N00102.AR.001842
NSY PORTSMOUTH
5090.3a

LETTER REGARDING THE TRANSMITTAL OF REVISED TABLES FOR SEAFOOD INGESTION RISK ASSESSMENT NSY PORTSMOUTH ME
12/27/1995
NAVFAC NORTHERN

DEPARTMENT OF THE NAVY
NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
10 INDUSTRIAL HIGHWAY
MAIL STOP, #82
LESTER, PA 19113-2090

IN REPLY REFER TO

5090
Code 1823/JMC

DEC 27 1995

Ms. Nancy Beardsley
Maine Department of Environmental Protection
State House Station 17
Augusta, ME 04333-0017

Subj: SEAFOOD INGESTION RISK ASSESSMENT

Dear Ms. Beardsley:

Enclosed are two copies of the revised tables for the Seafood Ingestion Risk Assessment which had been originally sent to you on January 24, 1995. The revisions were based on the Phase II off-shore data collected and do not include sub-legal adult lobster values. These revised tables were developed by the Navy Environmental Health Center. If you have any questions following your review of this information we are available for consultation, (610) 595-0567 x117.

Sincerely,

Jim Conroy

JAMES M. CONROY, PE
LT, CEC, USN
Remedial Project Manager
By direction of the
Commanding Officer

Encl:
(1) Revised Tables for Seafood Ingestion Risk Assessment

Copy to:
US EPA New England Region (M. Cassidy, 3 copies)
NEHC (C. Grosse, w/o encl)
PNS (Code 121.10, F. Endyke)
Brown and Root Environmental (L. Klink, M. Perry)

Copy to:
Code 1822/TB
Code 1831/SH
Code 1823/JC
Code 1823/FJE
Code 1823/FAL

TABLE 6.0
ACCEPTABLE SEAFOOD CONSUMPTION RATES

MAXIMUM CONCENTRATION BASED SERVINGS PER YEAR (10^{-5} CANCER RISK)			
SEAFOOD	**SERVING SIZE (oz)**	**Central Tendency (9 years)[1]**	**High End (30 years)[1]**
Lobster (tail and claw) Meal	3.351	21.44	6.43
Lobster (TOMALLEY) Meal	0.670	12.66	3.80
Lobster (tail, claw, tomalley) Meal	4.021	7.43	2.23
Mussel Meal	8.000	6.67	1.18
Flounder Filet Meal	8.000	0.56	0.10
Flounder Liver Meal	0.670	24.14	7.22
Flounder Liver And Filet Meal	8.670	2.95	0.55
AVERAGE (95% UCL OF MEAN ASSUMING NORMAL DISTRIBUTION)			
CONCENTRATION BASED SERVINGS PER YEAR (10^{-5} CANCER RISK)			
SEAFOOD	**SERVING SIZE (oz)**	**Central Tendency (9 years)[1]**	**High End (30 years)[1]**
Lobster (tail and claw) Meal	3.351	33.70	10.11
Lobster (TOMALLEY) Meal	0.670	17.99	5.39
Lobster (tail, claw, tomalley) Meal	4.021	10.97	3.29
Mussel Meal	8.000	19.84	3.51
Flounder Filet Meal	8.000	1.03	0.18
Flounder Liver Meal	0.670	31.85	9.53
Flounder Liver And Filet Meal	8.670	5.17	0.98

TABLE 2-1
MAXIMUM AND
95 PERCENTILE UPPER CONFIDENCE LEVEL AVERAGE CONCENTRATION TABLE FOR SEAFOOD

Chemical of Potential Concern	95% UCL Average * Pseudo-pleuronectes americanus filet flounder flesh	MAXIMUM Pseudo-pleuronectes americanus filet flounder flesh	95% UCL Average Pseudo-pleuronectes americanus liver flounder liver	Maximum Pseudo-pleuronectes americanus liver flounder liver	95% UCL Average Homarus americanus tail/claw Adult Lobster
	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight
Aluminum	0.508	0.795	2.347	2.667	0.386
Silver	0.031	0.033	***1.594***	***2.582***	0.106
10% of total Arsenic	**5.525**	**10.122**	**0.549**	**0.881**	0.375
Cadmium	0.003	0.004	**0.754**	**1.225**	0.004
assume Chromium III	0.058	0.072	0.109	0.117	0.057
assume Chromium IV	0.058	0.072	0.109	0.117	0.057
Copper	0.067	0.104	***18.341***	***30.842***	4.912
Iron	1.131	1.546	348.363	348.363	1.216
Manganese	0.023	0.025	***2.049***	***3.055***	0.261
Nickle	0.281	0.428	1.062	1.774	0.040
Lead	0.017	0.024	0.630	0.867	0.020
Zinc	3.223	3.767	35.955	38.772	24.124
Mercury (Inorganic)	0.070	0.096	***0.060***	***0.072***	0.168
Methyl-Mercury	***0.071***	***0.071***	0.031	0.031	***0.217***
Fluorene	0.00020	0.00026	0.00107	0.00123	0.00043
Phenanthrene	0.00055	0.00059	0.00266	0.00305	0.00221
Anthracene	0.00045	0.00058	0.00083	0.00088	0.00048
C1-phenanthrene + anthracene	0.00057	0.00069	0.00249	0.00391	0.00325
C2-phenanthrene + anthracene	0.00035	0.00043	0.00265	0.00403	0.00401
C3-phenanthrene + anthracene	0.00052	0.00052	0.00360	0.00654	0.00369
C4-phenanthrene + anthracene	0.00079	0.00105	0.00297	0.00496	0.00355
Sum C1:C4-phenanthrene + anthracene	0.00222	0.00269	0.01171	0.01944	0.01449
Fluoranthene	0.00023	0.00027	0.00142	0.00223	0.01190
Pyrene	0.00049	0.00060	0.00405	0.00573	0.01520
Benz(a)anthracene	**0.00056**	**0.00058**	**0.00088**	**0.00097**	**0.00184**
Chrysene	0.00056	0.00059	0.00098	0.00120	0.00286
Sum of benzofluoranthenes as benzo(b) fluoranthene	0.00020	0.00022	0.00100	0.00114	**0.00720**
Benzo(e)pyrene	0.00017	0.00019	0.00113	0.00137	0.00241
Benzo(a)pyrene	0.00013	0.00018	**0.00388**	**0.00968**	**0.00255**
Perylene	0.00091	0.00107	0.00116	0.00164	0.00085
Indeno(1,2,3-cd)pyrene	0.00005	0.00006	0.00127	0.00162	0.00153
Dibenz(a,h)anthracene	**0.00120**	**0.00135**	**0.00111**	**0.00135**	0.00021
Benzo(g,h,i)perylene	0.00005	0.00005	0.00005	0.00005	0.00220
Sum of measured PAHs	0.00399	0.00444	0.00399	0.00444	0.06465

*95 % UPPER CONFIDENCE LEVEL FOR THE ARITHMETIC AVERAGE

(ASSUMING NORMAL DISTRIBUTION)

TABLE 2-1
MAXIMUM AND
95 PERCENTILE UPPER CONFIDENCE LEVEL AVERAGE CONCENTRATION TABLE FOR SEAFOOD

Chemical of Potential Concern	95% UCL Average * Pseudo-pleuronectes americanus filet flounder flesh	MAXIMUM Pseudo-pleuronectes americanus filet flounder flesh	95% UCL Average Pseudo-pleuronectes americanus liver flounder liver	Maximum Pseudo-pleuronectes americanus liver flounder liver	95% UCL Average Homarus americanus tail/claw Adult Lobster
	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight
8 (2 4') Congener number; position of chlorines	0.00024	0.00065	0.00036	0.00046	0.00010
18 (2 2' 5)	0.00008	0.00017	0.00050	0.00057	0.29154
28 (2 4 4')	0.00015	0.00023	0.00268	0.00414	0.00016
52 (2 2' 5 5')	0.00029	0.00060	0.00323	0.00359	0.00008
44 (2 2' 3 5')	0.00006	0.00013	0.00056	0.00066	0.00003
66 (2 3' 4 4')	0.00046	0.00084	0.00820	0.01173	0.00018
101 (2 2' 4 5 5')	0.00109	0.00213	0.01589	0.01993	0.00018
PCB118	0.00239	0.00213	0.03465	0.04839	0.00075
153 (2 2' 4 4' 5 5')	0.01866	0.02860	0.12098	0.20900	0.00498
105 (2 3 3' 4 4')	0.00092	0.00186	0.01564	0.02679	0.00023
138 (2 2' 3 4 4' 5)	0.00466	0.00977	0.06774	0.08546	0.00079
187 (2 2' 3 4' 5 5' 6)	0.00174	0.00386	0.02217	0.02393	0.00036
128 (2 2' 3 3' 4 4')	0.00078	0.00157	0.01198	0.01841	0.00015
180 (2 2' 3 4 4' 5 5')	0.00231	0.00511	0.03181	0.03509	0.00036
170 (2 2' 3 3' 4 4' 5)	0.00097	0.00220	0.01370	0.01729	0.00014
195 (2 2' 3 3' 4 4' 5 6)	0.00031	0.00068	0.00458	0.00543	0.00004
206 (2 2' 3 3' 4 4' 5 5' 6)	0.00058	0.00117	0.01065	0.01378	0.00005
209 (2 2' 3 3' 4 4' 5 5' 6 6')	0.00031	0.00066	0.00348	0.00446	0.00003
Sum of Congeners.	**0.02282**	**0.04849**	**0.31002**	**0.37453**	**0.00467**
Hexachlorobenzene	0.00011	0.00015	0.00135	0.00176	0.00007
Lindane (gamma-BHC)	0.00010	0.00022	0.00100	0.00182	0.00027
Alpha-chlordane as chlorodane	0.00028	0.00046	**0.00664**	**0.00958**	0.00006
Trans-nonachlor	0.00063	0.00108	0.01921	0.02763	0.00011
Heptachlor					
Heptachlor epoxide					
Mirex	0.00180				
o,p -DDD					
p,p -DDD	0.00050	0.00076	**0.01476**	**0.01706**	0.00015
o,p -DDE					
p,p -DDE	0.00312	0.00781	0.04109	0.04794	0.00082
o,p -DDT					
p,p -DDT	0.00015	0.00017	0.00376	0.00482	0.00007
Aldrin					

*95 % UPPER CONFIDENCE LEVEL FOR THE ARITHMETIC AVERAGE

(ASSUMING NORMAL DISTRIBUTION)

TABLE 2-1
MAXIMUM AND
95 PERCENTILE UPPER CONFIDENCE LEVEL AVERAGE CONCENTRATION TABLE FOR SEAFOOD

Chemical of Potential Concern	Maximum Homarus americanus tail/claw Adult Lobster	95% UCL Average* Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Maximum Homarus americanus hepatopancreas (Tomalley) Adult Lobster	95% UCL Average* Mytilus edulis mussel indigenous	Maximum Mytilus edulis mussel indigenous
	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight
Aluminum	0.476	2.403	7.520	84.529	**164.160**
Silver	0.161	0.360	0.569	0.056	0.126
10% of total Arsenic	**0.586**	**0.702**	**1.143**	**0.164**	**0.209**
Cadmium	0.006	5.306	**9.922**	**0.393**	**0.690**
assume Chromium III	0.075	0.136	0.291	5.936	15.946
assume Chromium IV	0.075	0.136	0.291	**5.936**	**15.946**
Copper	***7.244***	**162.863**	**168.664**	2.576	5.522
Iron	2.213	48.930	70.612	208.916	345.000
Manganese	0.512	**3.068**	**4.075**		**164.560**
Nickle	0.040	0.486	1.248	***6.633***	***18.760***
Lead	0.050	0.055	0.141	6.958	27.400
Zinc	28.698	34.187	**50.633**	18.832	34.544
Mercury (Inorganic)	0.323	***0.113***	***0.256***	***0.096***	**0.096**
Methyl-Mercury	***0.304***	0.055	0.060		
Fluorene	0.00093	0.00829	0.01624	0.00742	0.05892
Phenanthrene	0.00464	0.05558	0.17627	0.04392	0.46854
Anthracene	0.00064	0.02203	0.08924	0.00754	0.04999
C1-phenanthrene + anthracene	0.00721	0.06664	0.20177	0.02743	0.23701
C2-phenanthrene + anthracene	0.01005	0.06286	0.16186	0.02504	0.14111
C3-phenanthrene + anthracene	0.00860	0.04239	0.10975	0.01518	0.06166
C4-phenanthrene + anthracene	0.00860	0.02025	0.03528	0.02232	0.12790
Sum C1:C4-phenanthrene + anthracene	0.03447	0.19213	0.50865	0.08997	0.56769
Fluoranthene	0.03456	0.14090	0.44399	0.07186	0.72610
Pyrene	0.03735	0.08475	0.27881	0.48772	0.48772
Benz(a)anthracene	**0.00405**	**0.02595**	**0.09811**	**0.02448**	**0.23701**
Chrysene	0.00613	0.04804	0.15299	0.02163	0.18221
Sum of benzofluoranthenes as benzo(b) fluoranthene	**0.01776**	**0.07092**	**0.21784**		
Benzo(e)pyrene	0.00479	0.03283	0.10033	0.01310	0.08138
Benzo(a)pyrene	**0.00544**	**0.06714**	**0.18479**	**0.00888**	**0.07024**
Perylene	0.00161	0.03750	0.06551	0.00392	0.02414
Indeno(1,2,3-cd)pyrene	0.00349	0.01271	0.04135	**0.00618**	**0.02414**
Dibenz(a,h)anthracene	0.00034	**0.00264**	**0.00804**	**0.00331**	**0.00827**
Benzo(g,h,i)perylene	0.00427	0.02042	0.06042	0.00549	0.02156
Sum of measured PAHs	0.15731	0.76126	2.35971	0.35499	2.95943

*95 % UPPER CONFIDENCE LEVEL FOR THE ARITHMETIC AVERAGE

(ASSUMING NORMAL DISTRIBUTION)

TABLE 2-1
MAXIMUM AND
95 PERCENTILE UPPER CONFIDENCE LEVEL AVERAGE CONCENTRATION TABLE FOR SEAFOOD

Chemical of Potential Concern	Maximum Homarus americanus tail/claw Adult Lobster	95% UCL Average* Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Maximum Homarus americanus hepatopancreas (Tomalley) Adult Lobster	95% UCL Average* Mytilus edulis mussel indigenous	Maximum Mytilus edulis mussel indigenous
	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight	mg/kg wet weight
8 (2 4') Congener number; position of chlorines	0.00013	0.00071	0.00128	0.00040	0.00041
18 (2 2' 5)	0.38796	0.00116	0.00203	0.00042	0.00043
28 (2 4 4')	0.00033	0.00116	0.00203	0.00020	0.00021
52 (2 2' 5 5')	0.00016	0.00597	0.01434	0.00037	0.00075
44 (2 2' 3 5')	0.00004	0.00126	0.00327	0.00017	0.00032
66 (2 3' 4 4')	0.00025	0.02361	0.03630	0.00013	0.00067
101 (2 2' 4 5 5')	0.00032	0.01730	0.03630	0.00125	0.00125
PCB118	0.00114	0.07167	0.08629	0.00111	0.00340
153 (2 2' 4 4' 5 5')	0.00728	0.12078	0.14241	0.01727	0.04050
105 (2 3 3' 4 4')	0.00036	0.02642	0.03092	0.00032	0.00121
138 (2 2' 3 4 4' 5)	0.00124	0.10360	0.12186	0.00181	0.00643
187 (2 2' 3 4' 5 5' 6)	0.00056	0.04626	0.05887	0.00067	0.00175
128 (2 2' 3 3' 4 4')	0.00024	0.01909	0.02313	0.00040	0.00153
180 (2 2' 3 4 4' 5 5')	0.00054	0.05403	0.02313	0.00024	0.00060
170 (2 2' 3 3' 4 4' 5)	0.00023	0.01976	0.02830	0.00016	0.00017
195 (2 2' 3 3' 4 4' 5 6)	0.00005	0.00581	0.00745	0.00010	0.00011
206 (2 2' 3 3' 4 4' 5 5' 6)	0.00009	0.00907	0.01198	0.00011	0.00011
209 (2 2' 3 3' 4 4' 5 5' 6 6')	0.00005	0.00425	0.00568	0.00009	0.00010
Sum of Congeners.	**0.00648**	**0.53119**	**0.63014**	**0.01000**	**0.02924**
Hexachlorobenzene	0.00009	**0.00461**	**0.00626**	0.00073	0.00137
Lindane (gamma-BHC)	0.00043	**0.00191**	**0.00231**	0.00012	0.00012
Alpha-chlordane as chlorodane	0.00008	**0.00664**	**0.01035**	0.00024	0.00024
Trans-nonachlor	0.00017	0.01826	0.02766	0.00042	0.00042
Heptachlor					
Heptachlor epoxide				0.00024	0.00025
Mirex				0.00006	0.00006
o,p -DDD				0.00041	0.00261
p,p -DDD	0.00022	**0.03292**	**0.06586**	0.00098	0.00280
o,p -DDE				0.00008	0.00031
p,p -DDE	0.00107	0.28401	0.36312	0.00156	0.00337
o,p -DDT				0.00030	0.00087
p,p -DDT	0.00008	0.01691	0.03158	0.00232	0.00486
Aldrin				0.00009	0.00009

*95 % UPPER CONFIDENCE LEVEL FOR THE ARITHMETIC AVERAGE

(ASSUMING NORMAL DISTRIBUTION)

TABLE 3-1
DOSE-RESPONSE PARAMETERS CHEMICALS OF POTENTIAL CONCERN

Chemical of Potential Concern	Oral Reference Dose (mg/kg/day)	Oral Slope Factor [1/(mg/kg/day)]	Weight of Evidence
Aluminum	2.90E+00	NA	
Silver	5.00E-04	NA	
Arsenic	3.00E-04	1.50E+00	A
Cadmium	5.00E-04	NA	B1
Chromium (III)	5.00E-03	Under revision	NA
Copper	**3.70E-02**	NA	
Iron	NA	NA	
Manganese	5.00E-03	NA	
Nickle (soluable salts)	2.00E-02	NA	
Lead			
Zinc	3.00E-01	NA	
Mercury (total)			
Methyl-Mercury	6.00E-05	NA	

TABLE 3-1
DOSE-RESPONSE PARAMETERS CHEMICALS OF POTENTIAL CONCERN

Chemical of Potential Concern	Oral Reference Dose (mg/kg/day)	Oral Slope Factor [1/(mg/kg/day)]	Weight of Evidence
Fluorene	4.00E-02	NA	
Phenanthrene	***4.00E-03***	***NA***	
Anthracene	3.00E-01	NA	
C1-phenanthrene + anthracene			
C2-phenanthrene + anthracene			
C3-phenanthrene + anthracene			
C4-phenanthrene + anthracene			
Fluoranthene	4.00E-02	NA	
Pyrene	3.00E-02		
Benzo(a)anthracene (0.1 TEF)	NA	7.30E-01	
Chrysene (0.0001 TEF)	NA	7.30E-04	
Sum of benzofluoranthenes			
Benzo(e)pyrene	NA	NA	
Benzo(a)pyrene (1.0 TEF)	NA	***7.30E+00***	B2
Perylene	NA	NA	
Indeno(1,2,3-cd)pyrene (0.1 TEF)	NA	7.30E-01	
Dibenz(a,h)anthracene (1.0 TEF)	NA	7.30E+00	
Benzo(g,h,i)perylene	4.00E-03	NA	D
Sum of measured PAHs			

TABLE 3-1
DOSE-RESPONSE PARAMETERS CHEMICALS OF POTENTIAL CONCERN

Chemical of Potential Concern	Oral Reference Dose (mg/kg/day)	Oral Slope Factor [1/(mg/kg/day)]	Weight of Evidence
8 (2 4') Congener number; position of chlorines			
18 (2 2' 5)			
28 (2 4 4')			
52 (2 2' 5 5')			
44 (2 2' 3 5')			
66 (2 3' 4 4')			
101 (2 2' 4 5 5')			
153 (2 2' 4 4' 5 5')			
105 (2 3 3' 4 4')			
138 (2 2' 3 4 4' 5)			
187 (2 2' 3 4' 5 5' 6)			
128 (2 2' 3 3' 4 4')			
180 (2 2' 3 4 4' 5 5')			
170 (2 2' 3 3' 4 4' 5)			
195 (2 2' 3 3' 4 4' 5 6)			
206 (2 2' 3 3' 4 4' 5 5' 6)			
209 (2 2' 3 3' 4 4' 5 5' 6 6')			
Sum of PCB Congeners.		7.70E+00	
Hexachlorobenzene	8.00E-04	***1.60E+00***	***B2***
Lindane (gamma-BHC)	3.00E-04	1.60E+00	
Alpha-chlordane	6.00E-05	1.30E+00	
Trans-nonachlor	NA	NA	
Heptachlor	5.00E-04	4.50E+00	
Heptachlor epoxide	1.30E-05	9.10E+00	
Mirex	2.00E-04	***1.8 "(under revision)"***	
o,p -DDD (2,4' -DDD)	NA	NA	
p,p -DDD (4,4'-DDD)	NA	2.40E-01	
o,p -DDE (2,4'-DDD)	NA	NA	
p,p -DDE (4,4'-DDE)	NA	3.40E-01	
o,p -DDT (2,4'-DDT)	NA	NA	
p,p -DDT (4.4'-DDT)	5.00E-04	3.40E-01	B2
Aldrin	3.00E-05	1.70E+01	B2

TABLE 4- 1
EXPOSURE ASSESSMENT INPUT PARAMETERS
(SEAFOOD INTAKE FACTORS)

Central Tendency for Nine year exposure		Exposure Frequency	Exposure Duration	Non-carcinogen Averaging Time	Carcinogen Average Time	Receptor Body Weight
	Ingestion Rate (Kg/meal	Meals per year	Years	Days	Days	Weight in Kg
Lobster tail and claw	0.095	6	9	3285	25550	70
Lobster hepatopancreas	0.019	6	9	3285	25550	70
						70
Flounder Filet	0.0324	350	9	3285	25550	70
Flounder Liver	0.019	350	9	3285	25550	70
Mussels	0.0324	350	9	3285	25550	70

TABLE 4- 1
EXPOSURE ASSESSMENT INPUT PARAMETERS
(SEAFOOD INTAKE FACTORS)

High End for 30 year exposure		Exposure Frequency	Exposure Duration	Non-carcinogen Averaging Time	Carcinogen Average Time	Receptor Body Weight
	Ingestion Rate (Kg/meal	Meals per year	Years	Days	Days	Weight in Kg
Lobster tail and claw	0.095	52	30	10950	25550	70
Lobster hepatopancreas	0.019	52	30	10950	25550	70
Flounder Filet	0.055	350	30	10950	25550	70
Flounder Liver	0.019	350	30	10950	25550	70
Mussels	0.055	350	30	10950	25550	70

TABLE 4-2A
SEAFOOD INTAKES LOBSTER TAIL AND CLAW
FOR CANCER AND NON-CANCER CALCULATIONS

Chemical of Potential Concern	Intake Carcinogenic Central Tendency Using Maximum Concentration Homarus americanus tail/claw Adult Lobster	Intake Carcinogenic Central Tendency Using 95% UCL Concentration Homarus americanus tail/claw Adult Lobster	Intake Carcinogenic High End Using Maximum Concentration Homarus americanus tail/claw Adult Lobster	Intake Carcinogenic High End Using 95% UCL Concentration Homarus americanus tail/claw Adult Lobster
	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day
Aluminum	1.37E-06	1.11E-06	3.95E-05	3.20E-05
Silver	4.61E-07	3.04E-07	1.33E-05	8.78E-06
10% of total Arsenic	1.68E-06	1.08E-06	4.85E-05	3.11E-05
Cadmium	1.72E-08	1.02E-08	4.96E-07	2.94E-07
assume Chromium III	2.16E-07	1.63E-07	6.23E-06	4.71E-06
assume Chromium IV	2.16E-07	1.63E-07	6.23E-06	4.71E-06
Copper	2.08E-05	1.41E-05	6.01E-04	4.07E-04
Iron	6.35E-06	3.49E-06	1.83E-04	1.01E-04
Manganese	1.47E-06	7.50E-07	4.25E-05	2.17E-05
Nickle	1.21E-07	1.15E-07	3.50E-06	3.34E-06
Lead	1.45E-07	5.84E-08	4.19E-06	1.69E-06
Zinc	8.24E-05	6.92E-05	2.38E-03	2.00E-03
Mercury (Inorganic)	9.28E-07	4.83E-07	2.68E-05	1.40E-05
Methyl-Mercury	8.72E-07	6.23E-07	2.52E-05	1.80E-05
Fluorene	2.67E-09	1.23E-09	7.72E-08	3.54E-08
Phenanthrene	1.33E-08	6.34E-09	3.85E-07	1.83E-07
Anthracene	1.84E-09	1.38E-09	5.32E-08	3.99E-08
C1-phenanthrene + anthracene	2.07E-08	9.32E-09	5.98E-07	2.69E-07
C2-phenanthrene + anthracene	2.88E-08	1.15E-08	8.33E-07	3.32E-07
C3-phenanthrene + anthracene	2.47E-08	1.06E-08	7.13E-07	3.06E-07
C4-phenanthrene + anthracene	2.47E-08	1.02E-08	7.13E-07	2.94E-07
Sum C1:C4-phenanthrene + anthracene	1.17E-07	4.16E-08	3.37E-06	1.20E-06
Fluoranthene	9.92E-08	3.42E-08	2.86E-06	9.87E-07
Pyrene	1.07E-07	4.36E-08	3.10E-06	1.26E-06
Benz(a)anthracene	1.16E-08	5.29E-09	3.36E-07	1.53E-07
Chrysene	1.76E-08	8.22E-09	5.08E-07	2.37E-07
Sum of benzofluoranthenes as benzo(b) fluoranthene	5.10E-08	2.07E-08	1.47E-06	5.97E-07
Benzo(e)pyrene	1.38E-08	6.91E-09	3.97E-07	2.00E-07
Benzo(a)pyrene	1.56E-08	7.31E-09	4.51E-07	2.11E-07
Perylene	4.62E-09	2.44E-09	1.34E-07	7.05E-08
Indeno(1,2,3-cd)pyrene	1.00E-08	4.40E-09	2.90E-07	1.27E-07
Dibenz(a,h)anthracene	9.87E-10	6.17E-10	2.85E-08	1.78E-08
Benzo(g,h,i)perylene	1.22E-08	6.32E-09	3.54E-07	1.82E-07
Sum of measured PAHs	4.51E-07	1.86E-07	1.30E-05	5.36E-06
Sum of Congeners.	1.86E-08	1.34E-08	5.37E-07	3.87E-07
Hexachlorobenzene	2.73E-10	2.14E-10	7.87E-09	6.19E-09
Lindane (gamma-BHC)	1.24E-09	7.83E-10	3.58E-08	2.26E-08
Alpha-chlordane as chlorodane	2.40E-10	1.83E-10	6.95E-09	5.30E-09
Trans-nonachlor	4.87E-10	3.24E-10	1.41E-08	9.36E-09
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00
o,p -DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDD	6.41E-10	4.36E-10	1.85E-08	1.26E-08
o,p -DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDE	3.07E-09	2.34E-09	8.86E-08	6.77E-08
o,p -DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDT	2.30E-10	2.04E-10	6.65E-09	5.88E-09
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TABLE 4-2A
SEAFOOD INTAKES LOBSTER TAIL AND CLAW
FOR CANCER AND NON-CANCER CALCULATIONS

Chemical of Potential Concern	Intake Non-carcinogenic Central Tendency Using Maximum Concentration Homarus americanus tail/claw Adult Lobster	Intake Non-carcinogenic Central Tendency Using 95% UCL Concentration Homarus americanus tail/claw Adult Lobster	Intake Non-carcinogenic High End Using Maximum Concentration Homarus americanus tail/claw Adult Lobster	Intake Non-carcinogenic High End Using 95% UCL Concentration Homarus americanus tail/claw Adult Lobster
	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day
Aluminum	1.06E-05	8.60E-06	9.19E-05	7.44E-05
Silver	3.58E-06	2.36E-06	3.10E-05	2.05E-05
10% of total Arsenic	1.31E-05	8.35E-06	1.13E-04	7.23E-05
Cadmium	1.33E-07	7.91E-08	1.15E-06	6.84E-07
assume Chromium III	1.68E-06	1.27E-06	1.45E-05	1.10E-05
assume Chromium IV	1.68E-06	1.27E-06	1.45E-05	1.10E-05
Copper	1.62E-04	1.10E-04	1.40E-03	9.48E-04
Iron	4.94E-05	2.71E-05	4.27E-04	2.35E-04
Manganese	1.14E-05	5.82E-06	9.89E-05	5.04E-05
Nickle	9.41E-07	8.97E-07	8.15E-06	7.77E-06
Lead	1.13E-06	4.54E-07	9.75E-06	3.93E-06
Zinc	6.40E-04	5.38E-04	5.54E-03	4.66E-03
Mercury (Inorganic)	7.21E-06	3.75E-06	6.24E-05	3.25E-05
Methyl-Mercury	6.77E-06	4.84E-06	5.86E-05	4.19E-05
Fluorene	2.08E-08	9.52E-09	1.80E-07	8.24E-08
Phenanthrene	1.04E-07	4.92E-08	8.96E-07	4.26E-07
Anthracene	1.43E-08	1.07E-08	1.24E-07	9.29E-08
C1-phenanthrene + anthracene	1.61E-07	7.24E-08	1.39E-06	6.27E-07
C2-phenanthrene + anthracene	2.24E-07	8.94E-08	1.94E-06	7.74E-07
C3-phenanthrene + anthracene	1.92E-07	8.22E-08	1.66E-06	7.12E-07
C4-phenanthrene + anthracene	1.92E-07	7.92E-08	1.66E-06	6.85E-07
Sum C1:C4-phenanthrene + anthracene	9.07E-07	3.23E-07	7.85E-06	2.80E-06
Fluoranthene	7.71E-07	2.65E-07	6.67E-06	2.30E-06
Pyrene	8.33E-07	3.39E-07	7.21E-06	2.93E-06
Benz(a)anthracene	9.03E-08	4.11E-08	7.82E-07	3.55E-07
Chrysene	1.37E-07	6.39E-08	1.18E-06	5.53E-07
Sum of benzofluoranthenes as benzo(b) fluoranthene	3.96E-07	1.61E-07	3.43E-06	1.39E-06
Benzo(e)pyrene	1.07E-07	5.37E-08	9.25E-07	4.65E-07
Benzo(a)pyrene	1.21E-07	5.68E-08	1.05E-06	4.91E-07
Perylene	3.59E-08	1.90E-08	3.11E-07	1.64E-07
Indeno(1,2,3-cd)pyrene	7.79E-08	3.42E-08	6.74E-07	2.96E-07
Dibenz(a,h)anthracene	7.67E-09	4.79E-09	6.63E-08	4.15E-08
Benzo(g,h,i)perylene	9.51E-08	4.91E-08	8.23E-07	4.25E-07
Sum of measured PAHs	3.51E-06	1.44E-06	3.04E-05	1.25E-05
Sum of Congeners.	1.44E-07	1.04E-07	1.25E-06	9.01E-07
Hexachlorobenzene	2.12E-09	1.67E-09	1.83E-08	1.44E-08
Lindane (gamma-BHC)	9.62E-09	6.09E-09	8.32E-08	5.27E-08
Alpha-chlordane as chlorodane	1.87E-09	1.43E-09	1.62E-08	1.23E-08
Trans-nonachlor	3.78E-09	2.52E-09	3.27E-08	2.18E-08
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00
o,p -DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDD	4.98E-09	3.39E-09	4.31E-08	2.93E-08
o,p -DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDE	2.38E-08	1.82E-08	2.06E-07	1.58E-07
o,p -DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDT	1.79E-09	1.58E-09	1.55E-08	1.37E-08
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TABLE 4-2B
SEAFOOD INTAKES LOBSTER HEPATOPANCREAS FOR CANCER AND NONCANCER RISK CALCULATIONS

Chemical of Potential Concern	Intake Carcinogenic Central Tendency Using Maximum Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Intake Carcinogenic Central Tendency Using 95% UCL Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Intake Carcinogenic High End Using Maximum Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Intake Carcinogenic High End Using 95% UCL Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster
	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day
Aluminum	4.32E-06	1.38E-06	1.25E-04	3.99E-05
Silver	3.26E-07	2.07E-07	9.44E-06	5.98E-06
10% of total Arsenic	6.56E-07	4.03E-07	1.90E-05	1.17E-05
Cadmium	5.70E-06	3.05E-06	1.65E-04	8.81E-05
assume Chromium IV	1.67E-07	7.78E-08	4.83E-06	2.25E-06
Copper	9.68E-05	9.35E-05	2.80E-03	2.70E-03
Iron	4.05E-05	2.81E-05	1.17E-03	8.12E-04
Manganese	2.34E-06	1.76E-06	6.77E-05	5.09E-05
Nickle	7.16E-07	2.79E-07	2.07E-05	8.07E-06
Zinc	2.91E-05	1.96E-05	8.41E-04	5.68E-04
Mercury (inorganic)	1.47E-07	6.49E-08	4.25E-06	1.88E-06
Methyl-Mercury	3.42E-08	3.15E-08	9.89E-07	9.12E-07
	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluorene	9.32E-09	4.76E-09	2.70E-07	1.38E-07
Phenanthrene	1.01E-07	3.19E-08	2.93E-06	9.23E-07
Anthracene	5.12E-08	1.26E-08	1.48E-06	3.66E-07
C1-phenanthrene + anthracene	1.16E-07	3.83E-08	3.35E-06	1.11E-06
C2-phenanthrene + anthracene	9.29E-08	3.61E-08	2.69E-06	1.04E-06
C3-phenanthrene + anthracene	6.30E-08	2.43E-08	1.82E-06	7.04E-07
C4-phenanthrene + anthracene	2.03E-08	1.16E-08	5.86E-07	3.36E-07
Sum C1:C4-phenanthrene + anthracene	2.92E-07	1.10E-07	8.44E-06	3.19E-06
Fluoranthene	2.55E-07	8.09E-08	7.37E-06	2.34E-06
Pyrene	1.60E-07	4.86E-08	4.63E-06	1.41E-06
Benz(a)anthracene	5.63E-08	1.49E-08	1.63E-06	4.31E-07
Chrysene	8.78E-08	2.76E-08	2.54E-06	7.97E-07
Sum of benzofluoranthenes as benzo(b) fluoranthene	1.25E-07	4.07E-08	3.62E-06	1.18E-06
Benzo(e)pyrene	5.76E-08	1.88E-08	1.67E-06	5.45E-07
Benzo(a)pyrene	1.06E-07	3.85E-08	3.07E-06	1.11E-06
Perylene	3.76E-08	2.15E-08	1.09E-06	6.22E-07
Indeno(1,2,3-cd)pyrene	2.37E-08	7.29E-09	6.86E-07	2.11E-07
Dibenz(a,h)anthracene	4.61E-09	1.52E-09	1.33E-07	4.39E-08
Benzo(g,h,i)perylene	3.47E-08	1.17E-08	1.00E-06	3.39E-07
Sum of measured PAHs	1.35E-06	4.37E-07	3.92E-05	1.26E-05
	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sum of Congeners.	3.62E-07	3.05E-07	1.05E-05	8.82E-06
	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexachlorobenzene	3.60E-09	2.64E-09	1.04E-07	7.65E-08
Lindane (gamma-BHC)	1.33E-09	1.10E-09	3.83E-08	3.17E-08
Alpha-chlordane as chlorodane	5.94E-09	3.81E-09	1.72E-07	1.10E-07
Trans-nonachlor	1.59E-08	1.05E-08	4.59E-07	3.03E-07
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00
o,p -DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDD	3.78E-08	1.89E-08	1.09E-06	5.46E-07
o,p -DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDE	2.08E-07	1.63E-07	6.03E-06	4.71E-06
o,p -DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDT	1.81E-08	9.71E-09	5.24E-07	2.81E-07
Aldrin				

TABLE 4-2B
SEAFOOD INTAKES LOBSTER HEPATOPANCREAS FOR CANCER AND NONCANCER RISK CALCULATIONS

Chemical of Potential Concern	Intake Non-carcinogenic Central Tendency Using Maximum Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Intake Non-carcinogenic Central Tendency Using 95% UCL Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Intake Non-carcinogenic High End Using Maximum Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Intake Non-carcinogenic High End Using 95% UCL Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster
	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day
Aluminum	3.35E-05	1.07E-05	2.91E-04	9.30E-05
Silver	2.54E-06	1.61E-06	2.20E-05	1.39E-05
10% of total Arsenic	5.10E-06	3.13E-06	4.43E-05	2.72E-05
Cadmium	4.43E-05	2.37E-05	3.84E-04	2.05E-04
assume Chromium IV	1.30E-06	6.05E-07	1.13E-05	5.25E-06
Copper	7.52E-04	7.26E-04	6.53E-03	6.30E-03
Iron	3.15E-04	2.18E-04	2.73E-03	1.89E-03
Manganese	1.82E-05	1.37E-05	1.58E-04	1.19E-04
Nickle	5.57E-06	2.17E-06	4.83E-05	1.88E-05
Zinc	2.26E-04	1.52E-04	1.96E-03	1.32E-03
Mercury (Inorganic)	1.14E-06	5.05E-07	9.90E-06	4.38E-06
Methyl-Mercury	2.66E-07	2.45E-07	2.31E-06	2.13E-06
	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluorene	7.24E-08	3.70E-08	6.29E-07	3.21E-07
Phenanthrene	7.86E-07	2.48E-07	6.82E-06	2.15E-06
Anthracene	3.98E-07	9.83E-08	3.45E-06	8.53E-07
C1-phenanthrene + anthracene	9.00E-07	2.97E-07	7.81E-06	2.58E-06
C2-phenanthrene + anthracene	7.22E-07	2.80E-07	6.26E-06	2.43E-06
C3-phenanthrene + anthracene	4.89E-07	1.89E-07	4.25E-06	1.64E-06
C4-phenanthrene + anthracene	1.57E-07	9.03E-08	1.37E-06	7.84E-07
Sum C1:C4-phenanthrene + anthracene	2.27E-06	8.57E-07	1.97E-05	7.44E-06
Fluoranthene	1.98E-06	6.28E-07	1.72E-05	5.45E-06
Pyrene	1.24E-06	3.78E-07	1.08E-05	3.28E-06
Benz(a)anthracene	4.38E-07	1.16E-07	3.80E-06	1.00E-06
Chrysene	6.82E-07	2.14E-07	5.92E-06	1.86E-06
Sum of benzofluoranthenes as benzo(b) fluoranthene	9.72E-07	3.16E-07	8.43E-06	2.74E-06
Benzo(e)pyrene	4.47E-07	1.46E-07	3.88E-06	1.27E-06
Benzo(a)pyrene	8.24E-07	2.99E-07	7.15E-06	2.60E-06
Perylene	2.92E-07	1.67E-07	2.54E-06	1.45E-06
Indeno(1,2,3-cd)pyrene	1.84E-07	5.67E-08	1.60E-06	4.92E-07
Dibenz(a,h)anthracene	3.58E-08	1.18E-08	3.11E-07	1.02E-07
Benzo(g,h,i)perylene	2.69E-07	9.11E-08	2.34E-06	7.90E-07
Sum of measured PAHs	1.05E-05	3.40E-06	9.13E-05	2.95E-05
	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sum of Congeners.	2.81E-06	2.37E-06	2.44E-05	2.06E-05
	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexachlorobenzene	2.79E-08	2.05E-08	2.42E-07	1.78E-07
Lindane (gamma-BHC)	1.03E-08	8.51E-09	8.93E-08	7.39E-08
Alpha-chlordane as chlorodane	4.62E-08	2.96E-08	4.01E-07	2.57E-07
Trans-nonachlor	1.23E-07	8.14E-08	1.07E-06	7.06E-07
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00
o,p -DDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDD	2.94E-07	1.47E-07	2.55E-06	1.27E-06
o,p -DDE	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDE	1.62E-06	1.27E-06	1.41E-05	1.10E-05
o,p -DDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p,p -DDT	1.41E-07	7.54E-08	1.22E-06	6.55E-07
Aldrin				

TABLE 4-2C
SEAFOOD INTAKES MUSSELS
FOR CANCER AND NON-CANCER CALCULATIONS

Chemical of Potential Concern	Intake Carcinogenic Central Tendency using Maximum Concentration Mytilus edulis mussel indigenous	Intake Carcinogenic Central Tendency using 95% UCL Mytilusius edulis mussel indigenous	Intake Carcinogenic High End using Maximum Concentration Mytilus edulis mussel indigenous	Intake Carcinogenic High End using 95% UCL Mytilusius edulis mussel indigenous
	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day
Aluminum	9.37E-03	4.83E-03	5.30E-02	2.73E-02
Silver	7.20E-06	3.17E-06	4.07E-05	1.79E-05
10% of total Arsenic	1.20E-05	9.36E-06	6.76E-05	5.30E-05
Cadmium	3.94E-05	2.24E-05	2.23E-04	1.27E-04
assume Chromium IV	9.11E-04	3.39E-04	5.15E-03	1.92E-03
Copper	3.15E-04	1.47E-04	1.78E-03	8.32E-04
Iron	1.97E-02	1.19E-02	1.11E-01	6.75E-02
Manganese	9.40E-03	0.00E+00	5.32E-02	0.00E+00
Nickle	1.07E-03	3.79E-04	6.06E-03	2.14E-03
Zinc	1.97E-03	1.08E-03	1.12E-02	6.08E-03
Mercury (inorganic)	4.30E-05	4.30E-05	2.43E-04	2.43E-04
Methyl-Mercury (no data use inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluorene	3.36E-06	4.24E-07	1.90E-05	2.40E-06
Phenanthrene	2.68E-05	2.51E-06	1.51E-04	1.42E-05
Anthracene	2.85E-06	4.31E-07	1.61E-05	2.44E-06
C1-phenanthrene + anthracene	1.35E-05	1.57E-06	7.66E-05	8.86E-06
C2-phenanthrene + anthracene	8.06E-06	1.43E-06	4.56E-05	8.09E-06
C3-phenanthrene + anthracene	3.52E-06	8.67E-07	1.99E-05	4.90E-06
C4-phenanthrene + anthracene	7.30E-06	1.27E-06	4.13E-05	7.21E-06
Sum C1:C4-phenanthrene + anthracene	3.24E-05	5.14E-06	1.83E-04	2.91E-05
Fluoranthene	4.15E-05	4.10E-06	2.35E-04	2.32E-05
Pyrene	2.78E-05	2.78E-05	1.58E-04	1.58E-04
Benz(a)anthracene	1.35E-05	1.40E-06	7.66E-05	7.91E-06
Chrysene	1.04E-05	1.24E-06	5.89E-05	6.99E-06
Sum of benzofluoranthenes as benzo(b) fluoranthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(e)pyrene	4.65E-06	7.48E-07	2.63E-05	4.23E-06
Benzo(a)pyrene	4.01E-06	5.07E-07	2.27E-05	2.87E-06
Perylene	1.38E-06	2.24E-07	7.80E-06	1.27E-06
Indeno(1,2,3-cd)pyrene	1.38E-06	3.53E-07	7.80E-06	2.00E-06
Dibenz(a,h)anthracene	4.72E-07	1.89E-07	2.67E-06	1.07E-06
Benzo(g,h,i)perylene	1.23E-06	3.13E-07	6.97E-06	1.77E-06
Sum of measured PAHs	1.69E-04	2.03E-05	9.56E-04	1.15E-04
	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sum of Congeners.	1.67E-06	5.71E-07	9.44E-06	3.23E-06
	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexachlorobenzene	7.80E-08	4.19E-08	4.41E-07	2.37E-07
Lindane (gamma-BHC)	6.94E-09	6.76E-09	3.93E-08	3.82E-08
Alpha-chlordane as chlorodane	1.37E-08	1.37E-08	7.73E-08	7.73E-08
Trans-nonachlor	2.41E-08	2.41E-08	1.37E-07	1.37E-07
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	1.45E-08	1.37E-08	8.19E-08	7.75E-08
Mirex	3.50E-09	3.39E-09	1.98E-08	1.92E-08
o,p -DDD	1.49E-07	2.33E-08	8.44E-07	1.32E-07
p,p -DDD	1.60E-07	5.61E-08	9.05E-07	3.17E-07
o,p -DDE	1.80E-08	4.50E-09	1.02E-07	2.55E-08
p,p -DDE	1.93E-07	8.90E-08	1.09E-06	5.04E-07
o,p -DDT	4.98E-08	1.72E-08	2.81E-07	9.72E-08
p,p -DDT	2.78E-07	1.33E-07	1.57E-06	7.50E-07
Aldrin	5.26E-09	5.10E-09	2.97E-08	2.89E-08

TABLE 4-2C
SEAFOOD INTAKES MUSSELS
FOR CANCER AND NON-CANCER CALCULATIONS

Chemical of Potential Concern	Intake Non-Carcinogenic Central Tendency using Maximum concentration Mytilus edulis mussel indigenous	Intake Non-carcinogenic Central Tendency using 95% UCL Mytilusius edulis mussel indigenous	Intake Non-carcinogenic Central Tendency using average Mytilusius edulis mussel indigenous	Intake Non-carcinogenic High End using Maximum concentration Mytilus edulis mussel indigenous	Intake Non-Carcinogenic High End using 95% UCL Mytilusius edulis mussel indigenous
	mg/kg/day	mg/kg/day		mg/kg/day	mg/kg/day
Aluminum	7.29E-02	3.75E-02		1.24E-01	6.37E-02
Silver	5.60E-05	2.47E-05		9.50E-05	4.18E-05
10% of total Arsenic	9.30E-05	7.28E-05		1.58E-04	1.23E-04
Cadmium	3.06E-04	1.74E-04		5.19E-04	2.96E-04
assume Chromium IV	7.08E-03	2.64E-03		1.20E-02	4.47E-03
Copper	2.45E-03	1.14E-03		4.16E-03	1.94E-03
Iron	1.53E-01	9.28E-02		2.60E-01	1.57E-01
Manganese	7.31E-02	0.00E+00		1.24E-01	0.00E+00
Nickle	8.33E-03	2.95E-03		1.41E-02	4.99E-03
Zinc	1.53E-02	8.36E-03		2.60E-02	1.42E-02
Mercury (Inorganic)	3.35E-04	3.35E-04	3.29E-05	5.67E-04	5.67E-04
Methyl-Mercury (no data use Inorganic)	0.00E+00	0.00E+00		0.00E+00	0.00E+00
	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Fluorene	2.62E-05	3.29E-06		4.44E-05	5.59E-06
Phenanthrene	2.08E-04	1.95E-05		3.53E-04	3.31E-05
Anthracene	2.22E-05	3.35E-06		3.76E-05	5.68E-06
C1-phenanthrene + anthracene	1.05E-04	1.22E-05		1.78E-04	2.07E-05
C2-phenanthrene + anthracene	6.27E-05	1.11E-05		1.06E-04	1.89E-05
C3-phenanthrene + anthracene	2.74E-05	6.74E-06		4.64E-05	1.14E-05
C4-phenanthrene + anthracene	5.68E-05	9.91E-06		9.63E-05	1.68E-05
Sum C1:C4-phenanthrene + anthracene	2.52E-04	3.99E-05		4.27E-04	6.77E-05
Fluoranthene	3.22E-04	3.19E-05		5.47E-04	5.41E-05
Pyrene	2.17E-04	2.17E-04	1.29E-05	3.67E-04	3.67E-04
Benz(a)anthracene	1.05E-04	1.09E-05		1.78E-04	1.84E-05
Chrysene	8.09E-05	9.60E-06		1.37E-04	1.63E-05
Sum of benzofluoranthenes as benzo(b) fluoranthene	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Benzo(e)pyrene	3.61E-05	5.82E-06		6.13E-05	9.87E-06
Benzo(a)pyrene	3.12E-05	3.94E-06		5.29E-05	6.69E-06
Perylene	1.07E-05	1.74E-06		1.82E-05	2.95E-06
Indeno(1,2,3-cd)pyrene	1.07E-05	2.74E-06		1.82E-05	4.65E-06
Dibenz(a,h)anthracene	3.67E-06	1.47E-06		6.23E-06	2.49E-06
Benzo(g,h,i)perylene	9.57E-06	2.44E-06		1.62E-05	4.13E-06
Sum of measured PAHs	1.31E-03	1.59E-04		2.23E-03	2.67E-04
	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Sum of Congeners.	1.30E-05	4.44E-06		2.20E-05	7.53E-06
	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Hexachlorobenzene	6.07E-07	3.26E-07		1.03E-06	5.53E-07
Lindane (gamma-BHC)	5.40E-08	5.26E-08		9.15E-08	8.91E-08
Alpha-chlordane as chlorodane	1.06E-07	1.06E-07		1.80E-07	1.80E-07
Trans-nonachlor	1.88E-07	1.88E-07		3.18E-07	3.18E-07
Heptachlor	0.00E+00	0.00E+00		0.00E+00	0.00E+00
Heptachlor epoxide	1.13E-07	1.07E-07		1.91E-07	1.81E-07
Mirex	2.72E-08	2.63E-08		4.62E-08	4.47E-08
o,p -DDD	1.16E-06	1.81E-07		1.97E-06	3.07E-07
p,p -DDD	1.24E-06	4.36E-07		2.11E-06	7.40E-07
o,p -DDE	1.40E-07	3.50E-08		2.37E-07	5.94E-08
p,p -DDE	1.50E-06	6.92E-07		2.54E-06	1.17E-06
o,p -DDT	3.87E-07	1.34E-07		6.56E-07	2.27E-07
p,p -DDT	2.16E-06	1.03E-06		3.66E-06	1.75E-06
Aldrin	4.09E-08	3.97E-08		6.93E-08	6.73E-08

TABLE 4-2D
SEAFOOD INTAKES FLOUNDER FILET FOR CANCER AND NON-CANCER CALCULATIONS

Chemical of Potential Concern	Intake Carcinogenic Central tendency using Maximum Concentration for Pseudo-pleuronectes americanus filet flounder flesh	Intake Carcinogenic Central Tendency using 95% UCL concentration Pseudo-pleuronectes americanus filet flounder flesh	Intake Carcinogenic High End using Maximum Concentration for Pseudo-pleuronectes americanus filet flounder flesh	Intake Carcinogenic Central Tendency using Average concentration Pseudo-pleuronectes americanus filet flounder flesh	Intake Carcinogenic High End using 95% UCL Concentration Pseudo-pleuronectes americanus filet flounder flesh
	mg/kg/day	mg/kg/day	mg/kg/day		mg/kg/day
Aluminum	4.54E-05	2.90E-05	2.57E-04		1.64E-04
Silver	1.87E-06	1.77E-06	1.06E-05		1.00E-05
10% of total Arsenic	5.78E-04	3.15E-04	3.27E-03		1.78E-03
Cadmium	2.34E-07	1.92E-07	1.33E-06		1.09E-06
assume Chromium III	4.10E-06	3.30E-06	2.32E-05		1.87E-05
assume Chromium IV	4.10E-06	3.30E-06	2.32E-05		1.87E-05
Copper	5.93E-06	3.82E-06	3.36E-05		2.16E-05
Iron	8.83E-05	6.46E-05	4.99E-04		3.65E-04
Manganese	1.41E-06	1.32E-06	7.95E-06		7.48E-06
Nickle	2.44E-05	1.60E-05	1.38E-04		9.07E-05
Lead	1.36E-06	9.72E-07	7.69E-06		5.50E-06
Zinc	2.15E-04	1.84E-04	1.22E-03		1.04E-03
Mercury (Inorganic)	5.47E-06	4.00E-06	3.09E-05		2.26E-05
Methyl-Mercury	4.05E-06	4.05E-06	2.29E-05	2.28E-05	2.29E-05
	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Fluorene	1.51E-08	1.17E-08	8.55E-08		6.61E-08
Phenanthrene	3.36E-08	3.12E-08	1.90E-07		1.77E-07
Anthracene	3.34E-08	2.59E-08	1.89E-07		1.46E-07
C1-phenanthrene + anthracene	3.94E-08	3.23E-08	2.23E-07		1.83E-07
C2-phenanthrene + anthracene	2.44E-08	1.98E-08	1.38E-07		1.12E-07
C3-phenanthrene + anthracene	2.98E-08	2.98E-08	1.69E-07		1.69E-07
C4-phenanthrene + anthracene	5.98E-08	4.49E-08	3.38E-07		2.54E-07
Sum C1:C4-phenanthrene + anthracene	1.54E-07	1.27E-07	8.68E-07		7.17E-07
Fluoranthene	1.57E-08	1.33E-08	8.88E-08		7.52E-08
Pyrene	3.40E-08	2.78E-08	1.92E-07		1.57E-07
Benz(a)anthracene	3.34E-08	3.22E-08	1.89E-07		1.82E-07
Chrysene	3.37E-08	3.19E-08	1.90E-07		1.80E-07
Sum of benzofluoranthenes as benzo(b) fluoranthene	1.23E-08	1.13E-08	6.98E-08		6.39E-08
Benzo(e)pyrene	1.09E-08	9.95E-09	6.19E-08		5.63E-08
Benzo(a)pyrene	1.00E-08	7.51E-09	5.66E-08		4.25E-08
Perylene	6.12E-08	5.65E-08	3.46E-07		3.19E-07
Indeno(1,2,3-cd)pyrene	3.47E-09	2.71E-09	1.96E-08		1.53E-08
Dibenz(a,h)anthracene	7.73E-08	7.07E-08	4.37E-07		4.00E-07
Benzo(g,h,i)perylene	3.00E-09	2.62E-09	1.70E-08	1.13E-08	1.48E-08
Sum of measured PAHs	2.53E-07	2.28E-07	1.43E-06		1.29E-06
Sum of Congeners.	2.77E-06	1.30E-06	1.57E-05		7.37E-06
Hexachlorobenzene	8.72E-09	6.33E-09	4.93E-08		3.58E-08
Lindane (gamma-BHC)	1.27E-08	5.86E-09	7.21E-08		3.32E-08
Alpha-chlordane as chlorodane	2.61E-08	1.57E-08	1.48E-07		8.88E-08
Trans-nonachlor	6.16E-08	3.62E-08	3.49E-07		2.05E-07
Heptachlor	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Mirex	0.00E+00	0.00E+00	0.00E+00		0.00E+00
o,p -DDD	0.00E+00	0.00E+00	0.00E+00		0.00E+00
p,p -DDD	4.32E-08	2.86E-08	2.44E-07		1.62E-07
o,p -DDE	0.00E+00	0.00E+00	0.00E+00		0.00E+00
p,p -DDE	4.46E-07	1.78E-07	2.52E-06		1.01E-06
o,p -DDT	0.00E+00	0.00E+00	0.00E+00		0.00E+00
p,p -DDT	9.63E-09	8.33E-09	5.45E-08		4.71E-08
Aldrin					

TABLE 4-2D
SEAFOOD INTAKES FLOUNDER FILET FOR CANCER AND NON-CANCER CALCULATIONS

Chemical of Potential Concern	Intake Non-carcinogenic Central tendency using Maximum Concentration for Pseudo-pleuronectes americanus filet flounder flesh	Intake Non-carcinogenic Central Tendency using Average Concentration Pseudo-pleuronectes americanus filet flounder flesh	Intake Non-carcinogenic Central Tendency using 95% UCL Concentration Pseudo-pleuronectes americanus filet flounder flesh	Intake Non-carcinogenic High End using Maximum Concentration for Pseudo-pleuronectes americanus filet flounder flesh	Intake Non-carcinogenic High End using 95% UCL Concentration Pseudo-pleuronectes americanus filet flounder flesh
	mg/kg/day		mg/kg/day	mg/kg/day	mg/kg/day
Aluminum	3.53E-04		2.25E-04	5.98E-04	3.82E-04
Silver	1.45E-05		1.38E-05	2.47E-05	2.33E-05
10% of total Arsenic	4.49E-03		2.45E-03	7.62E-03	4.16E-03
Cadmium	1.82E-06		1.50E-06	3.09E-06	2.54E-06
assume Chromium III	3.19E-05		2.57E-05	5.41E-05	4.35E-05
assume Chromium IV	3.19E-05		2.57E-05	5.41E-05	4.35E-05
Copper	4.61E-05		2.97E-05	7.83E-05	5.03E-05
Iron	6.86E-04		5.02E-04	1.16E-03	8.51E-04
Manganese	1.09E-05		1.03E-05	1.85E-05	1.74E-05
Nickle	1.90E-04		1.25E-04	3.22E-04	2.11E-04
Lead	1.06E-05		7.58E-06	1.79E-05	1.28E-05
Zinc	1.67E-03		1.43E-03	2.84E-03	2.43E-03
Mercury (Inorganic)	4.25E-05		3.11E-05	7.21E-05	5.27E-05
Methyl-Mercury	3.15E-05	2.28E-05	3.15E-05	5.35E-05	5.35E-05
	0.00E+00		0.00E+00	0.00E+00	0.00E+00
Fluorene	1.18E-07		9.09E-08	1.99E-07	1.54E-07
Phenanthrene	2.61E-07		2.43E-07	4.43E-07	4.12E-07
Anthracene	2.60E-07		2.01E-07	4.40E-07	3.41E-07
C1-phenanthrene + anthracene	3.06E-07		2.51E-07	5.20E-07	4.26E-07
C2-phenanthrene + anthracene	1.90E-07		1.54E-07	3.22E-07	2.61E-07
C3-phenanthrene + anthracene	2.32E-07		2.32E-07	3.93E-07	3.93E-07
C4-phenanthrene + anthracene	4.65E-07		3.49E-07	7.89E-07	5.92E-07
Sum C1:C4-phenanthrene + anthracene	1.19E-06		9.86E-07	2.02E-06	1.67E-06
Fluoranthene	1.22E-07		1.03E-07	2.07E-07	1.75E-07
Pyrene	2.65E-07		2.16E-07	4.49E-07	3.67E-07
Benz(a)anthracene	2.60E-07		2.51E-07	4.40E-07	4.25E-07
Chrysene	2.62E-07		2.48E-07	4.44E-07	4.20E-07
Sum of benzofluoranthenes as benzo(b) fluoranthene	9.59E-08		8.78E-08	1.63E-07	1.49E-07
Benzo(e)pyrene	8.51E-08		7.73E-08	1.44E-07	1.31E-07
Benzo(a)pyrene	7.78E-08		5.84E-08	1.32E-07	9.90E-08
Perylene	4.76E-07		4.39E-07	8.07E-07	7.45E-07
Indeno(1,2,3-cd)pyrene	2.70E-08		2.11E-08	4.58E-08	3.57E-08
Dibenz(a,h)anthracene	6.01E-07		5.50E-07	1.02E-06	9.32E-07
Benzo(g,h,i)perylene	2.33E-08		2.04E-08	3.96E-08	3.45E-08
Sum of measured PAHs	1.97E-06		1.77E-06	3.34E-06	3.00E-06
Sum of Congeners.	2.15E-05		1.01E-05	3.65E-05	1.72E-05
Hexachlorobenzene	6.78E-08		4.92E-08	1.15E-07	8.34E-08
Lindane (gamma-BHC)	9.91E-08		4.56E-08	1.68E-07	7.73E-08
Alpha-chlordane as chlorodane	2.03E-07		1.22E-07	3.44E-07	2.07E-07
Trans-nonachlor	4.79E-07		2.81E-07	8.13E-07	4.77E-07
Heptachlor	0.00E+00		0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00		0.00E+00	0.00E+00	0.00E+00
Mirex	0.00E+00		0.00E+00	0.00E+00	0.00E+00
o,p -DDD	0.00E+00		0.00E+00	0.00E+00	0.00E+00
p,p -DDD	3.36E-07		2.22E-07	5.69E-07	3.77E-07
o,p -DDE	0.00E+00		0.00E+00	0.00E+00	0.00E+00
p,p -DDE	3.47E-06		1.39E-06	5.88E-06	2.35E-06
o,p -DDT	0.00E+00		0.00E+00	0.00E+00	0.00E+00
p,p -DDT	7.49E-08		6.48E-08	1.27E-07	1.10E-07
Aldrin					

TABLE 4-2E
SEAFOOD INTAKES FLOUNDER LIVER
FOR CANCER AND NON-CANCER CALCULATIONS

Chemical of Potential Concern	Intake Carcinogenic Central tendency using Maximum Concentration for Pseudo-pleuronectes americanus liver flounder liver	Intake Carcinogenic Central Tendency using 95% UCL concentration Pseudo-pleuronectes americanus Liver flounder Liver	Intake Carcinogenic High End using Maximum Concentration for Pseudo-pleuronectes americanus Liver flounder Liver	Intake Carcinogenic High End using 95% UCL Concentration Pseudo-pleuronectes americanus liver flounder liver
	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day
Aluminum	8.93465E-05	7.86239E-05	0.000298711	0.000262862
Silver	8.64929E-05	5.34078E-05	0.00028917	0.000178557
10% of total Arsenic	2.95198E-05	1.84058E-05	9.86929E-05	6.15358E-05
Cadmium	4.10325E-05	2.52751E-05	0.000137183	8.45018E-05
assume Chromium IV	3.93597E-06	3.65099E-06	1.31591E-05	1.22063E-05
Copper	0.001033192	0.000614425	0.003454253	0.002054198
Iron	0.011670147	0.011670147	0.039016611	0.039016611
Manganese	0.000102335	6.86499E-05	0.000342136	0.000229516
Nickle	5.94331E-05	3.55847E-05	0.000198702	0.00011897
Zinc	0.00129887	0.001204489	0.00434249	0.004026948
Mercury (Inorganic)	2.41396E-06	2.00455E-06	8.07055E-06	6.70179E-06
Methyl-Mercury	1.02183E-06	1.02183E-06	3.41628E-06	3.41628E-06
Fluorene	4.12851E-08	3.58839E-08	1.38028E-07	1.1997E-07
Phenanthrene	1.02013E-07	8.9111E-08	3.41057E-07	2.97923E-07
Anthracene	2.95526E-08	2.76525E-08	9.88028E-08	9.24501E-08
C1-phenanthrene + anthracene	1.3109E-07	8.34998E-08	4.38272E-07	2.79163E-07
C2-phenanthrene + anthracene	1.35034E-07	8.87667E-08	4.51459E-07	2.96772E-07
C3-phenanthrene + anthracene	2.19154E-07	1.2071E-07	7.32695E-07	4.03566E-07
C4-phenanthrene + anthracene	1.66026E-07	9.93879E-08	5.55072E-07	3.32282E-07
Sum C1:C4-phenanthrene + anthracene	6.51305E-07	3.92364E-07	2.1775E-06	1.31178E-06
Fluoranthene	7.48429E-08	4.74926E-08	2.50221E-07	1.58781E-07
Pyrene	1.91955E-07	1.35568E-07	6.4176E-07	4.53241E-07
Benz(a)anthracene	3.2553E-08	2.93944E-08	1.08834E-07	9.82737E-08
Chrysene	4.03E-08	3.2992E-08	1.34734E-07	1.10302E-07
Sum of benzofluoranthenes as benzo(b) fluoranthene	3.80753E-08	3.35509E-08	1.27297E-07	1.1217E-07
Benzo(e)pyrene	4.58817E-08	3.7726E-08	1.53395E-07	1.26129E-07
Benzo(a)pyrene	3.24304E-07	1.30143E-07	1.08424E-06	4.35105E-07
Perylene	5.47886E-08	3.89553E-08	1.83174E-07	1.30239E-07
Indeno(1,2,3-cd)pyrene	5.42549E-08	4.26221E-08	1.8139E-07	1.42498E-07
Dibenz(a,h)anthracene	4.53409E-08	3.72895E-08	1.51588E-07	1.24669E-07
Benzo(g,h,i)perylene	1.76174E-09	1.53622E-09	5.88999E-09	5.13803E-09
Sum of measured PAHs	1.4866E-07	1.33511E-07	4.97011E-07	4.46364E-07
Sum of Congeners.	1.25468E-05	1.03856E-05	4.19476E-05	3.47219E-05
Hexachlorobenzene	5.88929E-08	4.53232E-08	1.96898E-07	1.51528E-07
Lindane (gamma-BHC)	6.1116E-08	3.33512E-08	2.04328E-07	1.11502E-07
Alpha-chlordane as chlorodane	3.20909E-07	2.22467E-07	1.07289E-06	7.43769E-07
Trans-nonachlor	9.25742E-07	6.43447E-07	3.09502E-06	2.15123E-06
Heptachlor				
Heptachlor epoxide				
Mirex				
o,p -DDD				
p,p -DDD	5.71631E-07	4.94528E-07	1.91112E-06	1.65335E-06
o,p -DDE				
p,p -DDE	1.60594E-06	1.37639E-06	5.36911E-06	4.60166E-06
o,p -DDT				
p,p -DDT	1.61417E-07	1.25889E-07	5.39664E-07	4.20883E-07
Aldrin				

TABLE 4-2E
SEAFOOD INTAKES FLOUNDER LIVER
FOR CANCER AND NON-CANCER CALCULATIONS

Chemical of Potential Concern	Intake Non-carcinogenic Central tendency using Maximum Concentration for Pseudo-pleuronectes americanus liver flounder liver	Intake Non-carcinogenic Central Tendency using 95% UCL Concentration Pseudo-pleuronectes americanus liver flounder liver	Intake Non-carcinogenic High End using Maximum Concentration for Pseudo-pleuronectes americanus liver flounder liver	Intake Non-carcinogenic High End using 95% UCL Concentration Pseudo-pleuronectes americanus liver flounder liver
	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day
Aluminum	0.000693435	0.000610215	0.000693435	0.000610215
Silver	0.000671288	0.000414508	0.000671288	0.000414508
10% of total Arsenic	0.000229109	0.000142851	0.000229109	0.000142851
Cadmium	0.000318461	0.000196165	0.000318461	0.000196165
assume Chromium IV	3.05478E-05	2.83361E-05	3.05478E-05	2.83361E-05
Copper	0.008018802	0.004768673	0.008018802	0.004768673
Iron	0.090574276	0.090574276	0.090574276	0.090574276
Manganese	0.000794243	0.000532806	0.000794243	0.000532806
Nickle	0.000461272	0.00027618	0.000461272	0.00027618
Zinc	0.010080779	0.009348273	0.010080779	0.009348273
Mercury (Inorganic)	1.87352E-05	1.55577E-05	1.87352E-05	1.55577E-05
Methyl-Mercury	7.93065E-06	7.93065E-06	7.93065E-06	7.93065E-06
Fluorene	3.20422E-07	2.78502E-07	3.20422E-07	2.78502E-07
Phenanthrene	7.91739E-07	6.91607E-07	7.91739E-07	6.91607E-07
Anthracene	2.29364E-07	2.14616E-07	2.29364E-07	2.14616E-07
C1-phenanthrene + anthracene	1.01742E-06	6.48058E-07	1.01742E-06	6.48058E-07
C2-phenanthrene + anthracene	1.04803E-06	6.68936E-07	1.04803E-06	6.68936E-07
C3-phenanthrene + anthracene	1.7009E-06	9.36851E-07	1.7009E-06	9.36851E-07
C4-phenanthrene + anthracene	1.28856E-06	7.71368E-07	1.28856E-06	7.71368E-07
Sum C1:C4-phenanthrene + anthracene	5.05491E-06	3.04521E-06	5.05491E-06	3.04521E-06
Fluoranthene	5.8087E-07	3.68599E-07	5.8087E-07	3.68599E-07
Pyrene	1.4898E-06	1.05217E-06	1.4898E-06	1.05217E-06
Benz(a)anthracene	2.5265E-07	2.28135E-07	2.5265E-07	2.28135E-07
Chrysene	3.12776E-07	2.56057E-07	3.12776E-07	2.56057E-07
Sum of benzofluoranthenes as benzo(b) fluoranthene	2.9551E-07	2.60395E-07	2.9551E-07	2.60395E-07
Benzo(e)pyrene	3.56096E-07	2.92799E-07	3.56096E-07	2.92799E-07
Benzo(a)pyrene	2.51699E-06	1.01006E-06	2.51699E-06	1.01006E-06
Perylene	4.25225E-07	3.0234E-07	4.25225E-07	3.0234E-07
Indeno(1,2,3-cd)pyrene	4.21083E-07	3.30798E-07	4.21083E-07	3.30798E-07
Dibenz(a,h)anthracene	3.519E-07	2.89411E-07	3.519E-07	2.89411E-07
Benzo(g,h,i)perylene	1.36732E-08	1.19229E-08	1.36732E-08	1.19229E-08
Sum of measured PAHs	1.15378E-06	1.0362E-06	1.15378E-06	1.0362E-06
Sum of Congeners.	9.73784E-05	8.06044E-05	9.73784E-05	8.06044E-05
Hexachlorobenzene	4.57079E-07	3.51762E-07	4.57079E-07	3.51762E-07
Lindane (gamma-BHC)	4.74334E-07	2.58845E-07	4.74334E-07	2.58845E-07
Alpha-chlordane as chlorodane	2.49064E-06	1.72661E-06	2.49064E-06	1.72661E-06
Trans-nonachlor	7.18486E-06	4.99392E-06	7.18486E-06	4.99392E-06
Heptachlor				
Heptachlor epoxide				
Mirex				
o,p -DDD				
p,p -DDD	4.43654E-06	3.83813E-06	4.43654E-06	3.83813E-06
o,p -DDE				
p,p -DDE	1.2464E-05	1.06824E-05	1.2464E-05	1.06824E-05
o,p -DDT				
p,p -DDT	1.25279E-06	9.7705E-07	1.25279E-06	9.7705E-07
Aldrin				

TABLE 5-1A
ESTIMATED CANCER AND NON-CANCER RISK FOR MEAT FROM LOBSTER TAIL AND CLAW

Chemical of Potential Concern	Carcinogenic Central Tendency Risk Using Maximum Concentration Homarus americanus tail/claw Adult Lobster	Carcinogenic Central Tendency Risk Using 95% UCL Concentration Homarus americanus tail/claw Adult Lobster	Carcinogenic High End Estimated Risk Using Maximum Concentration Homarus americanus tail/claw Adult Lobster	Carcinogenic High End Estimate Risk Using 95% UCL Concentration Homarus americanus tail/claw Adult Lobster
	Intake * CSF	Intake * CSF	Intake * CSF	Intake * CSF
Aluminum				
Silver				
10% of total Arsenic	2.52E-06	1.61E-06	7.28E-05	4.66E-05
Cadmium				
assume Chromium III				
assume Chromium IV				
Copper				
Iron				
Manganese				
Nickle				
Lead				
Zinc				
Mercury (Inorganic)				
Methyl-Mercury				
Fluorene				
Phenanthrene				
Anthracene				
C1-phenanthrene + anthracene				
C2-phenanthrene + anthracene				
C3-phenanthrene + anthracene				
C4-phenanthrene + anthracene				
Sum C1:C4-phenanthrene + anthracene				
Fluoranthene				
Pyrene				
Benz(a)anthracene	8.49E-09	3.86E-09	2.45E-07	1.11E-07
Chrysene	1.28E-11	6.00E-12	3.71E-10	1.73E-10
Sum of benzofluoranthenes as benzo(b) fluoranthene				
Benzo(e)pyrene				
Benzo(a)pyrene	1.14E-07	5.33E-08	3.29E-06	1.54E-06
Perylene				
Indeno(1,2,3-cd)pyrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenz(a,h)anthracene	7.20E-09	4.50E-09	2.08E-07	1.30E-07
Benzo(g,h,i)perylene				
Sum of measured PAHs				
Sum of Congeners.	1.43E-07	1.03E-07	4.14E-06	2.98E-06
Hexachlorobenzene	4.36E-10	3.43E-10	1.26E-08	9.90E-09
Lindane (gamma-BHC)	1.98E-09	1.25E-09	5.72E-08	3.62E-08
Alpha-chlordane as chlorodane	3.13E-10	2.38E-10	9.03E-09	6.89E-09
Trans-nonachlor				
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mirex				
o,p -DDD				
p,p -DDD	1.54E-10	1.05E-10	4.45E-09	3.03E-09
o,p -DDE				
p,p -DDE	1.04E-09	7.96E-10	3.01E-08	2.30E-08
o,p -DDT				
p,p -DDT	7.83E-11	6.92E-11	2.26E-09	2.00E-09
Aldrin				
	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)
	2.80E-06	1.78E-06	8.08E-05	5.14E-05
	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)
	2.53E-06	1.62E-06	7.30E-05	4.67E-05

TABLE 5-1A
ESTIMATED CANCER AND NON-CANCER RISK FOR MEAT FROM LOBSTER TAIL AND CLAW

Chemical of Potential Concern	Non-carcinogenic Central Tendency Risk Using Maximum Concentration Homarus americanus tail/claw Adult Lobster	Non-carcinogenic Central Tendency Risk Using 95% UCL Concentration Homarus americanus tail/claw Adult Lobster	Non-carcinogenic High End Risk Using Maximum Concentration Homarus americanus tail/claw Adult Lobster	Non-carcinogenic High End Risk Using 95% UCL Concentration Homarus americanus tail/claw Adult Lobster
	Intake/RfD	Intake/Rfd	Intake/Rfd	Intake/Rfd
Aluminum	3.66E-06	2.97E-06	3.17E-05	2.57E-05
Silver	7.16E-03	4.73E-03	6.20E-02	4.09E-02
10% of total Arsenic	4.35E-02	2.78E-02	3.77E-01	2.41E-01
Cadmium	1.33E-04	7.91E-05	1.15E-03	6.84E-04
assume Chromium III	3.35E-04	2.53E-04	2.90E-03	2.19E-03
assume Chromium IV				
Copper	4.37E-03	2.96E-03	3.78E-02	2.56E-02
Iron				
Manganese	1.14E-04	5.82E-05	9.89E-04	5.04E-04
Nickle	4.71E-05	4.49E-05	4.07E-04	3.88E-04
Lead				
Zinc	3.20E-03	2.69E-03	2.77E-02	2.33E-02
Mercury (Inorganic)				
Methyl-Mercury	1.13E-01	8.07E-02	9.77E-01	6.99E-01
Fluorene	5.19E-07	2.38E-07	4.49E-06	2.06E-06
Phenanthrene	2.59E-05	1.23E-05	2.24E-04	1.07E-04
Anthracene	4.77E-08	3.58E-08	4.13E-07	3.10E-07
C1-phenanthrene + anthracene				
C2-phenanthrene + anthracene				
C3-phenanthrene + anthracene				
C4-phenanthrene + anthracene				
Sum C1:C4-phenanthrene + anthracene				
Fluoranthene	1.93E-06	6.64E-07	1.67E-05	5.74E-06
Pyrene	2.78E-06	1.13E-06	2.40E-05	9.78E-06
Benz(a)anthracene				
Chrysene				
Sum of benzofluoranthenes as benzo(b) fluoranthene				
Benzo(e)pyrene				
Benzo(a)pyrene				
Perylene				
Indeno(1,2,3-cd)pyrene				
Dibenz(a,h)anthracene				
Benzo(g,h,i)perylene	2.38E-05	1.23E-05	2.06E-04	1.06E-04
Sum of measured PAHs				
Sum of Congeners.				
Hexachlorobenzene	2.65E-06	2.08E-06	2.29E-05	1.80E-05
Lindane (gamma-BHC)	3.21E-05	2.03E-05	2.77E-04	1.76E-04
Alpha-chlordane as chlorodane	3.11E-05	2.38E-05	2.70E-04	2.06E-04
Trans-nonachlor				
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00
o,p -DDD				
p,p -DDD				
o,p -DDE				
p,p -DDE				
o,p -DDT				
p,p -DDT	3.58E-06	3.16E-06	3.10E-05	2.74E-05
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Non-cancer risk Hazard Quotient not adjusted for target organ	Non-cancer risk Hazard Quotient not adjusted for target organ	Non-cancer risk Hazard Quotient not adjusted for target organ	Non-cancer risk Hazard Quotient not adjusted for target organ
	0.171574	0.119476	1.487522	1.034026

TABLE 5-1B
ESTIMATED CANCER AND NON-CANCER RISK FOR LOBSTER HEPATOPANCREAS (TOMALLEY)

Chemical of Potential Concern	Carcinogenic Central Tendency Risk Using Maximum Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Carcinogenic Central Tendency Risk Using 95% UCL Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Carcinogenic High End Risk Using Maximum Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Carcinogenic High End Risk Using 95% UCL Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster
	Intake * CSF	Intake * CSF	Intake * CSF	Intake * CSF
Aluminum				
Silver				
10% of total Arsenic	9.85E-07	6.04E-07	2.85E-05	1.75E-05
Cadmium				
assume Chromium IV				
Copper				
Iron				
Manganese				
Nickle				
Zinc				
Mercury (Inorganic)				
Methyl-Mercury				
Fluorene				
Phenanthrene				
Anthracene				
C1-phenanthrene + anthracene				
C2-phenanthrene + anthracene				
C3-phenanthrene + anthracene				
C4-phenanthrene + anthracene				
Sum C1:C4-phenanthrene + anthracene				
Fluoranthene				
Pyrene				
Benz(a)anthracene	4.11E-08	1.09E-08	1.19E-06	3.14E-07
Chrysene	6.41E-11	2.01E-11	1.85E-09	5.82E-10
Sum of benzofluoranthenes as benzo(b) fluoranthene				
Benzo(e)pyrene				
Benzo(a)pyrene	7.74E-07	2.81E-07	2.24E-05	8.14E-06
Perylene				
Indeno(1,2,3-cd)pyrene	1.73E-08	5.32E-09	5.01E-07	1.54E-07
Dibenz(a,h)anthracene	3.37E-08	1.11E-08	9.74E-07	3.20E-07
Benzo(g,h,i)perylene				
Sum of measured PAHs				
Sum of Congeners.	2.79E-06	2.35E-06	8.05E-05	6.79E-05
Hexachlorobenzene	5.75E-09	4.23E-09	1.66E-07	1.22E-07
Lindane (gamma-BHC)	2.12E-09	1.75E-09	6.13E-08	5.07E-08
Alpha-chlordane as chlorodane	7.73E-09	4.95E-09	2.23E-07	1.43E-07
Trans-nonachlor				
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mirex				
o,p -DDD				
p,p -DDD	9.07E-09	4.54E-09	2.62E-07	1.31E-07
o,p -DDE				
p,p -DDE	7.09E-08	5.54E-08	2.05E-06	1.60E-06
o,p -DDT				
p,p -DDT	6.16E-09	3.30E-09	1.78E-07	9.55E-08
Aldrin				
	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)
	4.74E-06	3.33E-06	1.37E-04	9.64E-05
	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)
	3.06E-06	2.44E-06	8.84E-05	7.06E-05

TABLE 5-1B
ESTIMATED CANCER AND NON-CANCER RISK FOR LOBSTER HEPATOPANCREAS (TOMALLEY)

Chemical of Potential Concern	Non-carcinogenic Central Tendency Risk Using Maximum Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Non-carcinogenic Central Tendency Risk Using 95% UCL Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Non-carcinogenic High End Risk Using Maximum Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster	Non-carcinogenic High End Risk Using 95% UCL Concentration Homarus americanus hepatopancreas (Tomalley) Adult Lobster
	Intake/RfD	Intake/Rfd	Intake/RfD	Intake/Rfd
Aluminum	0.000012	0.000004	0.000100	0.000032
Silver	0.005073	0.003215	0.044022	0.027896
10% of total Arsenic	0.017000	0.010434	0.147508	0.090535
Cadmium	0.044252	0.023663	0.383981	0.205326
assume Chromium IV				
Copper	0.020331	0.019632	0.176413	0.170346
Iron				
Manganese	0.000182	0.000137	0.001577	0.001187
Nickle	0.000278	0.000108	0.002415	0.000941
Zinc	0.001129	0.000762	0.009798	0.006615
Mercury (Inorganic)				
Methyl-Mercury	0.004430	0.004084	0.038443	0.035437
Fluorene	0.000002	0.000001	0.000016	0.000008
Phenanthrene	0.000197	0.000062	0.001705	0.000538
Anthracene	0.000001	0.000000	0.000012	0.000003
C1-phenanthrene + anthracene				
C2-phenanthrene + anthracene				
C3-phenanthrene + anthracene				
C4-phenanthrene + anthracene				
Sum C1:C4-phenanthrene + anthracene				
Fluoranthene	0.000005	0.000002	0.000043	0.000014
Pyrene	0.000004	0.000001	0.000036	0.000011
Benz(a)anthracene				
Chrysene				
Sum of benzofluoranthenes as benzo(b) fluoranthene				
Benzo(e)pyrene				
Benzo(a)pyrene				
Perylene				
Indeno(1,2,3-cd)pyrene				
Dibenz(a,h)anthracene				
Benzo(g,h,i)perylene	0.000067	0.000023	0.000585	0.000198
Sum of measured PAHs				
Sum of Congeners.				
Hexachlorobenzene	0.000035	0.000026	0.000303	0.000223
Lindane (gamma-BHC)	0.000034	0.000028	0.000298	0.000246
Alpha-chlordane as chlorodane	0.000770	0.000493	0.006679	0.004280
Trans-nonachlor				
Heptachlor				
Heptachlor epoxide				
Mirex	0.000000	0.000000	0.000000	0.000000
o,p -DDD				
p,p -DDD				
o,p -DDE				
p,p -DDE				
o,p -DDT				
p,p -DDT	0.000282	0.000151	0.002444	0.001309
Aldrin				
	Non-cancer risk Hazard Quotient	Non-cancer risk Hazard Quotient	Non-cancer risk Hazard Quotient	Non-cancer risk Hazard Quotient
	0.094343	0.062946	0.818626	0.546194

TABLE 5-1C
ESTIMATED CANCER AND NON CANCER RISK FOR MUSSELS

Chemical of Potential Concern	Estimated Carcinogenic Risk for Central Tendency using Maximum concentration Mytilus edulis mussel indigenous	Estimated Carcinogenic Risk for Central Tendency using 95% UCL Mytilusius edulis mussel indigenous	Estimated Carcinogenic Risk for High End Assumptions Using Maximum Concentration Mytilus edulis mussel indigenous	Estimated Carcinogenic Risk for High End Assumptions using 95% UCL Mytilusius edulis mussel indigenous
	Intake * CSF	Intake * CSF	Intake * CSF	Intake * CSF
Aluminum				
Silver				
10% of total Arsenic	1.79E-05	1.40E-05	1.01E-04	7.94E-05
Cadmium				
assume Chromium IV	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper				
Iron				
Manganese				
Nickle				
Zinc				
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl-Mercury (no data use inorganic)				
Fluorene				
Phenanthrene				
Anthracene				
C1-phenanthrene + anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C2-phenanthrene + anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C3-phenanthrene + anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C4-phenanthrene + anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sum C1:C4-phenanthrene + anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluoranthene				
Pyrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benz(a)anthracene	9.88E-06	1.02E-06	5.59E-05	5.77E-06
Chrysene	7.60E-09	9.02E-10	4.30E-08	5.10E-09
Sum of benzofluoranthenes as benzo(b) fluoranthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(e)pyrene				
Benzo(a)pyrene	2.93E-05	3.70E-06	1.66E-04	2.09E-05
Perylene				
Indeno(1,2,3-cd)pyrene	1.01E-06	2.57E-07	5.69E-06	1.46E-06
Dibenz(a,h)anthracene	3.45E-06	1.38E-06	1.95E-05	7.81E-06
Benzo(g,h,i)perylene				
Sum of measured PAHs	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sum of Congeners.	1.29E-05	4.40E-06	7.27E-05	2.49E-05
	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexachlorobenzene	1.25E-07	6.71E-08	7.06E-07	3.80E-07
Lindane (gamma-BHC)	1.11E-08	1.08E-08	6.28E-08	6.12E-08
Alpha-chlordane as chlorodane	1.78E-08	1.78E-08	1.00E-07	1.00E-07
Trans-nonachlor				
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	1.32E-07	1.25E-07	7.45E-07	7.06E-07
Mirex				
o,p -DDD				
p,p -DDD	3.84E-08	1.35E-08	2.17E-07	7.62E-08
o,p -DDE				
p,p -DDE	6.55E-08	3.03E-08	3.70E-07	1.71E-07
o,p -DDT				
p,p -DDT	9.44E-08	4.51E-08	5.34E-07	2.55E-07
Aldrin	8.93E-08	8.68E-08	5.05E-07	4.91E-07
	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)
	7.50E-05	2.52E-05	4.24E-04	1.43E-04
	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)
	3.81E-05	1.53E-05	2.16E-04	8.64E-05

TABLE 5-1C
ESTIMATED CANCER AND NON CANCER RISK FOR MUSSELS

Chemical of Potential Concern	Estimated Non-Carcinogenic Risk for Central Tendency using Maximum concentration Mytilus edulis mussel indigenous	Estimated Non-Carcinogenic Central Tendency using 95% UCL Mytiluslus edulis mussel indigenous	Estimated Non-carcinogenic Risk for High End using Maximum concentration Mytilus edulis mussel indigenous	Estimated Non-Carcinogenic Risk for High End assumptions using 95% UCL Mytiluslus edulis mussel indigenous
	Intake/RfD	Intake/Rfd	Intake/RfD	Intake/Rfd
Aluminum	0.025133	0.012942	0.042625	0.021948
Silver	0.112016	0.049314	0.189973	0.083634
10% of total Arsenic	0.309971	0.242667	0.525694	0.411550
Cadmium	0.612294	0.348695	1.038417	0.591368
assume Chromium IV				
Copper	0.066259	0.030917	0.112372	0.052434
Iron				
Manganese	14.612928	0.000000	24.782736	0.000000
Nickle	0.416472	0.147261	0.706314	0.249746
Zinc	0.511251	0.278709	0.867054	0.472675
Mercury (Inorganic)		0.000033		
Methyl-Mercury (no data use Inorganic)	0.000000	0.000000	0.000000	0.000000
Fluorene	0.000654	0.000082	0.001109	0.000140
Phenanthrene	0.052008	0.004875	0.088203	0.008268
Anthracene	0.000074	0.000011	0.000125	0.000019
C1-phenanthrene + anthracene				
C2-phenanthrene + anthracene				
C3-phenanthrene + anthracene				
C4-phenanthrene + anthracene				
Sum C1:C4-phenanthrene + anthracene				
Fluoranthene	0.008060	0.000798	0.013669	0.001353
Pyrene	0.007218	0.000431	0.012242	0.012242
Benz(a)anthracene				
Chrysene				
Sum of benzofluoranthenes as benzo(b) fluoranthene				
Benzo(e)pyrene				
Benzo(a)pyrene				
Perylene				
Indeno(1,2,3-cd)pyrene				
Dibenz(a,h)anthracene				
Benzo(g,h,i)perylene	0.002394	0.000609	0.004059	0.001033
Sum of measured PAHs				
Sum of Congeners.				
Hexachlorobenzene	0.000758	0.000408	0.001286	0.000691
Lindane (gamma-BHC)	0.000180	0.000175	0.000305	0.000297
Alpha-chlordane as chlorodane	0.001771	0.001771	0.003003	0.003003
Trans-nonachlor				
Heptachlor	0.000000	0.000000	0.000000	0.000000
Heptachlor epoxide	0.008659	0.008198	0.014685	0.013904
Mirex	0.000136	0.000132	0.000231	0.000223
o,p -DDD				
p,p -DDD				
o,p -DDE				
p,p -DDE				
o,p -DDT				
p,p -DDT	0.004319	0.002062	0.007325	0.003497
Aldrin	0.001362	0.001323	0.002310	0.002243
	Non-cancer risk Hazard Quotient not adjusted for target organ	Non-cancer risk Hazard Quotient not adjusted for target organ	Non-cancer risk Hazard Quotient not adjusted for target organ	Non-cancer risk Hazard Quotient not adjusted for target organ
	18.169922	1.658502	30.815206	2.824185

TABLE 5-1D
ESTIMATED CANCER AND NON-CANCER RISK FOR FLOUNDER FILET

Chemical of Potential Concern	Estimated Carcinogenic Risk for Central Tendency Assumptions using Maximum Concentration for Pseudo-pleuronectes americanus filet flounder flesh	Estimated Carcinogenic Risk for Central Tendency using 95% UCL concentration Pseudo-pleuronectes americanus filet flounder flesh	Estimated Carcinogenic Risk for High End assumptions using Maximum Concentration for Pseudo-pleuronectes americanus filet flounder flesh	Estimated Carcinogenic Risk for High End Assumptions using 95% UCL Concentration Pseudo-pleuronectes americanus filet flounder flesh
	intake * CSF	intake * CSF	intake * CSF	intake * CSF
Aluminum				
Silver				
10% of total Arsenic	8.67E-04	4.73E-04	4.90E-03	2.68E-03
Cadmium				
assume Chromium III				
assume Chromium IV				
Copper				
Iron				
Manganese				
Nickle				
Lead				
Zinc				
Mercury (inorganic)				
Methyl-Mercury				
Fluorene				
Phenanthrene				
Anthracene				
C1-phenanthrene + anthracene				
C2-phenanthrene + anthracene				
C3-phenanthrene + anthracene				
C4-phenanthrene + anthracene				
Sum C1:C4-phenanthrene + anthracene				
Fluoranthene				
Pyrene				
Benz(a)anthracene	2.44E-08	2.35E-08	1.38E-07	1.33E-07
Chrysene	2.46E-11	2.33E-11	1.39E-10	1.32E-10
Sum of benzofluoranthenes as benzo(b) fluoranthene				
Benzo(e)pyrene				
Benzo(a)pyrene	7.30E-08	5.48E-08	4.13E-07	3.10E-07
Perylene				
Indeno(1,2,3-cd)pyrene	2.54E-09	1.98E-09	1.43E-08	1.12E-08
Dibenz(a,h)anthracene	5.64E-07	5.16E-07	3.19E-06	2.92E-06
Benzo(g,h,i)perylene				
Sum of measured PAHs				
Sum of Congeners.	2.13E-05	1.00E-05	1.21E-04	5.68E-05
Hexachlorobenzene	1.39E-08	1.01E-08	7.89E-08	5.73E-08
Lindane (gamma-BHC)	2.04E-08	9.38E-09	1.15E-07	5.31E-08
Alpha-chlordane as chlorodane	3.40E-08	2.04E-08	1.92E-07	1.15E-07
Trans-nonachlor				
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mirex				
o,p -DDD				
p,p -DDD	1.04E-08	6.87E-09	5.86E-08	3.88E-08
o,p -DDE				
p,p -DDE	1.52E-07	6.06E-08	8.58E-07	3.43E-07
o,p -DDT				
p,p -DDT	3.28E-09	2.83E-09	1.85E-08	1.60E-08
Aldrin				
	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)
	8.89E-04	4.84E-04	5.03E-03	2.74E-03
	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)
	8.67E-04	4.73E-04	4.91E-03	2.68E-03

used maximum for 95%UCL mean Flounder MEHg 95% UCL of mean greater than Maximum

TABLE 5-1D
ESTIMATED CANCER AND NON-CANCER RISK FOR FLOUNDER FILET

Chemical of Potential Concern	Estimated Non-carcinogenic Risk for Central Tendency Assumptions using Maximum Concentration for Pseudo-pleuronectes americanus filet flounder flesh	Estimated Non-carcinogenic Risk for Central Tendency assumptions using 95% UCL Concentration Pseudo-pleuronectes americanus filet flounder flesh	Estimated Non-carcinogenic Risk for High End assumptions using Maximum Concentration for Pseudo-pleuronectes americanus filet flounder flesh	Estimated Non-carcinogenic Risk for High End Assumptions using 95% UCL Concentration Pseudo-pleuronectes americanus filet flounder flesh
	Hazard Quotient Intake/RfD	Hazard Quotient Intake/RfD	Hazard Quotient Intake/RfD	Hazard Quotient Intake/RfD
Aluminum	1.22E-04	7.77E-05	2.06E-04	1.32E-04
Silver	2.91E-02	2.75E-02	4.93E-02	4.67E-02
10% of total Arsenic	1.50E+01	8.18E+00	2.54E+01	1.39E+01
Cadmium	3.64E-03	2.99E-03	6.18E-03	5.07E-03
assume Chromium III	6.38E-03	5.13E-03	1.08E-02	8.70E-03
assume Chromium IV				
Copper	1.25E-03	8.02E-04	2.11E-03	1.36E-03
Iron				
Manganese	2.19E-03	2.06E-03	3.71E-03	3.49E-03
Nickle	9.50E-03	6.23E-03	1.61E-02	1.06E-02
Lead				
Zinc	5.58E-03	4.77E-03	9.46E-03	8.09E-03
Mercury (Inorganic)				
Methyl-Mercury	5.25E-01	3.80E-01	8.91E-01	8.91E-01
Fluorene	2.94E-06	2.27E-06	4.98E-06	3.85E-06
Phenanthrene	6.54E-05	6.07E-05	1.11E-04	1.03E-04
Anthracene	8.66E-07	6.71E-07	1.47E-06	1.14E-06
C1-phenanthrene + anthracene				
C2-phenanthrene + anthracene				
C3-phenanthrene + anthracene				
C4-phenanthrene + anthracene				
Sum C1:C4-phenanthrene + anthracene				
Fluoranthene	3.05E-06	2.58E-06	5.17E-06	4.38E-06
Pyrene	8.82E-06	7.22E-06	1.50E-05	1.22E-05
Benz(a)anthracene				
Chrysene				
Sum of benzofluoranthenes as benzo(b) fluoranthene				
Benzo(e)pyrene				
Benzo(a)pyrene				
Perylene				
Indeno(1,2,3-cd)pyrene				
Dibenz(a,h)anthracene				
Benzo(g,h,i)perylene	5.84E-06	2.83E-06	9.90E-06	8.63E-06
Sum of measured PAHs				
Sum of Congeners.				
Hexachlorobenzene				
Lindane (gamma-BHC)	3.30E-04	1.52E-04	5.60E-04	2.58E-04
Alpha-chlordane as chlorodane	3.38E-03	2.04E-03	5.74E-03	3.45E-03
Trans-nonachlor				
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mirex	0.00E+00	0.00E+00	0.00E+00	0.00E+00
o,p -DDD				
p,p -DDD				
o,p -DDE				
p,p -DDE				
o,p -DDT				
p,p -DDT	1.50E-04	1.30E-04	2.54E-04	2.20E-04
Aldrin				
	Non-cancer risk Hazard Index, Sum of Hazard Quotients, not adjusted for Target Organ	Non-cancer risk Hazard Index, Sum of Hazard Quotients, not adjusted for Target Organ	Non-cancer risk Hazard Index, Sum of Hazard Quotients, not adjusted for Target Organ	Non-cancer risk Hazard Index, Sum of Hazard Quotients, not adjusted for Target Organ
	15.567079	8.607986	26.400924	14.845948

used maximum for 95%UCL mean Flounder MEHg 95% UCL of mean greater than Maxim

TABLE 5-1E
ESTIMATED CANCER AND NON-CANCER RISK FOR FLOUNDER LIVER

Chemical of Potential Concern	Estimated Carcinogenic Risk for Central Tendency Assumptions using Maximum Concentration for Pseudo- pleuronectes americanus liver flounder liver	Estimated Carcinogenic Risk for Central Tendency using 95% UCL concentration Pseudo- pleuronectes americanus liver flounder liver	Estimated Carcinogenic Risk for High End assumptions using Maximum Concentration for Pseudo- pleuronectes americanus liver flounder liver	Estimated Carcinogenic Risk for High End Assumptions using 95% UCL Concentration Pseudo- pleuronectes americanus liver flounder liver
	Intake * CSF	Intake * CSF	Intake * CSF	Intake * CSF
Aluminum				
Silver				
10% of total Arsenic	4.42796E-05	2.76087E-05	0.000148039	9.23038E-05
Cadmium				
assume Chromium IV				
Copper				
Iron				
Manganese				
Nickle				
Zinc				
Mercury (inorganic)				
Methyl-Mercury				
Fluorene				
Phenanthrene				
Anthracene				
C1-phenanthrene + anthracene				
C2-phenanthrene + anthracene				
C3-phenanthrene + anthracene				
C4-phenanthrene + anthracene				
Sum C1:C4-phenanthrene + anthracene				
Fluoranthene				
Pyrene				
Benz(a)anthracene	2.37637E-08	2.14579E-08	7.94486E-08	7.17398E-08
Chrysene	2.9419E-11	2.40841E-11	9.83561E-11	8.05201E-11
Sum of benzofluoranthenes as benzo(b) fluoranthene				
Benzo(e)pyrene				
Benzo(a)pyrene	2.36742E-06	9.50043E-07	7.91496E-06	3.17626E-06
Perylene				
Indeno(1,2,3-cd)pyrene	3.96061E-08	3.11141E-08	1.32414E-07	1.04023E-07
Dibenz(a,h)anthracene	3.30989E-07	2.72213E-07	1.10659E-06	9.10086E-07
Benzo(g,h,i)perylene				
Sum of measured PAHs				
Sum of Congeners.	9.66106E-05	7.99688E-05	0.000322997	0.000267359
Hexachlorobenzene	9.42286E-08	7.25171E-08	3.15033E-07	2.42445E-07
Lindane (gamma-BHC)	9.77857E-08	5.33619E-08	3.26925E-07	1.78404E-07
Alpha-chlordane as chlorodane	4.17182E-07	2.89207E-07	1.39476E-06	9.669E-07
Trans-nonachlor				
Heptachlor				
Heptachlor epoxide				
Mirex				
o,p -DDD				
p,p -DDD	1.37191E-07	1.18687E-07	4.5867E-07	3.96803E-07
o,p -DDE				
p,p -DDE	5.4602E-07	4.67972E-07	1.8255E-06	1.56456E-06
o,p -DDT				
p,p -DDT	5.48819E-08	4.28023E-08	1.83486E-07	1.431E-07
Aldrin				
	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)	Estimated Cancer Risk using sum of individual risk (EPA)
	1.45E-04	1.10E-04	4.85E-04	3.67E-04
	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)	Estimated Cancer Risk using Square Root of Sums of Squares (NAS)
	1.06E-04	8.46E-05	3.55E-04	2.83E-04

TABLE 5-1E
ESTIMATED CANCER AND NON-CANCER RISK FOR FLOUNDER LIVER

Chemical of Potential Concern	Estimated Non-carcinogenic Risk for Central Tendency Assumptions using Maximum Concentration for Pseudo-pleuronectes americanus liver flounder liver	Estimated Non-carcinogenic Risk for Central Tendency assumptions using 95% UCL Concentration Pseudo-pleuronectes americanus liver flounder liver	Estimated Non-carcinogenic Risk for High End assumptions using Maximum Concentration for Pseudo-pleuronectes americanus liver flounder liver	Estimated Non-carcinogenic Risk for High End Assumptions using 95% UCL Concentration Pseudo-pleuronectes americanus liver flounder liver
	Intake/RfD	Intake/Rfd	Intake/Rfd	Intake/Rfd
Aluminum	0.000239116	0.000210419	0.000239116	0.000210419
Silver	1.342576536	0.829016317	1.342576536	0.829016317
10% of total Arsenic	0.763695413	0.476170169	0.763695413	0.476170169
Cadmium	0.636921974	0.392329643	0.636921974	0.392329643
assume Chromium IV				
Copper	0.216724374	0.128883067	0.216724374	0.128883067
Iron				
Manganese	0.158848646	0.106561103	0.158848646	0.106561103
Nickle	0.023063601	0.013808981	0.023063601	0.013808981
Zinc	0.033602598	0.03116091	0.033602598	0.03116091
Mercury (Inorganic)				
Methyl-Mercury	0.1321775	0.0962429	0.1321775	0.1321775
Fluorene	8.01055E-06	6.96255E-06	8.01055E-06	6.96255E-06
Phenanthrene	0.000197935	0.000172902	0.000197935	0.000172902
Anthracene	7.64546E-07	7.15388E-07	7.64546E-07	7.15388E-07
C1-phenanthrene + anthracene				
C2-phenanthrene + anthracene				
C3-phenanthrene + anthracene				
C4-phenanthrene + anthracene				
Sum C1:C4-phenanthrene + anthracene				
Fluoranthene	1.45217E-05	9.21497E-06	1.45217E-05	9.21497E-06
Pyrene	0.00004966	3.50722E-05	0.00004966	3.50722E-05
Benz(a)anthracene				
Chrysene				
Sum of benzofluoranthenes as benzo(b) fluoranthene				
Benzo(e)pyrene				
Benzo(a)pyrene				
Perylene				
Indeno(1,2,3-cd)pyrene				
Dibenz(a,h)anthracene				
Benzo(g,h,i)perylene	3.4183E-06	0.000146907	3.4183E-06	2.98073E-06
Sum of measured PAHs				
Sum of Congeners.				
Hexachlorobenzene	0.000571349	0.000439703	0.000571349	0.000439703
Lindane (gamma-BHC)	0.001581112	0.000862817	0.001581112	0.000862817
Alpha-chlordane as chlorodane	0.041510627	0.028776776	0.041510627	0.028776776
Trans-nonachlor				
Heptachlor				
Heptachlor epoxide				
Mirex				
o,p -DDD				
p,p -DDD				
o,p -DDE				
p,p -DDE				
o,p -DDT				
p,p -DDT	0.002505582	0.001954101	0.002505582	0.001954101
Aldrin				
	Non-cancer risk Hazard Index, Sum of Hazard Quotients, not adjusted for Target Organ	Non-cancer risk Hazard Index, Sum of Hazard Quotients, not adjusted for Target Organ	Non-cancer risk Hazard Index, Sum of Hazard Quotients, not adjusted for Target Organ	Non-cancer risk Hazard Index, Sum of Hazard Quotients, not adjusted for Target Organ
	3.360402	2.112456	3.360402	2.148247