US ERA ARCHIVE DOCUMENT

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

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

#### **MEMORANDUM**

DATE:

January 18, 2006

SUBJECT:

Sulfuryl Fluoride and Fluoride Chronic Dietary Exposure Assessments for the

Section 3 Registration of Sulfuryl Fluoride as a Fumigant for Various Foods and

Food Processing Facilities.

PC Code:

078003

DP Code:

317731

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### **Executive Summary**

Chronic dietary risk assessments were conducted using the Dietary Exposure Evaluation Model (DEEM-FCID, Version 2.03), which uses food consumption data from the USDA's Continuing Surveys of Food Intakes by Individuals (CSFII) from 1994-1996 and 1998. The analyses were performed to support the requested registration of sulfuryl fluoride as a fumigant for pest management in foods and food processing facilities.

Assessments were conducted for food-borne residues of sulfuryl fluoride and fluoride anion, both of which may result from fumigation of foods and food processing facilities. For clarity, HED has conducted two sets of analyses. The first addresses all registered and proposed food fumigation uses for sulfuryl fluoride. These uses represent intentional, direct treatment of foods and include dried fruits, stored cereal grains, herbs and spices, dried peas and beans, tree nuts, cocoa beans, coconut, coffee beans, cottonseed, ginger, powdered milk, cheese, peanut, pine nut, and ham. The second analysis addresses inadvertent residues that may occur during space fumigations of grain milling facilities and food processing facilities. Because of the possibility of a food being intentionally fumigated (e.g., post-harvest fumigation of cocoa beans) and subsequently inadvertently fumigated (e.g., the same cocoa beans in a cocoa processing facility), the results of these two sets of analyses should be added together to get total dietary exposure estimates for sulfuryl fluoride and fluoride anion resulting from the two different intended uses.

A chronic population-adjusted dose (cPAD) of 0.003 mg/kg/day was used to assess dietary risk resulting from the consumption of sulfuryl fluoride. A separate analysis, using the toxicological findings of the Office of Water, was made for fluoride residues resulting from the use of sulfuryl fluoride. The RfD of 8 mg/day used in the fluoride risk assessments was selected to be protective of crippling skeletal fluorosis. The residue values used in the assessments are average values obtained from fumigation trials conducted with cereal grain commodities, tree nuts, dried fruits, finished foods (e.g., snack chips, cookies, etc.), and ingredient foods (powdered milk, powdered eggs, baking soda, etc.). The assessment incorporates estimates of the percentage of crops treated for the food fumigations and percentage of facilities and throughput treated (i.e., proportion of material that might be exposed during fumigation relative to the total annual production) for the space fumigations. As such, these assessments should be considered to be moderately refined. For fluoride, there are other potential sources of exposure that may be estimated using DEEM. These are background levels of fluoride that naturally occur in foods, fluoride in drinking water, and fluoride that results from the use of cryolite. Exposures from those sources were previously estimated (M. Doherty, D309014, 10/12/04) and will be combined with these food- and space-fumigation estimates in the forthcoming aggregate human health risk assessment.

Based on the available residue and use data, combined (food and space fumigation) chronic dietary exposure estimates for sulfuryl fluoride range from 0.000056 to 0.000225 mg/kg/day, depending on the population subgroup. Similarly, exposure estimates for fluoride anion range from 0.0829 to 0.6665 mg/day (note that in order to match the units of the RfD, exposure estimates for fluoride have been converted from mg/kg/day to mg/day). The estimates for

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sulfuryl fluoride are less than or equal to 8% of the cPAD; those for fluoride are less than or equal to 8% of the RfD. Generally, HED is concerned when risk estimates exceed 100% of the dietary risk metric.

HED notes that this assessment is predicated upon the removal of dried eggs from the list of "Commodities That Can Be Fumigated" on the ProFume Label. Dow AgroSciences recently submitted a proposed label with that deletion.

#### 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). For most instances, this dose is referred to as the population adjusted dose (PAD). The PAD is equivalent to the Reference Dose (RfD) divided by the special FQPA Safety Factor. In the case of fluoride, HED has relied on the analysis of the Office of Water.

For non-cancer chronic exposures, HED is concerned when estimated dietary risk exceeds 100% of the PAD (sulfuryl fluoride) or 100% of the maximum contaminant level (MCL) (fluoride anion). References which discuss 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 dietary risk assessments for sulfuryl fluoride and fluoride anion were conducted in October of 2004 (M. Doherty, D309014, 10/12/2004). Those analyses include estimates of fluoride exposure from the use of sulfuryl fluoride and cryolite, as well as exposure through drinking water and background residues of fluoride in foods. Those exposure estimates should be combined with estimates from the current assessment to obtain total dietary exposure estimates.

#### II. Residue Information

Sulfuryl fluoride is a fumigant and has been registered for post-harvest control of pests in foods (stored cereal grains, tree nuts, dried fruits) and in grain milling facilities. The current request would expand the list of foods intended for direct fumigation and would expand uses to all food processing facilities. The residues of concern for sulfuryl fluoride are the parent compound and the fluoride anion, and separate assessments have been conducted for each. Tolerances for sulfuryl fluoride are listed in 40 CFR 180.575; those for fluoride anion are in 40 CFR 180.145.

Residue estimates for sulfuryl fluoride and fluoride are from trials conducted in fumigation chambers and grain milling facilities. Detailed information for chamber-fumigated commodities may be found in the Residue and Analytical Chemistry Summary Documents for Sulfuryl Fluoride (M. Doherty, D317730, 7/13/05; M. Doherty, D283007, 1/13/04). The available data

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were translated to DEEM food entries as shown in Table 1. The Biological and Economic Analysis Division has provided HED with estimates of the percentage of food that is likely to be intentionally fumigated (see Attachment 12 to the 12/12/04 assessment referenced above) as well as the percentage of processing facilities that will likely be fumigated, the frequency of fumigation, as well as the extent of a given facility's production that would be exposed during fumigation (e-mail from C. Cook to C. Swartz dated 5/5/05; Attachment 9). The estimates of percent of commodity treated for the food fumigations are presented in Table 2 and range from 2% for stored cereal grains to 100% for commodities such as dried peas/beans and powdered milk. For the fumigation of food processing facilities, it is estimated that approximately 40% of the processing facilities would receive sulfuryl fluoride fumigation with, on average, 2.5 fumigations per year. Approximately one day's worth of production could be stored on-site and the facilities typically operate over 300 days per year. Combining these estimates gives a fraction of commodity treated estimate of  $0.4 \times 2.5 \div 300 = 0.003$ . This estimate was rounded up to 0.004 for the space fumigation analyses. For grain mills, HED assumed that 40% of the facilities would be treated, that there could be 3 fumigations per year, and 2 days worth of production exposed, giving a fraction of commodity treated estimate of  $0.4 \times 6 \div 300 = 0.008$ . Since cereal grain commodities could be exposed to sulfuryl fluoride at the mill and at the food processing facility, these two percent-commodity-treated estimates were added together for an overall inadvertent cereal grain commodity treated estimate of 1.1% [(0.003 + 0.008) × 100].

Since commodities would be exposed in their "final" form, processing factors are not used in this assessment. In the case of egg, only dried food forms are included in the analysis since that is the form that would be present in the processing facility. For milk, entries are restricted to the dried food form and the cured form; the latter to represent cheese. Ham is represented as cured pork.

The previous dietary risk assessment included a 0.1X processing factor for flour commodities to account for the practice of drawing down grain in the mills prior to fumigation and then flushing any residual grain/flour out of the mill with fresh material during startup and mill equilibration. The present assessment has removed that 0.1X factor to account for the ProFume label having been revised in 2005 to eliminate blending of fumigated flour with untreated flour.

This assessment addresses only the uses requested under PP#3F6573. The results of these analyses will be added to those of the previous analyses when HED conducts its aggregate human health risk assessments for sulfuryl fluoride and fluoride.

Table 1. Translation of Ava	nilable Residue Data into DEEM Food Forms			
DEEM Food	Fumigated Food or Commodity	Average Residue, ppm		
		Sulfuryl Fluoride	Fluoride Anion	
Alfalfa, seed	Wheat Grain	0.090	4.00	
Almond	Almond	0.030	4.70	
Almond, oil	Corn Oil	6.800	1.20	
Amaranth, grain	Wheat Grain	0.090	4.00	
Apple, dried	Fig	0.037	1.20	
Apricot, dried	Fig	0.037	1.20	

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Table 1. Translation of Available Residue Data into DEEM Food Forms DEEM Food Furnigated Food or Commodity Average Residue, ppm Sulfuryl Fluoride Fluoride Anion Arrowroot, flour Wheat Flour 0.008 32.57 Banana, dried Fig 0.037 1.20 Barley, bran Corn Bran 0.020 24.00 Barley, flour Corn Flour 0.020 17.10 Barley, pearled barley Corn Grain 0.020 4.00 Basil, dried leaves Basil 0.010 51.18 Bean, great northern, seed Cocoa Beans 0.11713.16 Bean, black, seed Cocoa Beans 0.117 13.16 Bean, broad, seed Cocoa Beans 0.117 13.16 Bean, cowpea, seed Cocoa Beans 0.117 13.16 Bean, kidney, seed Cocoa Beans 0.117 13.16 Bean, lima, seed Cocoa Beans 0.117 13.16 Bean, mung, seed Cocoa Beans 0.117 13.16 Bean, navy, seed Cocoa Beans 0.117 13.16 Bean, pink, seed Cocoa Beans 0.117 13.16 Bean, pinto, seed Cocoa Beans 0.117 13.16 Beef, meat, dried Beef Jerky 0.005 31.32 Beet, sugar, molasses Sugar 0.002 0.77 Brazil nut Pecan 2.400 8.60 Buckwheat, flour Wheat Flour 0.008 32.57 Butternut Cocoa Beans 0.117 13.16 Cashew Pecan 2.400 8.60 Chestnut Pecan 2.400 8.60 Chickpea, flour Wheat Flour 0.008 32.57 Chickpea, seed Cocoa Beans 0.117 13.16 Chicory, roots Ground Coffee 0.816 10.79 Chive Parsley 0.162 52.20 Chrysanthemum, garland Parsley 0.162 52.20 Cinnamon Peppercorns 0.015 5.96 Cinnamon-babyfood Peppercorns 0.015 5.96 Cocoa bean, chocolate Cocoa Beans 0.117 13.16 Cocoa bean, powder Cocoa Beans 0.117 13.16 Coconut, dried Coconut 0.900 35.18 Coconut, meat Coconut 0.900 35.18 Coconut, milk Coconut 0.900 35.18 Coconut, oil Corn Oil 6.800 1.20 Coffee, instant Ground Coffee 0.816 10.79 Coffee, roasted bean Coffee Beans 0.011 7.15 Coriander, seed Peppercorns 0.015 5.96 Corn, field, bran Corn Bran 0.020 24.00 Corn, field, flour Corn Flour 0.020 17.10 Corn, field, meal Corn Meal 0.020 24.00 Corn, field, oil Corn Oil 6.800 1.20 Corn, field, starch Corn Starch 0.020 4.60 Corn, field, syrup Corn Syrup 0.020 1.20 Corn, pop Corn Grain 0.020 4.00

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DEEM Food	Fumigated Food or Commodity	Average Res	sidue, ppm
		Sulfuryl Fluoride	Fluoride Anion
Cottonseed, oil	Corn Oil	6.800	1.20
Cranberry, dried	Raisin	0.001	1.20
Currant, dried	Raisin	0.001	1.20
Date	Fig	0.037	1.20
Dill, seed	Chili Peppers	0.247	26.35
Egg, white (dried)	Powdered Eggs	0.444	755.34
Egg, whole (dried)	Powdered Eggs	0.444	755.34
Fig, dried	Fig	0.037	1.20
Filbert	Pecan	2.400	8.60
Filbert, oil	Corn Oil	6.800	1.20
Flaxseed, oil	Corn Oil	6.800	1.20
Garlic, dried	Garlic Powder	0.002	15.80
Ginger, dried	Garlic Powder	0.002	15.80
Grape, raisin	Raisin	0.001	1.20
Guar, seed	Chili Peppers	0.247	26.35
Herbs, other	Basil	0.010	51.18
Hickory nut	Pecan	2.400	8.60
Lentil, seed	Cocoa Beans	0.117	13.16
Lychee, dried	Fig	0.037	1.20
Macadamia nut	Pecan	2.400	8.60
Mango, dried	Fig	0.037	1.20
Maple syrup	Sugar	0.002	0.77
Maple, sugar	Sugar	0.002	0.77
Marjoram	Basil	0.010	51.18
Milk, fat (dried)	Powdered Whole Milk	1.453	1.69
Milk, nonfat solids (dried)	Powdered Nonfat Milk	0.002	2.36
Milk, sugar (lactose, dried)	Powdered Nonfat Milk	0.002	2.36
Milk, water (dried)	Powdered Nonfat Milk	0.002	2.36
Milk, fat (cured)	Powdered Cheese	0.408	4.48
Milk, nonfat solids (cured)	Powdered Cheese	0.408	4.48
Milk, water (cured)	Powdered Cheese	0.408	4.48
Oat, bran	Wheat Bran	0.008	35.95
Oat, flour	Wheat Flour	0.008	32.57
Oat, groats/rolled oats	Wheat Grain	0.090	4.00
Olive, oil	Corn Oil	6.800	1.20
Onion, dry bulb, dried	Onion Powder	0.002	1.17
Palm, oil	Corn Oil	6.800	1.20
Papaya, dried	Fig	0.037	1.20
Parsley, dried leaves	Parsley	0.162	52.20
Pea, dry	Cocoa Beans	0.102	13.16
Pea, pigeon, seed	Cocoa Beans	0.117	13.16
Peach, dried	Fig Fig	0.117	13.16
Peanut	Peanuts	0.037	11.30
Peanut, butter	Peanuts	0.145	11.30
Peanut, oil	Corn Oil	6.800	1.20
Pear, dried	Fig	0.037	1.20

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DEEM Food	Fumigated Food or Commodity	Average Res	sidue, ppm	
		Sulfuryl Fluoride	Fluoride Anion	
Pecan	Pecan	2.400	8.60	
Pepper, bell, dried	Chili Peppers	0.247	26.35	
Pepper, black and white	Peppercorns	0.015	5.96	
Pepper, nonbell, dried	Chili Peppers	0.247	26.35	
Peppermint, oil	Corn Oil	6.800	1.20	
Pine nut	Pecan	2.400	8.60	
Pineapple, dried	Fig	0.037	1.20	
Pistachio	Pecan	2.400	8.60	
Plantain, dried	Fig	0.037	1.20	
Plum, prune, dried	Prune	0.001	0.70	
Pork (cured)	Ham	0.002	18.08	
Potato, chips	Doritos	0.138	5.95	
Potato, dry (granules/ flakes)	Egg Noodles	0.002	17.65	
Potato, flour	Wheat Flour	0.008	32.57	
Psyllium, seed	Chili Peppers	0.247	26.35	
Pumpkin, seed	Almond	0.030	4.70	
Quinoa, grain	Wheat Grain	0.090	4.00	
Rapeseed, oil	Corn Oil	6.800	1.20	
Rice, bran	Rice Brown	0.021	5.30	
Rice, brown	Rice Brown	0.021	5.30	
Rye, flour	Wheat Flour	0.008	32.57	
Safflower, oil	Corn Oil	6.800	1.20	
Sesame, oil	Corn Oil	6.800	1.20	
Sesame, seed	Chili Peppers	0.247	26.35	
Sorghum, syrup	Corn Syrup	0.020	1.20	
Soybean, flour	Corn Flour	0.020	17.10	
Soybean, oil	Corn Oil	6.800	1.20	
Soybean, soy milk	Powdered Whole Milk	1.453	1.69	
Spearmint, oil	Corn Oil	6.800	1.20	
Spices, other	Chili Peppers	0.247	26.35	
Sugarcane, molasses	Sugar	0.002	0.77	
Sugarcane, sugar	Sugar	0.002	0.77	
Sunflower, oil	Corn Oil	6.800	1.20	
Sunflower, seed	Chili Peppers	0.247	26.35	
Tea, dried	Basil	0.010	51.18	
Tea, instant	Basil	0.010	51.18	
Tomato, dried	Fig	0.037	1.20	
Triticale, flour	Wheat Flour	0.008	32.57	
Turmeric	Chili Peppers	0.247	26.35	
Walnut	Walnut	0.600	5.60	
Wheat, bran	Wheat Bran	0.008	35.95	
Wheat, flour	Wheat Flour	0.008	33.93	
Wheat, germ	Wheat Germ	0.020	58.00	
Wild rice	Brown Rice	0.005	31.32	

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Table 2. Estimates of Percent of Commodities Treated with Sulfuryl Fluoride % Treated Estimate Food Fumigations Cheese 100 Cocoa bean 100 Coconut 100 Coffee bean 100 Cottonseed 100 Dried fruits 40 Dried peas and bean 100 Ginger 100 Ginseng 100 Ham 100 Herbs and spices 100 Peanut 100 Pine nut 100 Powdered milk 100 Stored cereal grain 2 Tree nuts 20 Space Fumigations Cereal grain commodities 1.1 All other commodities 0.4

### III. DEEM-FCID™ Program and Consumption Information

The sulfuryl fluoride and fluoride chronic dietary exposure assessments were conducted using the Dietary Exposure Evaluation Model software with the Food Commodity Intake Database (DEEM-FCID<sup>TM</sup>, 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 assessment, 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. The resulting residue consumption estimate for each food/food form is summed with the residue consumption estimates for all other food/food forms on the commodity residue list to arrive at the total average estimated exposure.

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Exposure is expressed in mg/kg body weight/day and as a percent of the cPAD. This procedure is performed for each population subgroup.

### IV. Toxicological Information

Sulfuryl Fluoride. On October 21, 2003, HED's Hazard Identification Assessment Review Committee (HIARC) met to re-evaluate the potential for increased susceptibility of infants and children from exposure to sulfuryl fluoride, as required by the Food Quality Protection Act (FQPA) of 1996, according to the 2002 OPP 10X Guidance Document. This re-evaluation was conducted to update the decision which was reached on April 11, 2001 using previous OPP policy. The findings of those meetings, as related to dietary exposure, are summarized in Table 3. Sulfuryl fluoride is classified as a "not likely" human carcinogen according to the EPA Draft Guidelines for Carcinogen Risk Assessment dated July, 1999; therefore, a cancer assessment is not necessary.

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ı	Table 3 Summary of Dose and Endnoint Selection Delevent for use in Dietom, Human Harlet Dist.
ı	Table 3. Summary of Dose and Endpoint Selection Relevant for use in Dietary Human Health Risk Assessments
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ı	for Sulfuryl Fluoride. Kidwell, J. TXR No. 0052208. 10/31/03. Sulfuryl Fluoride - Second Report of the
ſ	101 Sultaryl Fluoride. Kluwell, J. LAK NO. 0032208. 10/31/03. Silinityl Filloride - Second Report of the
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Exposure Scenario	Dose Used in Risk Assessment, UF	Special FQPA SF and Level of Concern for Risk Assessment	Study and Toxicological Effects		
Acute Dietary	None UF = N/A	Not applicable	No toxicological endpoint attributable to a single exposure was identified in the available toxicology studies on sulfuryl fluoride.		
Chronic Dietary (All populations)	NOAEL= 8.5 mg/kg/day UF = 3000 Chronic RfD = 0.003 mg/kg/day	FQPA SF = 1X cPAD = chronic RfD FQPA SF = 0.003 mg/kg/day	90-Day Inhalation - Rabbit LOAEL = 28 mg/kg/day based on vacuolation of white matter in the brain of females.		
Cancer	Classified as "Not likely to be carcinogenic to humans"				

UF = 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

Fluoride. HED is basing its fluoride risk assessments on the MCL for fluoride set by the Agency's Office of Water. In regulating fluoride levels in water, the Office of Water has determined that the MCL of 4 ppm provides adequate protection against skeletal fluorosis, which is the primary effect of concern (see Federal Register 50 FR 47142). The MCL was derived from a LOAEL of 20 mg/day and a safety factor of 2.5, giving a reference dose of 8 mg/day. In its assessment of the health effects of fluoride, the National Research Council came to the following conclusion concerning cancer risk posed to humans through exposure to fluoride:

The subcommittee concludes that the available laboratory data are insufficient to demonstrate a carcinogenic effect of fluoride in animals. The subcommittee also concludes that the weight of the evidence from more than 50 epidemiological studies

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does not support the hypothesis of an association between fluoride exposure and increased cancer risk in humans. National Research Council, 1993.

The Agency for Toxic Substances and Disease Registry (ATSDR, 2001) and the World Health Organization (2002) have come to similar conclusions. Based on the findings of those bodies, HED believes that a cancer risk assessment for fluoride is not appropriate.

### V. Results/Discussion

Dietary exposure and risk estimates associated with the proposed use of sulfuryl fluoride as a fumigant for foods and food processing facilities are presented in Table 4 (sulfuryl fluoride) and Table 5 (fluoride), below. The combined-use risk estimates for all population subgroups are well below HED's level of concern for both sulfuryl fluoride and fluoride.

Table 4. Sulfuryl Fluoride Chronic Dietary Exposure and Risk Estimates for Fumigation of Food and Food Processing Facilities with Sulfuryl Fluoride. The cPAD for sulfuryl fluoride is 0.003 mg/kg/day for all population subgroups.

Population Subgroup	p Food Fumigations Space I		Space Fumigation	ons	Food + Space	
	Exposure Estimate, mg/kg/day	% cPAD	Exposure Estimate,	% -DAD	Exposure Estimate,	%
TIC D (1 + 1)	T		mg/kg/day	cPAD	mg/kg/day	cPAD
U.S. Pop. (total)	0.000064	2	0.000018	1	0.000082	3
All infants (< 1 year)	0.000041	1	0.000097	3	0.000138	5
Children 1-2 yrs	0.000189	6	0.000036	1	0.000225	8
Children 3-5 yrs	0.000177	6	0.000036	1	0.000213	7
Children 6-12 yrs	0.000100	3	0.000026	1	0.000126	4
Youth 13-19 yrs	0.000058	2	0.000017	1	0.000075	3
Adults 20-49 yrs	0.000047	2	0.000014	<1	0.000061	2
Adults 50+ yrs	0.000045	2	0.000011	<1	0.000056	2
Females 13-49 yrs	0.000046	2	0.000013	<1	0.000059	2

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Population	NHANES	Food I	Fumigation	ıs	Space	Fumigation	ns	Food + Space	
Subgroup	Estimated Body	Exposure Estimate %		Exposure Estimate		%	Exposure	%	
	Weight, kg*	mg/kg/day	mg/day	RfD	mg/kg/day	mg/day	RfD	Estimate, mg/day	RfD
U.S. Pop. (total)	70	0.008701	0.6091	8	0.000820	0.0574	1	0.6665	8
All infants (< 1 year)	7	0.010972	0.0768	1	0.000876	0.0061	<1	0.0829	1
Children 1-2 yrs	13	0.017980	0.2337	3	0.002052	0.0267	<1	0.2604	3
Children 3-5 yrs	22	0.019274	0.4240	5	0.002009	0.0442	1	0.4682	6
Children 6-12 yrs	40	0.012879	0.5152	6	0.001361	0.0544	1	0.5696	7
Youth 13-19 yrs	60	0.008014	0.4808	6	0.000795	0.0477	1	0.5285	7
Adults 20-49 yrs	70	0.007212	0.5048	6	0.000660	0.0462	1	0.5510	7
Adults 50+ yrs	70	0.006670	0.4669	6	0.000516	0.0361	<1	0.5030	6
Females 13-49 yrs	61	0.006398	0.3903	5	0.000603	0.0368	<1	0.4271	5

\*U.S. EPA. 2000. Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health. Office of Science and Technology, Office of Water EPA-822-B-00-004. Washington, DC.

### VI. Characterization of Inputs/Outputs

All dietary assessments for both sulfuryl fluoride and fluoride anion presented in this document are based on average residues from trial fumigations and incorporate estimates of percentage of commodity treated. Since the residue values used in the assessment are based on maximum treatment rates and, in the case of sulfuryl fluoride, minimum aeration times, the residue values are expected to result in mid-to-high end estimates of dietary exposure to sulfuryl fluoride and fluoride anion.

#### VII. Conclusions

Dietary risk estimates associated with the proposed use of sulfuryl fluoride as a fumigant for foods and food processing facilities are well below HED's level of concern. Additional dietary sources of fluoride exposure were previously estimated and will be integrated with the estimates discussed in this assessment in the forthcoming aggregate human health risk assessment for sulfuryl fluoride.

### VIII. List of Attachments

1. Sulfuryl Fluoride Food Fumigation Residue Inputs

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- 2. Fluoride Food Fumigation Residue Inputs
- 3. Sulfuryl Fluoride Space Fumigation Residue Inputs
- 4. Fluoride Space Fumigation Residue Inputs
- 5. Sulfuryl Fluoride Food Fumigation Exposure and Risk Estimates
- 6. Fluoride Food Fumigation Exposure and Risk Estimates
- 7. Sulfuryl Fluoride Space Fumigation Exposure and Risk Estimates
- 8. Fluoride Space Fumigation Exposure and Risk Estimates
- 9. Percent of Processed Foods Treated (e-mail from C. Cook to C. Swartz)

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# Attachment 1: Sulfuryl Fluoride Food Fumigation Residue Inputs

U.S. Environmental Protection Agency

DEEM-FCID Chronic analysis for SULFURYL FLUORIDE

Residue file: C:\Documents and Settings\MDOHERTY\My Documents\Chemistry Reviews\DEEM
Runs\Sulfuryl Fluoride\SF Food Fumigation.R98

Adjust. #2 used Analysis Date 01-05-2006 Residue file dated: 01-05-2006/13:17:50/8 Reference dose (RfD) = 0.003 mg/kg bw/day Comment:RfD is cPAD

Food Crop EPA Code Grp	Food Name	Residue (ppm)			
	·	(ppm)	#1	#2	
14000030 14	Almond				
14000031 14		0.030000 0.030000	1.000	0.200	
11000090 11	Annle deied	0.037000		0.200	Burn Bir.
11000091 11	Apple, dried Apple, dried-babyfood Apricot, dried	0.037000	1.000		From Figs
12000130 12	Apricot, dried	0.037000	1.000	0.400 0.400	From Figs
95000240 O	Banana dried	0.037000 0.037000	1.000	0.400	From Figs From Figs
95000241 O	Banana, dried-babyfood	0.037000 0.037000 0.020000	1.000	0.400	From Figs
15000250 15	barrey, pearied barrey	0.020000	1.000	0.020	1101111195
15000251 15	Barley, pearled barley-babyfood	0.020000	1.000	0.020	
15000260 15	Barley, flour	0.020000	1.000	0.020	
15000261 15	Barley, flour-babyfood	0.020000	1.000	0.020	
15000270 15	Barley, bran	0.020000	1.000	0.020	
19010290 19A	Basil, dried leaves	0.010000	1.000	1.000	
19010291 19A	Basil, dried leaves Basil, dried leaves-babyfood Bean, black, seed	0.010000	1.000	1.000	
06030300 6C	Bean, black, seed	0.117000	1.000	1.000	From Cocoa Beans
06030320 6C	Bean, broad, seed	0.117000	1.000	1.000	From Cocoa Beans
06030340 6C	Bean, Cowpea, seed	0.117000	1.000	1.000	From Cocoa Beans
06030350 6C	Bean, great northern, seed	0.117000	1.000	1.000	From Cocoa Beans
06030360 6C	Bean, kidney, seed	0.117000	1.000	1.000	From Cocoa Beans
06030380 6C	Bean, lima, seed	0.117000	1.000	1.000	From Cocoa Beans
06030390 6C	Bean, mung, seed	0.117000	1.000	1.000	From Cocoa Beans
06030400 6C	Bean, navy, seed	0.117000	1.000	1.000	From Cocoa Beans
06030410 6C	Bean, pink, seed	0.117000	1.000	1.000	From Cocoa Beans
06030420 6C 21000450 M	Bean, pinto, seed	0.117000	1.000	1.000	From Cocoa Beans
14000590 14	Beef, meat, dried Brazil nut	0.005000	1.000	1.000	
14000590 14		2.400000	1.000	0.200	From Pecan
14000810 14	Butternut Cashew	2.400000	1.000	0.200	From Pecan
14000310 14	Chestnut	2.400000	1.000	0.200	From Pecan
06030980 6C	Chickpea, seed	2.400000	1.000	0.200	From Pecan
06030981 6C	Chicknes seed-habufood	0.117000	1.000	1.000	From Cocoa Beans
06030990 6C	Chickpea, seed-babyfood Chickpea, flour	0.117000	1.000	1.000	From Cocoa Beans
19011030 19A	Chive	0.117000	1.000	1.000	From Cocoa Beans
19021050 19B	Cinnamon	0.162000	1.000	1.000	From Parsley
		0.015000 0.015000	1.000	1.000	From Peppercorns
95001090 O	Cinnamon-babyfood Cocoa bean, chocolate Cocoa bean, powder	0.117000	1.000 1.000	1.000	From Peppercorns
95001100 O	Cocoa bean, powder	0.117000	1.000	1.000	
95001110 0	Coconut, meat	0.900000	1.000	1.000	
95001111 0	Coconut- meat-babyfood	0.900000	1.000	1.000 1.000	
95001120 O	Coconut, dried	0.900000	1.000	1.000	From Figs
95001130 0	Coconut, milk	0.900000	1.000	1.000	FIOM FIGS
95001150 O	Coffee, roasted bean	0.011000	1.000	1.000	
95001160 O	C+66+		1.000	1.000	
19011180 19A	Corriander, leaves Corriander, leaves-babyfood Corriander, leaves-babyfood	0.162000	1.000	1.000	From Parsley
19011181 19A	Coriander, leaves-babyfood	0.162000	1.000	1.000	From Parsley
17021170 170	corrander, seed	0.015000	1.000	1.000	From Peppercorns
19021191 19B	Coriander, seed-babyfood	0.015000	1.000	1.000	From Peppercorns
15001200 15	Corn, field, flour	0.020000	1.000	0.020	room reppercorns
15001201 15	Corn, field, flour-babyfood	0.020000	1.000	0.020	
15001210 15	Corn, field, meal	0.020000	1.000	0.020	
15001211 15	Corn, field, meal-babyfood	0.020000	1.000	0.020	
15001220 15	Corn, field, bran	0.020000	1.000	0.020	
15001230 15 15001231 15	Corn, field, starch	0.020000	1.000	0.020	
15001231 15	Corn, field, starch-babyfood	0.020000	1.000	0.020	
15001240 15	Corn, field, syrup Corn, field, syrup-babyfood	0.020000	1.000	0.020	
15001241 15	Corn, pop	0.020000	1.000	0.020	
	,	0.023000	1.000	0.020	

01031661 1CD Ginger-babyfood 0.002000 1.000 1.000 From Garlic F 01031670 1CD Ginger, dried 0.002000 1.000 1.000 From Garlic F 95001780 O Grape, raisin 0.001000 1.000 0.400 0.00131820 6C Guar, seed 0.117000 1.000 1.000 From Coccoa Be 06031821 6C Guar, seed-babyfood 0.117000 1.000 1.000 From Coccoa Be 19011840 19A Herbs, other 0.162000 1.000 1.000 From Parsley 19011841 19A Herbs, other-babyfood 0.162000 1.000 1.000 From Parsley 14001850 14 Hickory nut 2.400000 1.000 0.200 From Pecan 19012020 19A Lemongrass 0.162000 1.000 1.000 From Parsley 19012020 19A Lemongrass 0.162000 1.000 1.000 From Parsley 1.000 1.000 From Parsley 1.000 1.000 1.000 From Parsley 1.000 1.000 From Parsley 1.000 1.000 From Parsley 1.000 1.000 1.000 From Parsley 1.000 1.000 From Parsley 1.000 I.000 I.000 I.000 From Parsley 1.000 I.000 I.000 I.000 From Parsley 1.000 I.000 I.000 I.000 I.000 I.000 From Parsley I.0000 I.000 II.000 III.000 III.0			·			Page: 14 of 4
15001271 15 Corn, sweet-babyfood 0.023000 1.000 0.020						
15001271   15	001270 15	Corn, sweet	0.023000	1.000	0.020	
	001271 15	Corn, sweet-babyfood	0.023000			
130-Uncooked; Pried; Cook Meth N/S	001310 0	Cranberry, dried	0.037000	1.000		From Figs
	001410 0					
		130-Uncooked; Dried; Cook Meth	N/S			
210-Cooked; Fresh or N/S; Cook Meth N/S			0.037000	1.000	0.400	
211-Cooked; Fresh or N/S; Baked   0.000000   1.000   0.000		210-Cooked; Fresh or N/S; Cook	Meth N/S			
212-Cooked; Fresh or N/S; Boiled   230-Cooked; Dried; Cook Meth N/S   0.000000   1.000   0.0				1.000	0.000	
212-Cooked; Fresh or N/S; Boiled   230-Cooked; Dried; Cook Meth N/S   0.000000   1.000   0.000   0.000   0.000   0.000   0.0000   0.		211-Cooked; Fresh or N/S; Bake	d 0.000000			
230-Cooked; Dried; Cook Meth N/S		212-Cooked; Fresh or N/S; Boil	.ed			
230-Cooked; Dried; Cook Meth N/S				1.000	0.000	
1902  1430   19B   Dill, seed   0.015000   1.000   1		230-Cooked; Dried; Cook Meth N	r/s			
1902  1430   19B   Dill, seed   0.015000   1.000   1			0.037000	1.000	0.400	
	021430 19B	Dill, seed	0.015000			From Peppercorns
	011440 19A	Dillweed	0.162000	1.000		
	001540 O	Fig, dried	0.037000	1.000		
1031660   1CD   Ginger	001550 14	Filbert	2.400000	1.000		From Pecan
			0.002000	1.000		From Garlic Powde
Stool   Stoo			0.002000	1.000		From Garlic Powde
Second   S	031670 1CD		0.002000			From Garlic Powde
1.000   1.00	001780 O	Grape, raisin	0.001000			
Seed-babyfood   0.117000   1.000   1.000   From Cocoa Be	031820 6C		0.117000	1.000		From Cocoa Beans
19011840 19A   Herbs, other   0.162000   1.000   1.000   From Parsley			0.117000	1.000		From Cocoa Beans
1901  194	011840 19A		0.162000			
Hickory nut	011841 19A	Herbs, other-babyfood	0.162000	1.000		
1000   1000	001850 14	Hickory nut	2.400000	1.000		
10032030 6C   Lentil, seed	012020 19A		0.162000	1.000		
15002120	032030 6C		0.117000			From Cocoa Beans
### Macadamia nut	002120 O	Lychee, dried		1.000	0.400	
### Amago, dried	002130 14	Macadamia nut	2.400000	1.000		
9012200 19A Marjoram	002160 O	Mango, dried	0.037000			
### Argoram-babyfood			0.010000	1.000		
Milk, fat		Marjoram-babyfood	0.010000			
0.000000 1.000 1.000  120-Uncooked; Frozen; Cook Meth N/S	002220 D					
120-Uncooked; Frozen; Cook Meth N/S  0.000000 1.000 1.000  130-Uncooked; Dried; Cook Meth N/S  1.453000 1.000 1.000  150-Uncooked; Cured etc; Cook Meth N/S  0.408000 1.000 1.000  210-Cooked; Fresh or N/S; Cook Meth N/S  0.000000 1.000 1.000  211-Cooked; Fresh or N/S; Baked 0.000000 1.000 1.000  212-Cooked; Fresh or N/S; Boiled  0.000000 1.000 1.000  213-Cooked; Fresh or N/S; Fried 0.000000 1.000 1.000  214-Cooked; Fresh or N/S; Fried/baked		110-Uncooked; Fresh or N/S; Co	ok Meth N/S			
0.000000 1.000 1.000  130-Uncooked; Dried; Cook Meth N/S  1.453000 1.000 1.000  150-Uncooked; Cured etc; Cook Meth N/S  0.408000 1.000 1.000  210-Cooked; Fresh or N/S; Cook Meth N/S  0.000000 1.000 1.000  211-Cooked; Fresh or N/S; Baked 0.000000 1.000 1.000  212-Cooked; Fresh or N/S; Boiled  0.000000 1.000 1.000  213-Cooked; Fresh or N/S; Fried 0.000000 1.000 1.000  214-Cooked; Fresh or N/S; Fried/baked				1.000	1.000	
130-Uncooked; Dried; Cook Meth N/S  1.453000 1.000 1.000  150-Uncooked; Cured etc; Cook Meth N/S  0.408000 1.000 1.000  210-Cooked; Fresh or N/S; Cook Meth N/S  0.000000 1.000 1.000  211-Cooked; Fresh or N/S; Baked 0.000000 1.000 1.000  212-Cooked; Fresh or N/S; Boiled  0.000000 1.000 1.000  213-Cooked; Fresh or N/S; Fried 0.000000 1.000 1.000  214-Cooked; Fresh or N/S; Fried/baked  0.000000 1.000 1.000		120-Uncooked; Frozen; Cook Met	h N/S			
1.453000 1.000 1.000  150-Uncooked; Cured etc; Cook Meth N/S			0.000000	1.000	1.000	
150-Uncooked; Cured etc; Cook Meth N/S		130-Uncooked; Dried; Cook Meth	N/S			
0.408000 1.000 1.000 210-Cooked; Fresh or N/S; Cook Meth N/S			1.453000	1.000	1.000	
210-Cooked; Fresh or N/S; Cook Meth N/S  0.000000 1.000 1.000 211-Cooked; Fresh or N/S; Baked 0.000000 1.000 1.000 212-Cooked; Fresh or N/S; Boiled  0.000000 1.000 1.000 213-Cooked; Fresh or N/S; Fried 0.000000 1.000 1.000 214-Cooked; Fresh or N/S; Fried/baked  0.000000 1.000 1.000		150-Uncooked; Cured etc; Cook				
0.000000 1.000 1.000 211-Cooked; Fresh or N/S; Baked 0.000000 1.000 1.000 212-Cooked; Fresh or N/S; Boiled 0.000000 1.000 1.000 213-Cooked; Fresh or N/S; Fried 0.000000 1.000 1.000 214-Cooked; Fresh or N/S; Fried/baked 0.000000 1.000 1.000 1.000		010 Garlest - 1	0.408000	1.000	1.000	
211-Cooked; Fresh or N/S; Baked 0.000000 1.000 1.000 212-Cooked; Fresh or N/S; Boiled  0.000000 1.000 1.000 213-Cooked; Fresh or N/S; Fried 0.000000 1.000 1.000 214-Cooked; Fresh or N/S; Fried/baked  0.000000 1.000 1.000		210-Cooked; Fresh or N/S; Cook				
212-Cooked; Fresh or N/S; Boiled  0.000000 1.000 1.000  213-Cooked; Fresh or N/S; Fried 0.000000 1.000 1.000  214-Cooked; Fresh or N/S; Fried/baked  0.000000 1.000 1.000		211 Garler d. Burrell 1974 - 1	0.000000		1.000	
0.000000 1.000 1.000 213-Cooked; Fresh or N/S; Fried 0.000000 1.000 1.000 214-Cooked; Fresh or N/S; Fried/baked 0.000000 1.000 1.000		211-Cooked; Fresh or N/S; Bake	d 0.000000	1.000	1.000	
213-Cooked; Fresh or N/S; Fried 0.000000 1.000 1.000 214-Cooked; Fresh or N/S; Fried/baked 0.000000 1.000 1.000		212-Cooked; Fresh or N/S; Boile				
214-Cooked; Fresh or N/S; Fried/baked 0.000000 1.000 1.000		212 Garland Books 1 12/2 - 1	0.000000		1.000	
0.00000 1.000 1.000		213-Cooked; Fresh or N/S; Fried	d 0.000000	1.000	1.000	
0.000000 1.000 1.000 215-Cooked; Fresh or N/S; Boiled/baked		214-Cooked; Fresh or N/S; Fried				
213-Cooked; Fresh or N/S; Bolled/baked		215 Cooked Break and M/C D 12	0.000000	1.000	1.000	
		215-Cooked; Fresh or N/S; Boile				
0.000000 1.000 1.000		220 Geologia Barrera G. J. M. J.	0.000000	1.000	1.000	
220-Cooked; Frozen; Cook Meth N/S		220-Cooked; Frozen; Cook Meth 1				
0.000000 1.000 1.000		221 Cooked Burney B. 1			1.000	
221-Cooked; Frozen; Baked 0.000000 1.000 1.000						
222-Cooked; Frozen; Boiled 0.000000 1.000 1.000		222 Cooked; Frozen; Boiled			1.000	
223-Cooked; Frozen; Fried 0.000000 1.000 1.000		223-Cooked; Frozen; Fried	0.000000		1.000	
224-Cooked; Frozen; Fried/baked 0.000000 1.000 1.000		224-Cooked; Frozen; Fried/baked	d 0.000000	1,000	1.000	
230-Cooked; Dried; Cook Meth N/S		230-Cooked; Dried; Cook Meth N,				
1.453000 1.000 1.000		221 Cooked Ded a - 2			1.000	
231-Cooked; Dried; Baked 1.453000 1.000 1.000		232-Cooked; Dried; Baked				
232-Cooked; Dried; Boiled 1.453000 1.000 1.000 233-Cooked; Dried; Fried 1.453000 1.000 1.000		233-Cooked: Dried: Boiled				
230-Cooked; Pried; Fried 1.453000 1.000 1.000		240-Cooked, Conned Cooked	1.453000	1.000	1.000	
240-Cooked; Canned; Cook Meth N/S		240-Cooked; Canned; Cook Meth 1				
0.000000 1.000 1.000		242-Cooked, Campad Dada				
242-Cooked; Canned; Boiled 0.000000 1.000 1.000		250-Cooked: Cumad 7	0.000000	1.000	1.000	
250-Cooked; Cured etc; Cook Meth N/S		230-Cooked; Cured etc; Cook Met			_	
0.408000 1.000 1.000		253-Cooked, Cured at-				
253-Cooked; Cured etc; Fried 0.408000 1.000 1.000 255-Cooked; Cured etc; Boiled/baked		255-Cooked, Cured etc; Fried	0.408000	1.000	1.000	
A		-00 cooked, cared etc; Bolled/R		1 000		
7012230 D Milk, nonfat solids	12230 D	Milk, nonfat solids	0.408000	1.000	1.000	
	<del>-</del>		ok Moth M/C			
27012230 D Milk, nonfat solids 110-Uncooked; Fresh or N/S; Cook Meth N/S	12230 D			1.000	1.000	

	0.000000	1.000	1.000
	120-Uncooked; Frozen; Cook Meth N/S		
	0.000000	1.000	1.000
	130-Uncooked; Dried; Cook Meth N/S		
	0.002000	1.000	1.000
	150-Uncooked; Cured etc; Cook Meth N/S		
	0.408000 210-Cooked; Fresh or N/S; Cook Meth N/S	1.000	1.000
	0.000000 211-Cooked; Fresh or N/S; Baked 0.000000	1.000	1.000
	212-Cooked; Fresh or N/S; Boiled	1.000	1.000
	0.000000	1.000	1.000
	213-Cooked; Fresh or N/S; Fried 0.000000	1.000	1.000
	214-Cooked; Fresh or N/S; Fried/baked	2.0,00	1.000
	0.000000	1.000	1.000
	215-Cooked; Fresh or N/S; Boiled/baked		
	0.000000	1.000	1.000
	220-Cooked; Frozen; Cook Meth N/S		
	0.000000	1.000	1.000
	221-Cooked; Frozen; Baked 0.000000	1.000	1.000
	222-Cooked; Frozen; Boiled 0.000000	1.000	1.000
	223-Cooked; Frozen; Fried 0.000000 224-Cooked; Frozen; Fried/baked 0.000000	1.000	1.000
	224-Cooked; Frozen; Fried/baked 0.000000 230-Cooked; Dried; Cook Meth N/S	1.000	1.000
		1 000	1 000
	0.002000 231-Cooked; Dried; Baked 0.002000	1.000 1.000	1.000
	232-Cooked; Dried; Boiled 0.002000	1.000	1.000
	233-Cooked; Dried; Fried 0.002000	1.000	1.000
	240-Cooked; Canned; Cook Meth N/S	2.000	1.000
	0.000000	1.000	1.000
	242-Cooked; Canned; Boiled 0.000000	1.000	1.000
	245-Cooked; Canned; Boiled/baked		
	0.000000	1.000	1.000
	250-Cooked; Cured etc; Cook Meth N/S		
	0.408000 253-Cooked; Cured etc; Fried 0.408000	1.000	1.000
	253-Cooked; Cured etc; Fried 0.408000 255-Cooked; Cured etc; Boiled/baked	1.000	1.000
	0.408000	1.000	1.000
27012231 D	Milk, nonfat solids-baby food/infant	1.000	1.000
	110-Uncooked; Fresh or N/S; Cook Meth N/S		
	0.000000	1.000	1.000
	130-Uncooked; Dried; Cook Meth N/S		
	0.002000	1.000	1.000
	211-Cooked; Fresh or N/S; Baked 0.000000 240-Cooked; Canned; Cook Meth N/S	1.000	1.000
		1 000	
27022240 D	0.000000 Milk, water	1.000	1.000
	110-Uncooked; Fresh or N/S; Cook Meth N/S		
	0.00000	1.000	1.000
	120-Uncooked; Frozen; Cook Meth N/S		
	0.000000	1.000	1.000
	130-Uncooked; Dried; Cook Meth N/S		
	0.002000	1.000	1.000
	150-Uncooked; Cured etc; Cook Meth N/S	1 000	
	0.408000 210-Cooked; Fresh or N/S; Cook Meth N/S	1.000	1.000
	0.000000	1.000	1 000
	211-Cooked; Fresh or N/S; Baked 0.000000	1.000	1.000
	212-Cooked; Fresh or N/S; Boiled	1.000	1.000
	0.00000	1.000	1.000
	213-Cooked; Fresh or N/S; Fried 0.000000	1.000	1.000
	214-Cooked; Fresh or N/S; Fried/baked		
	0.000000	1.000	1.000
	215-Cooked; Fresh or N/S; Boiled/baked		
	0.000000 220-Cooked; Frozen; Cook Meth N/S	1.000	1.000
		1 000	
	0.000000 221-Cooked; Frozen; Baked 0.000000	1.000 1.000	1.000
	222-Cooked; Frozen; Boiled 0.000000	1.000	1.000 1.000
	223-Cooked; Frozen; Fried 0.000000	1.000	1.000
	224-Cooked; Frozen; Fried/baked 0.000000	1.000	1.000
	230-Cooked; Dried; Cook Meth N/S		
	0.002000	1.000	1.000

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	231-Cooked; Dried; Baked 0.00200		1.000	
	232-Cooked; Dried; Boiled 0.00200		1.000	
	233-Cooked; Dried; Fried 0.00200 240-Cooked; Canned; Cook Meth N/S	00 1.000	1.000	
	0.0000	١ ١ ١ ١ ١	7 000	
	242-Cooked; Canned; Boiled 0.00000		1.000	
	250-Cooked; Cured etc; Cook Meth N/S	70 1.000	1.000	
	0.40800	0 1.000	1.000	
	253-Cooked; Cured etc; Fried 0.40800		1.000	
	255-Cooked; Cured etc; Boiled/baked			
	0.40800	00 1.000	1.000	
27032251 D	Milk, sugar (lactose)-baby food/infa			
	110-Uncooked; Fresh or N/S; Cook Meth N/			
	0.00000	00 1.000	1.000	
	130-Uncooked; Dried; Cook Meth N/S			
	0.00200 210-Cooked; Fresh or N/S; Cook Meth N/S	00 1.000	1.000	
	0.00000	1 000	1 000	
	212-Cooked; Fresh or N/S; Boiled	00 1.000	1.000	
	0.00000	0 1.000	1.000	
	230-Cooked; Dried; Cook Meth N/S	1.000	1.000	
	0.00200	0 1.000	1.000	
	240-Cooked; Canned; Cook Meth N/S			
	0.00000	0 1.000	1.000	
15002260 15	Millet, grain 0.03300	0 1.000	0.020	From Wheat Grain
15002310 15	Oat, bran 0.00800	0 1.000	0.020	
15002320 15	Oat, flour 0.00800	0 1.000	0.020	
15002321 15	Oat, flour-babyfood 0.00800		0.020	
15002330 15 15002331 15	Oat, groats/rolled oats 0.00800		0.020	
95002460 O	Oat, groats/rolled oats-babyfood 0.00800 Papaya, dried 0.03700		0.020	
19012490 19A	P		0.400	From Figs
19012491 19A			1.000	
06032560 6C	Pea, dry 0.11700		1.000 1.000	Prom Cooss Dans
06032561 6C	Pea, dry-babyfood 0.11700		1.000	From Cocoa Beans From Cocoa Beans
06032580 6C	Pea, pigeon, seed 0.11700		1.000	From Cocoa Beans
12002610 12	Peach, dried 0.03700		0.400	From Figs
12002611 12	Peach, dried-babyfood 0.03700	0 1.000	0.400	From Figs
95002630 O	Peanut 0.14500	0 1.000	1.000	
95002640 O	Peanut, butter 0.14500	0 1.000	1.000	
11002670 11 14002690 14	Pear, dried 0.03700		0.400	From Figs
19022740 19B	Pecan 2.40000 Pepper, black and white 0.01500		0.200	
19022741 19B	Demon blank a line of the control of		1.000	
95002780 O	Dina met		1.000	
95002800 O	Pineapple, dried 2.40000 0.03700		1.000 0.400	From Pecan
14002820 14	Pistachio 2.40000		0.200	From Figs From Pecan
95002840 O	Plantain, dried 0.03700		0.400	From Figs
12002870 12	Plum, prune, dried 0.00100		0.400	riom rigs
12002871 12	Plum, prune, dried-babyfood 0.00100		0.400	
25002900 M	Pork, meat			
	210-Cooked; Fresh or N/S; Cook Meth N/S			
	0.00000 211-Cooked; Fresh or N/S; Baked 0.00000		1.000	
	211-Cooked; Fresh or N/S; Baked 0.00000 212-Cooked; Fresh or N/S; Boiled	0 1.000	1.000	
		0 1 000		
	0.00000 213-Cooked; Fresh or N/S; Fried 0.00000		1.000	
	214-Cooked; Fresh or N/S; Fried/baked	0 1.000	1.000	
	0.00000	0 1.000	1.000	
	215-Cooked; Fresh or N/S; Boiled/baked	1.000	1.000	
	0.00000	0 1.000	1.000	
	220-Cooked; Frozen; Cook Meth N/S		2.000	
	0.00000	0 1.000	1.000	
	221-Cooked; Frozen; Baked 0.00000		1.000	
	222-Cooked; Frozen; Boiled 0.00000	0 1.000	1.000	
	230-Cooked; Dried; Cook Meth N/S			
	0.00000 232-Cooked; Dried; Boiled 0.00000		1.000	
	232-Cooked; Dried; Boiled 0.00000 240-Cooked; Canned; Cook Meth N/S	0 1.000	1.000	
	0.00000	0 1.000	1.000	
	242-Cooked; Canned; Boiled 0.00000		1.000	
	250-Cooked; Cured etc; Cook Meth N/S		2.000	
	0.00200	0 1.000	1.000	

1 C Codc. 0780			
	251-Cooked; Cured etc; Baked 0.002000	1.000	1.000
	252-Cooked; Cured etc; Boiled 0.002000	1.000	1.000
	253-Cooked; Cured etc; Fried 0.002000	1.000	1.000
	255-Cooked; Cured etc; Boiled/baked		
25002910 M	0.002000 Pork, skin	1.000	1.000
25002510 14	210-Cooked; Fresh or N/S; Cook Meth N/S		
	0.000000	1.000	1.000
	211-Cooked; Fresh or N/S; Baked 0.000000	1.000	1.000
	212-Cooked; Fresh or N/S; Boiled	2,,,,,	1.000
	0.000000	1.000	1.000
	213-Cooked; Fresh or N/S; Fried 0.000000	1.000	1.000
	221-Cooked; Frozen; Baked 0.000000	1.000	1.000
	240-Cooked; Canned; Cook Meth N/S		
	0.000000 250-Cooked; Cured etc; Cook Meth N/S	1.000	1.000
	0.002000	1.000	1.000
25002920 M	Pork, meat byproducts	1.000	1.000
	110-Uncooked; Fresh or N/S; Cook Meth N/S		
	0.000000	1.000	1.000
	120-Uncooked; Frozen; Cook Meth N/S		
	0.000000	1.000	1.000
	130-Uncooked; Dried; Cook Meth N/S	1 000	
	0.000000 210-Cooked; Fresh or N/S; Cook Meth N/S	1.000	1.000
	0.000000	1.000	1.000
	211-Cooked; Fresh or N/S; Baked 0.000000	1.000	1.000
	212-Cooked; Fresh or N/S; Boiled		
	0.000000	1.000	1.000
	213-Cooked; Fresh or N/S; Fried 0.000000	1.000	1.000
	214-Cooked; Fresh or N/S; Fried/baked 0.000000	1 000	1 000
	215-Cooked; Fresh or N/S; Boiled/baked	1.000	1.000
	0.000000	1.000	1.000
	221-Cooked; Frozen; Baked 0.000000	1.000	1.000
	222-Cooked; Frozen; Boiled 0.000000	1.000	1.000
	230-Cooked; Dried; Cook Meth N/S		
	0.000000 231-Cooked; Dried; Baked 0.000000	1.000	1.000
	231-Cooked; Dried; Baked 0.000000 232-Cooked; Dried; Boiled 0.000000	1.000	1.000
	233-Cooked; Dried; Fried 0.000000	1.000 1.000	1.000
	240-Cooked; Canned; Cook Meth N/S	1.000	1.000
	0.000000	1.000	1.000
	242-Cooked; Canned; Boiled 0.000000	1.000	1.000
	250-Cooked; Cured etc; Cook Meth N/S		
	0.002000 252-Cooked; Cured etc; Boiled 0.002000	1.000	1.000
25002930 M	Pork, fat 252-Cooked; Cured etc; Boiled 0.002000	1.000	1.000
	110-Uncooked; Fresh or N/S; Cook Meth N/S		
	, ,		
	0.000000	1.000	1.000
	210-Cooked; Fresh or N/S; Cook Meth N/S		
	0.000000 211-Cooked; Fresh or N/S; Baked 0.000000	1.000	1.000
	211-Cooked; Fresh or N/S; Baked 0.000000 212-Cooked; Fresh or N/S; Boiled	1.000	1.000
	0.000000	1.000	1.000
	213-Cooked; Fresh or N/S; Fried 0.000000	1.000	1.000
	214-Cooked; Fresh or N/S; Fried/baked		
	0.000000 215-Cooked; Fresh or N/S; Boiled/baked	1.000	1.000
	0.000000	1 000	1 000
	220-Cooked; Frozen; Cook Meth N/S	1.000	1.000
	0.000000	1.000	1.000
	221-Cooked; Frozen; Baked 0.000000	1.000	1.000
	222-Cooked; Frozen; Boiled 0.000000	1.000	1.000
	230-Cooked; Dried; Cook Meth N/S	1 000	
	0.000000 232-Cooked; Dried; Boiled 0.000000	1.000 1.000	1.000
	240-Cooked; Canned; Cook Meth N/S	1.000	1.000
	0.000000	1.000	1.000
	242-Cooked; Canned; Boiled 0.000000	1.000	1.000
	250-Cooked; Cured etc; Cook Meth N/S		

		0.002000	1.000	1.000	
	251-Cooked; Cured etc; Baked	0.002000	1.000	1.000	
	252-Cooked; Cured etc; Boiled	0.002000	1.000	1.000	
	253-Cooked; Cured etc; Fried	0.002000	1.000	1.000	
	255-Cooked; Cured etc; Boiled/ba	aked			
		0.002000	1.000	1.000	
15003230 15	Rice, white	0.021000	1.000	0.020	From Rice Grain
15003231 15	Rice, white-babyfood	0.021000	1.000	0.020	From Rice Grain
15003240 15	Rice, brown	0.021000	1.000	0.020	From Rice Grain
15003241 15	Rice, brown-babyfood	0.021000	1.000	0.020	From Rice Grain
15003250 15	Rice, flour	0.021000	1.000	0.020	Mile Grain
15003251 15	Rice, flour-babyfood	0.021000	1.000	0.020	
15003260 15	Rice, bran	0.021000	1.000	0.020	
15003261 15	Rice, bran-babyfood	0.021000	1.000	0.020	
19013340 19A	Savory	0.162000	1.000	1.000	From Parsley
15003440 15	Sorghum, grain	0.023000	1.000	0.020	From Corn Grain
19023540 19B	Spices, other	0.015000	1.000	1.000	From Peppercorns
19023541 19B	Spices, other-babyfood	0.015000	1.000	1.000	From Peppercorns
14003910 14	Walnut	0.600000	1.000	0.200	reppercorns
15004010 15	Wheat, grain	0.033000	1.000	0.020	
15004011 15	Wheat, grain-babyfood	0.033000	1.000	0.020	
15004020 15	Wheat, flour	0.008000	1.000	0.020	
15004021 15	Wheat, flour-babyfood	0.008000	1.000	0.020	
15004030 15	Wheat, germ	0.020000	1.000	0.020	
15004040 15	Wheat, bran	0.008000	1.000	0.020	
15004050 15	Wild rice	0.021000	1.000	0.020	
				0.020	

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### Attachment 2: Fluoride Food Fumigation Residue Inputs

U.S. Environmental Protection Agency Ver. 2.00
DEEM-FCID Chronic analysis for FLUORIDE 1994-98 data
Residue file: C:\Documents and Settings\MDOHERTY\My Documents\Chemistry Reviews\DEEM Runs\Sulfuryl Fluoride\F Food Fumigation.R98

Adjust. #2 used Analysis Date 01-05-2006 Residue file dated: 01-05 Reference dose (RfD) = 0.114 mg/kg bw/day Comment:RfD is converted Fluoride MCL and for adult pops only. Residue file dated: 01-05-2006/13:19:46/8

Food Crop Residue Adj.Factors Comment					
EPA Code Grp	Food Name	(ppm)	Auj.Fac	COIS	Commenc
			#1	#2	
	32				
14000030 14	Almond Almond-babyfood Apple, dried	4.700000 4.700000	1.000	0.200	
14000031 14	Annle dried				
11000090 11	Apple, dried-babyfood	1.200000	1.000	0.400	From Figs
12000130 12		1.200000	1.000	0.400	From Figs
95000240 0	Ranana dried	1.200000	1.000 1.000		From Figs
95000241 0	Banana, dried-babyfood	1.200000	1.000	0.400 0.400	From Figs
15000250 15	Barley, pearled barley	6 270000	1.000	0.020	From Figs
15000251 15	Barley, pearled barley-babyfood	6.270000	1.000	0.020	
15000260 15	Barley, flour	32.570000	1.000	0.020	
15000261 15	Barley, flour Barley, flour-babyfood	32.570000	1.000	0.020	
15000270 15	Bariev, bran	35.950000	1.000	0.020	
19010290 19A	Basil, dried leaves	51.180000	1.000 1.000 1.000 1.000	1.000	
19010291 19A	Basil, dried leaves-babyfood	51.180000	1.000	1.000	
06030300 6C	Bean, black, seed	13.160000	1.000	1.000	From Cocoa Beans
06030320 6C	Bean, broad, seed	13.160000	1.000	1.000	From Cocoa Beans
06030340 6C	Bean, cowpea, seed	13.160000	1.000	1.000	From Cocoa Beans
06030350 6C	Bean, great northern, seed	13.160000	1.000	1.000	From Cocoa Beans
06030360 6C	Bean, kidney, seed	13.160000	1.000	1.000	From Cocoa Beans
06030380 6C	Bean, kidney, seed Bean, lima, seed Bean, mung, seed Bean, navy, seed Bean, pink, seed Bean, pinto, seed Bean, pinto, seed Bean, meat, dried Brazil nut Butternut Cashew	13.160000	1.000 1.000 1.000 1.000	1.000	From Cocoa Beans
06030390 6C 06030400 6C	Bean, mung, seed	13.160000	1.000	1.000	From Cocoa Beans
06030400 6C	Bean nink seed	13.160000			From Cocoa Beans
06030410 GC	Bean ninto seed	13.160000 13.160000	1.000	1.000	From Cocoa Beans
21000450 M	Reef meat dried	31.320000	1.000 1.000	1.000	From Cocoa Beans
14000590 14	Brazil nut	8.600000	1.000	1.000 0.200	From Pecan
14000680 14	Butternut	8.600000	1.000	0.200	From Pecan
14000810 14	Cashew	8.600000	1.000	0.200	From Pecan
14000920 14	Chestnut Chickpea, seed	8.600000	1.000	0.200	From Pecan
06030980 6C	Chestnut Chickpea, seed Chickpea, seed-babyfood Chickpea, flour	13.160000	1.000	1.000	From Cocoa Beans
06030981 6C	Chickpea, seed-babyfood Chickpea, flour Chive	13.160000	1.000	1.000	From Cocoa Beans
06030990 6C	Chickpea, flour	13.160000	1.000	1.000	From Cocoa Beans
19011030 19A	Chive	52.200000	1.000	1.000	From Parsley
19021050 19B	Cinnamon	5.960000	1.000	1.000	From Peppercorns
19021051 19B	Cinnamon-babyfood	5.960000	1.000	1.000	From Peppercorns
95001090 O	Cocoa bean, chocolate Cocoa bean, powder	13.160000	1.000	1.000	
95001100 0	Cocoa bean, powder	13.160000	1.000	1.000	
95001110 0	Coconut, meat	35.180000	1.000	1.000	
95001111 0	Cocoa bean, powder Coconut, meat Coconut- meat-babyfood Coconut, dried Coconut, milk Coffee, roasted bean Coffee, instant Coriander, leaves Coriander, leaves-babyfood Coriander, seed Coriander, seed-babyfood	35.180000	1.000	1.000	
95001120 O	Coconut, dried	35.180000	1.000	1.000	From Figs
95001130 O 95001150 O	Coffee reacted bear	35.180000	1.000	1.000	
95001150 O	Coffee instant	7.150000	1.000 1.000 1.000 1.000 1.000	1.000	
19011180 192	Coriander, leaves	52 200000	1.000	1.000	Barrer Daniel
19011181 19A	Coriander, leaves-babyfood	52.200000	1.000	1.000	From Parsley
19021190 19B	Coriander, seed	5 960000	1.000	1.000 1.000	From Parsley
19021191 19B	Coriander, seed Coriander, seed-babyfood	5.960000	1.000	1.000	From Peppercorns From Peppercorns
15001200 15		17.100000	1.000	0.020	
15001201 15	Corn, field, flour-babyfood	17.100000	1.000	0.020	
15001210 15	Corn, field, meal	24.000000	1.000	0.020	
15001211 15	Corn, field, meal-babyfood	24.000000	1.000	0.020	
15001220 15	Corn, field, bran	24.000000	1.000	0.020	
15001230 15	Corn, field, starch	17.100000	1.000	0.020	
15001231 15	Corn, field, starch-babyfood	17.100000	1.000	0.020	
15001240 15	Corn, field, syrup	1.200000	1.000	0.020	
15001241 15	Corn, field, syrup-babyfood	1.200000	1.000	0.020	
15001260 15	Corn, pop	4.000000	1.000	0.020	

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15001270 15	Corn, sweet	4.000000	1.000	0 000	
15001271 15	Corn, sweet-babyfood	4.000000	1.000	0.020	
95001310 O	Cranberry, dried	1.200000	1.000	0.020	Bus Biss
95001310 O	Date	1.200000	1.000	0.400	From Figs
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	130-Uncooked; Dried; Cook	Meth N/C			
	130 oncooked, biled, cook		1 000	0 400	
	210-Cooked; Fresh or N/S;	1.200000	1.000	0.400	
	210 cooked, fiesh of M/S;		1 000	0 000	
	211-Cooked; Fresh or N/S;	0.000000	1.000	0.000	
	212-Cooked; Fresh or N/S;	Baked 0.000000	1.000	0.000	
	212-cooked, Flesh of N/S;		1 000	0 000	
	230-Cooked; Dried; Cook Me	0.000000	1.000	0.000	
	230 COOKER, DITER, COOK ME	*	1 000	0 400	
19021430 19B	Dill seed	1.200000	1.000	0.400	N D
19011440 19A		5.960000	1.000	1.000	From Peppercorns
95001540 O	Fig, dried	52.200000	1.000	1.000	From Parsley
14001550 14	Filbert	1.200000	1.000	0.400	P P
01031660 1CD		8.600000	1.000	0.200	From Pecan
01031660 1CD		15.800000	1.000	1.000	From Garlic Powder
01031601 1CD	Ginger, dried	15.800000	1.000	1.000	From Garlic Powder
95001780 O	Grape, raisin	15.800000	1.000	1.000	From Garlic Powder
06031820 6C	Guar, seed	1.200000	1.000	0.400	
06031820 6C	Guar, seed-babyfood	13.160000	1.000	1.000	From Cocoa Beans
19011840 19A		13.160000	1.000	1.000	From Cocoa Beans
19011840 19A		52.200000	1.000	1.000	From Parsley
	<b>_</b>	52.200000	1.000	1.000	From Parsley
14001850 14 19012020 19A	Hickory nut	8.600000	1.000	0.200	From Pecan
	, 3	52.200000	1.000	1.000	From Parsley
06032030 6C	Lentil, seed	13.160000	1.000	1.000	From Cocoa Beans
95002120 0	Lychee, dried	1.200000	1.000	0.400	From Figs
14002130 14	Macadamia nut	8.600000	1.000	0.200	From Pecan
95002160 0	Mango, dried	1.200000	1.000	0.400	From Figs
19012200 19A		51.180000	1.000	1.000	From Basil
	Marjoram-babyfood	51.180000	1.000	1.000	From Basil
27002220 D	Milk, fat				
	110-Uncooked; Fresh or N/S				
	100 7711	0.000000	1.000	1.000	
	120-Uncooked; Frozen; Cook	·			
	120 Hannahad Budad Gara	0.000000	1.000	1.000	
	130-Uncooked; Dried; Cook	•			
	150 Hannahad Good of G	1.690000	1.000	1.000	
	150-Uncooked; Cured etc; C				
	010 Gaaland Barrel are 12/0	4.480000	1.000	1.000	
	210-Cooked; Fresh or N/S;	•			
	211 Carles & Book to Mr.	0.000000	1.000	1.000	
	211-Cooked; Fresh or N/S;	Baked 0.000000	1.000	1.000	
	212-Cooked; Fresh or N/S;				
	212 Cooked Breek or V/C	0.000000	1.000	1.000	
	213-Cooked; Fresh or N/S;	Fried 0.000000	1.000	1.000	
	214-Cooked; Fresh or N/S;				
	215 Cooked Break as N/C	0.000000	1.000	1.000	
	215-Cooked; Fresh or N/S;				
	220-Cooked; Frozen; Cook M	0.000000	1.000	1.000	
	220-Cooked; Flozen; Cook M				
	221 Cooked Emones Believe	0.000000	1.000	1.000	
	221-Cooked; Frozen; Baked 222-Cooked; Frozen; Boiled	0.000000	1.000	1.000	
	223-Cooked; Frozen; Boiled 223-Cooked; Frozen; Fried		1.000	1.000	
	223-Cooked; Frozen; Fried	0.000000	1.000	1.000	
	224-Cooked; Frozen; Fried/	baked 0.000000	1.000	1.000	
	230-Cooked; Dried; Cook Me				
	231-Cooked; Dried; Baked	1.690000	1.000	1.000	
	231-Cooked; Dried; Baked 232-Cooked; Dried; Boiled	1.690000	1.000	1.000	
	233-Cooked; Dried; Boiled 233-Cooked; Dried; Fried	1.690000	1.000	1.000	
	240-Cooked; Canned; Cook M	1.690000	1.000	1.000	
	240-COOKed; Calified; COOK M		1 000		
	242-Cooked; Canned; Boiled	0.000000	1.000	1.000	
	250-Cooked; Canned; Boiled 250-Cooked; Cured etc; Coo		1.000	1.000	
	250-Cooked; Cared etc; Coo		1 000	1 000	
	253-Cooked; Cured etc; Fri	4.480000	1.000	1.000	
	255-Cooked; Cured etc; Boi	ed 4.480000 led/baked	1.000	1.000	
	dared ccc, bor	4.480000	1.000	1.000	
27012230 D	Milk, nonfat solids	4.400000	1.000	1.000	
	110-Uncooked; Fresh or N/S	: Cook Meth N/S			

	0.000000 120-Uncooked; Frozen; Cook Meth N/S	1.000	1.000
	0.000000	1.000	1.000
	130-Uncooked; Dried; Cook Meth N/S		
	2.360000 150-Uncooked; Cured etc; Cook Meth N/S	1.000	1.000
	4.480000 210-Cooked; Fresh or N/S; Cook Meth N/S	1.000	1.000
	0.000000	1.000	1.000
	211-Cooked; Fresh or N/S; Baked 0.000000 212-Cooked; Fresh or N/S; Boiled	1.000	1.000
	0.000000	1.000	1.000
	213-Cooked; Fresh or N/S; Fried 0.000000 214-Cooked; Fresh or N/S; Fried/baked	1.000	1.000
	0.000000 215-Cooked; Fresh or N/S; Boiled/baked	1.000	1.000
	0.000000 220-Cooked; Frozen; Cook Meth N/S	1.000	1.000
	0.000000	1.000	1.000
	221-Cooked; Frozen; Baked 0.000000	1.000	1.000
	222-Cooked; Frozen; Boiled 0.000000	1.000	1.000
	223-Cooked; Frozen; Fried 0.000000	1.000	1.000
	224-Cooked; Frozen; Fried/baked 0.000000	1.000	1.000
	230-Cooked; Dried; Cook Meth N/S		
	2.360000	1.000	1.000
	231-Cooked; Dried; Baked 2.360000	1.000	1.000
	232-Cooked; Dried; Boiled 2.360000	1.000	1.000
•	233-Cooked; Dried; Fried 2.360000	1.000	1.000
	240-Cooked; Canned; Cook Meth N/S		
	0.000000	1.000	1.000
	242-Cooked; Canned; Boiled 0.000000 245-Cooked; Canned; Boiled/baked	1.000	1.000
	0.000000	1.000	1.000
	250-Cooked; Cured etc; Cook Meth N/S 4.480000	1.000	1.000
	253-Cooked; Cured etc; Fried 4.480000	1.000	1.000
	255-Cooked; Cured etc; Boiled/baked	1.000	1.000
<b>2701</b> 2231 D	4.480000 Milk, nonfat solids-baby food/infant	1.000	1.000
	110-Uncooked; Fresh or N/S; Cook Meth N/S 0.000000	1.000	1.000
	130-Uncooked; Dried; Cook Meth N/S 2.360000	1.000	1.000
	211-Cooked; Fresh or N/S; Baked 0.000000	1.000	1.000
	240-Cooked; Canned; Cook Meth N/S 0.000000	1.000	1.000
27022240 D	Milk, water 110-Uncooked; Fresh or N/S; Cook Meth N/S		
	0.000000	1.000	1.000
	120-Uncooked; Frozen; Cook Meth N/S 0.000000	1 000	1 000
	130-Uncooked; Dried; Cook Meth N/S	1.000	1.000
	2.360000 150-Uncooked; Cured etc; Cook Meth N/S	1.000	1.000
	4.480000 210-Cooked; Fresh or N/S; Cook Meth N/S	1.000	1.000
	0.000000	1.000	1.000
	211-Cooked; Fresh or N/S; Baked 0.000000 212-Cooked; Fresh or N/S; Boiled	1.000	1.000
	0.000000	1.000	1.000
	213-Cooked; Fresh or N/S; Fried 0.000000	1.000	1.000
	214-Cooked; Fresh or N/S; Fried/baked 0.000000	1.000	1.000
	215-Cooked; Fresh or N/S; Boiled/baked 0.000000	1.000	1.000
	220-Cooked; Frozen; Cook Meth N/S	1.000	1.000
	221-Cooked; Frozen; Baked 0.000000	1.000	1.000
	222-Cooked; Frozen; Boiled 0.000000	1.000	1.000
	223-Cooked; Frozen; Fried 0.000000	1.000	1.000
	224-Cooked; Frozen; Fried/baked 0.000000	1.000	1.000
	230-Cooked; Dried; Cook Meth N/S	1.000	1.000
	2.360000	1.000	1.000

PC Code: 0780	de and Fluoride D	ietary Exposure Ass	sessment		DP Code: 317731 Page: 22 of 43
	231-Cooked; Dried; Baked	2 260000	1 000		
	232-Cooked; Dried; Boiled	2.360000 2.360000	1.000	1.000	
	233-Cooked; Dried; Fried	2.360000	1.000 1.000	1.000	
	240-Cooked; Canned; Cook M	leth N/S	1.000	1.000	
		0.000000	1.000	1.000	
	242-Cooked; Canned; Boiled 250-Cooked; Cured etc; Coo	0.000000 k Meth N/S	1.000	1.000	
		4.480000	1.000	1.000	
	253-Cooked; Cured etc; Fri 255-Cooked; Cured etc; Boi	ed 4.480000	1.000	1.000	
		4.480000	1.000	1.000	
27032251 D	Milk, sugar (lactose)-baby f 110-Uncooked; Fresh or N/S	ood/infa ; Cook Meth N/S			
	130-Uncooked; Dried; Cook	0.00000	1.000	1.000	
	210-Cooked; Fresh or N/S;	2.360000	1.000	1.000	
		0.00000	1.000	1.000	
	212-Cooked; Fresh or N/S;				
	230-Cooked; Dried; Cook Me	0.000000 th N/S	1.000	1.000	
	240-Cooked; Canned; Cook M	2.360000 eth N/S	1.000	1.000	
4500000		0.000000	1.000	1.000	
15002260 15	Millet, grain	4.990000	1.000	0.020	From Wheat Grain
15002310 15 15002320 15	Oat, bran Oat, flour	35.950000	1.000	0.020	
15002320 15	Oat, flour-babyfood	32.570000	1.000	0.020	
15002330 15	Oat, groats/rolled oats	32.570000 50.000000	1.000	0.020	
15002331 15	Oat, groats/rolled oats-baby	food 50.000000	1.000 1.000	0.020 0.020	
95002460 O	Papaya, dried	1.200000	1.000	0.400	From Figs
19012490 19A		52.200000	1.000	1.000	riom rigs
19012491 19A		od 52.2000.00	1.000	1.000	
06032560 6C	Pea, dry	13.160000	1.000	1.000	From Cocoa Beans
06032561 6C	Pea, dry-babyfood	13.160000	1.000	1.000	From Cocoa Beans
06032580 6C 12002610 12	Pea, pigeon, seed Peach, dried	13.160000	1.000	1.000	From Cocoa Beans
12002611 12	Peach, dried-babyfood	1.200000	1.000	0.400	From Figs
95002630 O	Peanut	1.200000 11.30000	1.000	0.400	From Figs
95002640 O	Peanut, butter	11.300000	1.000 1.000	1.000	
11002670 11	Pear, dried	1.200000	1.000	0.400	From Figs
14002690 14	Pecan	8.600000	1.000	0.200	riom rigs
19022740 19B		5.960000	1.000	1.000	
19022741 19B	Pepper, black and white-baby	food 5.960000	1.000	1.000	
95002780 0	Pine nut	8.600000	1.000	1.000	From Pecan
95002800 O	Pineapple, dried	1.200000	1.000	0.400	From Figs
14002820 14	Pistachio	8.600000	1.000	0.200	_
95002840 O 12002870 12	Plantain, dried Plum, prune, dried	1.200000	1.000	0.400	From Figs
12002870 12	Plum, prune, dried-babyfood	0.700000	1.000	0.400	
25002900 M	Pork, meat	0.700000	1.000	0.400	
	210-Cooked; Fresh or N/S;	Cook Meth N/S			
		0.00000	1.000	1.000	
	211-Cooked; Fresh or N/S;	Baked 0.000000	1.000	1.000	
	212-Cooked; Fresh or N/S; 1				
	212 Cooled B	0.000000	1.000	1.000	
	213-Cooked; Fresh or N/S; 1 214-Cooked; Fresh or N/S; 1	Fried 0.000000 Fried/baked	1.000	1.000	
		0.00000	1.000	1.000	

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18.080000

215-Cooked; Fresh or N/S; Boiled/baked

220-Cooked; Frozen; Cook Meth N/S

221-Cooked; Frozen; Baked 222-Cooked; Frozen; Boiled 230-Cooked; Dried; Cook Meth N/S

232-Cooked; Dried; Boiled 0 240-Cooked; Canned; Cook Meth N/S

242-Cooked; Canned; Boiled 0.00 250-Cooked; Cured etc; Cook Meth N/S

1.000

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	251-Cooked;	Cured etc; Baked 18.080000	1.000	1.000
	252-Cooked;	Cured etc; Boiled 18.080000	1.000	1.000
	253-Cooked;	Cured etc; Fried 18.080000	1.000	1.000
	255-Cooked;	Cured etc; Boiled/baked		
		18.080000	1.000	1.000
25002910 M	Pork, skin			
	210-Cooked;	Fresh or N/S; Cook Meth N/S		
	211 Casked	0.000000	1.000	1.000
	211-Cooked;	Fresh or N/S; Baked 0.000000	1.000	1.000
	212-Cooked;	Fresh or N/S; Boiled		
	213-Cooked.	0.000000 Fresh or N/S; Fried 0.000000	1.000	1.000
	221-Cooked:	Fresh or N/S; Fried 0.000000 Frozen; Baked 0.000000	1.000 1.000	1.000
	240-Cooked:	Canned; Cook Meth N/S	1.000	1.000
		0.00000	1.000	1.000
	250-Cooked;	Cured etc; Cook Meth N/S	2.000	1.000
		18.080000	1.000	1.000
25002920 M	Pork, meat by	products		
	110-Uncooke	d; Fresh or N/S; Cook Meth N/S		
		0.000000	1.000	1.000
	120-Uncooke	d; Frozen; Cook Meth N/S		
	120 !!!	0.000000	1.000	1.000
	130-Uncooke	d; Dried; Cook Meth N/S		
	210-Cooked.	0.000000	1.000	1.000
	ziv-cookeu;	Fresh or N/S; Cook Meth N/S	1 000	
	211-Cooked:	0.000000 Fresh or N/S; Baked 0.000000	1.000	1.000
	212-Cooked:	Fresh or N/S; Boiled	1.000	1.000
		0.000000	1.000	1.000
	213-Cooked;	Fresh or N/S; Fried 0.000000	1.000	1.000
	214-Cooked;	Fresh or N/S; Fried/baked		1.000
		0.000000	1.000	1.000
	215-Cooked;	Fresh or N/S; Boiled/baked		
		0.000000	1.000	1.000
		Frozen; Baked 0.000000	1.000	1.000
	222-Cooked;	Frozen; Boiled 0.000000	1.000	1.000
	230-Cooked;	Dried; Cook Meth N/S		
	221 Cooked.	0.000000 Dried; Baked 0.000000	1.000	1.000
		_ , , _ , _ , _ ,	1.000	1.000
		Dried; Boiled 0.000000 Dried; Fried 0.000000	1.000	1.000
		Canned; Cook Meth N/S	1.000	1.000
	•	0.000000	1.000	1.000
		Canned; Boiled 0.000000	1.000	1.000
	250-Cooked;	Cured etc; Cook Meth N/S		
		18.080000	1.000	1.000
0500000	252-Cooked;	Cured etc; Boiled 18.080000	1.000	1.000
25002930 M	Pork, fat	a m		
	110-Uncooke	d; Fresh or N/S; Cook Meth N/S		
	210-Cooked.	0.000000 Fresh or N/S; Cook Meth N/S	1.000	1.000
	210 COOKEG,		1 000	
	211-Cooked:	0.000000 Fresh or N/S; Baked 0.000000	1.000	1.000
	212-Cooked;	Fresh or N/S; Boiled	1.000	1.000
	•	0.000000	1.000	1.000
	213-Cooked;	Fresh or N/S; Fried 0.000000	1.000	1.000
	214-Cooked;	Fresh or N/S; Fried/baked		2.000
		0.000000	1.000	1.000
	215-Cooked;	Fresh or N/S; Boiled/baked		
	000 01 1	0.000000	1.000	1.000
	220-Cookea;	Frozen; Cook Meth N/S		
	221 Coolead	0.000000	1.000	1.000
		Frozen; Baked 0.000000	1.000	1.000
	230-Cooked:	Frozen; Boiled 0.000000 Dried; Cook Meth N/S	1.000	1.000
	coonca,	0.000000	1 000	1 000
	232-Cooked:	Dried; Boiled 0.000000	1.000 1.000	1.000
	240-Cooked;	Canned; Cook Meth N/S	2.000	1.000
		0.000000	1.000	1.000
	242-Cooked;	Canned; Boiled 0.000000	1.000	1.000
	250-Cooked;	Cured etc; Cook Meth N/S		
	251 - Cooked	18.080000	1.000	1.000
	ZJI-COOKEG;	Cured etc; Baked 18.080000	1.000	1.000

	252-Cooked; Cured etc; B		1.000	1.000	
	253-Cooked; Cured etc; F	ried 18.080000	1.000	1.000	
	255-Cooked; Cured etc; B	oiled/baked			
		18.080000	1.000	1.000	
15003230 15	Rice, white	5.300000	1.000	0.020	From Rice Grain
15003231 15	Rice, white-babyfood	5.300000	1.000	0.020	From Rice Grain
15003240 15	Rice, brown	5.300000	1.000	0.020	From Rice Grain
15003241 15	Rice, brown-babyfood	5.300000	1.000	0.020	From Rice Grain
15003250 15	Rice, flour	32.570000	1.000	0.020	
15003251 15	Rice, flour-babyfood	32.570000	1.000	0.020	
15003260 15	Rice, bran	25.900000	1.000	0.020	
15003261 15	Rice, bran-babyfood	25.900000	1.000	0.020	
19013340 19A		52.200000	1.000	1.000	From Parsley
15003440 15	Sorghum, grain	4.000000	1.000	0.020	From Corn Grain
19023540 19B	Spices, other	51.180000	1.000	1.000	From Basil
19023541 19B	Spices, other-babyfood	51.180000	1.000	1.000	From Basil
15003810 15	Triticale, flour	32.570000	1.000	0.020	
15003811 15	Triticale, flour-babyfood	32.570000	1.000	0.020	
14003910 14	Walnut	5.600000	1.000	0.200	
15004010 15	Wheat, grain	4.990000	1.000	0.020	
15004011 15	Wheat, grain-babyfood	4.990000	1.000	0.020	
15004020 15	Wheat, flour	32.570000	1.000	0.020	
15004021 15	Wheat, flour-babyfood	32.570000	1.000	0.020	
15004030 15	Wheat, germ	58.000000	1.000	0.020	
15004040 15	Wheat, bran	35.950000	1.000	0.020	
15004050 15	Wild rice	5.300000	1.000	0.020	

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## Attachment 3: Sulfuryl Fluoride Space Fumigation Residue Inputs

U.S. Environmental Protection Agency Ver. 2.00
DEEM-FCID Chronic analysis for SULFURYL FLUORIDE 1994-98 data
Residue file: C:\Documents and Settings\MDOHERTY\My Documents\Chemistry Reviews\DEEM
Runs\Sulfuryl Fluoride\SF Space Fumigation.R98

Adjust. #2 used Analysis Date 01-05-2006 Residue file dated: 01-05-2006/13:16:35/8 Reference dose (RfD) = 0.003 mg/kg bw/day

Food Crop		Residue	Adi.Fa	ctors	Comment
EPA Code Gr	p Food Name	(maga)	,		COMMENCE
	p Food Name	VE E	#1	#2	
18000020 18	Alfalfa, seed Almond Almond-babyfood Almond, oil Almond, oil-babyfood Amaranth, grain Apple, dried Apple, dried-babyfood Apricot, dried Arrowroot, flour Arrowroot, flour-babyfood Banana, dried	0.090000	1.000	0.004 0.004	
14000030 14	Almond	0.030000	1.000	0.004	
14000031 14	Almond-babyfood	0.030000	1.000	0.004	
14000040 14	Almond, oil	6.800000	1.000	0.004	
14000041 14	Almond, oil-babyfood	6.800000	1.000	0.004 0.004 0.004	
95000060 O	Amaranth, grain	0.090000	1.000	0.004 0.004	
11000090 11	Apple, dried	0.037000	1.000	0.004	
11000091 11	Apple, dried-babyfood	0.037000	1.000	0.004	
12000130 12	Apricot, dried	0.037000	1.000	0.004	
01030150 1CD	Arrowroot, flour	0.008000	1.000	0.004	
01030151 1CD	Arrowroot, flour-babyfood	0.008000	1.000	0.004	
95000240 O	Banana, dried	0.037000	1.000	0.004	
95000241 O	Banana, dried-babyfood	0.037000	1.000	0.004	
15000250 15	Barley, pearled barley	0.020000	1.000	0.011	
15000251 15	Barley, pearled barley-babyfood	0.020000	1.000		
15000260 15	Barley, flour	0.020000	1.000	0.011 0.011	
15000261 15	Barley, flour-babyfood	0.020000	1.000	0.011	
15000270 15	Barley, bran	0.020000	1.000	0.011	
19010280 19A	Basil, fresh leaves	0.016200	1.000	0.011	
19010281 19A	Basil, fresh leaves-babyfood	0.016200	1.000		
19010290 19A	Basil, dried leaves	0.010000	1.000	0.004 0.004	
19010291 19A	Basil, dried leaves-babyfood	0.010000	1.000	0 004	
06030300 6C	Bean, black, seed	0.117000	1.000	0.004	
06030320 6C	Bean, broad, seed	0.117000	1.000	0.004	
06030340 6C	Bean, cowpea, seed	0.117000	1.000	0.004	
06030350 6C	Bean, great northern, seed	0.117000	1.000	0.004	
06030360 6C	Arrowroot, flour-babyfood Banana, dried Banana, dried-babyfood Barley, pearled barley Barley, pearled barley-babyfood Barley, flour Barley, flour-babyfood Barley, bran Basil, fresh leaves Basil, fresh leaves-babyfood Basil, dried leaves Basil, dried leaves Basil, dried leaves Basil, dried leaves-babyfood Bean, black, seed Bean, broad, seed Bean, cowpea, seed Bean, great northern, seed Bean, kidney, seed Bean, lima, seed Bean, navy, seed Bean, pink, seed Bean, pink, seed Bean, pinto, seed Beet, sugar, molasses Beet, sugar, molasses Beet, sugar, molasses-babyfood Brazil nut Buckwheat, flour	0.117000	1.000	0.004	
06030380 6C	Bean, lima, seed	0.117000	1.000	0.004 0.004	
06030390 6C	Bean, mung, seed	0.117000	1.000	0.004	
06030400 6C	Bean, navy, seed	0.117000	1.000	0.004	
06030410 6C	Bean, pink, seed	0.117000	1.000	0.004	
06030420 6C	Bean, pinto, seed	0.117000	1.000	0.004	
21000450 M	Beef, meat, dried	0.005000	1.000	0.004	
01010530 1A	Beet, sugar, molasses	0.002000	1.000	0.004	
01010531 1A	Beet, sugar, molasses-babyfood	0.002000	1.000	0.004	
14000590 14	Brazil nut	2.400000	1.000	0.004	
15000660 15	Buckwheat, flour	0.008000	1.000	0.011	
14000000 14	Beet, sugar, molasses-babyfood Brazil nut Buckwheat, flour Butternut Cashew Chestnut Chickpea, seed Chickpea, seed-babyfood Chickpea, flour Chicory, roots Chive Chrysanthemum, garland Cinnamon Cinnamon-babyfood	2.400000	1.000	0.004	
14000810 14	Cashew	2.400000	1.000	0.004	
14000920 14	Chestnut	2.400000	1.000	0.004	
06030980 6C	Chickpea, seed	0.117000	1.000	0.004	
06030981 6C	Chickpea, seed-babyfood	0.117000	1.000	0.004	
06030990 6C	Chickpea, flour	0.117000	1.000	0.004	
01011000 1AB	Chicory, roots	0.816000	1.000	0.004 0.004	
19011030 19A	Chive	0.162000	1.000	0.004	
04011040 4A	Chrysanthemum, garland	0.162000	1.000	0 004	
19021050 19B	Cinnamon	0.015000	1.000	0.004	
19021051 19B	Cinnamon-babyfood	0.015000	1.000	0.004	
95001090 0	Cocoa bean, chocolate	0.117000	1.000	0.004	
95001100 0	Cocoa bean, powder	0.117000	1.000	0.004	
95001110 0	Coconut, meat	0.900000	1.000	0.004	
95001111 0	Coconut meat-babyfood	0.900000	1.000	0.004	
95001120 0	Coconut, dried	0.900000	1.000	0.004	
95001130 0	Coconut, milk	0.900000	1.000	0.004	
95001140 0	Coconut, oil	6.800000	1.000	0.004	
95001141 O 95001150 O	Coconut, oil-babyfood Coffee, roasted bean	6.800000	1.000	0.004	
22001130 0	Corree, roasted bean	0.011000	1.000	0.004	

95001160 O	Coffee, instant	0 916000	1 000	0 004
		0.816000	1.000	0.004
19011180 19A	Coriander, leaves	0.162000	1.000	0.004
19011181 19A	Coriander, leaves-babyfood	0.162000	1.000	0.004
19021190 19B	Coriander, seed	0.015000	1.000	0.004
19021191 19B	Coriander, seed-babyfood	0.015000	1.000	0.004
15001200 15	Corn, field, flour			
	Comp. field flows belows	0.020000	1.000	0.011
15001201 15	Corn, field, flour-babyfood	0.020000	1.000	0.011
15001210 15	Corn, field, meal	0.020000	1.000	0.011
15001211 15	Corn, field, meal-babyfood	0.020000	1.000	0.011
15001220 15	Corn, field, bran			
		0.020000	1.000	0.011
15001230 15	Corn, field, starch	0.020000	1.000	0.011
15001231 15	Corn, field, starch-babyfood	0.020000	1.000	0.011
15001240 15	Corn, field, syrup	0.020000	1.000	0.011
15001241 15	Corn, field, syrup-babyfood			
		0.020000	1.000	0.011
15001250 15	Corn, field, oil	6.800000	1.000	0.011
15001251 15	Corn, field, oil-babyfood	6.800000	1.000	0.011
15001260 15	Corn, pop	0.023000	1.000	0.011
95001280 O	Cottonseed, oil			
		6.800000	1.000	0.004
95001281 0	Cottonseed, oil-babyfood	6.800000	1.000	0.004
95001310 O	Cranberry, dried	0.037000	1.000	0.004
13021370 13B	Currant, dried	0.037000	1.000	0.004
95001410 O	Date			
		0.037000	1.000	0.004
19021430 19B	Dill, seed	0.015000	1.000	0.004
19011440 19A	Dillweed	0.162000	1.000	0.004
70001450 P	Egg, whole			
	110-Uncooked; Fresh or N/S;	Cook Moth N/C		
	110-bilcooked; Flesh of N/S;			
		0.00000	1.000	0.004
	120-Uncooked; Frozen; Cook M	Meth N/S		
		0.000000	1.000	0.004
	210-Cooked; Fresh or N/S; Co		1.000	0.004
	210-COOKER; FIESH OF N/S; CC	•		
		0.000000	1.000	0.004
	211-Cooked; Fresh or N/S; Ba	ked 0.000000	1.000	0.004
	212-Cooked; Fresh or N/S; Bo	oiled		
	,,,		1 000	0 004
	212 Garden Brook - 12/6 B	0.000000	1.000	0.004
	213-Cooked; Fresh or N/S; Fr	ried 0.000000	1.000	0.004
	214-Cooked; Fresh or N/S; Fr	ried/baked		
		0.00000	1.000	0.004
	215-Cooked; Fresh or N/S; Bo			
			1 000	
	001 011 1 1	0.00000	1.000	0.004
	221-Cooked; Frozen; Baked	0.00000	1.000	0.004
	223-Cooked; Frozen; Fried	0.000000	1.000	0.004
	224-Cooked; Frozen; Fried/ba		1.000	0.004
	, , , , , , , , , , , , , , , , , , , ,		1.000	0.004
	220 Cooled Dui-d C1 Make	27.40		
	230-Cooked; Dried; Cook Meth	1 N/S		
		0.444000	1.000	0.004
	232-Cooked; Dried; Boiled	0.444000	1.000	0.004
	233-Cooked; Dried; Fried	0.444000	1.000	0.004
	The state of the s		1.000	0.004
	240-Cooked; Canned; Cook Met	•		
		0.000000	1.000	0.004
	242-Cooked; Canned; Boiled	0.00000	1.000	0.004
	252-Cooked; Cured etc; Boile	ed 0.000000	1.000	0.004
	253-Cooked; Cured etc; Fried	0.000000		
70001460 P		. 0.00000	1.000	0.004
70001480 P	Egg, white			
	110-Uncooked; Fresh or N/S;	Cook Meth N/S		
		0.444000	1.000	0.004
	120-Uncooked; Frozen; Cook M			
	=== ===================================		1 000	
	130 Harris D. 1 1 0 1 H	0.000000	1.000	0.004
	130-Uncooked; Dried; Cook Me	th N/S		
		0.444000	1.000	0.004
	210-Cooked; Fresh or N/S; Co	ook Meth N/S		
	,,,,,,,,		1 000	0 001
	211-Cooked, Frank 11/2 -	0.000000	1.000	0.004
	211-Cooked; Fresh or N/S; Ba	iked 0.000000	1.000	0.004
	212-Cooked; Fresh or N/S; Bo	oiled		
		0.000000	1.000	0.004
	213-Cooked; Fresh or N/S; Fr		1.000	
	214-Cooked; Fresh or N/S; Fr	-ind/hal	1.000	0.004
	are cooked; riesh of N/S; FI			
		0.000000	1.000	0.004
	221-Cooked; Frozen; Baked	0.00000	1.000	0.004
	223-Cooked; Frozen; Fried	0.000000	1.000	0.004
	230-Cooked; Dried; Cook Meth	N/S		
	,, nee.		1 000	0 001
	222-Cooked, Dwind Daily	0.444000	1.000	0.004
	232-Cooked; Dried; Boiled	0.444000	1.000	0.004
	233-Cooked; Dried; Fried	0.444000	1.000	0.004
	200 coolica, prica, rried			

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	240-Cooked; Canned; Cook Meth N	's .		
		0.000000	1.000	0.004
	242-Cooked; Canned; Boiled	0.000000	1.000	0.004
	250-Cooked; Cured etc; Cook Meth		1 000	0 004
70001461 P	Egg, white (solids)-babyfood	0.000000 0.444000	1.000 1.000	0.004
95001540 O	Fig, dried	0.037000	1.000	0.004
14001550 14	Filbert	2.400000	1.000	0.004 0.004
14001560 14	Filbert, oil	6.800000	1.000	0.004
20001630 20	Flaxseed, oil	6.800000	1.000	0.004
03001650 3	Garlic, dried	0.002000	1.000	0.004
03001651 3	Garlic, dried-babyfood	0.002000	1.000	0.004
01031670 1CD	Ginger, dried	0.002000	1.000	0.004
01011680 1AB	Ginseng, dried	0.002000	1.000	0.004
95001780 O	Grape, raisin	0.001000	1.000	0.004
06031820 6C	Guar, seed	0.117000	1.000	0.004
06031821 6C	Guar, seed-babyfood	0.117000	1.000	0.004
19011840 19A	Herbs, other	0.162000	1.000	0.004
19011841 19A	Herbs, other-babyfood	0.162000	1.000	0.004
14001850 14	Hickory nut	2.400000	1.000	0.004
19012020 19A	Lemongrass	0.162000	1.000	0.004
06032030 6C	Lentil, seed	0.117000	1.000	0.004
95002120 0	Lychee, dried	0.037000	1.000	0.004
14002130 14	Macadamia nut	2.400000	1.000	0.004
95002160 O	Mango, dried	0.037000	1.000	0.004
95002180 0	Maple, sugar	0.002000	1.000	0.004
95002190 O	Maple syrup	0.002000	1.000	0.004
19012200 19A	Marjoram	0.010000	1.000	0.004
19012201 19A	Marjoram-babyfood	0.010000	1.000	0.004
27002220 D	Milk, fat	. M-+1- 37/0		
	110-Uncooked; Fresh or N/S; Cook		1 000	
	120-Uncooked; Frozen; Cook Meth	0.000000	1.000	0.004
	120 oncooked; Flozen; Cook Meth	0.000000	1.000	0.004
	130-Uncooked; Dried; Cook Meth N		1.000	0.004
		1.453000	1.000	0.004
	150-Uncooked; Cured etc; Cook Me		2.000	0.004
		0.408000	1.000	0.004
	210-Cooked; Fresh or N/S; Cook M			
		0.000000	1.000	0.004
	211-Cooked; Fresh or N/S; Baked	0.000000	1.000	0.004
	212-Cooked; Fresh or N/S; Boiled	l		
		0.000000	1.000	0.004
	213-Cooked; Fresh or N/S; Fried	0.000000	1.000	0.004
	214-Cooked; Fresh or N/S; Fried/	baked		
		0.000000	1.000	0.004
	215-Cooked; Fresh or N/S; Boiled	•		
	200 Garland Barrers G 1 11 11	0.000000	1.000	0.004
	220-Cooked; Frozen; Cook Meth N/			
	221 Cooked Emones Baland	0.000000	1.000	0.004
	221-Cooked; Frozen; Baked 222-Cooked; Frozen; Boiled	0.000000	1.000	0.004
	223-Cooked; Frozen; Fried	0.000000	1.000	0.004
	224-Cooked; Frozen; Fried/baked	0.000000 0.000000	1.000	0.004
	224 COOKER, FIGZER, FITER/DAKER	0.00000	1.000	0.004
	230-Cooked; Dried; Cook Meth N/S	}		
	,	1.453000	1.000	0.004
	231-Cooked; Dried; Baked	1.453000	1.000	0.004
	232-Cooked; Dried; Boiled	1.453000	1.000	0.004
	233-Cooked; Dried; Fried	1.453000	1.000	0.004
	240-Cooked; Canned; Cook Meth N/	S		
		0.000000	1.000	0.004
	242-Cooked; Canned; Boiled	0.000000	1.000	0.004
	250-Cooked; Cured etc; Cook Meth			
		0.408000	1.000	0.004
	253-Cooked; Cured etc; Fried	0.408000	1.000	0.004
	255-Cooked; Cured etc; Boiled/ba			_
27012230 D	Milk, nonfat solids	0.408000	1.000	0.004
2.0122JU D	110-Uncooked; Fresh or N/S; Cook	Meth M/C		
	oncooned, Ilean of M/S; Cook	0.000000	1 000	0 004
	120-Uncooked; Frozen; Cook Meth	N/S	1.000	0.004
	, and any odd recti	0.000000	1.000	0.004
			• • •	3.004

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	120 Ungooked, Deied Gook Wash w/s		
	130-Uncooked; Dried; Cook Meth N/S	1 000	0.004
	0.002000 150-Uncooked; Cured etc; Cook Meth N/S	1.000	0.004
	0.408000 210-Cooked; Fresh or N/S; Cook Meth N/S	1.000	0.004
	0.000000 211-Cooked; Fresh or N/S; Baked 0.000000	1.000	0.004
	212-Cooked; Fresh or N/S; Boiled	1.000	0.004
	0.000000 213-Cooked; Fresh or N/S; Fried 0.000000	1.000 1.000	0.004
	214-Cooked; Fresh or N/S; Fried/baked	1.000	0.004
	0.000000 215-Cooked; Fresh or N/S; Boiled/baked	1.000	0.004
	0.000000 220-Cooked; Frozen; Cook Meth N/S	1.000	0.004
	0.000000	1.000	0.004
	221-Cooked; Frozen; Baked 0.000000	1.000	0.004
	222-Cooked; Frozen; Boiled 0.000000	1.000	0.004
	223-Cooked; Frozen; Fried 0.000000	1.000	0.004
	224-Cooked; Frozen; Fried/baked 0.000000	1.000	0.004
	230-Cooked; Dried; Cook Meth N/S		
	0.002000	1.000	0.004
	231-Cooked; Dried; Baked 0.002000	1.000	0.004
	232-Cooked; Dried; Boiled 0.002000	1.000	0.004
	233-Cooked; Dried; Fried 0.002000 240-Cooked; Canned; Cook Meth N/S	1.000	0.004
	0.000000	1 000	0.004
	242-Cooked; Canned; Boiled 0.000000	1.000	0.004
	245-Cooked; Canned; Boiled/baked	1.000	0.004
	0.000000 250-Cooked; Cured etc; Cook Meth N/S	1.000	0.004
	0.408000	1.000	0.004
	253-Cooked; Cured etc; Fried 0.408000 255-Cooked; Cured etc; Boiled/baked	1.000	0.004
27012231 D	0.408000 Milk, nonfat solids-baby food/infant	1.000	0.004
	110-Uncooked; Fresh or N/S; Cook Meth N/S		
	0.000000 130-Uncooked; Dried; Cook Meth N/S	1.000	0.004
	0.002000	1.000	0.004
	211-Cooked; Fresh or N/S; Baked 0.000000 240-Cooked; Canned; Cook Meth N/S	1.000	0.004
	0.000000	1.000	0.004
27022240 D	Milk, water 110-Uncooked; Fresh or N/S; Cook Meth N/S		
	0.000000 120-Uncooked; Frozen; Cook Meth N/S	1.000	0.004
	0.000000	1.000	0.004
	130-Uncooked; Dried; Cook Meth N/S		0.001
	0.002000 150-Uncooked; Cured etc; Cook Meth N/S	1.000	0.004
	0.408000 210-Cooked; Fresh or N/S; Cook Meth N/S	1.000	0.004
	0.000000	1.000	0.004
	211-Cooked; Fresh or N/S; Baked 0.000000 212-Cooked; Fresh or N/S; Boiled	1.000	0.004
	0.000000	1.000	0.004
	213-Cooked; Fresh or N/S; Fried 0.000000 214-Cooked; Fresh or N/S; Fried/baked	1.000	0.004
	0.000000 215-Cooked; Fresh or N/S; Boiled/baked	1.000	0.004
	0.000000 220-Cooked; Frozen; Cook Meth N/S	1.000	0.004
	0.000000	1.000	0.004
	221-Cooked; Frozen; Baked 0.000000	1.000	0.004
	222-Cooked; Frozen; Boiled 0.000000	1.000	0.004
	223-Cooked; Frozen; Fried 0.000000	1.000	0.004
	224-Cooked; Frozen; Fried/baked 0.000000 230-Cooked; Dried; Cook Meth N/S	1.000	0.004
	230-Cooked; Dried; Cook Meth N/S 0.002000	1.000	0.004
	231-Cooked, Dried, Baland		_
	231-Cooked; Dried; Baked 0.002000 232-Cooked; Dried; Boiled 0.002000	1.000	0.004 0.004

	233-Cooked; Dried; Fried	0.002000	1 000	0.004
	240-Cooked; Canned; Cook Meth N	1/S	1.000	0.004
	, , , , , , , , , , , , , , , , , , , ,	0.000000	1.000	0.004
	242-Cooked; Canned; Boiled	0.000000	1.000	0.004
	250-Cooked; Cured etc; Cook Met	h N/S		
	050 5 1 1 5 1 1 1	0.408000	1.000	0.004
	253-Cooked; Cured etc; Fried	0.408000	1.000	0.004
	255-Cooked; Cured etc; Boiled/h		1 000	
27032251 D	Milk, sugar (lactose)-baby food/i	0.408000	1.000	0.004
	110-Uncooked; Fresh or N/S; Coo	nk Meth N/S		
	, , , , , , , , , , , , , , , , , , , ,	0.000000	1.000	0.004
	130-Uncooked; Dried; Cook Meth	N/S		
		0.002000	1.000	0.004
	210-Cooked; Fresh or N/S; Cook			
	212-Cooked; Fresh or N/S; Boile	0.000000	1.000	0.004
	212-COOKed; Flesh Of N/S; Bolle	0.000000	1 000	0 004
	230-Cooked; Dried; Cook Meth N/	'S	1.000	0.004
	mar areas, areas, acon need hy	0.002000	1.000	0.004
	240-Cooked; Canned; Cook Meth N	/S	2.000	0.004
		0.000000	1.000	0.004
15002260 15	Millet, grain	0.033000	1.000	0.011
15002310 15	Oat, bran	0.008000	1.000	0.011
15002320 15	Oat, flour	0.008000	1.000	0.011
15002321 15	Oat, flour-babyfood	0.008000	1.000	0.011
15002330 15	Oat, groats/rolled oats	0.008000	1.000	0.011
15002331 15	Oat, groats/rolled oats-babyfood	0.008000	1.000	0.011
95002360 O	Olive, oil	6.800000	1.000	0.004
03002380 3	Onion, dry bulb, dried	0.002000	1.000	0.004
03002381 3	Onion, dry bulb, dried-babyfood	0.002000	1.000	0.004
95002440 O	Palm, oil	6.800000	1.000	0.004
95002441 O	Palm, oil-babyfood	6.800000	1.000	0.004
95002460 O	Papaya, dried	0.037000	1.000	0.004
19012490 19A	Parsley, dried leaves	0.162000	1.000	0.004
19012491 19A	Parsley, dried leaves-babyfood	0.162000	1.000	0.004
06032560 6C	Pea, dry	0.117000	1.000	0.004
06032561 6C	Pea, dry-babyfood	0.117000	1.000	0.004
06032580 6C	Pea, pigeon, seed	0.117000	1.000	0.004
12002610 12	Peach, dried	0.037000	1.000	0.004
12002611 12	Peach, dried-babyfood	0.037000	1.000	0.004
95002630 O	Peanut	0.145000	1.000	0.004
95002640 O	Peanut, butter	0.145000	1.000	0.004
95002650 O	Peanut, oil	6.800000	1.000	0.004
11002670 11	Pear, dried	0.037000	1.000	0.004
14002690 14	Pecan	2.400000	1.000	0.004
08002710 8	Pepper, bell, dried	0.247000	1.000	0.004
08002711 8	Pepper, bell, dried-babyfood	0.247000	1.000	0.004
08002730 8	Pepper, nonbell, dried	0.247000	1.000	0.004
19022740 19B	Pepper, black and white	0.015000	1.000	0.004
19022741 19B	Pepper, black and white-babyfood	0.015000	1.000	0.004
95002760 O	Peppermint, oil	6.800000	1.000	0.004
95002780 O	Pine nut	2.400000	1.000	0.004
95002800 O	Pineapple, dried	0.037000	1.000	0.004
14002820 14	Pistachio	2.400000	1.000	0.004
95002840 O	Plantain, dried	0.037000	1.000	0.004
12002870 12	Plum, prune, dried	0.001000	1.000	0.004
12002871 12	Plum, prune, dried-babyfood	0.001000	1.000	0.004
25002900 M	Pork, meat			
	210-Cooked; Fresh or N/S; Cook			
	211 Cooked Toronto - 17/2 - 1	0.000000	1.000	1.000
	211-Cooked; Fresh or N/S; Baked	0.000000	1.000	1.000
	212-Cooked; Fresh or N/S; Boile			
	213-Cooked; Fresh or N/S; Fried	0.000000	1.000	1.000
	214-Cooked; Fresh or N/S; Fried	0.000000	1.000	1.000
	111 COORCG, FIESH OF N/S; FILED,		1 000	7 000
	215-Cooked; Fresh or N/S; Boiled	0.000000 d/baked	1.000	1.000
	, 32 M/D/ BOTTE	0.000000	1.000	1.000
	220-Cooked; Frozen; Cook Meth N	/s	1.000	1.000
		0.000000	1.000	1.000
	221-Cooked; Frozen; Baked	0.000000	1.000	1.000
	222-Cooked; Frozen; Boiled	0.000000	1.000	1.000

	230-Cooked; Dried; Cook Meth N/	'c		
	The secondary billed, cook Meen Ny	0.000000	1.000	1.000
	232-Cooked; Dried; Boiled	0.000000	1.000	1.000
	240-Cooked; Canned; Cook Meth N	0.000000	1.000	1.000
	242-Cooked; Canned; Boiled	0.000000	1.000	1.000
	250-Cooked; Cured etc; Cook Met	•	1 000	
	251-Cooked; Cured etc; Baked	0.002000 0.002000	1.000 1.000	0.004 0.004
	252-Cooked; Cured etc; Boiled	0.002000	1.000	0.004
	253-Cooked; Cured etc; Fried	0.002000	1.000	0.004
	255-Cooked; Cured etc; Boiled/b	0.002000	1.000	0.004
25002901 M	Pork, meat-babyfood	0.002000	1.000	0.004
25002930 M	Pork, fat	1- 11-11-11/0		
	110-Uncooked; Fresh or N/S; Coo	0.000000	1.000	1.000
	210-Cooked; Fresh or N/S; Cook	Meth N/S	1.000	1.000
	011 Garlanda Barrala - 1975 - 1986	0.000000	1.000	1.000
	211-Cooked; Fresh or N/S; Baked 212-Cooked; Fresh or N/S; Boile	0.000000 a	1.000	1.000
	111 coonca, fiebn of N/S, Boile	0.000000	1.000	1.000
	213-Cooked; Fresh or N/S; Fried	0.000000	1.000	1.000
	214-Cooked; Fresh or N/S; Fried		1 000	
	215-Cooked; Fresh or N/S; Boile	0.000000 d/baked	1.000	1.000
		0.000000	1.000	1.000
	220-Cooked; Frozen; Cook Meth N	•		
	221-Cooked; Frozen; Baked	0.000000	1.000 1.000	1.000
	222-Cooked; Frozen; Boiled	0.000000	1.000	1.000
	230-Cooked; Dried; Cook Meth N/			
	232-Cooked; Dried; Boiled	0.000000 0.000000	1.000 1.000	1.000
	240-Cooked; Canned; Cook Meth N	/s	1.000	1.000
	242 Cooked Commed Ded 1 4	0.000000	1.000	1.000
	242-Cooked; Canned; Boiled 250-Cooked; Cured etc; Cook Met	0.000000 h พ/ร	1.000	1.000
		0.002000	1.000	0.004
	251-Cooked; Cured etc; Baked	0.002000	1.000	0.004
	252-Cooked; Cured etc; Boiled 253-Cooked; Cured etc; Fried	0.002000 0.002000	1.000 1.000	0.004
	255-Cooked; Cured etc; Boiled/b	aked	1.000	0.004
01000000 10	Bakaka akit	0.002000	1.000	0.004
01032960 1C 01032970 1C	Potato, chips Potato, dry (granules/ flakes)	0.138000	1.000	0.004
01032970 1C	Potato, dry (granules/ flakes)-b	0.002000 0.002000	1.000	0.004
01032980 1C	Potato, flour	0.002000	1.000 1.000	0.004
01032981 1C	Potato, flour-babyfood	0.008000	1.000	0.004 0.004
95003060 O	Psyllium, seed	0.247000	1.000	0.004
09023090 9B	Pumpkin, seed	0.030000	1.000	0.004
95003110 0	Quinoa, grain	0.090000	1.000	0.004
20003190 20	Rapeseed, oil	6.800000	1.000	0.004
20003191 20	Rapeseed, oil-babyfood	6.800000	1.000	0.004
15003230 15	Rice, white	0.021000	1.000	0.011
15003231 15	Rice, white-babyfood	0.021000	1.000	0.011
15003240 15	Rice, brown	0.021000	1.000	0.011
15003241 15	Rice, brown-babyfood	0.021000	1.000	0.011
15003250 15	Rice, flour	0.021000	1.000	0.011
15003251 15	Rice, flour-babyfood	0.021000	1.000	0.011
15003260 15 15003261 15	Rice, bran Rice, bran-babyfood	0.021000	1.000	0.011
15003201 15	Rye, flour	0.021000	1.000	0.011
20003300 20	Safflower, oil	0.008000 6.800000	1.000	0.011
20003301 20	Safflower, oil-babyfood	6.800000	1.000 1.000	0.004
19013340 19A	Savory	0.162000	1.000	0.004
95003360 O	Sesame, seed	0.247000	1.000	0.004
95003361 0	Sesame, seed-babyfood	0.247000	1.000	0.004
95003370 O	Sesame, oil	6.800000	1.000	0.004
95003371 0	Sesame, oil-babyfood	6.800000	1.000	0.004
15003440 15 15003450 15	Sorghum, grain	0.023000	1.000	0.011
06003480 6	Sorghum, syrup Soybean, flour	0.020000	1.000	0.011
		0.020000	1.000	0.004

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06003481 6	Soybean, flour-babyfood	0.020000	1.000	0.004
06003490 6	Soybean, soy milk	1.453000	1.000	0.004
06003491 6	Soybean, soy milk-babyfood or in	1.453000	1.000	0.004
06003500 6	Soybean, oil	6.800000	1.000	0.004
06003501 6	Soybean, oil-babyfood	6.800000	1.000	0.004
95003530 O	Spearmint, oil	6.800000	1.000	0.004
19023540 19B	Spices, other	0.015000	1.000	0.004
19023541 19B	Spices, other-babyfood	0.015000	1.000	0.004
95003620 O	Sugarcane, sugar	0.002000	1.000	0.004
95003621 0	Sugarcane, sugar-babyfood	0.002000	1.000	0.004
95003630 O	Sugarcane, molasses	0.002000	1.000	0.004
95003631 0	Sugarcane, molasses-babyfood	0.002000	1.000	0.004
20003640 20	Sunflower, seed	0.247000	1.000	0.004
20003650 20	Sunflower, oil	6.800000	1.000	0.004
20003651 20	Sunflower, oil-babyfood	6.800000	1.000	0.004
95003720 O	Tea, dried	0.010000	1.000	0.004
95003730 O	Tea, instant	0.010000	1.000	0.004
08003780 8	Tomato, dried	0.037000	1.000	0.004
08003781 8	Tomato, dried-babyfood	0.037000	1.000	0.004
15003810 15	Triticale, flour	0.008000	1.000	0.011
15003811 15	Triticale, flour-babyfood	0.008000	1.000	0.011
01033870 1CD	Turmeric	0.247000	1.000	0.004
14003910 14	Walnut	0.600000	1.000	0.004
15004010 15	Wheat, grain	0.033000	1.000	0.011
15004011 15	Wheat, grain-babyfood	0.033000	1.000	0.011
15004020 15	Wheat, flour	0.008000	1.000	0.011
15004021 15	Wheat, flour-babyfood	0.008000	1.000	0.011
15004030 15	Wheat, germ	0.020000	1.000	0.011
15004040 15	Wheat, bran	0.008000	1.000	0.011
15004050 15	Wild rice	0.021000	1.000	0.011

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### Attachment 4: Fluoride Space Fumigation Residue Inputs

U.S. Environmental Protection Agency Ver. 2.00 DEEM-FCID Chronic analysis for FLUORIDE 1994-98 data Residue file: C:\Documents and Settings\MDOHERTY\My Documents\Chemistry Reviews\DEEM Runs\Sulfuryl Fluoride\F Space Fumigation.R98

Adjust. #2 used Analysis Date 01-05-2006 Residue file dated: 01-05-2006/13:18:31/8

Reference dose (RfD) = 0.114 mg/kg bw/day
Comment:RfD is converted Fluoride MCL and is valid for adult pops. only -----Residue Adj. Factors Comment EPA Code Grp Food Name (mgg) 18000020 18 Alfalfa, seed 14000030 14 Almond 14000031 14 Almond-babyfood 4.000000 1.000 4.700000 1.000 0.004 0.004 Almond-babyfood 14000031 14 4.700000 1.000 0.004 Almond, oil
Almond, oil-babyfood 14000040 14 14000041 14 1.200000 1,000 0.004 1.200000 1.000 0.004 Amaranth, grain 95000060 O 11000090 11 4.000000 1.000 0.004 Apple, dried 1.200000 1.000 0.004 Apple, dried-babyfood 11000091 11 1.000 0.004 Apricot, dried Arrowroot, flour Arrowroot, flour-babyfood 12000130 12 1.200000 1.000 0.004 01030150 1CD 4.990000 4.990000 1.200000 1.000 0.004 Arrowroot, flour-babyfood
Banana, dried
Banana, dried-babyfood
Barley, pearled barley
Barley, pearled barley-babyfood
Barley, pearled barley-babyfood
Barley, flour
Barley, flour
Barley, flour-babyfood
Barley, bran
Basil, fresh leaves
Basil, fresh leaves-babyfood
Basil, dried leaves-babyfood 01030151 1CD 1.000 0.004 95000240 O 1.000 0.004 95000241 0 1.000 0.004 15000250 15 1.000 0.011 15000251 15 1.000 0.011 15000260 15 1.000 0.011 15000261 15 1.000 0.011 15000270 15 1.000 0.011 19010280 19A 1.000 0.004 19010281 19A 1.000 0.004 19010290 19A 1.000 0.004 19010291 19A 1.000 0.004 06030300 6C 1.000 0.004 06030320 6C 1.000 0.004 Bean, cowpea, seed Bean, great northern, seed 06030340 6C 13.160000 1.000 0.004 06030350 6C 13.160000 1.000 0.004 06030360 6C Bean, kidney, seed 13.160000 1.000 0.004 Bean, lima, seed Bean, mung, seed 06030380 6C 13.160000 1.000 0.004 06030390 6C 13.160000 1.000 0.004 06030400 6C Bean, navy, seed Bean, pink, seed 13.160000 1.000 0.004 06030410 6C 13.160000 1.000 0.004 Bean, pinto, seed Beef, meat, dried 06030420 6C 13.160000 1.000 0.004 21000450 M 31.320000 1.000 0.004 01010530 1A Beet, sugar, molasses Beet, sugar, molasses-babyfood Brazil nut 0.770000 1.000 0.004 01010531 1A 0.770000 1.000 0.004 14000590 14 8.600000 1.000 0.004 15000660 15 Buckwheat, flour 32.570000 1.000 0.011 14000680 14 Butternut 8.600000 1,000 0.004 14000810 14 Cashew 8.600000 1.000 0.004 14000920 14 Chestnut 8.600000 1.000 0.004 06030980 6C Chickpea, seed 13.160000 1.000 0.004 Chickpea, seed-babyfood Chickpea, flour 06030981 6C 13.160000 1.000 06030990 6C 13.160000 10.790000 1.000 01011000 1AB Chicory, roots 1.000 19011030 19A Chive 52.200000 1.000 Chrysanthemum, garland 04011040 4A 52.200000 1.000 19021050 19B 5.960000 Cinnamon 1.000 19021051 19B Cinnamon-babyfood 5.960000 1.000 95001090 O Cocoa bean, chocolate 13.160000 1.000 95001100 O Cocoa bean, powder 13.160000 1.000 95001110 0 Coconut, meat 35.180000 1.000 95001111 0 Coconut - meat-babyfood Coconut, dried 35.180000 1.000 0.004 95001120 O 35,180000 1.000 95001130 O Coconut, milk 35.180000 1.000 0.004 95001140 O Coconut, oil 1.200000 1.200000 1.000 95001141 0 Coconut, oil-babyfood

1.000

0.004

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95001150 O	Coffee reacted bear	7 150000		
95001160 0	Coffee, roasted bean	7.150000	1.000	0.004
	Coffee, instant	10.790000	1.000	0.004
19011180 19A		52.200000	1.000	0.004
19011181 19A		52.200000	1.000	0.004
19021190 19B		5.960000	1.000	0.004
19021191 19B	,	5.960000	1.000	0.004
15001200 15	Corn, field, flour	17.100000	1.000	0.011
15001201 15	Corn, field, flour-babyfood	17.100000	1.000	0.011
15001210 15	Corn, field, meal	24.000000	1.000	0.011
15001211 15	Corn, field, meal-babyfood	24.000000	1.000	0.011
15001220 15	Corn, field, bran	24.000000	1.000	0.011
15001230 15	Corn, field, starch	17.100000		
15001231 15	Corn, field, starch-babyfood	17.100000	1.000	0.011
15001240 15	Corn, field, syrup		1.000	0.011
15001240 15		1.200000	1.000	0.011
	Corn, field, syrup-babyfood	1.200000	1.000	0.011
15001250 15	Corn, field, oil	1.200000	1.000	0.011
15001251 15	Corn, field, oil-babyfood	1.200000	1.000	0.011
15001260 15	Corn, pop	4.000000	1.000	0.011
95001280 O	Cottonseed, oil	1.200000	1.000	0.004
95001281 0	Cottonseed, oil-babyfood	1.200000	1.000	0.004
95001310 O	Cranberry, dried	1.200000	1.000	0.004
13021370 13B	Currant, dried	1.200000	1.000	0.004
95001410 O	Date	1.200000	1.000	0.004
19021430 19B	Dill, seed	26.350000	1.000	0.004
19011440 19A		52.200000	1.000	
70001450 P	Egg, whole	32.200000	1.000	0.004
, 0001100 1	110-Uncooked; Fresh or N/S	Cook Moth N/C		
	110-bilcooked; Flesh of N/S			
	120 Upgashad Barrey G. 1	0.000000	1.000	0.004
	120-Uncooked; Frozen; Cook			
		0.000000	1.000	0.004
	210-Cooked; Fresh or N/S;	Cook Meth N/S		
		0.00000	1.000	0.004
	211-Cooked; Fresh or N/S;	Baked 0.000000	1.000	0.004
	<pre>212-Cooked; Fresh or N/S;</pre>	Boiled		
		0.00000	1.000	0.004
	213-Cooked; Fresh or N/S;	Fried 0.000000	1.000	0.004
	214-Cooked; Fresh or N/S;	Fried/baked		
		0.000000	1.000	0.004
	<pre>215-Cooked; Fresh or N/S;</pre>	Boiled/baked		
	. ,	0.000000	1.000	0.004
	221-Cooked; Frozen; Baked	0.000000	1.000	0.004
	223-Cooked; Frozen; Fried	0.000000	1.000	
	224-Cooked; Frozen; Fried/			0.004
	230-Cooked; Dried; Cook Me	th M/C	1.000	0.004
	250 COOKER, Diler, COOK ME			
	222 Cooked Dwied Deiled	755.340000	1.000	0.004
	232-Cooked; Dried; Boiled	755.340000	1.000	0.004
	233-Cooked; Dried; Fried	755.340000	1.000	0.004
	240-Cooked; Canned; Cook M	leth N/S		
	0.0 0 1 1 0 0 0 0 0 0	0.000000	1.000	0.004
	242-Cooked; Canned; Boiled	0.00000	1.000	0.004
	252-Cooked; Cured etc; Boi	led 0.000000	1.000	0.004
	253-Cooked; Cured etc; Fri	ed 0.000000	1.000	0.004
70001460 P	Egg, white			
	110-Uncooked; Fresh or N/S	; Cook Meth N/S		
		0.000000	1.000	0.004
	120-Uncooked; Frozen; Cook	Meth N/S		0.001
	•	0.000000	1.000	0.004
	130-Uncooked; Dried; Cook	Meth N/S	1.000	0.004
	, 11111, 1111, 1111, 1111, 1111, 1111, 1111, 1111, 1111, 1111, 1111, 1111, 1111, 1111, 1111, 1111, 1111, 1111,	755.340000	1 000	0 004
	210-Cooked; Fresh or N/S;	Cook Moth N/C	1.000	0.004
	210 cooked, 11con of N/S;			
	211-Cooked, Front or N/C	0.000000	1.000	0.004
	211-Cooked; Fresh or N/S;	Baked 0.000000	1.000	0.004
	212-Cooked; Fresh or N/S;			
	212 Cooked Birth and	0.000000	1.000	0.004
	213-Cooked; Fresh or N/S;	Fried 0.000000	1.000	0.004
	214-Cooked; Fresh or N/S;	Fried/baked		
	000 0 1 -	0.000000	1.000	0.004
	221-Cooked; Frozen; Baked	0.000000	1.000	0.004
	223-Cooked; Frozen; Fried	0.000000	1.000	0.004
	230-Cooked; Dried; Cook Me	th N/S		
		755.340000	1.000	0.004
	232-Cooked; Dried; Boiled	755.340000	1.000	0.004
	233-Cooked; Dried; Fried	755.340000	1.000	0.004
		·	<del>.</del>	

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	240 Gral 1 2 G 1 7 7 1 7 1		
	240-Cooked; Canned; Cook Meth N/S 0.000000	1.000	0 004
	242-Cooked; Canned; Boiled 0.000000	1.000	0.004 0.004
	250-Cooked; Cured etc; Cook Meth N/S	1 000	
70001461 P	0.000000 Egg, white (solids)-babyfood 755.340000	1.000 1.000	0.004
95001540 O	Fig, dried 1.200000	1.000	0.004
14001550 14	Filbert 8.600000	1.000	
14001560 14	Filbert, oil 1.200000	1.000	0.004
20001630 20	Flaxseed, oil 1.200000	1.000	0.004
03001650 3	Garlic, dried 15.800000	1.000	
03001651 3	Garlic, dried-babyfood 15.800000	1.000	0.004
01031670 1CD	Ginger, dried 15.800000	1.000	
01011680 1AB	Ginseng, dried 15.800000		0.004
95001780 O	20.00000	1.000	0.004
06031820 6C	Grape, raisin 1.200000 Guar, seed 13.160000	1.000	0.004
06031821 6C	Guar, seed-babyfood 13.160000	1.000	0.004
19011840 19A	***************************************	1.000	0.004
19011841 19A		1.000	0.004
14001850 14		1.000	0.004
19012020 19A		1.000	0.004
06032030 6C	F 11	1.000	0.004
95002120 0	Y1 1	1.000	0.004
14002130 14		1.000	0.004
95002160 0		1.000	0.004
95002180 0		1.000	0.004
95002180 O		1.000	0.004
19012200 19A		1.000	0.004
19012200 19A 19012201 19A	M	1.000	0.004
27002220 D	Marjoram-babyfood 51.180000 Milk, fat	1.000	0.004
27002220 D	110-Uncooked; Fresh or N/S; Cook Meth N/S		
	0.000000	1 000	
	120-Uncooked; Frozen; Cook Meth N/S	1.000	0.004
		1 000	
	0.000000 130-Uncooked; Dried; Cook Meth N/S	1.000	0.004
	1.690000	1.000	0.004
	150-Uncooked; Cured etc; Cook Meth N/S		0.001
	4.480000	1.000	0.004
	210-Cooked; Fresh or N/S; Cook Meth N/S		0.001
	0.00000	1.000	0.004
	211-Cooked; Fresh or N/S; Baked 0.000000	1.000	0.004
	212-Cooked; Fresh or N/S; Boiled		0.001
	0.000000	1.000	0.004
	213-Cooked; Fresh or N/S; Fried 0.000000	1.000	0.004
	214-Cooked; Fresh or N/S; Fried/baked		
	0.000000	1.000	0.004
	215-Cooked; Fresh or N/S; Boiled/baked		0.001
	0.000000	1.000	0.004
	220-Cooked; Frozen; Cook Meth N/S		0.001
	0.00000	1.000	0.004
	221-Cooked; Frozen; Baked 0.000000	1.000	0.004
	222-Cooked; Frozen; Boiled 0.000000	1.000	0.004
	223-Cooked; Frozen; Fried 0.000000	1.000	0.004
	224-Cooked; Frozen; Fried/baked 0.000000	1.000	0.004
	230-Cooked; Dried; Cook Meth N/S		004
	1,690000	1.000	0.004
	231-Cooked; Dried; Baked 1.690000	1.000	0.004
	232-Cooked; Dried; Boiled 1.690000	1.000	0.004
	233-Cooked; Dried; Fried 1.690000	1.000	0.004
	240-Cooked; Canned; Cook Meth N/S		
	0.000000	1.000	0.004
	242-Cooked; Canned; Boiled 0.000000	1.000	0.004
	250-Cooked; Cured etc; Cook Meth N/S		
	4.480000	1.000	0.004
	253-Cooked; Cured etc; Fried 4.480000	1.000	0.004
	255-Cooked; Cured etc; Boiled/baked		<del>-</del>
07010000	4.480000	1.000	0.004
27012230 D	Milk, nonfat solids		
	110-Uncooked; Fresh or N/S; Cook Meth N/S		
	0.000000	1.000	0.004
	120-Uncooked; Frozen; Cook Meth N/S		
	0.000000	1.000	0.004
	130-Uncooked; Dried; Cook Meth N/S		

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	2.20000	1 000	
	2.360000 150-Uncooked; Cured etc; Cook Meth N/S	1.000	0.004
	4.480000 210-Cooked; Fresh or N/S; Cook Meth N/S	1.000	0.004
	0.000000 211-Cooked; Fresh or N/S; Baked 0.000000	1.000	0.004
	212-Cooked; Fresh or N/S; Boiled	1.000	0.004
	0.000000 213-Cooked; Fresh or N/S; Fried 0.000000	1.000	0.004
	214-Cooked; Fresh or N/S; Fried/baked	1.000	0.004
	0.000000 215-Cooked; Fresh or N/S; Boiled/baked	1.000	0.004
	0.000000 220-Cooked; Frozen; Cook Meth N/S 0.000000	1.000	0.004
	221-Cooked; Frozen; Baked 0.000000	1.000 1.000	0.004
	222-Cooked; Frozen; Boiled 0.000000	1.000	0.004 0.004
	223-Cooked; Frozen; Fried 0.000000	1.000	0.004
	224-Cooked; Frozen; Fried/baked 0.000000	1.000	0.004
	230-Cooked; Dried; Cook Meth N/S 2.360000	1.000	0.004
	231-Cooked; Dried; Baked 2.360000	1.000	0.004
	232-Cooked; Dried; Boiled 2.360000	1.000	0.004
	233-Cooked; Dried; Fried 2.360000	1.000	0.004
	240-Cooked; Canned; Cook Meth N/S 0.000000	1.000	0.004
	242-Cooked; Canned; Boiled 0.000000 245-Cooked; Canned; Boiled/baked	1.000	0.004
	0.000000 250-Cooked; Cured etc; Cook Meth N/S	1.000	0.004
	4.480000	1.000	0.004
	253-Cooked; Cured etc; Fried 4.480000 255-Cooked; Cured etc; Boiled/baked	1.000	0.004
27012231 D	4.480000 Milk, nonfat solids-baby food/infant 110-Uncooked; Fresh or N/S; Cook Meth N/S	1.000	0.004
	0.000000 130-Uncooked; Dried; Cook Meth N/S	1.000	0.004
	2.360000 211-Cooked; Fresh or N/S; Baked 0.000000 240-Cooked; Canned; Cook Meth N/S	1.000	0.004 0.004
	0.000000	1.000	0.004
27022240 D	Milk, water 110-Uncooked; Fresh or N/S; Cook Meth N/S		
	0.000000 120-Uncooked; Frozen; Cook Meth N/S	1.000	0.004
	0.000000 130-Uncooked; Dried; Cook Meth N/S	1.000	0.004
	2.360000 150-Uncooked; Cured etc; Cook Meth N/S	1.000	0.004
	4.480000 210-Cooked; Fresh or N/S; Cook Meth N/S	1.000	0.004
	0.00000	1.000	0.004
	211-Cooked; Fresh or N/S; Baked 0.000000 212-Cooked; Fresh or N/S; Boiled	1.000	0.004
	0.000000	1.000	0.004
	213-Cooked; Fresh or N/S; Fried 0.000000 214-Cooked; Fresh or N/S; Fried/baked	1.000	0.004
	0.000000 215-Cooked; Fresh or N/S; Boiled/baked	1.000	0.004
	0.000000 220-Cooked; Frozen; Cook Meth N/S	1.000	0.004
	0.000000	1.000	0.004
	221-Cooked; Frozen; Baked 0.000000 222-Cooked; Frozen; Boiled 0.000000	1.000	0.004
	222 4-1-3	1.000	0.004
	224 (2-2-3 8 - 1 - 4 - 4	1.000	0.004
	230-Cooked; Frozen; Fried/baked 0.000000 230-Cooked; Dried; Cook Meth N/S 2.360000	1.000	0.004
	231-Cooked; Dried; Baked 2 360000	1.000 1.000	0.004
	232-Cooked; Dried; Boiled 2.360000	1.000	0.004 0.004
	233-Cooked; Dried; Fried 2.360000	1.000	0.004

	240-Cooked; Canned; Cook Meth N/S		
		1 000	
	0.000000 242-Cooked; Canned; Boiled 0.000000	1.000	0.004
	242-Cooked; Canned; Boiled 0.000000	1.000	0.004
	250-Cooked; Cured etc; Cook Meth N/S		
	4.480000	1.000	0.004
	253-Cooked; Cured etc; Fried 4.480000	1.000	0.004
	255-Cooked; Cured etc; Boiled/baked		
	4.480000	1.000	0.004
27032251 D	Milk, sugar (lactose)-baby food/infa		
	110-Uncooked; Fresh or N/S; Cook Meth N/S		
	0.00000	1.000	0.004
	130-Uncooked; Dried; Cook Meth N/S	2.000	0.004
	2.360000	1 000	0 004
	210-Cooked; Fresh or N/S; Cook Meth N/S	1.000	0.004
		1 000	
	0.000000 212-Cooked; Fresh or N/S; Boiled	1.000	0.004
	0.000000	1.000	0.004
	230-Cooked; Dried; Cook Meth N/S		
	2.360000	1.000	0.004
	240-Cooked; Canned; Cook Meth N/S		
	0.000000	1.000	0.004
15002260 15	Millet, grain 4.990000	1.000	1.000
15002310 15	Oat, bran 35.950000	1.000	0.011
15002320 15	Oat, flour 32.570000	1.000	0.011
15002321 15	Oat, flour-babyfood 32.570000	1.000	0.011
15002330 15	Oat, groats/rolled oats 50.000000	1.000	0.011
15002331 15	Oat, groats/rolled oats-babyfood 50.000000		
95002360 O		1.000	0.011
03002380 3	2.200000	1.000	0.004
03002381 3	Omican days by 31 3 1 3 1 3 1 3 1	1.000	0.004
95002440 O		1.000	0.004
95002441 0	D-121 1 1 5 5	1.000	0.004
	Palm, oil-babyfood 1.200000	1.000	0.004
95002460 O	Papaya, dried 1.200000	1.000	0.004
19012490 19A	Parsley, dried leaves 52.200000	1.000	0.004
19012491 19A	Parsley, dried leaves-babyfood 52.200000	1.000	0.004
06032560 6C	Pea, dry 13.160000	1.000	0.004
06032561 6C	Pea, dry-babyfood 13.160000	1.000	0.004
06032580 6C	Pea, pigeon, seed 13.160000	1.000	0.004
12002610 12	Peach, dried 1.200000	1.000	0.004
12002611 12	Peach, dried-babyfood 1.200000	1.000	
95002630 O	Donmark		0.004
95002640 O	D	1.000	0.004
95002650 O	December 113	1.000	0.004
11002670 11	2.20000	1.000	0.004
14002690 14	D	1.000	0.004
08002710 8	Doman hall it is	1.000	0.004
08002711 8	Pepper, bell, dried 26.350000	1.000	0.004
08002711 8	Pepper, bell, dried-babyfood 26.350000	1.000	0.004
19022740 19B	Pepper, nonbell, dried 26.350000	1.000	0.004
	Pepper, black and white 5.960000	1.000	0.004
19022741 19B	Pepper, black and white-babyfood 5.960000	1.000	0.004
95002760 O	Peppermint, oil 1.200000	1.000	0.004
95002780 O	Pine nut 8.600000	1.000	0.004
95002800 O	Pineapple, dried 1.200000	1.000	0.004
14002820 14	Pistachio 8.600000	1.000	0.004
95002840 O	Plantain, dried 1.200000	1.000	0.004
12002870 12	Plum, prune, dried 0.700000	1.000	0.004
12002871 12	Plum, prune, dried-babyfood 0.700000	1.000	0.004
25002900 M	Pork, meat	1.000	0.004
	210-Cooked; Fresh or N/S; Cook Meth N/S		
		1 000	
	0.000000 211-Cooked; Fresh or N/S; Baked 0.000000	1.000	1.000
	211-Cooked; Fresh or N/S; Baked 0.000000 212-Cooked; Fresh or N/S; Boiled	1.000	1.000
	0.000000 213-Cooked; Fresh or N/S; Fried 0.000000	1.000	1.000
	213-Cooked; Fresh or N/S; Fried 0.000000	1.000	1.000
	214-Cooked; Fresh or N/S; Fried/baked		
	0.000000	1.000	1.000
	215-Cooked; Fresh or N/S; Boiled/baked		
	0.000000	1.000	1.000
	220-Cooked; Frozen; Cook Meth N/S		
	0.000000	1.000	1.000
	221-Cooked; Frozen; Baked n nonnon	1.000	1.000
	222-Cooked; Frozen; Boiled 0.000000	1.000	1.000
	230-Cooked; Dried; Cook Meth N/S		1.000
	•		

		0.000000	1.000	1.000
	232-Cooked; Dried; Boiled			
		0.000000	1.000	1.000
	240-Cooked; Canned; Cook Meth 1	N/S		
		0.000000	1.000	1.000
	242-Cooked, Campad, Dadlad			
	242-Cooked; Canned; Boiled	0.000000	1.000	1.000
	250-Cooked; Cured etc; Cook Met	th N/S		
		18.080000	1.000	0 004
	OFI Cooked County of the Duly 1			0.004
	251-Cooked; Cured etc; Baked	18.080000	1.000	0.004
	252-Cooked; Cured etc; Boiled	18.080000	1.000	0.004
	253-Cooked; Cured etc; Fried	18.080000		
		18.080000	1.000	0.004
	255-Cooked; Cured etc; Boiled/	baked		
	•	18.080000	1.000	0.004
25002901 M	Pork, meat-babyfood			
		18.080000	1.000	0.004
25002930 M	Pork, fat			
	110-Uncooked; Fresh or N/S; Coo	ok Meth N/S		
	, , , , , , , , , , , , , , , , , , , ,			
		0.000000	1.000	1.000
	210-Cooked; Fresh or N/S; Cook	Meth N/S		
		0.000000	1.000	1 000
	211 Cooked Break N/C D-1	_		1.000
	211-Cooked; Fresh or N/S; Baked		1.000	1.000
	212-Cooked; Fresh or N/S; Boile	ed.		
	, , , , , , , , , , , , , , , , , , , ,		1 000	1 000
	040 0 1 3 0 3 1 1 1 1 1 1 1 1 1	0.000000	1.000	1.000
	213-Cooked; Fresh or N/S; Fried		1.000	1.000
	214-Cooked; Fresh or N/S; Fried	i/haked		
		0.000000	1.000	1.000
	215-Cooked; Fresh or N/S; Boile	ed/baked		
	·	0.000000	1 000	1 000
	000 0-1-1 =		1.000	1.000
	220-Cooked; Frozen; Cook Meth N	N/S		
		0.000000	1.000	1.000
	221-Cooked; Frozen; Baked			
		0.00000	1.000	1.000
	222-Cooked; Frozen; Boiled	0.000000	1.000	1.000
	230-Cooked; Dried; Cook Meth N/	/s		
	, , ooon neen n,			
		0.00000	1.000	1.000
	232-Cooked; Dried; Boiled	0.000000	1.000	1.000
	240-Cooked; Canned; Cook Meth N			
	210 occide, camica, cook McCii i	•		
		0.000000	1.000	1.000
	242-Cooked; Canned; Boiled	0.000000	1.000	1.000
	250-Cooked; Cured etc; Cook Met			
	and cooked, carea etc, cook Met			
		18.080000	1.000	0.004
	251-Cooked; Cured etc; Baked	18.080000	1.000	0.004
	252-Cooked; Cured etc; Boiled			
	252 Cooked, Cured ecc, Bolled	18.080000	1.000	0.004
	253-Cooked; Cured etc; Fried	18.080000	1.000	0.004
	255-Cooked; Cured etc; Boiled/k	paked		
	,		1 000	
01000000 10	D-6-61-1	18.080000	1.000	0.004
01032960 1C	Potato, chips	5.950000	1.000	0.004
01032970 1C	Potato, dry (granules/ flakes)	17.650000	1.000	0.004
01032971 1C	Potato, dry (granules/ flakes)-b			
	Potato, dry (granules/ flakes)-D	17.650000	1.000	0.004
01032980 1C	Potato, flour	4.990000	1.000	0.004
01032981 1C	Potato, flour-babyfood	4.990000	1.000	0.004
95003060 O	Psyllium, seed			
		26.350000	1.000	0.004
09023090 9B	Pumpkin, seed	4.700000	1.000	0.004
95003110 O	Quinoa, grain	4.000000	1.000	
20003190 20	Rapeseed, oil			0.004
		1.200000	1.000	0.004
20003191 20	Rapeseed, oil-babyfood	1.200000	1.000	0.004
15003230 15	Rice, white			
15003231 15	Rice, white-babyfood	5.300000	1.000	0.011
		5.300000	1.000	0.011
15003240 15	Rice, brown	5.300000	1.000	0.011
15003241 15	Rice, brown-babyfood	5.300000		
			1.000	0.011
15003250 15	Rice, flour	32.570000	1.000	0.011
15003251 15	Rice, flour-babyfood	32.570000	1.000	0.011
15003260 15	Rice, bran			
		25.900000	1.000	0.011
15003261 15	Rice, bran-babyfood	25.900000	1.000	0.011
15003290 15	Rye, flour	32.570000	1.000	0.011
20003300 20	Safflower, oil			
		1.200000	1.000	0.004
20003301 20	Safflower, oil-babyfood	1.200000	1.000	0.004
19013340 19A	Savory	52.200000	1.000	0.004
95003360 O	Sesame, seed			
		26.350000	1.000	0.004
95003361 0	Sesame, seed-babyfood	26.350000	1.000	0.004
95003370 O	Sesame, oil	1.200000	1.000	0.004
95003371 0	Sesame, oil-babyfood			
		1.200000	1.000	0.004
15003440 15	Sorghum, grain	4.000000	1.000	0.011
15003450 15	Sorghum, syrup	1.200000	1.000	0.011
06003480 6	Soybean, flour			
		4.110000	1.000	0.004
06003481 6	Soybean, flour-babyfood	4.110000	1.000	0.004

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06003490	6	Soybean, soy milk	1.690000	1.000	0.004
06003491		Soybean, soy milk-babyfood or in	1.690000	1.000	0.004
06003500	6	Soybean, oil	1.200000	1.000	0.004
06003501	6	Soybean, oil-babyfood	1.200000	1.000	0.004
95003530		Spearmint, oil	1.200000	1.000	0.004
19023540	19B	Spices, other	51.180000	1.000	0.004
19023541	19B	Spices, other-babyfood	51.180000	1.000	0.004
95003620	0	Sugarcane, sugar	0.770000	1.000	0.004
95003621	0	Sugarcane, sugar-babyfood	0.770000	1.000	0.004
95003630	-	Sugarcane, molasses	0.770000	1.000	0.004
95003631	-	Sugarcane, molasses-babyfood	0.770000	1.000	0.004
20003640		Sunflower, seed	13.160000	1.000	0.004
20003650		Sunflower, oil	1.200000	1.000	0.004
20003651		Sunflower, oil-babyfood	1.200000	1.000	0.004
95003720		Tea, dried	51.180000	1.000	0.004
95003730	-	Tea, instant	51.180000	1.000	0.004
08003780		Tomato, dried	1.200000	1.000	0.004
08003781		Tomato, dried-babyfood	1.200000	1.000	0.004
15003810		Triticale, flour	32.570000	1.000	0.011
15003811		Triticale, flour-babyfood	32.570000	1.000	0.011
01033870		Turmeric	26.350000	1.000	0.004
14003910		Walnut	5.600000	1.000	0.004
15004010		Wheat, grain	4.990000	1.000	0.011
15004011	-	Wheat, grain-babyfood	4.990000	1.000	0.011
15004020		Wheat, flour	32.570000	1.000	0.011
15004021		Wheat, flour-babyfood	32.570000	1.000	0.011
15004030		Wheat, germ	58.000000	1.000	0.011
15004040		Wheat, bran	35.950000	1.000	0.011
15004050	15	Wild rice	5.300000	1.000	0.011

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## Attachment 5: Sulfuryl Fluoride Food Fumigation Exposure and Risk Estimates

U.S. Environmental Protection Agency Ver. 2.00 (1994-98 data) DEEM-FCID Chronic analysis for SULFURYL FLUORIDE (1994-98 data)

Residue file name: C:\Documents and Settings\MDOHERTY\My Documents\Chemistry Reviews\DEEM Runs\Sulfuryl Fluoride\SF Food Fumigation.R98

Adjustment factor #2 used. Analysis Date 01-05-2006/13:21:25 Residue file Reference dose (RfD, Chronic) = .003 mg/kg bw/day COMMENT 1: RfD is cPAD Residue file dated: 01-05-2006/13:17:50/8

Total exposure by population subgroup

	Total	Exposure
Population Subgroup	mg/kg body wt/day	Percent of Rfd
U.S. Population (total)	0.000064	2.1%
U.S. Population (spring season)	0.000061	2.0%
U.S. Population (summer season)	0.000066	2.2%
U.S. Population (autumn season)	0.000061	2.0%
U.S. Population (winter season)	0.000068	2.3%
Northeast region	0.000074	2.5%
Midwest region	0.000061	2.0%
Southern region	0.000058	1.9%
Western region	0.000066	2.2%
Hispanics	0.000087	2.9%
Non-hispanic whites	0.000060	2.0%
Non-hispanic blacks	0.000068	2.3%
Non-hisp/non-white/non-black	0.000059	2.0%
All infants (< 1 year)	0.000041	1.4%
Nursing infants	0.000016	0.5%
Non-nursing infants	0.000051	1.7%
Children 1-6 yrs	0.000177	5.9%
Children 7-12 yrs	0.000091	3.0%
Females 13-19 (not preg or nursing)	0.000053	1.8%
Females 20+ (not preg or nursing)	0.000043	1.4%
Females 13-50 yrs	0.000051	1.7%
Females 13+ (preg/not nursing)	0.000058	1.9%
Females 13+ (nursing)	0.000070	2.3%
Males 13-19 yrs	0.000062	2.1%
Males 20+ yrs	0.000050	1.7%
Seniors 55+	0.000045	1.5%
Children 1-2 yrs	0.000189	6.3%
Children 3-5 yrs	0.000177	5.9%
Children 6-12 yrs	0.000100	3.3%
Youth 13-19 yrs	0.000058	1.9%
Adults 20-49 yrs	0.000047	1.6%
Adults 50+ yrs	0.000045	1.5%
Females 13-49 yrs	0.000046	1.5%

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# Attachment 6: Fluoride Food Fumigation Exposure and Risk Estimates

U.S. Environmental Protection Agency Ver. 2.00
DEEM-FCID Chronic analysis for FLUORIDE (1994-98 data)
Residue file name: C:\Documents and Settings\MDOHERTY\My Documents\Chemistry Reviews\DEEM
Runs\Sulfuryl Fluoride\F Food Fumigation.R98

Analysis Date 01-05-2006/13:20:32 Residue file dated: 01-05-2006/13:19:46/8 Reference dose (RfD, Chronic) = .114 mg/kg bw/day

COMMENT 1: RfD is converted Fluoride MCL and for adult pops only.

Total exposure by population subgroup

Total Exposure

Population Subgroup	mg/kg body wt/day	Percent of Rfd
U.S. Population (total)	0.008701	7.6%
U.S. Population (spring season)	0.008769	7.7%
U.S. Population (summer season)	0.008445	7.4%
U.S. Population (autumn season)	0.008685	7.6%
U.S. Population (winter season)	0.008923	7.8%
Northeast region	0.008469	7.4%
Midwest region	0.009009	7.9%
Southern region	0.008685	7.6%
Western region	0.008603	7.5%
Hispanics	0.010609	9.3%
Non-hispanic whites	0.008472	7.4%
Non-hispanic blacks	0.008703	7.6%
Non-hisp/non-white/non-black	0.007875	6.9%
All infants (< 1 year)	0.010972	9.6%
Nursing infants	0.004778	4.2%
Non-nursing infants	0.013323	11.7%
Children 1-6 yrs	0.018456	16.2%
Children 7-12 yrs	0.012149	10.7%
Females 13-19 (not preg or nursing)	0.007135	6.3%
Females 20+ (not preg or nursing)	0.006114	5.4%
Females 13-50 yrs	0.007123	6.2%
Females 13+ (preg/not nursing)	0.007071	6.2%
Females 13+ (nursing)	0.008478	7.4%
Males 13-19 yrs	0.008855	7.8%
Males 20+ yrs	0.007950	7.0%
Seniors 55+	0.006556	5.8%
Children 1-2 yrs	0.017980	15.8%
Children 3-5 yrs	0.019274	16.9%
Children 6-12 yrs	0.012879	11.3%
Youth 13-19 yrs	0.008014	7.0%
Adults 20-49 yrs	0.007212	6.3%
Adults 50+ yrs	0.006670	5.9%
Females 13-49 yrs	0.006398	5.6%

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# Attachment 7: Sulfuryl Fluoride Space Fumigation Exposure and Risk Estimates

U.S. Environmental Protection Agency Ver. 2.00

DEEM-FCID Chronic analysis for SULFURYL FLUORIDE (1994-98 data)

Residue file name: C:\Documents and Settings\MDOHERTY\My Documents\Chemistry Reviews\DEEM Runs\Sulfuryl Fluoride\SF Space Fumigation.R98

Adjustment factor #2 used. Residue file dated: 01-05-2006/13:16:35/8 Analysis Date 01-05-2006/13:21:54 Residue file Reference dose (RfD, Chronic) = .003 mg/kg bw/day

Total exposure by population subgroup

Total Exposure

Population Subgroup	mg/kg body wt/day	Percent of Rfd
U.S. Population (total)	0.000018	0.6%
U.S. Population (spring season)	0.000018	0.6%
	0.000017	0.6%
U.S. Population (autumn season)	0.000017	0.6%
U.S. Population (winter season)	0.000018	0.6%
Northeast region	0.000017	0.6%
Midwest region	0.000018	0.6%
Southern region	0.000017	0.6%
Western region	0.000018	0.6%
Hispanics	0.000020	0.7%
Non-hispanic whites	0.000017	0.7%
Non-hispanic blacks	0.000019	0.6%
Non-hisp/non-white/non-black	0.000019	0.6%
All infants (< 1 year)	0.000097	3.2%
Nursing infants	0.000030	1.0%
Non-nursing infants	0.000123	4.1%
Children 1-6 yrs	0.000035	1.2%
Children 7-12 yrs	0.000025	0.8%
Females 13-19 (not preg or nursing)	0.000015	0.5%
Females 20+ (not preg or nursing)	0.000012	0.4%
Females 13-50 yrs	0.000014	0.5%
Females 13+ (preg/not nursing)	0.000015	0.5%
Females 13+ (nursing)	0.000016	0.5%
Males 13-19 yrs	0.000019	0.6%
Males 20+ yrs	0.000014	0.5%
Seniors 55+	0.000011	0.4%
Children 1-2 yrs	0.000036	1.2%
Children 3-5 yrs	0.000036	1.2%
Children 6-12 yrs	0.000026	0.9%
Youth 13-19 yrs	0.000017	0.5%
Adults 20-49 yrs	0.000014	0.5%
Adults 50+ yrs	0.000011	0.4%
Females 13-49 yrs	0.000013	0.4%

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## Attachment 8: Fluoride Space Fumigation Exposure and Risk Estimates

U.S. Environmental Protection Agency Ver. 2.00 (1994-98 data) DEEM-FCID Chronic analysis for FLUORIDE (1994-98 data)
Residue file name: C:\Documents and Settings\MDOHERTY\My Documents\Chemistry Reviews\DEEM Runs\Sulfuryl Fluoride\F Space Fumigation.R98

Adjustment factor #2 used. Analysis Date 01-05-2006/13:21:00 Residue file dated: 01-05-2006/13:18:Reference dose (RfD, Chronic) = .114 mg/kg bw/day

COMMENT 1: RfD is converted Fluoride MCL and is valid for adult pops. only Residue file dated: 01-05-2006/13:18:31/8

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Total exposure by population subgroup

Total Exposure

Population Subgroup	mg/kg body wt/day	Percent of Rfd
U.S. Population (total)	0.000820	0.7%
U.S. Population (spring season)	0.000835	0.7%
U.S. Population (summer season)	0.000800	0.7%
U.S. Population (autumn season)	0.000817	0.7%
U.S. Population (winter season)	0.000828	0.7%
Northeast region	0.000862	0.8%
Midwest region	0.000853	0.7%
Southern region	0.000769	0.7%
Western region	0.000827	0.7%
Hispanics	0.000820	0.7%
Non-hispanic whites	0.000823	0.7%
Non-hispanic blacks	0.000790	0.7%
Non-hisp/non-white/non-black	0.000847	0.7%
All infants (< 1 year)	0.000876	0.8%
Nursing infants	0.000489	0.4%
Non-nursing infants	0.001023	0.9%
Children 1-6 yrs	0.001981	1.7%
Children 7-12 yrs	0.001291	1.1%
Females 13-19 (not preg or nursing)	0.000700	0.6%
Females 20+ (not preg or nursing)	0.000541	0.5%
Females 13-50 yrs	0.000642	0.6%
Females 13+ (preg/not nursing)	0.000606	0.5%
Females 13+ (nursing)	0.000739	0.6%
Males 13-19 yrs	0.000885	0.8%
Males 20+ yrs	0.000677	0.6%
Seniors 55+	0.000509	0.4%
Children 1-2 yrs	0.002052	1.8%
Children 3-5 yrs	0.002009	1.8%
Children 6-12 yrs	0.001361	1.2%
Youth 13-19 yrs	0.000795	0.7%
Adults 20-49 yrs	0.000660	0.6%
Adults 50+ yrs	0.000516	0.5%
Females 13-49 yrs	0.000603	0.5%

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# Attachment 9. Percent of Facilities/Throughput Treated

Colwell Cook/DC/USEPA/US 05/05/2005 03:32 PM

To

Christina Swartz/DC/USEPA/US@EPA

cc

Jonathan Becker/DC/USEPA/US@EPA, Michael Doherty/DC/USEPA/US@EPA, Richard Loranger/DC/USEPA/US@EPA, Bill Chism/DC/USEPA/US@EPA Subject

Re: sulfuryl fluoride Update on % Processed Food Treated

### Greetings,

I have some information relating to processed foods and storage time in warehouses. This information is from a University Professor and a couple of food industry folks.

Product is not likely to get retreated in the warehouse. Most of the millers (rice & flour) mill "to order" (i.e. they have an order that they are going to go ahead and ship out. They prefer not to have much stored in their warehouses. Several of their customers have set the maximum to 3 days from milling grain to receiving product, so very little time in storage at the mill.

The baked goods would not be fumigated with the structural fumigant. If a product of value has pest "issues" it will be sent to a trailer for fumigation with Al phosphide (product of choice). But again, these products are not stored for long at the processing plant, probably no more than 2-3 days.

So pet food is the only commodity stored for any length of time at a processing facility/warehouse.

It was estimated that less than 5% of the 1% Treated would likely get a second fumigation.

Let me know if this is not sufficient.

Colwell Cook