established tolerance of 0.10 ppm for soybean seeds. However, in light of the proposed reduced application rate (0.45 lb ai/A instead of 0.9 lb ai/A) and the European tolerance level of 0.05 ppm, HED now recommends that the soybean, seed tolerance be lowered to 0.05 ppm.

Residue Data used for the Acute and Chronic Assessments:

Food: Refined, Tier 3 acute probabilistic and chronic dietary exposure assessments were conducted for all existing and proposed new food uses of flufenacet and drinking water. Anticipated residues for many crops (field corn, soybean, sweet corn and wheat) were developed using field trial data. Anticipated residues for livestock commodities were derived using available feeding and metabolism studies in conjunction with the anticipated dietary burden to ruminants, swine and poultry. Tolerance level residues were used to assess flufenacet exposure from the remaining commodities (i.e., cereal grains). Pesticide Data Program (PDP) monitoring data are available for wheat flour (2003,2004), wheat grain (2005) and pork fat/muscle (2005). The PDP data were not used to develop anticipated residues for wheat commodities, since they reflect the historical, regional section 18 use of flufenacet on wheat in the Pacific Northwest, rather than the proposed section 3 national use. Since wheat makes up 80% of the theoretical swine diet, the PDP data for pork commodities are also considered inappropriate for estimating anticipated residues in these commodities.

Acute and chronic exposure estimates for all commodities were further refined using %CT data, following the guidance provided in HED SOP 99.6 (*Classification of Food Forms with Respect to level of Blending*; 8/20/99). Projected %CT data were used to refine anticipated residues for the new food uses (sweet corn and wheat). Available processing data were used to refine anticipated residues for cereal grains and corn. For all other processed commodities, DEEM (ver. 7.81) default processing factors were assumed.

Anticipated residues for *plant* commodities were calculated in accordance with HED guidance for Tier 3 assessments as follows:

Acute Assessment:

- Field corn, soybean and wheat (blended commodities): Average field trial residues were calculated and multiplied by the maximum %CT or projected %CT (wheat) estimate in the acute DEEM analysis. A residue value equal to $\frac{1}{2}$ the Limit of Quantitation (LOQ) was assumed for all field trial samples with non-detectable residues.
- Other cereal grains (blended commodities): Flufenacet is not registered for direct application to these crops; however, inadvertent residues may occur in these crops from flufenacet's use on other crops. In the DEEM analysis, the tolerance level of 0.1 ppm for inadvertent residues was multiplied by the maximum projected %CT estimate for wheat (the field crop with the highest estimated or projected maximum %CT).
- Sweet corn (not blended or partially blended): All sweet corn field trial samples contained non-detectable residues of flufenacet. For the acute assessment, a residue distribution file was constructed using $\frac{1}{2}$ the LOQ for non-detectable residues and incorporating zeros to account for the percent of the crop not likely to be treated with flufenacet.

Chronic Assessment:

- Field corn, soybean, wheat (blended commodities) and sweet corn (not blended or partially blended): Average field trial residues were calculated and multiplied by the average %CT or projected %CT (wheat) estimate in the chronic DEEM analysis. A residue value equal to $\frac{1}{2}$ the Limit of Quantitation (LOQ) was assumed for all field trial samples with non-detectable residues.
- Other cereal grains (blended commodities): Flufenacet is not registered for direct application to these crops; however, inadvertent residues may occur in these crops from flufenacet's use on other crops. In the DEEM analysis, the tolerance level of 0.1 ppm for inadvertent residues was multiplied by the average projected %CT estimate for wheat (the field crop with the highest estimated or projected average %CT).

The residue data for plant commodities used in the chronic and acute dietary assessments are summarized in Table 2. Residue distribution files (RDFs) used in the acute assessment are included in the attachments.

Table 2. Data and Residue Estimates Used in Dietary Analyses											
RAC	Food Forms	Classification ¹	Data Source	No. of Samples	No. of Detectable Residues	LOQ (ppm)	%CT		Processing Factors	Anticipated Residue Estimates/Tolerance	
							Ave.	Max.		Acute (Tol., AR, RDF) ⁵	Chronic (Tol., AR)
Cereal Grains (Barley, Buckwheat, Millet, Oat, Popcorn, Rye, Sorghum)	All	B	Tolerance	N/A	N/A	N/A	1 ²	3 ²	Flour: 0.44x ³ Bran: 2.1x ³	0.1 ppm adjusted by 3%CT	0.1 ppm adjusted by 1%CT
Corn, field	All	B	Ave. Field Trial; MRID: 45012405 & 45012407	62	0	0.05	<1 ⁴	<2.5 ⁴	All: 1x ⁵	0.025 ppm adjusted by 2.5%CT	0.025 ppm adjusted by 1%CT
Corn, sweet	All	NB/PB	Field Trial; MRID: 45012405 & 45012407	18	0	0.05	3 ⁶	10 ⁶	N/A	RDF: 'Sweet Corn, using maximum projected 10%CT TOTALZ=90 TOTALLOD=10 LODRES=0.025	0.025 ppm adjusted by 3%CT
Soybean	All	B	Ave. Field Trial; MRID: 43850093	22	2	0.05	<1 ⁴	<2.5 ⁴	1x ⁵	0.03 ppm adjusted by 2.5%CT	0.03 ppm adjusted by 1%CT
Wheat/Triticale	All	B	Ave. Field Trial; MRID: 45012401	38	38 (29 above LOQ)	0.05	1 ⁶	3 ⁶	Flour: 0.44x ³ Bran: 2.1x ³	0.13 ppm adjusted by 3%CT	0.13 ppm adjusted by 1%CT

1. Classification of blended (B), partially blended (PB), not blended (NB).
2. Based on projected %CT for wheat, the field crop with the highest estimated ave. and max. %CT.
3. Based on processing data for wheat: MRID#45012408; A. Acierito; DP Num: 288564; 07/27/06.
4. Screening Level Usage Analysis; BEAD; 08/18/2005
5. N. Dodd; DP Num: 224142; 12/12/96
6. *Projected Percent Crop Treated for Herbicide Flufenacet (PC 121903) on Sweet Corn, Wheat and Grasses Grown for Seed*; N. Zinn & A Grube; DP Nums: 320497, 321194; 10/25/2006

Anticipated residues for *livestock* commodities were calculated as described in the following sections. As mentioned above, the residues of concern for risk assessment in livestock include parent flufenacet *plus* thiadone related residues, glycoside conjugate (THNG) and the malonylalanine conjugate of thiadone. So, while tolerances are only required for a few animal commodities (kidney of cattle, goat, hog, horse and sheep), anticipated residues for flufenacet and thiadone compounds have been calculated for all livestock commodities, including ruminants, swine and poultry.

The DEEM input values calculated for ruminants, swine and poultry were incorporated into the acute and chronic analyses as follows:

- The calculated anticipated residues for livestock were used probabilistically in the acute assessment following the procedures outlined in the 4/6/99 e-mail from David Miller to Novigen. These procedures were subsequently summarized and posted on the Dietary Exposure Scientific Advisory Committee (DE SAC) database by Christina Swartz (10/14/99). Residue distribution files (RDFs) were constructed using the calculated anticipated residue value for the percentage of the livestock commodity expected to contain residues and zeros for the percentage of the commodity expected to be residue-free. The percentage of the commodity expected to contain residues was assumed to equal to the highest maximum %CT estimate for any single feed item. For ruminants, swine and poultry, the feed item with the highest %CT estimate is wheat (3% projected). Therefore, RDFs were constructed for each livestock commodity with a 3% probability of encountering the calculated anticipated residue and a 97% probability of encountering a zero.
- The calculated anticipated residues for livestock were used deterministically in the chronic assessment. The point estimates were adjusted by the highest average %CT estimate. Again, the highest average %CT estimate for any single feed item is wheat (1% projected). Therefore, 1% was incorporated as an adjustment factor for each livestock commodity in the chronic DEEM analysis.

Note: BEAD's maximum and average projected %CT estimates for sweet corn are 10% and 3%, respectively, which are higher than the estimates for wheat used to refine the exposure estimates for livestock commodities in the acute and chronic analyses. Sweet corn was not included in the proposed livestock diets and the projected %CT estimates were not used to adjust exposures for livestock commodities, because the sweet corn acreage is small compared to the acreage planted to corn, soybeans and wheat. Over the last 5 years, less than 1 million acres of sweet corn have been planted in the U.S., compared to approximately 60 million acres of wheat, 75 million acres of soybeans and 80 million acres of field corn (from USDA's National Agricultural Statistics Service website).

Cattle, goats, horses, and sheep:

To determine anticipated residues for cattle, goat, sheep and horse tissues, the dietary burden to these livestock was determined using the proposed diet developed by J. Stokes and B. Schneider (DP Num:332410; 09/13/06). Table 3 summarizes the dietary burden for beef and dairy cattle.

Table 3. Anticipated Flufenacet Residues in the Diet of Dairy¹ and Beef Cattle						
Feed Item	AR ² (ppm)	% Dry Matter	% Diet-- Dairy Cattle	% Diet-- Beef Cattle	Diary Cattle Residue (ppm)	Beef Cattle Residue (ppm)
Field Corn Forage	0.36	40	20	15	0.18	0.135
Field Corn Stover	0.15	83	10	--	0.018	--
Field Corn Grain	0.025	88	35	30	0.01	0.0085
Wheat, Milled Byproducts	0.13 (grain) ³	88	10	20	0.015	0.03
Wheat, Hay	0.95	88	10	20	0.108	0.216
Soybean Meal	0.03 (seed)	92	15	15	0.005	0.005
Anticipated Dietary Burden (ppm)					0.34	0.39

¹Flufenacet is also proposed for use on grass grown for seed in the Pacific Northwest and sweet corn, both of which may be fed to cattle. However, these crops were not included in the proposed diet because of the limited acreage compared to the acreage planted to field corn, wheat and soybeans.

²ARs for forage, hay and stover (Non-blended feed items) are the HAFT value from the crop field trials while the ARs for field corn grain, wheat milled byproducts and soybean meal (Blended feed items) are the average residue levels from the field trials.

³Processing data (MRID 45012408) indicate that residues do not concentrate in milled byproducts (shorts, middlings, AGF).

A 29-day dairy cattle feeding study was conducted using FOE oxalate (MRID 43850090). This metabolite was used because it was a major plant metabolite, whereas no parent flufenacet was found in plant metabolism studies. The cattle feeding study was reviewed and found acceptable (Memo, 1/7/97, N. Dodd, DP Num:224142). Milk samples from the 82.4 and 24.67 ppm groups from various treatment days were analyzed for residues of FOE oxalate. Residue levels in all milk samples were <0.01 ppm. The results of this study are summarized in Table 4.

Table 4. Maximum FOE Oxalate Residues from the Cattle Feeding Study					
Treatment Level (ppm)*	Kidney (ppm)	Liver (ppm)	Fat (ppm)	Muscle (ppm)	Milk (ppm)
82.4	0.64	0.19	0.10	0.09	<0.01
24.7	0.32	0.057	<0.05	<0.05	<0.01
7.80	0.058	<0.05	Not analyzed	Not analyzed	Not analyzed

The results of the feeding study corrected for the rate of exaggeration (based on the anticipated dietary burdens for beef and dairy cattle) are summarized in Table 5.

Treatment Level (ppm)*	Kidney (ppm)	Liver (ppm)	Fat (ppm)	Muscle (ppm)	Milk (ppm)
82.4 (211x/242x)	0.003	0.0009	0.0005	0.0004	0.00002
24.7 (63/73x)	0.005	0.0009	0.0004	0.0004	0.00007
7.80 (20/23x)	0.003	0.0013	Not analyzed	Not analyzed	Not analyzed
Average	0.0037	0.001	0.00045	0.0004	0.000045

* In parenthesis are the exaggeration rates based on the anticipated DB of 0.39 ppm for beef cattle/0.34 ppm for dairy cattle.

A metabolism study using 166 ppm [thiadiazole-2-¹⁴C] flufenacet was conducted on a lactating goat. This dose rate corresponds to an exaggerated rate of 426x the anticipated dietary burden calculated for beef cattle and 488x for dairy cattle. The results of this metabolism study are discussed in HED's review of 6/30/97 (Memo, N. Dodd, DP Num: 236252) and are summarized in Table 6.

Matrix	Residue	% TRR	ppm (426x/488x)	ppm (1x ¹)	Flufenacet ² Anticipated Residue (AR) Level ppm	DEEM ³ input ppm
fat	thiadone	89	2.533	0.006	0.00045	0.0064
kidney	thiadone glucuronide	9	1.837	0.0043	0.0037	0.051
	thiadone	89	18.164	0.0426		
liver	thiadone glucuronide	5	0.848	0.002	0.001	0.037
	thiadone	86	14.582	0.034		
muscle	thiadone	84	3.205	0.0075	0.0004	0.0079
milk-avg ⁴	thiadone glucuronide	10	0.054	0.00011	0.000045	0.00062
	thiadone	40	0.23	0.00047		

¹ Normalized to 1X rate based on anticipated dietary burden for beef cattle (fat, kidney, liver and muscle) or dairy cattle (milk).

² From Table 5.

³ Sum of [thiadone + thiadone glucuronide] + flufenacet AR.

⁴ Values for milk in the above table are averaged over the 3-day study.

Thus, for the dietary risk assessment, anticipated residue values for livestock commodities represent a sum of the anticipated-residue level selected for flufenacet and metabolites containing the 4-fluoro-N-methylethyl benzenamine moiety added to the calculated level of thiadone-related compounds based on the anticipated dietary burden. The appropriate residue level for meat byproducts and other organ meats is that of kidney, as this anticipated residue level is considered the worst-case value for all tissues.

Swine:

In order to determine ARs for swine tissues, the dietary burden to swine was determined using a reasonable diet (A. Acierto; 11/29/06; DP Num: 288564 & 288565) and anticipated (average field trial) residues for the feed items. Table 7 summarizes the anticipated dietary burden for swine.

Table 7. Anticipated Flufenacet Dietary Burden for Swine			
Feed Item	AR (ppm)	% in Diet–Swine	Possible Residue (ppm)
Wheat grain	0.13	80	0.104
Soybean meal	0.03	20	0.006
Anticipated Dietary Burden for Swine			0.110

Table 7 shows that the anticipated swine dietary burden for flufenacet is 0.11 ppm. ARs for swine were determined in a way similar to that for ruminants, using the cattle feeding and goat metabolism studies, as described below. The corrected results of the cattle feeding study based on the anticipated swine dietary burden are summarized in Table 8.

Table 8. Corrected FOE Oxalate Residues from the Cattle Feeding Study				
Treatment Level (ppm)*	Kidney (ppm)	Liver (ppm)	Fat (ppm)	Muscle (ppm)
82.4 (749x)	0.00085	0.00025	0.00013	0.00012
24.7 (224x)	0.0014	0.00025	0.00011	0.00011
7.80 (71x)	0.00082	0.00035	Not analyzed	Not analyzed
Average	0.0010	0.00028	0.00012	0.00012

* In parenthesis is the exaggeration rate based on the anticipated DB of 0.11 ppm for swine.

The goat metabolism study was conducted using a dose of 166 ppm [thiadiazole-2-¹⁴C] flufenacet, which corresponds to an exaggerated rate of 1509x the anticipated DB calculated for swine. The results of this metabolism study are discussed in HED's review of 6/30/97 (Memo, N. Dodd, DP Num: 236252) and summarized below in Table 9.

Matrix	Residue	% TRR	ppm (1509x)	ppm (1x ¹)	Flufenacet ² Residue Level ppm	DEEM ³ input ppm
fat	thiadone	89	2.533	0.0017	0.00012	0.0018
kidney	thiadone	9	1.837	0.0012	0.0010	0.014
	glucuronide thiadone	89	18.164	0.012		
liver	thiadone	5	0.848	0.00056	0.00028	0.011
	glucuronide thiadone	86	14.582	0.0097		
muscle	thiadone	84	3.205	0.0022	0.00012	0.0023

¹ Normalized to 1X rate based on the anticipated swine dietary burden.

² From Table 8.

³ Sum of [thiadone + thiadone glucuronide] + flufenacet AR.

Thus, for the dietary risk assessment, residue values for pork commodities represent a sum of the anticipated residue level of flufenacet and metabolites containing the 4-fluoro-N-methylethyl benzenamine moiety added to the calculated level of thiadone-related compounds based on the anticipated swine dietary burden. The appropriate residue level for meat byproducts and other organ meats is that of kidney, as this anticipated residue value is considered the worst-case value for all tissues. For DEEM commodities designated as “skin” such as “Pork, skin”, the anticipated residue level for fat was used.

Poultry:

In order to determine ARs for poultry tissues, the dietary burden to poultry was determined using a reasonable diet (A. Acierito; 11/29/06; DP Num: 288564 & 288565) and anticipated (average field trial) residues for the feed items. Table 10 summarizes the anticipated dietary burden for poultry.

Feed Item	AR (ppm)	% in Diet–Poultry	Possible Residue (ppm)
Wheat grain	0.13	80	0.104
Soybean meal	0.03	20	0.006
Anticipated Dietary Burden for Poultry			0.11

Table 10 shows that the anticipated poultry dietary burden of flufenacet from treated feed items is 0.11 ppm. No flufenacet poultry feeding study is available for review. However, poultry metabolism studies using [thiadiazole-2-¹⁴C] flufenacet (MRID 43850076), [fluorophenyl-UL-¹⁴C] flufenacet (MRID 43850074), and [fluorophenyl-UL-¹⁴C] FOE oxalate (MRID 438500798) at 78 ppm are available. Collectively, these studies show that no tolerances are needed for flufenacet and its metabolites containing the 4-fluoro-N-methylethyl benzenamine moiety in poultry commodities. But, as with the ruminants, thiadone-related residues predominate. The hen metabolism study using [thiadiazole-2-¹⁴C] flufenacet at 78 ppm (corresponding to an

exaggeration rate of 709x the anticipated DB) gave results for thiadone-related residues as discussed in the HED memo of 6/30/97 (Memo, N. Dodd, DP Num: 236252) and as summarized in Table 11.

Table 11. Derivation of DEEM Input Values for Poultry Commodities					
Matrix	Metabolite	% TRR	ppm (flufenacet equivalents)		DEEM input ppm
			1000x	1x ¹	
fat	thiadone	80	1.430	0.0020	0.0020
liver	thiadone glucuronide	9	0.935	0.0013	0.013
	thiadone	83	8.620	0.012	
muscle	thiadone	86	1.920	0.0027	0.0027
Eggs - avg ²	thiadone	90	0.408	0.00058	0.00058

¹ Normalized to 1X rate based on the anticipated DB to poultry.

² Values for eggs in the above table are averaged over the 3 days of the study.

Thus, for the dietary risk assessment, anticipated residue values for poultry commodities represent the calculated level of thiadone-related compounds based on the anticipated dietary burden. The appropriate residue level for meat byproducts and other organ meats is that of liver, as this is considered the worst-case value for all tissues. For DEEM commodities designated as “skin”, such as “chicken, skin” or “poultry, other, skin”, the anticipated residue level for fat was used.

III. Drinking Water Data

Reference: *Revised Estimated Drinking Water Concentrations of Flufenacet and Degradate Thiadone for the Use in Human Health Risk Assessment*; Ronald Parker; DP Num: 318616, 318629; 10/04/06.

The residues of concern in drinking water include flufenacet and its degradate, thiadone. The Environmental Fate and Effects Division (EFED) provided estimated drinking water concentrations (EDWCs) of flufenacet and thiadone in surface water using the Tier II PRZM/EXAMS models. Groundwater EDWCs were provided for parent flufenacet only using the Tier I SCIGROW model.

Ground Water: For ground water, the acute and chronic flufenacet EDWC from the SCIGROW model is 0.10 ppb. Ground-water monitoring information provided by the registrant supports the SCIGROW model result as a reasonable estimate of groundwater concentrations. Acute and chronic concentrations of 0.18 ppb and 0.03 ppb, respectively, were seen in a small-scale prospective groundwater study conducted by the registrant in a Nebraska aquifer that could reasonably be expected to be used for drinking water. (FOE 5043; Reregistration Eligibility Document; October, 1997). The Agency has been unable to locate any other field monitoring data for flufenacet in groundwater.

Surface Water: For surface water, the combined one-in-ten-year peak (acute) and one-in-ten-year mean (chronic) estimated concentrations of flufenacet *and* thiadone are presented in Table 12 for two Midwest corn belt cropping scenarios (Ohio corn and Illinois corn). Thiadone concentrations are expected to average 11 percent of parent flufenacet concentrations at the time of year when combined concentrations are the highest. Therefore, combined concentrations of flufenacet and thiadone were derived by multiplying parent flufenacet concentrations by a factor of 1.11.

PRZM Scenario	Acute Parent Flufenacet (ppb)	Chronic Parent Flufenacet (ppb)	Acute Degradate Thiadone (ppb)	Chronic Degradate Thiadone (ppb)	Sum: Acute Parent Plus Degradate (ppb)	Sum: Chronic Parent Plus Degradate (ppb)
Ohio Corn	7.78	2.01	0.86	0.22	8.64	2.23
Illinois Corn	9.07	2.55	1.00	0.28	10.07	2.83

Of all the labeled crops, the highest surface water concentrations would be expected for corn and soybeans, because the application rate is higher and there is more area planted to these crops; and surface water EDWCs for these two crops should not be different. The Ohio and Illinois corn scenarios were chosen as the most appropriate national-level scenarios based on their location in the Midwestern corn belt. The modeling results for these two scenarios are similar, with the Illinois scenario returning only slightly higher values. This slight difference is not due to differences in soil vulnerability in Ohio and Illinois; rather, it is an artifact of planting date selection relative to rainfall events at these two locations. EFED selected application dates 14 days before recommended planting dates without regard to rainfall dates for the two scenarios. Since growers seek to maximize the benefit of pesticide applications, they would be expected to apply flufenacet when dry weather is forecast. Therefore, the model results for the Ohio corn scenario were selected as appropriate for use in the dietary assessment. The selection of the Ohio scenario also provides consistency with the previous 2003 dietary assessment which used drinking water estimates based on the Ohio corn scenario.

The estimated surface water concentrations of flufenacet are nearly 2 orders of magnitude higher than estimated groundwater concentrations. Therefore, the PRZM/EXAMS surface water modeling results were used in the dietary assessment. For the acute assessment, the entire 30-year distribution of estimated daily concentrations from the Ohio corn scenario was used in a probabilistic analysis. For the chronic assessment, the estimated 1-in-10 year annual mean residue was used as a point estimate in a deterministic analysis.

IV. DEEM-FCID™ Program and Consumption Information

Flufenacet acute and chronic dietary exposure assessments were conducted using the Dietary Exposure Evaluation Model software with the Food Commodity Intake Database (DEEM-FCID™, Version 2.03), which incorporates consumption data from USDA's Continuing Surveys of Food Intakes by Individuals (CSFII), 1994-1996 and 1998. The 1994-96, 98 data are based on the reported consumption of more than 20,000 individuals over two non-consecutive survey days. Foods "as consumed" (e.g., apple pie) are linked to EPA-defined food commodities (e.g.

apples, peeled fruit - cooked; fresh or N/S; baked; or wheat flour - cooked; fresh or N/S, baked) using publicly available recipe translation files developed jointly by USDA/ARS and EPA. For chronic exposure assessment, consumption data are averaged for the entire U.S. population and within population subgroups, but for acute exposure assessment are retained as individual consumption events. Based on analysis of the 1994-96, 98 CSFII consumption data, which took into account dietary patterns and survey respondents, HED concluded that it is most appropriate to report risk for the following population subgroups: the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, adults 20-49, females 13-49, and adults 50+ years old.

For chronic dietary exposure assessments, an estimate of the residue level in each food or food-form (e.g., orange or orange juice) on the food commodity residue list is multiplied by the average daily consumption estimate for that food/food form to produce a residue intake estimate. The resulting residue intake estimate for each food/food form is summed with the residue intake estimates for all other food/food forms on the commodity residue list to arrive at the total average estimated exposure. Exposure is expressed in mg/kg body weight/day and as a percent of the cPAD. This procedure is performed for each population subgroup.

For acute exposure assessments, individual one-day food consumption data are used on an individual-by-individual basis. The reported consumption amounts of each food item can be multiplied by a residue point estimate and summed to obtain a total daily pesticide exposure for a deterministic exposure assessment, or “matched” in multiple random pairings with residue values and then summed in a probabilistic assessment. The resulting distribution of exposures is expressed as a percentage of the aPAD on both a user (i.e., only those who reported eating relevant commodities/food forms) and a per-capita (i.e., those who reported eating the relevant commodities as well as those who did not) basis. In accordance with HED policy, per capita exposure and risk are reported for all tiers of analysis. However, for Tiers 1 and 2, any significant differences in user vs. per capita exposure and risk are specifically identified and noted in the risk assessment.

V. Toxicological Information

On April 23, 2003, the HED Hazard Identification Assessment Review Committee (HIARC) reviewed the recommendations of the toxicology reviewer for flufenacet with regard to the appropriate toxicological endpoints and doses for human health risk assessments. The potential for increased susceptibility of infants and children from exposure to flufenacet was also evaluated as required by the Food Quality Protection Act (FQPA) of 1996. The doses and toxicological endpoints selected for the various dietary exposure scenarios are summarized in Table 13.

Table 13. Summary of Dietary Endpoints and Doses Selected for Flufenacet²			
Exposure Scenario	Dose (mg/kg/day) Uncertainty Factor (UF)	Special FQPA SF* and Level of Concern for Risk Assessment	Study and Endpoint for Dietary Risk Assessment
Acute Dietary (all populations)	LOAEL = 1.7 mg/kg/day UF = 1000X¹ Acute RfD = 0.0017 mg/kg/day	FQPA SF = 1X aPAD = 0.0017 mg/kg/day	Developmental-neurotoxicity study in rats LOAEL = 1.7 mg/kg/day, based on decreased body weight/body weight gain and missing morphometric measurements in caudate/putamen in pups.
Chronic Dietary (all populations)	LOAEL = 1.7 mg/kg/day UF = 1000X¹ Chronic RfD = 0.0017 mg/kg/day	FQPA SF = 1X cPAD = 0.0017 mg/kg/day	Developmental-neurotoxicity study in rats LOAEL = 1.7 mg/kg/day, based on decreased body weight/body weight gain in pups.
Cancer Classification	E (Not likely to be a Human Carcinogen)		

¹The 1000-fold uncertainty factor includes 10X interspecies, 10X intraspecies and 10X for the lack of a NOAEL in the DNT and the requirement of a comparative thyroid study.

²UF = uncertainty factor, FQPA SF = Special FQPA safety factor, NOAEL = no-observed-adverse-effect-level, LOAEL = lowest-observed-adverse-effect-level, PAD = population adjusted dose (a = acute, c = chronic) RfD = reference dose.

VI. Results/Discussion

As stated above, for acute and chronic assessments, HED is concerned when dietary risk exceeds 100% of the PAD. The DEEM-FCID™ analyses estimate the dietary exposure of the U.S. population and various population subgroups. The acute and chronic results reported below are for the general U.S. Population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, females 13-49, adults 20-49, and adults 50+ years.

Results of Acute Dietary Exposure Analysis

Based on the assumptions described above, estimated acute dietary exposure is below HED's level of concern for the U.S. population and all population subgroups. Combined dietary exposure from food and drinking water at the 99.9th percentile of exposure is estimated to be 0.000514 mg/kg/day for the general U.S. population, equivalent to 30% of the acute Population Adjusted Dose (aPAD). The population subgroup with the highest estimated acute dietary exposure is infants, less than 1 year old, with an estimated exposure at the 99.9th percentile of 0.001514 mg/kg/day, equivalent to 89% of the aPAD. The acute dietary exposure results at the 99.9th percentile are compared to the results at the 95th and 99th percentiles in Table 14.

Table 14. Results of Acute Dietary (Food + Drinking Water) Exposure Analysis Using DEEM FCID							
Population Subgroup	aPAD (mg/kg/day)	95th Percentile		99th Percentile		99.9th Percentile	
		Exposure (mg/kg/day)	% aPAD	Exposure (mg/kg/day)	% aPAD	Exposure (mg/kg/day)	% aPAD
General U.S. Population	0.0017	0.000115	6.8	0.000230	14	0.000514	30
All Infants (< 1 year old)		0.000396	23	0.000790	46	0.001514	89
Children 1-2 years old		0.000185	11	0.000361	21	0.000720	42
Children 3-5 years old		0.000171	10	0.000325	19	0.000635	37
Children 6-12 years old		0.000118	7.0	0.000227	13	0.000444	26
Youth 13-19 years old		0.000088	5.2	0.000178	10	0.000389	23
Adults 20-49 years old		0.000105	6.2	0.000206	12	0.000424	25
Adults 50+ years old		0.000104	6.1	0.000190	11	0.000344	20
Females 13-49 years old		0.000106	6.2	0.000207	12	0.000418	25

The major contributor to dietary exposure for all population subgroups is drinking water. Estimated acute dietary exposure from food alone is less than or equal to 13% of the aPAD for the general U.S. population and all subgroups. Estimated acute exposures (99.9th percentile) from food alone and drinking water alone are compared to exposures for food and water combined in Table 15, below. Please note that the analyses for food, drinking water, and food + drinking water were conducted separately and that the results are not additive (i.e., food exposure + drinking water exposure \neq the combined exposure for food and drinking water).

Table 15. Results of Acute Dietary Exposure Analysis for Food, Drinking Water and Combined Food and Drinking Water at the 99.9th Percentile of Exposure							
Population Subgroup	aPAD (mg/kg/day)	Food Alone		Drinking Water Alone		Food and Drinking Water	
		Exposure (mg/kg/day)	% aPAD	Exposure (mg/kg/day)	% aPAD	Exposure (mg/kg/day)	% aPAD
General U.S. Population	0.0017	0.000102	6.0	0.000503	30	0.000514	30
All Infants (< 1 year old)		0.000110	6.4	0.001520	89	0.001514	89
Children 1-2 years old		0.000215	13	0.000690	41	0.000720	42
Children 3-5 years old		0.000223	13	0.000611	36	0.000635	37
Children 6-12 years old		0.000148	8.7	0.000428	25	0.000444	26
Youth 13-19 years old		0.000085	5.0	0.000377	22	0.000389	23
Adults 20-49 years old		0.000069	4.1	0.000419	25	0.000424	25
Adults 50+ years old		0.000063	3.7	0.000339	20	0.000344	20
Females 13-49 years old		0.000073	4.3	0.000413	24	0.000418	25

Results of Chronic Dietary Exposure Analysis

Chronic dietary exposure estimates for food and drinking water combined are well below HED's level of concern. Using the DEEM-FCID software, chronic dietary exposure is estimated at 0.000049 mg/kg/day for the general U.S. population (2.9% of the chronic Population Adjusted Dose (cPAD)) and 0.000156 mg/kg/day (9.2% of the cPAD) for infants <1 year old, the population subgroup with the highest estimated chronic dietary exposure to flufenacet. As with the acute assessment, the major contributor to estimated chronic dietary exposure is drinking water. Estimated chronic dietary exposure from food alone represents less than 1% of the aPAD for the general U.S. population and all subgroups. Estimated chronic exposures from food alone and drinking water alone are compared to exposures for food and water combined in Table 16, below.

Table 16. Summary of Chronic Dietary Exposure and Risk for Flufenacet¹						
Population Subgroup	Food Only		Drinking Water Only		Total	
	Exposure (mg/kg/day)	% cPAD	Exposure (mg/kg/day)	% cPAD	Exposure (mg/kg/day)	% cPAD
	cPAD = 0.0017 mg/kg/day					
General U.S. Population	0.000002	<1	0.000047	2.8	0.000049	2.9
All Infants (< 1 year old)	0.000002	<1	0.000154	9.1	0.000156	9.2
Children 1-2 years old	0.000005	<1	0.000070	4.1	0.000075	4.4
Children 3-5 years old	0.000005	<1	0.000065	3.8	0.000070	4.1
Children 6-12 years old	0.000003	<1	0.000045	2.7	0.000048	2.9
Youth 13-19 years old	0.000002	<1	0.000034	2.0	0.000036	2.1
Adults 20-49 years old	0.000002	<1	0.000044	2.6	0.000046	2.7
Adults 50+ years old	0.000001	<1	0.000046	2.7	0.000048	2.8
Females 13-49 years old	0.000002	<1	0.000044	2.6	0.000045	2.7

¹The population subgroup with the highest estimated chronic dietary (food + drinking water) exposure and risk is indicated by bold text.

VII. Characterization of Inputs/Outputs

Both the acute and chronic dietary analyses may be considered partially refined. A characterization of the inputs/outputs and uncertainties regarding the assessment is provided below.

Food:

- The assessment for food incorporates anticipated residue estimates for most crops and livestock commodities that were derived using field trial data. Although field trial data provide more refined exposure estimates than tolerances, the results may still be considered somewhat conservative, since field trials are conducted under maximum use conditions (maximum allowed application rate, minimum PHI, etc.). In actual practice, flufenacet is likely to be applied using a range of rates and PHIs, and treated commodities may be stored for various time periods (beyond the minimum PHI) prior to consumption by humans or livestock.
- Anticipated residues for food commodities were adjusted for %CT, using screening level usage estimates for the existing crops (field corn and soybeans) and projected %CT estimates for new uses (sweet corn and wheat), both of which are intended to provide “protective” exposure estimates.

Drinking Water:

- Drinking water is the risk “driver” in both the acute and chronic dietary analyses. PRZM-EXAMS surface water modeling data were used probabilistically in the acute analysis and deterministically in the chronic analysis. The modeling estimates were partially refined in that they took into consideration crop-specific percent cropped area (PCA). PRZM/EXAMS data represent the range of concentrations that are estimated to result from the annual use of flufenacet over a 30 year period at the maximum application rate. Although the PRZM/EXAMS models provide more refined estimates of surface water residues than the Tier 1 FIRST model, the drinking water inputs may be considered conservative, since they assume that applications will be made at maximum application rates to the entire crop within the watershed every year for 30 years.
- The PRZM/EXAMS results for the Ohio corn scenario were used in this assessment and in the previous 2003 dietary assessment for flufenacet. Although the Illinois corn scenario returned a slightly higher 1-in-10 year peak concentration in EFED’s current analysis, the difference is so small (10 ppb vs. 8.6 ppb) that it would not be expected to significantly impact the risk assessment results. The results for the Ohio corn scenario are considered to provide a reasonable, high-end estimate of drinking water exposure to residues of flufenacet.

VIII. Conclusions

These partially refined, Tier 3 dietary exposure analyses using DEEM-FCID™ indicate that acute and chronic dietary exposures to flufenacet from food and drinking water are below HED’s level of concern for this pesticide for the general U.S. population and all population subgroups.

IX. List of Attachments

- 📁 RDF Files Used in the Acute Dietary Analyses
- 📁 Acute Food Only Input File
- 📁 Acute Food Only Results File
- 📁 Acute Drinking Water Only Input File
- 📁 Acute Drinking Water Only Results File
- 📁 Acute Food + Drinking Water Input File
- 📁 Acute Food + Drinking Water Results File
- 📁 Chronic Food Only Input File
- 📁 Chronic Food Only Results File
- 📁 Chronic Drinking Water Only Input File
- 📁 Chronic Drinking Water Only Results File
- 📁 Chronic Food + Drinking Water Input File
- 📁 Chronic Food + Drinking Water Results File

RDF Files Used in the Acute Dietary Analyses

<p>1.</p> <p>'meat</p> <p>TOTALNZ=3 TOTALZ=97 0.0079 0.0079 0.0079</p>	<p>2.</p> <p>'meatfat</p> <p>TOTALNZ=3 TOTALZ=97 0.0064 0.0064 0.0064</p>	<p>3.</p> <p>'meatbyproducts</p> <p>TOTALNZ=3 TOTALZ=97 0.051 0.051 0.051</p>
<p>4.</p> <p>'meatliver</p> <p>TOTALNZ=3 TOTALZ=97 0.037 0.037 0.037</p>	<p>5.</p> <p>'pork meat</p> <p>TOTALNZ=3 TOTALZ=97 0.0023 0.0023 0.0023</p>	<p>6.</p> <p>'porkfat</p> <p>TOTALNZ=3 TOTALZ=97 0.0018 0.0018 0.0018</p>
<p>7.</p> <p>'pork kidney</p> <p>TOTALNZ=3 TOTALZ=97 0.014 0.014 0.014</p>	<p>8.</p> <p>'pork liver</p> <p>TOTALNZ=3 TOTALZ=97 0.011 0.011 0.011</p>	<p>9.</p> <p>'poultry meat</p> <p>TOTALNZ=3 TOTALZ=97 0.0027 0.0027 0.0027</p>
<p>10.</p> <p>'poultry fat</p> <p>TOTALNZ=3 TOTALZ=97 0.0020 0.0020 0.0020</p>	<p>11.</p> <p>'poultry liver</p> <p>TOTALNZ=3 TOTALZ=97 0.013 0.013 0.013</p>	<p>12.</p> <p>'eggs</p> <p>TOTALNZ=3 TOTALZ=97 0.00058 0.00058 0.00058</p>

<p>13. (Only the first few daily concentration values from the drinking water distribution of more than 10,000 daily values are shown)</p> <p>'OH Corn Flufenacet + Thiadone 'Parent * 1.11 with 0.46 PCA factor</p> <p>1.33E-03 1.33E-03 1.32E-03 1.32E-03 1.31E-03 1.31E-03 1.30E-03 1.30E-03 1.30E-03 1.29E-03 1.29E-03 1.28E-03 1.28E-03 1.27E-03 1.27E-03</p>	<p>14.</p> <p>'milk</p> <p>TOTALNZ=3 TOTALZ=97 0.00062 0.00062 0.00062</p>	<p>15.</p> <p>'Sweet Corn, using maximum projected 10%CT TOTALZ=90 TOTALLOD=10 LODRES=0.025</p>
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Acute Food Only Input File

U.S. Environmental Protection Agency

Ver. 2.02

DEEM-FCID Acute analysis for FLUFENACET

Residue file name: C:\Documents and Settings\sstanton\My Documents\DEEM-FCID Files\Flufenacet\Flufenacet Acute\Flufenacet Acute Food Only.R98

Analysis Date 12-05-2006 Residue file dated: 12-05-2006/13:14:18/8

Reference dose: aRfD = 0.0017 mg/kg bw/day NOEL = 1.7 mg/kg bw/day

Comment: Flufenacet Acute - Food Only

RDL indices and parameters for Monte Carlo Analysis:

Index #	Dist Code	Parameter #1	Param #2	Param #3	Comment
1	6	Meat.rdf			
2	6	Meat Fat.rdf			
3	6	Meat Byproducts.rdf			
4	6	Meat Liver.rdf			
5	6	Pork Meat.RDF			
6	6	Pork Fat.rdf			
7	6	Pork Kidney.RDF			
8	6	Pork Liver.RDF			
9	6	Poultry Meat.RDF			
10	6	Poultry Fat.RDF			
11	6	Poultry Liver.RDF			
12	6	Eggs.RDF			
13	6	OH Corn Flufenacet + Thiadone.RDF			
14	6	Milk.rdf			
15	6	Sweet Corn.RDF			

EPA Code	Crop Grp	Food Name	Def Res (ppm)	Adj.Factors #1	Adj.Factors #2	RDL Pntr	Comment
15000250	15	Barley, pearled barley	0.100000	1.000	0.030		
15000251	15	Barley, pearled barley-babyfood	0.100000	1.000	0.030		
15000260	15	Barley, flour	0.100000	0.440	0.030		
15000261	15	Barley, flour-babyfood	0.100000	0.440	0.030		
15000270	15	Barley, bran	0.100000	2.100	0.030		
21000440	M	Beef, meat	1.000000	1.000	1.000	1	
21000441	M	Beef, meat-babyfood	1.000000	1.000	1.000	1	
21000450	M	Beef, meat, dried	1.000000	1.920	1.000	1	
21000460	M	Beef, meat byproducts	1.000000	1.000	1.000	3	
21000461	M	Beef, meat byproducts-babyfood	1.000000	1.000	1.000	3	
21000470	M	Beef, fat	1.000000	1.000	1.000	2	
21000471	M	Beef,fat-babyfood	1.000000	1.000	1.000	2	
21000480	M	Beef, kidney	1.000000	1.000	1.000	3	
21000490	M	Beef, liver	1.000000	1.000	1.000	4	
21000491	M	Beef, liver-babyfood	1.000000	1.000	1.000	4	
15000650	15	Buckwheat	0.100000	1.000	0.030		
15000660	15	Buckwheat, flour	0.100000	0.440	0.030		
40000930	P	Chicken, meat	1.000000	1.000	1.000	9	
40000931	P	Chicken, meat-babyfood	1.000000	1.000	1.000	9	
40000940	P	Chicken, liver	1.000000	1.000	1.000	11	
40000950	P	Chicken, meat byproducts	1.000000	1.000	1.000	11	
40000951	P	Chicken, meat byproducts-babyfoo	1.000000	1.000	1.000	11	
40000960	P	Chicken, fat	1.000000	1.000	1.000	10	
40000961	P	Chicken, fat-babyfood	1.000000	1.000	1.000	10	
40000970	P	Chicken, skin	1.000000	1.000	1.000	10	
40000971	P	Chicken, skin-babyfood	1.000000	1.000	1.000	10	
15001200	15	Corn, field, flour	0.025000	1.000	0.025		

15001201	15	Corn, field, flour-babyfood	0.025000	1.000	0.025	
15001210	15	Corn, field, meal	0.025000	1.000	0.025	
15001211	15	Corn, field, meal-babyfood	0.025000	1.000	0.025	
15001220	15	Corn, field, bran	0.025000	1.000	0.025	
15001230	15	Corn, field, starch	0.025000	1.000	0.025	
15001231	15	Corn, field, starch-babyfood	0.025000	1.000	0.025	
15001240	15	Corn, field, syrup	0.025000	1.000	0.025	
15001241	15	Corn, field, syrup-babyfood	0.025000	1.000	0.025	
15001250	15	Corn, field, oil	0.025000	1.000	0.025	
15001251	15	Corn, field, oil-babyfood	0.025000	1.000	0.025	
15001260	15	Corn, pop	0.100000	1.000	0.030	
15001270	15	Corn, sweet	1.000000	1.000	1.000	15
15001271	15	Corn, sweet-babyfood	1.000000	1.000	1.000	15
70001450	P	Egg, whole	1.000000	1.000	1.000	12
70001451	P	Egg, whole-babyfood	1.000000	1.000	1.000	12
70001460	P	Egg, white	1.000000	1.000	1.000	12
70001461	P	Egg, white (solids)-babyfood	1.000000	1.000	1.000	12
70001470	P	Egg, yolk	1.000000	1.000	1.000	12
70001471	P	Egg, yolk-babyfood	1.000000	1.000	1.000	12
23001690	M	Goat, meat	1.000000	1.000	1.000	1
23001700	M	Goat, meat byproducts	1.000000	1.000	1.000	3
23001710	M	Goat, fat	1.000000	1.000	1.000	2
23001720	M	Goat, kidney	1.000000	1.000	1.000	3
23001730	M	Goat, liver	1.000000	1.000	1.000	4
24001890	M	Horse, meat	1.000000	1.000	1.000	1
27002220	D	Milk, fat	1.000000	1.000	1.000	14
27002221	D	Milk, fat - baby food/infant for	1.000000	1.000	1.000	14
27012230	D	Milk, nonfat solids	1.000000	1.000	1.000	14
27012231	D	Milk, nonfat solids-baby food/in	1.000000	1.000	1.000	14
27022240	D	Milk, water	1.000000	1.000	1.000	14
27022241	D	Milk, water-babyfood/infant form	1.000000	1.000	1.000	14
27032251	D	Milk, sugar (lactose)-baby food/	1.000000	1.000	1.000	14
15002260	15	Millet, grain	0.100000	1.000	0.030	
15002310	15	Oat, bran	0.100000	2.100	0.030	
15002320	15	Oat, flour	0.100000	0.440	0.030	
15002321	15	Oat, flour-babyfood	0.100000	0.440	0.030	
15002330	15	Oat, groats/rolled oats	0.100000	1.000	0.030	
15002331	15	Oat, groats/rolled oats-babyfood	0.100000	1.000	0.030	
25002900	M	Pork, meat	1.000000	1.000	1.000	5
25002901	M	Pork, meat-babyfood	1.000000	1.000	1.000	5
25002910	M	Pork, skin	1.000000	1.000	1.000	6
25002920	M	Pork, meat byproducts	1.000000	1.000	1.000	7
25002921	M	Pork, meat byproducts-babyfood	1.000000	1.000	1.000	7
25002930	M	Pork, fat	1.000000	1.000	1.000	6
25002931	M	Pork, fat-babyfood	1.000000	1.000	1.000	6
25002940	M	Pork, kidney	1.000000	1.000	1.000	7
25002950	M	Pork, liver	1.000000	1.000	1.000	8
60003010	P	Poultry, other, meat	1.000000	1.000	1.000	9
60003020	P	Poultry, other, liver	1.000000	1.000	1.000	11
60003030	P	Poultry, other, meat byproducts	1.000000	1.000	1.000	11
60003040	P	Poultry, other, fat	1.000000	1.000	1.000	10
60003050	P	Poultry, other, skin	1.000000	1.000	1.000	10
15003280	15	Rye, grain	0.100000	1.000	0.030	
15003290	15	Rye, flour	0.100000	0.440	0.030	
26003390	M	Sheep, meat	1.000000	1.000	1.000	1
26003391	M	Sheep, meat-babyfood	1.000000	1.000	1.000	1
26003400	M	Sheep, meat byproducts	1.000000	1.000	1.000	3
26003410	M	Sheep, fat	1.000000	1.000	1.000	2
26003411	M	Sheep, fat-babyfood	1.000000	1.000	1.000	2
26003420	M	Sheep, kidney	1.000000	1.000	1.000	3

26003430	M	Sheep, liver	1.000000	1.000	1.000	4
15003440	15	Sorghum, grain	0.100000	1.000	0.030	
15003450	15	Sorghum, syrup	0.100000	1.000	0.030	
06003470	6	Soybean, seed	0.030000	1.000	0.025	
06003480	6	Soybean, flour	0.030000	1.000	0.025	
06003481	6	Soybean, flour-babyfood	0.030000	1.000	0.025	
06003490	6	Soybean, soy milk	0.030000	1.000	0.025	
06003491	6	Soybean, soy milk-babyfood or in	0.030000	1.000	0.025	
06003500	6	Soybean, oil	0.030000	1.000	0.025	
06003501	6	Soybean, oil-babyfood	0.030000	1.000	0.025	
15003810	15	Triticale, flour	0.130000	0.440	0.030	
15003811	15	Triticale, flour-babyfood	0.130000	0.440	0.030	
50003820	P	Turkey, meat	1.000000	1.000	1.000	9
50003821	P	Turkey, meat-babyfood	1.000000	1.000	1.000	9
50003830	P	Turkey, liver	1.000000	1.000	1.000	11
50003831	P	Turkey, liver-babyfood	1.000000	1.000	1.000	11
50003840	P	Turkey, meat byproducts	1.000000	1.000	1.000	11
50003841	P	Turkey, meat byproducts-babyfood	1.000000	1.000	1.000	11
50003850	P	Turkey, fat	1.000000	1.000	1.000	10
50003851	P	Turkey, fat-babyfood	1.000000	1.000	1.000	10
50003860	P	Turkey, skin	1.000000	1.000	1.000	10
50003861	P	Turkey, skin-babyfood	1.000000	1.000	1.000	10
15004010	15	Wheat, grain	0.130000	1.000	0.030	
15004011	15	Wheat, grain-babyfood	0.130000	1.000	0.030	
15004020	15	Wheat, flour	0.130000	0.440	0.030	
15004021	15	Wheat, flour-babyfood	0.130000	0.440	0.030	
15004030	15	Wheat, germ	0.130000	1.000	0.030	
15004040	15	Wheat, bran	0.130000	2.100	0.030	

Acute Food Only Results File

U.S. Environmental Protection Agency Ver. 2.02
 DEEM-FCID ACUTE Analysis for FLUFENACET (1994-98 data)
 Residue file: Flufenacet Acute Food Only.R98 Adjustment factor #2 used.
 Analysis Date: 12-05-2006/13:35:31 Residue file dated: 12-05-2006/13:14:18/8
 NOEL (Acute) = 1.700000 mg/kg body-wt/day
 Daily totals for food and foodform consumption used.
 MC iterations = 1000 MC list in residue file MC seed = 100
 Run Comment: "Flufenacet Acute - Food Only"

Summary calculations (per capita):

	95th Percentile			99th Percentile			99.9th Percentile		
	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE
U.S. Population:	0.000016	0.94	106267	0.000033	1.93	51860	0.000102	6.00	16680
All infants:	0.000017	1.00	100121	0.000030	1.76	56925	0.000110	6.45	15512
Children 1-2 yrs:	0.000034	1.97	50689	0.000075	4.39	22766	0.000215	12.63	7914
Children 3-5 yrs:	0.000030	1.74	57387	0.000065	3.83	26111	0.000223	13.11	7626
Children 6-12 yrs:	0.000021	1.23	81312	0.000046	2.71	36957	0.000148	8.70	11490
Youth 13-19 yrs:	0.000013	0.78	128730	0.000026	1.54	65046	0.000085	5.01	19965
Adults 20-49 yrs:	0.000011	0.66	152634	0.000023	1.34	74620	0.000069	4.06	24655
Adults 50+ yrs:	0.000009	0.53	188236	0.000019	1.10	90738	0.000063	3.70	27061
Females 13-49 yrs:	0.000011	0.62	161747	0.000021	1.22	81894	0.000073	4.31	23222

Acute Drinking Water Only Input File

U.S. Environmental Protection Agency Ver. 2.02
 DEEM-FCID Acute analysis for FLUFENACET
 Residue file name: C:\Documents and Settings\sstanton\My Documents\DEEM-FCID
 Files\Flufenacet\Flufenacet Acute\Flufenacet Acute DW only_OH Corn Scenario.R98
 Analysis Date 11-24-2006 Residue file dated: 11-01-2006/08:06:36/8
 Reference dose (aRfD) = 0.0017 mg/kg bw/day
 Comment: Drinking Water Only using PRZM-EXAMS Distribution for OH Corn Scenario

RDL indices and parameters for Monte Carlo Analysis:

Index #	Dist	Parameter #1	Param #2	Param #3	Comment
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1	6	OH Corn Flufenacet + Thiadone.RDF			
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EPA Code	Crop Grp	Food Name	Def Res (ppm)	Adj.Factors #1	Adj.Factors #2	RDL Pntr	Comment
86010000	O	Water, direct, all sources	1.000000	1.000	1.000	1	
86020000	O	Water, indirect, all sources	1.000000	1.000	1.000	1	

Acute Drinking Water Only Results File

U.S. Environmental Protection Agency Ver. 2.02
 DEEM-FCID ACUTE Analysis for FLUFENACET (1994-98 data)
 Residue file: Flufenacet Acute DW only_OH Corn Scenario.R98
 Adjustment factor #2 used.
 Analysis Date: 11-24-2006/09:08:46 Residue file dated: 11-01-2006/08:06:36/8
 Daily totals for food and foodform consumption used.
 MC iterations = 1000 MC list in residue file MC seed = 100
 Run Comment: "Drinking Water Only using PRZM-EXAMS Distribution for OH Corn Scenario"
 =====

Summary calculations (per capita):

	95th Percentile Exposure	% aRfD	99th Percentile Exposure	% aRfD	99.9th Percentile Exposure	% aRfD
	-----	-----	-----	-----	-----	-----
U.S. Population:	0.000106	6.26	0.000220	12.95	0.000503	29.61
All infants:	0.000392	23.04	0.000785	46.17	0.001520	89.41
Children 1-2 yrs:	0.000164	9.62	0.000335	19.72	0.000690	40.60
Children 3-5 yrs:	0.000150	8.82	0.000302	17.78	0.000611	35.95
Children 6-12 yrs:	0.000104	6.10	0.000211	12.39	0.000428	25.18
Youth 13-19 yrs:	0.000080	4.72	0.000171	10.04	0.000377	22.18
Adults 20-49 yrs:	0.000099	5.85	0.000200	11.77	0.000419	24.64
Adults 50+ yrs:	0.000099	5.84	0.000185	10.85	0.000339	19.93
Females 13-49 yrs:	0.000100	5.87	0.000201	11.84	0.000413	24.29

Acute Food + Drinking Water Input File

U.S. Environmental Protection Agency

Ver. 2.02

DEEM-FCID Acute analysis for FLUFENACET

Residue file name: C:\Documents and Settings\sstanton\My Documents\DEEM-FCID Files\Flufenacet\Flufenacet Acute\Flufenacet Acute Food + Water OH Corn Scenario.R98

Analysis Date 12-05-2006 Residue file dated: 12-05-2006/13:10:39/8

Reference dose: aRfD = 0.0017 mg/kg bw/day NOEL = 1.7 mg/kg bw/day

Comment: Flufenacet Acute - Food + Drinking Water - OH Corn Scenario

RDL indices and parameters for Monte Carlo Analysis:

Index #	Dist Code	Parameter #1	Param #2	Param #3	Comment
1	6	Meat.rdf			
2	6	Meat Fat.rdf			
3	6	Meat Byproducts.rdf			
4	6	Meat Liver.rdf			
5	6	Pork Meat.RDF			
6	6	Pork Fat.rdf			
7	6	Pork Kidney.RDF			
8	6	Pork Liver.RDF			
9	6	Poultry Meat.RDF			
10	6	Poultry Fat.RDF			
11	6	Poultry Liver.RDF			
12	6	Eggs.RDF			
13	6	OH Corn Flufenacet + Thiadone.RDF			
14	6	Milk.rdf			
15	6	Sweet Corn.RDF			

EPA Code	Crop Grp	Food Name	Def Res (ppm)	Adj.Factors #1	Adj.Factors #2	RDL Pntr	Comment
15000250	15	Barley, pearled barley	0.100000	1.000	0.030		
15000251	15	Barley, pearled barley-babyfood	0.100000	1.000	0.030		
15000260	15	Barley, flour	0.100000	0.440	0.030		
15000261	15	Barley, flour-babyfood	0.100000	0.440	0.030		
15000270	15	Barley, bran	0.100000	2.100	0.030		
21000440	M	Beef, meat	1.000000	1.000	1.000	1	
21000441	M	Beef, meat-babyfood	1.000000	1.000	1.000	1	
21000450	M	Beef, meat, dried	1.000000	1.920	1.000	1	
21000460	M	Beef, meat byproducts	1.000000	1.000	1.000	3	
21000461	M	Beef, meat byproducts-babyfood	1.000000	1.000	1.000	3	
21000470	M	Beef, fat	1.000000	1.000	1.000	2	
21000471	M	Beef,fat-babyfood	1.000000	1.000	1.000	2	
21000480	M	Beef, kidney	1.000000	1.000	1.000	3	
21000490	M	Beef, liver	1.000000	1.000	1.000	4	
21000491	M	Beef, liver-babyfood	1.000000	1.000	1.000	4	
15000650	15	Buckwheat	0.100000	1.000	0.030		
15000660	15	Buckwheat, flour	0.100000	0.440	0.030		
40000930	P	Chicken, meat	1.000000	1.000	1.000	9	
40000931	P	Chicken, meat-babyfood	1.000000	1.000	1.000	9	
40000940	P	Chicken, liver	1.000000	1.000	1.000	11	
40000950	P	Chicken, meat byproducts	1.000000	1.000	1.000	11	
40000951	P	Chicken, meat byproducts-babyfoo	1.000000	1.000	1.000	11	
40000960	P	Chicken, fat	1.000000	1.000	1.000	10	
40000961	P	Chicken, fat-babyfood	1.000000	1.000	1.000	10	
40000970	P	Chicken, skin	1.000000	1.000	1.000	10	
40000971	P	Chicken, skin-babyfood	1.000000	1.000	1.000	10	
15001200	15	Corn, field, flour	0.025000	1.000	0.025		

15001201	15	Corn, field, flour-babyfood	0.025000	1.000	0.025	
15001210	15	Corn, field, meal	0.025000	1.000	0.025	
15001211	15	Corn, field, meal-babyfood	0.025000	1.000	0.025	
15001220	15	Corn, field, bran	0.025000	1.000	0.025	
15001230	15	Corn, field, starch	0.025000	1.000	0.025	
15001231	15	Corn, field, starch-babyfood	0.025000	1.000	0.025	
15001240	15	Corn, field, syrup	0.025000	1.000	0.025	
15001241	15	Corn, field, syrup-babyfood	0.025000	1.000	0.025	
15001250	15	Corn, field, oil	0.025000	1.000	0.025	
15001251	15	Corn, field, oil-babyfood	0.025000	1.000	0.025	
15001260	15	Corn, pop	0.100000	1.000	0.030	
15001270	15	Corn, sweet	1.000000	1.000	1.000	15
15001271	15	Corn, sweet-babyfood	1.000000	1.000	1.000	15
70001450	P	Egg, whole	1.000000	1.000	1.000	12
70001451	P	Egg, whole-babyfood	1.000000	1.000	1.000	12
70001460	P	Egg, white	1.000000	1.000	1.000	12
70001461	P	Egg, white (solids)-babyfood	1.000000	1.000	1.000	12
70001470	P	Egg, yolk	1.000000	1.000	1.000	12
70001471	P	Egg, yolk-babyfood	1.000000	1.000	1.000	12
23001690	M	Goat, meat	1.000000	1.000	1.000	1
23001700	M	Goat, meat byproducts	1.000000	1.000	1.000	3
23001710	M	Goat, fat	1.000000	1.000	1.000	2
23001720	M	Goat, kidney	1.000000	1.000	1.000	3
23001730	M	Goat, liver	1.000000	1.000	1.000	4
24001890	M	Horse, meat	1.000000	1.000	1.000	1
27002220	D	Milk, fat	1.000000	1.000	1.000	14
27002221	D	Milk, fat - baby food/infant for	1.000000	1.000	1.000	14
27012230	D	Milk, nonfat solids	1.000000	1.000	1.000	14
27012231	D	Milk, nonfat solids-baby food/in	1.000000	1.000	1.000	14
27022240	D	Milk, water	1.000000	1.000	1.000	14
27022241	D	Milk, water-babyfood/infant form	1.000000	1.000	1.000	14
27032251	D	Milk, sugar (lactose)-baby food/	1.000000	1.000	1.000	14
15002260	15	Millet, grain	0.100000	1.000	0.030	
15002310	15	Oat, bran	0.100000	2.100	0.030	
15002320	15	Oat, flour	0.100000	0.440	0.030	
15002321	15	Oat, flour-babyfood	0.100000	0.440	0.030	
15002330	15	Oat, groats/rolled oats	0.100000	1.000	0.030	
15002331	15	Oat, groats/rolled oats-babyfood	0.100000	1.000	0.030	
25002900	M	Pork, meat	1.000000	1.000	1.000	5
25002901	M	Pork, meat-babyfood	1.000000	1.000	1.000	5
25002910	M	Pork, skin	1.000000	1.000	1.000	6
25002920	M	Pork, meat byproducts	1.000000	1.000	1.000	7
25002921	M	Pork, meat byproducts-babyfood	1.000000	1.000	1.000	7
25002930	M	Pork, fat	1.000000	1.000	1.000	6
25002931	M	Pork, fat-babyfood	1.000000	1.000	1.000	6
25002940	M	Pork, kidney	1.000000	1.000	1.000	7
25002950	M	Pork, liver	1.000000	1.000	1.000	8
60003010	P	Poultry, other, meat	1.000000	1.000	1.000	9
60003020	P	Poultry, other, liver	1.000000	1.000	1.000	11
60003030	P	Poultry, other, meat byproducts	1.000000	1.000	1.000	11
60003040	P	Poultry, other, fat	1.000000	1.000	1.000	10
60003050	P	Poultry, other, skin	1.000000	1.000	1.000	10
15003280	15	Rye, grain	0.100000	1.000	0.030	
15003290	15	Rye, flour	0.100000	0.440	0.030	
26003390	M	Sheep, meat	1.000000	1.000	1.000	1
26003391	M	Sheep, meat-babyfood	1.000000	1.000	1.000	1
26003400	M	Sheep, meat byproducts	1.000000	1.000	1.000	3
26003410	M	Sheep, fat	1.000000	1.000	1.000	2
26003411	M	Sheep, fat-babyfood	1.000000	1.000	1.000	2
26003420	M	Sheep, kidney	1.000000	1.000	1.000	3

26003430	M	Sheep, liver	1.000000	1.000	1.000	4
15003440	15	Sorghum, grain	0.100000	1.000	0.030	
15003450	15	Sorghum, syrup	0.100000	1.000	0.030	
06003470	6	Soybean, seed	0.030000	1.000	0.025	
06003480	6	Soybean, flour	0.030000	1.000	0.025	
06003481	6	Soybean, flour-babyfood	0.030000	1.000	0.025	
06003490	6	Soybean, soy milk	0.030000	1.000	0.025	
06003491	6	Soybean, soy milk-babyfood or in	0.030000	1.000	0.025	
06003500	6	Soybean, oil	0.030000	1.000	0.025	
06003501	6	Soybean, oil-babyfood	0.030000	1.000	0.025	
15003810	15	Triticale, flour	0.130000	0.440	0.030	
15003811	15	Triticale, flour-babyfood	0.130000	0.440	0.030	
50003820	P	Turkey, meat	1.000000	1.000	1.000	9
50003821	P	Turkey, meat-babyfood	1.000000	1.000	1.000	9
50003830	P	Turkey, liver	1.000000	1.000	1.000	11
50003831	P	Turkey, liver-babyfood	1.000000	1.000	1.000	11
50003840	P	Turkey, meat byproducts	1.000000	1.000	1.000	11
50003841	P	Turkey, meat byproducts-babyfood	1.000000	1.000	1.000	11
50003850	P	Turkey, fat	1.000000	1.000	1.000	10
50003851	P	Turkey, fat-babyfood	1.000000	1.000	1.000	10
50003860	P	Turkey, skin	1.000000	1.000	1.000	10
50003861	P	Turkey, skin-babyfood	1.000000	1.000	1.000	10
86010000	O	Water, direct, all sources	1.000000	1.000	1.000	13
86020000	O	Water, indirect, all sources	1.000000	1.000	1.000	13
15004010	15	Wheat, grain	0.130000	1.000	0.030	
15004011	15	Wheat, grain-babyfood	0.130000	1.000	0.030	
15004020	15	Wheat, flour	0.130000	0.440	0.030	
15004021	15	Wheat, flour-babyfood	0.130000	0.440	0.030	
15004030	15	Wheat, germ	0.130000	1.000	0.030	
15004040	15	Wheat, bran	0.130000	2.100	0.030	

Acute Food + Drinking Water Results File

U.S. Environmental Protection Agency Ver. 2.02
 DEEM-FCID ACUTE Analysis for FLUFENACET (1994-98 data)
 Residue file: Flufenacet Acute Food + Water OH Corn Scenario.R98
 Adjustment factor #2 used.
 Analysis Date: 12-05-2006/13:53:11 Residue file dated: 12-05-2006/13:10:39/8
 NOEL (Acute) = 1.700000 mg/kg body-wt/day
 Daily totals for food and foodform consumption used.
 MC iterations = 1000 MC list in residue file MC seed = 100
 Run Comment: "Flufenacet Acute - Food + Drinking Water - OH Corn Scenario"

Summary calculations (per capita):

	95th Percentile			99th Percentile			99.9th Percentile		
	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE
U.S. Population:	0.000115	6.76	14793	0.000230	13.54	7387	0.000514	30.24	3307
All infants:	0.000396	23.32	4288	0.000790	46.45	2152	0.001514	89.05	1123
Children 1-2 yrs:	0.000185	10.90	9173	0.000361	21.26	4703	0.000720	42.36	2360
Children 3-5 yrs:	0.000171	10.07	9932	0.000325	19.14	5224	0.000635	37.33	2678
Children 6-12 yrs:	0.000118	6.95	14393	0.000227	13.35	7490	0.000444	26.12	3828
Youth 13-19 yrs:	0.000088	5.20	19223	0.000178	10.47	9551	0.000389	22.88	4370
Adults 20-49 yrs:	0.000105	6.19	16151	0.000206	12.13	8246	0.000424	24.97	4005
Adults 50+ yrs:	0.000104	6.13	16319	0.000190	11.16	8964	0.000344	20.25	4939
Females 13-49 yrs:	0.000106	6.21	16108	0.000207	12.15	8230	0.000418	24.58	4068

Chronic Food Only Input File

U.S. Environmental Protection Agency Ver. 2.00
 DEEM-FCID Chronic analysis for FLUFENACET 1994-98 data
 Residue file: C:\Documents and Settings\sstanton\My Documents\DEEM-FCID
 Files\Flufenacet\Flufenacet Chronic\Flufenacet Chronic Food Only.R98

Adjust. #2 used

Analysis Date 11-24-2006 Residue file dated: 11-24-2006/08:29:32/8
 Reference dose (RfD) = 0.0017 mg/kg bw/day
 Comment: Flufenacet Chronic - Food Only

Food Crop			Residue (ppm)	Adj. Factors		Comment
EPA Code	Grp	Food Name		#1	#2	
15000250	15	Barley, pearled barley	0.100000	1.000	0.010	
15000251	15	Barley, pearled barley-babyfood	0.100000	1.000	0.010	
15000260	15	Barley, flour	0.100000	0.440	0.010	
15000261	15	Barley, flour-babyfood	0.100000	0.440	0.010	
15000270	15	Barley, bran	0.100000	2.100	0.010	
21000440	M	Beef, meat	0.007900	1.000	0.010	
21000441	M	Beef, meat-babyfood	0.007900	1.000	0.010	
21000450	M	Beef, meat, dried	0.007900	1.920	0.010	
21000460	M	Beef, meat byproducts	0.051000	1.000	0.010	
21000461	M	Beef, meat byproducts-babyfood	0.051000	1.000	0.010	
21000470	M	Beef, fat	0.006400	1.000	0.010	
21000471	M	Beef, fat-babyfood	0.006400	1.000	0.010	
21000480	M	Beef, kidney	0.051000	1.000	0.010	
21000490	M	Beef, liver	0.037000	1.000	0.010	
21000491	M	Beef, liver-babyfood	0.037000	1.000	0.010	
15000650	15	Buckwheat	0.100000	1.000	0.010	
15000660	15	Buckwheat, flour	0.100000	0.440	0.010	
40000930	P	Chicken, meat	0.002700	1.000	0.010	
40000931	P	Chicken, meat-babyfood	0.002700	1.000	0.010	
40000940	P	Chicken, liver	0.013000	1.000	0.010	
40000950	P	Chicken, meat byproducts	0.013000	1.000	0.010	
40000951	P	Chicken, meat byproducts-babyfood	0.013000	1.000	0.010	
40000960	P	Chicken, fat	0.002000	1.000	0.010	
40000961	P	Chicken, fat-babyfood	0.002000	1.000	0.010	
40000970	P	Chicken, skin	0.002000	1.000	0.010	
40000971	P	Chicken, skin-babyfood	0.002000	1.000	0.010	
15001200	15	Corn, field, flour	0.025000	1.000	0.010	
15001201	15	Corn, field, flour-babyfood	0.025000	1.000	0.010	
15001210	15	Corn, field, meal	0.025000	1.000	0.010	
15001211	15	Corn, field, meal-babyfood	0.025000	1.000	0.010	
15001220	15	Corn, field, bran	0.025000	1.000	0.010	
15001230	15	Corn, field, starch	0.025000	1.000	0.010	
15001231	15	Corn, field, starch-babyfood	0.025000	1.000	0.010	
15001240	15	Corn, field, syrup	0.025000	1.000	0.010	
15001241	15	Corn, field, syrup-babyfood	0.025000	1.000	0.010	
15001250	15	Corn, field, oil	0.025000	1.000	0.010	
15001251	15	Corn, field, oil-babyfood	0.025000	1.000	0.010	
15001260	15	Corn, pop	0.100000	1.000	0.010	
15001270	15	Corn, sweet	0.025000	1.000	0.030	
15001271	15	Corn, sweet-babyfood	0.025000	1.000	0.030	
70001450	P	Egg, whole	0.000580	1.000	0.010	
70001451	P	Egg, whole-babyfood	0.000580	1.000	0.010	
70001460	P	Egg, white	0.000580	1.000	0.010	
70001461	P	Egg, white (solids)-babyfood	0.000580	1.000	0.010	

70001470	P	Egg, yolk	0.000580	1.000	0.010
70001471	P	Egg, yolk-babyfood	0.000580	1.000	0.010
23001690	M	Goat, meat	0.007900	1.000	0.010
23001700	M	Goat, meat byproducts	0.051000	1.000	0.010
23001710	M	Goat, fat	0.006400	1.000	0.010
23001720	M	Goat, kidney	0.051000	1.000	0.010
23001730	M	Goat, liver	0.037000	1.000	0.010
24001890	M	Horse, meat	0.007900	1.000	0.010
27002220	D	Milk, fat	0.000620	1.000	0.010
27002221	D	Milk, fat - baby food/infant for	0.000620	1.000	0.010
27012230	D	Milk, nonfat solids	0.000620	1.000	0.010
27012231	D	Milk, nonfat solids-baby food/in	0.000620	1.000	0.010
27022240	D	Milk, water	0.000620	1.000	0.010
27022241	D	Milk, water-babyfood/infant form	0.000620	1.000	0.010
27032251	D	Milk, sugar (lactose)-baby food/	0.000620	1.000	0.010
15002260	15	Millet, grain	0.100000	1.000	0.010
15002310	15	Oat, bran	0.100000	2.100	0.010
15002320	15	Oat, flour	0.100000	0.440	0.010
15002321	15	Oat, flour-babyfood	0.100000	0.440	0.010
15002330	15	Oat, groats/rolled oats	0.100000	1.000	0.010
15002331	15	Oat, groats/rolled oats-babyfood	0.100000	1.000	0.010
25002900	M	Pork, meat	0.002300	1.000	0.010
25002901	M	Pork, meat-babyfood	0.002300	1.000	0.010
25002910	M	Pork, skin	0.001800	1.000	0.010
25002920	M	Pork, meat byproducts	0.014000	1.000	0.010
25002921	M	Pork, meat byproducts-babyfood	0.014000	1.000	0.010
25002930	M	Pork, fat	0.001800	1.000	0.010
25002931	M	Pork, fat-babyfood	0.001800	1.000	0.010
25002940	M	Pork, kidney	0.014000	1.000	0.010
25002950	M	Pork, liver	0.011000	1.000	0.010
60003010	P	Poultry, other, meat	0.002700	1.000	0.010
60003020	P	Poultry, other, liver	0.013000	1.000	0.010
60003030	P	Poultry, other, meat byproducts	0.013000	1.000	0.010
60003040	P	Poultry, other, fat	0.002000	1.000	0.010
60003050	P	Poultry, other, skin	0.002000	1.000	0.010
15003280	15	Rye, grain	0.100000	1.000	0.010
15003290	15	Rye, flour	0.100000	0.440	0.010
26003390	M	Sheep, meat	0.007900	1.000	0.010
26003391	M	Sheep, meat-babyfood	0.007900	1.000	0.010
26003400	M	Sheep, meat byproducts	0.051000	1.000	0.010
26003410	M	Sheep, fat	0.006400	1.000	0.010
26003411	M	Sheep, fat-babyfood	0.006400	1.000	0.010
26003420	M	Sheep, kidney	0.051000	1.000	0.010
26003430	M	Sheep, liver	0.037000	1.000	0.010
15003440	15	Sorghum, grain	0.100000	1.000	0.010
15003450	15	Sorghum, syrup	0.100000	1.000	0.010
06003470	6	Soybean, seed	0.030000	1.000	0.010
06003480	6	Soybean, flour	0.030000	1.000	0.010
06003481	6	Soybean, flour-babyfood	0.030000	1.000	0.010
06003490	6	Soybean, soy milk	0.030000	1.000	0.010
06003491	6	Soybean, soy milk-babyfood or in	0.030000	1.000	0.010
06003500	6	Soybean, oil	0.030000	1.000	0.010
06003501	6	Soybean, oil-babyfood	0.030000	1.000	0.010
15003810	15	Triticale, flour	0.130000	0.440	0.010
15003811	15	Triticale, flour-babyfood	0.130000	0.440	0.010
50003820	P	Turkey, meat	0.002700	1.000	0.010
50003821	P	Turkey, meat-babyfood	0.002700	1.000	0.010
50003830	P	Turkey, liver	0.013000	1.000	0.010
50003831	P	Turkey, liver-babyfood	0.013000	1.000	0.010
50003840	P	Turkey, meat byproducts	0.013000	1.000	0.010

50003841	P	Turkey, meat byproducts-babyfood	0.013000	1.000	0.010
50003850	P	Turkey, fat	0.002000	1.000	0.010
50003851	P	Turkey, fat-babyfood	0.002000	1.000	0.010
50003860	P	Turkey, skin	0.002000	1.000	0.010
50003861	P	Turkey, skin-babyfood	0.002000	1.000	0.010
15004010	15	Wheat, grain	0.130000	1.000	0.010
15004011	15	Wheat, grain-babyfood	0.130000	1.000	0.010
15004020	15	Wheat, flour	0.130000	0.440	0.010
15004021	15	Wheat, flour-babyfood	0.130000	0.440	0.010
15004030	15	Wheat, germ	0.130000	1.000	0.010
15004040	15	Wheat, bran	0.130000	2.100	0.010

Chronic Food Only Results File

U.S. Environmental Protection Agency Ver. 2.00
 DEEM-FCID Chronic analysis for FLUFENACET (1994-98 data)
 Residue file name: C:\Documents and Settings\sstanton\My Documents\DEEM-FCID
 Files\Flufenacet\Flufenacet Chronic\Flufenacet Chronic Food Only.R98

Adjustment factor #2 used.

Analysis Date 11-24-2006/09:26:17 Residue file dated: 11-24-2006/08:29:32/8

Reference dose (RfD, Chronic) = .0017 mg/kg bw/day

COMMENT 1: Flufenacet Chronic - Food Only

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Total exposure by population subgroup

Population Subgroup	mg/kg body wt/day	Percent of Rfd
U.S. Population (total)	0.000002	0.1%
U.S. Population (spring season)	0.000002	0.1%
U.S. Population (summer season)	0.000002	0.1%
U.S. Population (autumn season)	0.000002	0.1%
U.S. Population (winter season)	0.000002	0.1%
Northeast region	0.000002	0.1%
Midwest region	0.000002	0.1%
Southern region	0.000002	0.1%
Western region	0.000002	0.1%
Hispanics	0.000002	0.1%
Non-hispanic whites	0.000002	0.1%
Non-hispanic blacks	0.000002	0.1%
Non-hisp/non-white/non-black	0.000002	0.1%
All infants (< 1 year)	0.000002	0.1%
Nursing infants	0.000001	0.0%
Non-nursing infants	0.000002	0.1%
Children 1-6 yrs	0.000005	0.3%
Children 7-12 yrs	0.000003	0.2%
Females 13-19 (not preg or nursing)	0.000002	0.1%
Females 20+ (not preg or nursing)	0.000001	0.1%
Females 13-50 yrs	0.000002	0.1%
Females 13+ (preg/not nursing)	0.000002	0.1%
Females 13+ (nursing)	0.000002	0.1%
Males 13-19 yrs	0.000002	0.1%
Males 20+ yrs	0.000002	0.1%
Seniors 55+	0.000001	0.1%
Children 1-2 yrs	0.000005	0.3%
Children 3-5 yrs	0.000005	0.3%
Children 6-12 yrs	0.000003	0.2%
Youth 13-19 yrs	0.000002	0.1%
Adults 20-49 yrs	0.000002	0.1%
Adults 50+ yrs	0.000001	0.1%
Females 13-49 yrs	0.000002	0.1%

Chronic Water Only Input File

U.S. Environmental Protection Agency Ver. 2.00
 DEEM-FCID Chronic analysis for FLUFENACET 1994-98 data
 Residue file: C:\Documents and Settings\sstanton\My Documents\DEEM-FCID
 Files\Flufenacet\Flufenacet Chronic\Flufenacet Chronic DW only_OH Corn Scenario.R98
Adjust. #2 used
 Analysis Date 11-24-2006 Residue file dated: 11-01-2006/10:26:45/8
 Reference dose (RfD) = 0.0017 mg/kg bw/day
 Comment: Drinking Water Only using PRZM-EXAMS Mean for OH Corn Scenario

Food Crop			Residue (ppm)	Adj. Factors		Comment
EPA Code	Grp	Food Name		#1	#2	
86010000	O	Water, direct, all sources	0.002230	1.000	1.000	
86020000	O	Water, indirect, all sources	0.002230	1.000	1.000	

Chronic Water Only Results File

U.S. Environmental Protection Agency Ver. 2.00
 DEEM-FCID Chronic analysis for FLUFENACET (1994-98 data)
 Residue file name: C:\Documents and Settings\sstanton\My Documents\DEEM-FCID
 Files\Flufenacet\Flufenacet Chronic\Flufenacet Chronic DW only_OH Corn Scenario.R98
 Adjustment factor #2 used.

Analysis Date 11-24-2006/09:27:47 Residue file dated: 11-01-2006/10:26:45/8

Reference dose (RfD, Chronic) = .0017 mg/kg bw/day

COMMENT 1: Drinking Water Only using PRZM-EXAMS Mean for OH Corn Scenario

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Total exposure by population subgroup

Population Subgroup	mg/kg body wt/day	Percent of Rfd
U.S. Population (total)	0.000047	2.8%
U.S. Population (spring season)	0.000047	2.7%
U.S. Population (summer season)	0.000050	3.0%
U.S. Population (autumn season)	0.000045	2.7%
U.S. Population (winter season)	0.000045	2.7%
Northeast region	0.000043	2.5%
Midwest region	0.000048	2.8%
Southern region	0.000045	2.6%
Western region	0.000054	3.2%
Hispanics	0.000053	3.1%
Non-hispanic whites	0.000046	2.7%
Non-hispanic blacks	0.000045	2.6%
Non-hisp/non-white/non-black	0.000058	3.4%
All infants (< 1 year)	0.000154	9.1%
Nursing infants	0.000057	3.4%
Non-nursing infants	0.000191	11.2%
Children 1-6 yrs	0.000066	3.9%
Children 7-12 yrs	0.000043	2.5%
Females 13-19 (not preg or nursing)	0.000033	1.9%
Females 20+ (not preg or nursing)	0.000047	2.8%
Females 13-50 yrs	0.000045	2.7%
Females 13+ (preg/not nursing)	0.000046	2.7%
Females 13+ (nursing)	0.000065	3.8%
Males 13-19 yrs	0.000035	2.0%
Males 20+ yrs	0.000042	2.5%
Seniors 55+	0.000046	2.7%
Children 1-2 yrs	0.000070	4.1%
Children 3-5 yrs	0.000065	3.8%
Children 6-12 yrs	0.000045	2.7%
Youth 13-19 yrs	0.000034	2.0%
Adults 20-49 yrs	0.000044	2.6%
Adults 50+ yrs	0.000046	2.7%
Females 13-49 yrs	0.000044	2.6%

Chronic Food + Water Input File

U.S. Environmental Protection Agency

Ver. 2.00

DEEM-FCID Chronic analysis for FLUFENACET

1994-98 data

Residue file: C:\Documents and Settings\sstanton\My Documents\DEEM-FCID

Files\Flufenacet\Flufenacet Chronic\Flufenacet Chronic Food + Water OH Corn Scenario.R98

Adjust. #2 used

Analysis Date 11-24-2006

Residue file dated: 11-24-2006/08:28:20/8

Reference dose (RfD) = 0.0017 mg/kg bw/day

Comment: Flufenacet Chronic - Food and Drinking Water (IL Corn Mean)

Food Crop			Residue (ppm)	Adj. Factors		Comment
EPA Code	Grp	Food Name		#1	#2	
15000250	15	Barley, pearled barley	0.100000	1.000	0.010	
15000251	15	Barley, pearled barley-babyfood	0.100000	1.000	0.010	
15000260	15	Barley, flour	0.100000	0.440	0.010	
15000261	15	Barley, flour-babyfood	0.100000	0.440	0.010	
15000270	15	Barley, bran	0.100000	2.100	0.010	
21000440	M	Beef, meat	0.007900	1.000	0.010	
21000441	M	Beef, meat-babyfood	0.007900	1.000	0.010	
21000450	M	Beef, meat, dried	0.007900	1.920	0.010	
21000460	M	Beef, meat byproducts	0.051000	1.000	0.010	
21000461	M	Beef, meat byproducts-babyfood	0.051000	1.000	0.010	
21000470	M	Beef, fat	0.006400	1.000	0.010	
21000471	M	Beef, fat-babyfood	0.006400	1.000	0.010	
21000480	M	Beef, kidney	0.051000	1.000	0.010	
21000490	M	Beef, liver	0.037000	1.000	0.010	
21000491	M	Beef, liver-babyfood	0.037000	1.000	0.010	
15000650	15	Buckwheat	0.100000	1.000	0.010	
15000660	15	Buckwheat, flour	0.100000	0.440	0.010	
40000930	P	Chicken, meat	0.002700	1.000	0.010	
40000931	P	Chicken, meat-babyfood	0.002700	1.000	0.010	
40000940	P	Chicken, liver	0.013000	1.000	0.010	
40000950	P	Chicken, meat byproducts	0.013000	1.000	0.010	
40000951	P	Chicken, meat byproducts-babyfoo	0.013000	1.000	0.010	
40000960	P	Chicken, fat	0.002000	1.000	0.010	
40000961	P	Chicken, fat-babyfood	0.002000	1.000	0.010	
40000970	P	Chicken, skin	0.002000	1.000	0.010	
40000971	P	Chicken, skin-babyfood	0.002000	1.000	0.010	
15001200	15	Corn, field, flour	0.025000	1.000	0.010	
15001201	15	Corn, field, flour-babyfood	0.025000	1.000	0.010	
15001210	15	Corn, field, meal	0.025000	1.000	0.010	
15001211	15	Corn, field, meal-babyfood	0.025000	1.000	0.010	
15001220	15	Corn, field, bran	0.025000	1.000	0.010	
15001230	15	Corn, field, starch	0.025000	1.000	0.010	
15001231	15	Corn, field, starch-babyfood	0.025000	1.000	0.010	
15001240	15	Corn, field, syrup	0.025000	1.000	0.010	
15001241	15	Corn, field, syrup-babyfood	0.025000	1.000	0.010	
15001250	15	Corn, field, oil	0.025000	1.000	0.010	
15001251	15	Corn, field, oil-babyfood	0.025000	1.000	0.010	
15001260	15	Corn, pop	0.100000	1.000	0.010	
15001270	15	Corn, sweet	0.025000	1.000	0.030	
15001271	15	Corn, sweet-babyfood	0.025000	1.000	0.030	
70001450	P	Egg, whole	0.000580	1.000	0.010	
70001451	P	Egg, whole-babyfood	0.000580	1.000	0.010	
70001460	P	Egg, white	0.000580	1.000	0.010	
70001461	P	Egg, white (solids)-babyfood	0.000580	1.000	0.010	
70001470	P	Egg, yolk	0.000580	1.000	0.010	

70001471	P	Egg, yolk-babyfood	0.000580	1.000	0.010
23001690	M	Goat, meat	0.007900	1.000	0.010
23001700	M	Goat, meat byproducts	0.051000	1.000	0.010
23001710	M	Goat, fat	0.006400	1.000	0.010
23001720	M	Goat, kidney	0.051000	1.000	0.010
23001730	M	Goat, liver	0.037000	1.000	0.010
24001890	M	Horse, meat	0.007900	1.000	0.010
27002220	D	Milk, fat	0.000620	1.000	0.010
27002221	D	Milk, fat - baby food/infant for	0.000620	1.000	0.010
27012230	D	Milk, nonfat solids	0.000620	1.000	0.010
27012231	D	Milk, nonfat solids-baby food/in	0.000620	1.000	0.010
27022240	D	Milk, water	0.000620	1.000	0.010
27022241	D	Milk, water-babyfood/infant form	0.000620	1.000	0.010
27032251	D	Milk, sugar (lactose)-baby food/	0.000620	1.000	0.010
15002260	15	Millet, grain	0.100000	1.000	0.010
15002310	15	Oat, bran	0.100000	2.100	0.010
15002320	15	Oat, flour	0.100000	0.440	0.010
15002321	15	Oat, flour-babyfood	0.100000	0.440	0.010
15002330	15	Oat, groats/rolled oats	0.100000	1.000	0.010
15002331	15	Oat, groats/rolled oats-babyfood	0.100000	1.000	0.010
25002900	M	Pork, meat	0.002300	1.000	0.010
25002901	M	Pork, meat-babyfood	0.002300	1.000	0.010
25002910	M	Pork, skin	0.001800	1.000	0.010
25002920	M	Pork, meat byproducts	0.014000	1.000	0.010
25002921	M	Pork, meat byproducts-babyfood	0.014000	1.000	0.010
25002930	M	Pork, fat	0.001800	1.000	0.010
25002931	M	Pork, fat-babyfood	0.001800	1.000	0.010
25002940	M	Pork, kidney	0.014000	1.000	0.010
25002950	M	Pork, liver	0.011000	1.000	0.010
60003010	P	Poultry, other, meat	0.002700	1.000	0.010
60003020	P	Poultry, other, liver	0.013000	1.000	0.010
60003030	P	Poultry, other, meat byproducts	0.013000	1.000	0.010
60003040	P	Poultry, other, fat	0.002000	1.000	0.010
60003050	P	Poultry, other, skin	0.002000	1.000	0.010
15003280	15	Rye, grain	0.100000	1.000	0.010
15003290	15	Rye, flour	0.100000	0.440	0.010
26003390	M	Sheep, meat	0.007900	1.000	0.010
26003391	M	Sheep, meat-babyfood	0.007900	1.000	0.010
26003400	M	Sheep, meat byproducts	0.051000	1.000	0.010
26003410	M	Sheep, fat	0.006400	1.000	0.010
26003411	M	Sheep, fat-babyfood	0.006400	1.000	0.010
26003420	M	Sheep, kidney	0.051000	1.000	0.010
26003430	M	Sheep, liver	0.037000	1.000	0.010
15003440	15	Sorghum, grain	0.100000	1.000	0.010
15003450	15	Sorghum, syrup	0.100000	1.000	0.010
06003470	6	Soybean, seed	0.030000	1.000	0.010
06003480	6	Soybean, flour	0.030000	1.000	0.010
06003481	6	Soybean, flour-babyfood	0.030000	1.000	0.010
06003490	6	Soybean, soy milk	0.030000	1.000	0.010
06003491	6	Soybean, soy milk-babyfood or in	0.030000	1.000	0.010
06003500	6	Soybean, oil	0.030000	1.000	0.010
06003501	6	Soybean, oil-babyfood	0.030000	1.000	0.010
15003810	15	Triticale, flour	0.130000	0.440	0.010
15003811	15	Triticale, flour-babyfood	0.130000	0.440	0.010
50003820	P	Turkey, meat	0.002700	1.000	0.010
50003821	P	Turkey, meat-babyfood	0.002700	1.000	0.010
50003830	P	Turkey, liver	0.013000	1.000	0.010
50003831	P	Turkey, liver-babyfood	0.013000	1.000	0.010
50003840	P	Turkey, meat byproducts	0.013000	1.000	0.010
50003841	P	Turkey, meat byproducts-babyfood	0.013000	1.000	0.010

50003850	P	Turkey, fat	0.002000	1.000	0.010
50003851	P	Turkey, fat-babyfood	0.002000	1.000	0.010
50003860	P	Turkey, skin	0.002000	1.000	0.010
50003861	P	Turkey, skin-babyfood	0.002000	1.000	0.010
86010000	O	Water, direct, all sources	0.002230	1.000	1.000
86020000	O	Water, indirect, all sources	0.002230	1.000	1.000
15004010	15	Wheat, grain	0.130000	1.000	0.010
15004011	15	Wheat, grain-babyfood	0.130000	1.000	0.010
15004020	15	Wheat, flour	0.130000	0.440	0.010
15004021	15	Wheat, flour-babyfood	0.130000	0.440	0.010
15004030	15	Wheat, germ	0.130000	1.000	0.010
15004040	15	Wheat, bran	0.130000	2.100	0.010

Chronic Food + Water Results File

U.S. Environmental Protection Agency Ver. 2.00
 DEEM-FCID Chronic analysis for FLUFENACET (1994-98 data)
 Residue file name: C:\Documents and Settings\sstanton\My Documents\DEEM-FCID
 Files\Flufenacet\Flufenacet Chronic\Flufenacet Chronic Food + Water OH Corn Scenario.R98
 Adjustment factor #2 used.

Analysis Date 11-24-2006/09:29:00 Residue file dated: 11-24-2006/08:28:20/8

Reference dose (RfD, Chronic) = .0017 mg/kg bw/day

COMMENT 1: Flufenacet Chronic - Food and Drinking Water (IL Corn Mean)

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Total exposure by population subgroup

Population Subgroup	Total Exposure	
	mg/kg body wt/day	Percent of Rfd
U.S. Population (total)	0.000049	2.9%
U.S. Population (spring season)	0.000049	2.9%
U.S. Population (summer season)	0.000053	3.1%
U.S. Population (autumn season)	0.000048	2.8%
U.S. Population (winter season)	0.000048	2.8%
Northeast region	0.000045	2.6%
Midwest region	0.000050	2.9%
Southern region	0.000047	2.7%
Western region	0.000056	3.3%
Hispanics	0.000055	3.3%
Non-hispanic whites	0.000048	2.8%
Non-hispanic blacks	0.000047	2.7%
Non-hisp/non-white/non-black	0.000060	3.5%
All infants (< 1 year)	0.000156	9.2%
Nursing infants	0.000058	3.4%
Non-nursing infants	0.000193	11.4%
Children 1-6 yrs	0.000071	4.2%
Children 7-12 yrs	0.000046	2.7%
Females 13-19 (not preg or nursing)	0.000035	2.1%
Females 20+ (not preg or nursing)	0.000048	2.8%
Females 13-50 yrs	0.000047	2.8%
Females 13+ (preg/not nursing)	0.000047	2.8%
Females 13+ (nursing)	0.000067	3.9%
Males 13-19 yrs	0.000037	2.2%
Males 20+ yrs	0.000044	2.6%
Seniors 55+	0.000048	2.8%
Children 1-2 yrs	0.000075	4.4%
Children 3-5 yrs	0.000070	4.1%
Children 6-12 yrs	0.000048	2.9%
Youth 13-19 yrs	0.000036	2.1%
Adults 20-49 yrs	0.000046	2.7%
Adults 50+ yrs	0.000048	2.8%
Females 13-49 yrs	0.000045	2.7%