

QUARTERLY CUMULATIVE DOSE CONTRIBUTIONS FROM RADIOACTIVE EFFLUENTS

FOURTH QUARTER, 1992

<u>I. LIQUID EFFLUENTS:</u>	<u>TOTAL BODY DOSE (mREM)</u>	<u>CRITICAL ORGAN DOSE (mREM)</u>
Monitor/Hotel Tank:	5.57E-03	7.83E-03
Steam Generator:	<u>1.79E-07</u>	<u>1.79E-07</u>
Totals:	5.57E-03	7.83E-03
T.S. 2.9.1.A. Annual Objective:	3.00E+00	1.00E+01
<u>Percent of TS Annual Objective:</u>		
This Quarter:	0.19%	0.08%
Year to Date:	4.52%	1.86%
<u>II. GASEOUS EFFLUENTS:</u>	<u>TOTAL BODY GAMMA DOSE (mREM)</u>	<u>TOTAL BODY BETA DOSE (mREM)</u>
A. Noble Gas Air Dose:	8.16E-04	5.21E-04
T.S. 2.9.1.B. Annual Objective:	1.00E+01	2.00E+01
<u>Percent of TS Annual Objective:</u>		
This Quarter:	0.01%	0.00%
Year to Date:	0.10%	0.12%
B. <u>I-131, H-3, and Particulates with Half-Lives > 8 Days</u>	<u>TOTAL BODY DOSE (mREM)</u>	<u>CRITICAL ORGAN DOSE (Thyroid, mREM)</u>
*Inhalation:	3.99E-06	3.98E-06
*Ground and Food:	<u>8.23E-06</u>	<u>0.00E+00</u>
Totals:	1.22E-05	3.98E-06
T.S. 2.9.1.B. Annual Objective:	1.50E+01	1.50E+01
<u>Percent of TS Annual Objective:</u>		
This Quarter:	0.00%	0.00%
Year to Date:	0.00%	0.53%

* Highest of Infant or Child Dose Factors.

TABLE 1A

EFFLUENT AND WASTE DISPOSAL REPORT

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

SEMIANNUAL FOR JULY THRU DEC 92											
					3 QUARTER			4 QUARTER			
NUCLIDES IN CURIES		CONT	DECAY	RM060	RM041	TOTAL	CONT	DF AV	RM060	RM041	TOTAL
A. FISSION&ACTIVATION GASES											
TOTAL RELEASE		CI	1.27E+01	7.47E-02	0.00E+00	0.00E+00	1.27E+01	1.74E+00	4.77E-03	0.00E+00	1.74E+00
AVG RELEASE RATE FOR PERIOD		UC1/SEC	1.59E+00	9.40E-03	0.00E+00	0.00E+00	1.60E+00	2.19E-01	6.00E-04	0.00E+00	2.19E-01
PERCENT OF LIMIT		%									
TECH SPEC = NONE											
B. IODINES											
TOTAL RELEASE		CI	0.00E+00	0.00E+00	8.56E-06	0.00E+00	8.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00
AVG RELEASE RATE FOR PERIOD		UC1/SEC	0.00E+00	0.00E+00	1.08E-06	0.00E+00	1.08E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERCENT OF LIMIT		%									
TECH SPEC = NONE											
C. PARTICULATES											
PARTICULATES WITH HALF LIVES -GT. 8 DAYS		CI	0.00E+00	0.00E+00	9.27E-09	5.39E-07	5.49E-07	0.00E+00	0.00E+00	9.39E-07	1.17E-06
AVG RELEASE RATE FOR PERIOD		UC1/SEC	0.00E+00	0.00E+00	1.17E-09	6.79E-08	6.90E-08	0.00E+00	0.00E+00	1.18E-07	1.47E-07
PERCENT OF LIMIT		%									
TECH SPEC = NONE											
GROSS ALPHA RADIOACTIVITY		CI	0.00E+00	0.00E+00	1.43E-06	1.79E-07	1.61E-06	0.00E+00	0.00E+00	5.85E-06	5.94E-06
D. TRITIUM											
TOTAL RELEASE		CI	2.11E+00	0.00E+00	0.00E+00	0.00E+00	2.11E+00	1.78E-01	0.00E+00	0.00E+00	1.78E-01
AVG RELEASE RATE FOR PERIOD		UC1/SEC	2.66E-01	0.00E+00	0.00E+00	0.00E+00	2.66E-01	2.24E-02	0.00E+00	0.00E+00	2.24E-02
PERCENT OF LIMIT		%									
TECH SPEC = NONE											

TABLE 1C

EFFLUENT AND WASTE DISPOSAL REPORT

GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

SEMIANNUAL FOR JULY THRU DEC 92

3 QUARTER

4 QUARTER

NUCLIDES IN CURIES	CONT	DECAY	RM060	RM041	TOTAL	CONT	DECAY	RM060	RM041	TOTAL
FISSION GASES										
XENON-133	1.20E+01	5.97E-02	0.00E+00	0.00E+00	1.21E+01	9.24E-01	7.88E-04	0.00E+00	0.00E+00	9.25E-01
KRYPTON-85M	7.26E-04	0.00E+00	0.00E+00	0.00E+00	7.26E-04	1.38E-03	0.00E+00	0.00E+00	0.00E+00	1.38E-03
XENON-131M	0.00E+00	7.52E-04	0.00E+00	0.00E+00	7.52E-04	0.00E+00	2.57E-04	0.00E+00	0.00E+00	2.57E-04
KRYPTON-88	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XENON-133M	1.52E-01	0.00E+00	0.00E+00	0.00E+00	1.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XENON-135	2.24E-01	0.00E+00	0.00E+00	0.00E+00	2.24E-01	3.61E-01	0.00E+00	0.00E+00	0.00E+00	3.61E-01
KRYPTON-87	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KRYPTON-138	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KRYPTON-85	0.00E+00	1.42E-02	0.00E+00	0.00E+00	1.42E-02	0.00E+00	3.73E-03	0.00E+00	0.00E+00	3.73E-03
XENON-135M	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ARGON-41	2.40E-01	0.00E+00	0.00E+00	0.00E+00	2.40E-01	4.51E-01	0.00E+00	0.00E+00	0.00E+00	4.51E-01
TOTAL FOR PERIOD	1.27E+01	7.47E-02	0.00E+00	0.00E+00	1.27E+01	1.74E+00	4.77E-03	0.00E+00	0.00E+00	1.74E+00
IGDINES										
IODINE-131 CTD	0.00E+00	0.00E+00	8.56E-06	0.00E+00	8.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IODINE-133 CTD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IODINE-135 CTD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IODINE-132 CTD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	0.00E+00	0.00E+00	8.56E-06	0.00E+00	8.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PARTICULATES										
STRONTIUM-89	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
STRONTIUM-90	0.00E+00	0.00E+00	9.27E-09	1.58E-08	2.51E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CARBON-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IRON-55	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IODINE-129	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NICKEL-63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PHOSPHORUS-32	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IODINE-131 PRF.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IODINE-133 PRF.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BARIUM-140	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CESIUM-137	0.00E+00	0.00E+00	0.00E+00	5.24E-07	5.24E-07	0.00E+00	0.00E+00	9.39E-07	0.00E+00	9.39E-07
CESIUM-134	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
COBALT-58	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MANGANESE-54	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
COBALT-60	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IODINE-135 PRF.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LANTHANUM-140	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CERIUM-144	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CERIUM-141	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MOLYBDENUM-99	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IRON-59	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ZINC-65	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	0.00E+00	0.00E+00	9.27E-09	5.39E-07	5.49E-07	0.00E+00	0.00E+00	9.39E-07	2.31E-07	1.17E-06
TRITIUM & GROSS ALPHA										
TRITIUM	2.11E+00	0.00E+00	0.00E+00	0.00E+00	2.11E+00	1.78E-01	0.00E+00	0.00E+00	0.00E+00	1.78E-01
GROSS ALPHA	0.00E+00	0.00E+00	1.43E-06	1.79E-07	1.61E-06	0.00E+00	0.00E+00	5.85E-06	9.11E-08	5.94E-06

Note: Lower Limit of Detection (LLD) is reported as "0.00E+00".

Yttrium-90 activity is equal to Strontium-90 (SR-90/Y-90 secular equilibrium) for the third and fourth quarters. Yttrium-90 quantities are not shown on this table, but are included in GASPAR Dose Calculations.

TABLE 2A

EFFLUENT AND WASTE DISPOSAL REPORT

LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

SEMIANNUAL FOR JULY THRU DEC 92

		3 QUARTER	4 QUARTER
A. FISSION&ACTIVATION PRODUCTS			
TOTAL RELEASE (NO TRITIUM,GAS,ALPHA)	CI	8.09E-02	9.13E-02
AVG DILUTED CONCENTRATION	UCI/ML	5.24E-10	5.44E-10
PERCENT OF LIMIT 10 CFR 20, APP. B = 1.0E-07	%	5.24E-01	5.44E-01
B. TRITIUM			
TOTAL RELEASE	CI	5.57E+01	1.11E+01
AVG DILUTED CONCENTRATION	UCI/ML	3.61E-07	6.61E-08
PERCENT OF LIMIT 10 CFR 20, APP. B = 3.0E-03	%	1.20E-02	2.20E-03
C. DISSOLVED&ENTRAINED GASES			
TOTAL RELEASE	CI	3.22E-02	4.66E-03
AVG DILUTED CONCENTRATION	UCI/ML	2.09E-10	2.78E-11
PERCENT OF LIMIT TECH SPEC = 2.0E-04 UCI/ML	%	1.04E-04	1.39E-05
D. GROSS ALPHA RADIOACTIVITY			
TOTAL RELEASE	CI	0.00E+00	6.13E-05
E. VOLUME OF WASTE RELEASE			
PRIOR TO DIL.	LITERS	2.95E+07	3.89E+07
F. VOLUME OF DILUTION WATER			
THIS PERIOD	LITERS	1.54E+11	1.68E+11

TABLE 2B

EFFLUENT AND WASTE DISPOSAL REPORT

LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

SEMIANNUAL FOR JULY THRU DEC 92

3 QUARTER 4 QUARTER

NUCLIDES IN CURIES	CONT	BATCH	CONT	BATCH
STRONTIUM-89	6.78E-05	0.00E+00	0.00E+00	5.00E-06
STRONTIUM-90	0.00E+00	8.36E-05	0.00E+00	1.24E-05
CARBON-14	0.00E+00	2.45E-03	0.00E+00	4.56E-02
IRON-55	0.00E+00	2.62E-03	0.00E+00	9.06E-04
IODINE-129	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NICKEL-63	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PHOSPHORUS-32	0.00E+00	0.00E+00	0.00E+00	0.00E+00
COBALT-57	0.00E+00	1.94E-05	0.00E+00	2.77E-05
MOLYBDENUM-99	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TECHNETIUM-99M	0.00E+00	5.73E-05	0.00E+00	9.87E-07
CERTIUM-141	0.00E+00	0.00E+00	0.00E+00	5.16E-05
TIN-117M	0.00E+00	1.37E-05	0.00E+00	0.00E+00
CHROMIUM-51	0.00E+00	5.00E-03	0.00E+00	5.81E-03
IODINE-131	0.00E+00	1.15E-04	0.00E+00	3.53E-05
IODINE-133	0.00E+00	2.05E-06	0.00E+00	0.00E+00
BARIUM-140	0.00E+00	5.35E-03	0.00E+00	0.00E+00
RUTHENIUM-103	0.00E+00	8.66E-05	0.00E+00	2.22E-04
CESIUM-137	3.48E-05	8.30E-04	0.00E+00	6.34E-04
ZIRCONIUM-95	0.00E+00	1.12E-03	0.00E+00	4.51E-03
NIObIUM-95	0.00E+00	1.47E-03	0.00E+00	7.19E-03
CESIUM-134	0.00E+00	1.41E-04	0.00E+00	2.38E-04
COBALT-58	0.00E+00	2.12E-02	0.00E+00	6.49E-03
MANGANESE-54	0.00E+00	2.11E-04	0.00E+00	4.75E-04
CESIUM-136	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IRON-59	0.00E+00	8.26E-05	0.00E+00	7.61E-05
ZINC-65	0.00E+00	9.05E-06	0.00E+00	4.27E-05
COBALT-60	0.00E+00	2.52E-03	0.00E+00	5.25E-03
LANTHANUM-140	0.00E+00	3.19E-03	0.00E+00	1.74E-05
ANTIMONY-124	0.00E+00	2.93E-03	0.00E+00	1.70E-04
CERIUM-144	0.00E+00	9.78E-05	0.00E+00	4.23E-04
ANTIMONY-125	0.00E+00	2.91E-02	0.00E+00	4.46E-03
SILVER-110M	0.00E+00	1.66E-03	0.00E+00	5.44E-03
BROMINE-82	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KRYPTON-88	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RHODIUM-103M	0.00E+00	8.66E-05	0.00E+00	2.22E-04
TIN-113	0.00E+00	6.18E-05	0.00E+00	2.19E-04
ANTIMONY-122	0.00E+00	5.87E-06	0.00E+00	0.00E+00
IODINE-132	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TELLURIUM-132	0.00E+00	7.03E-06	0.00E+00	0.00E+00
THORIUM-234	6.39E-05	0.00E+00	0.00E+00	0.00E+00
RUTHENIUM-106	0.00E+00	0.00E+00	0.00E+00	9.70E-04
SELENIUM-75	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ANTIMONY-126	0.00E+00	8.00E-06	0.00E+00	0.00E+00
BERYLLIUM-7	0.00E+00	1.76E-04	0.00E+00	0.00E+00
RHODIUM-106	0.00E+00	0.00E+00	0.00E+00	9.70E-04
HAFNIUM-181	0.00E+00	3.55E-05	0.00E+00	1.68E-04
PRASEODYMIUM-144	0.00E+00	3.96E-05	0.00E+00	4.23E-04
TOTAL FOR PERIOD	1.66E-04	8.08E-02	0.00E+00	9.13E-02

Yttrium-90 activity is equal to Strontium-90 (SR-90/Y-90 secular equilibrium) for the third and fourth quarters. Yttrium-90 quantities are not shown on this table, but are included in LADTAP Dose Calculations.

Note: Lower Limit of Detection (LLD) is reported as "0.00E+00".

TABLE 2B (Continued)

DISSOLVED GASES
ENTRAINED GASES

XENON-133	0.00E+00	3.20E-02	0.00E+00	4.65E-03
XENON-135	0.00E+00	7.30E-05	0.00E+00	9.01E-06
XENON-131M	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XENON-133M	0.00E+00	2.06E-04	0.00E+00	0.00E+00
TOTAL FOR PERIOD	0.00E+00	3.22E-02	0.00E+00	4.66E-03

OTHER, ALPHA & TRITIUM

ALPHA	0.00E+00	0.00E+00	0.00E+00	6.13E-05
TRITIUM	5.97E-02	5.57E+01	2.17E-02	1.11E+01
GROSS BETA/GAMMA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL FOR PERIOD	5.97E-02	5.57E+01	2.17E-02	1.11E+01

AVG. CONC. IN UCI/ML

ALPHA	0.00E+00	0.00E+00	0.00E+00	5.31E-11
TRITIUM	1.36E-09	2.25E-05	4.84E-10	8.45E-06

TABLE VII-A-1

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 1 RES, VEG
 AT 4.58 MILES N

BETA AIR DOSE = 9.42E-05 MILLRADS
 GAMMA AIR DOSE = 4.18E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.55E-05	2.55E-05	2.55E-05	2.55E-05	2.55E-05	2.55E-05	2.64E-05	6.52E-05
GROUND	1.34E-07	1.34E-07	1.34E-07	1.34E-07	1.34E-07	1.34E-07	1.34E-07	1.56E-07
VEGET								
ADULT	3.26E-05	3.24E-05	2.58E-07	3.26E-05	3.25E-05	3.38E-05	3.24E-05	3.24E-05
TEEN	3.72E-05	3.71E-05	3.55E-07	3.73E-05	3.72E-05	3.83E-05	3.72E-05	3.71E-05
CHILD	5.76E-05	5.75E-05	7.07E-07	5.78E-05	5.76E-05	5.93E-05	5.76E-05	5.75E-05
INHAL								
ADULT	1.80E-05	1.80E-05	1.66E-08	1.80E-05	1.80E-05	1.85E-05	1.80E-05	1.80E-05
TEEN	1.81E-05	1.81E-05	1.96E-08	1.81E-05	1.81E-05	1.88E-05	1.81E-05	1.81E-05
CHILD	1.60E-05	1.60E-05	2.11E-08	1.60E-05	1.60E-05	1.67E-05	1.60E-05	1.60E-05
INFANT	9.20E-06	9.19E-06	1.08E-08	9.20E-06	9.20E-06	9.88E-06	9.20E-06	9.19E-06

TABLE VII-A-2

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 2 RES, VEG
 AT 1.86 MILES NNE

BETA AIR DOSE = 6.67E-04 MILLRADS
 GAMMA AIR DOSE = 3.63E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.25E-04	2.25E-04	2.25E-04	2.25E-04	2.25E-04	2.25E-04	2.32E-04	5.25E-04
GROUND	7.00E-07	7.00E-07	7.00E-07	7.00E-07	7.00E-07	7.00E-07	7.00E-07	8.17E-07
VEGET								
ADULT	2.16E-04	2.15E-04	1.35E-06	2.16E-04	2.15E-04	2.23E-04	2.15E-04	2.15E-04
TEEN	2.47E-04	2.46E-04	1.86E-06	2.47E-04	2.47E-04	2.52E-04	2.46E-04	2.46E-04
CHILD	3.82E-04	3.82E-04	3.70E-06	3.83E-04	3.82E-04	3.91E-04	3.82E-04	3.81E-04
INHAL								
ADULT	1.19E-04	1.19E-04	1.20E-07	1.19E-04	1.19E-04	1.23E-04	1.19E-04	1.19E-04
TEEN	1.20E-04	1.20E-04	1.42E-07	1.20E-04	1.20E-04	1.25E-04	1.20E-04	1.20E-04
CHILD	1.06E-04	1.06E-04	1.53E-07	1.06E-04	1.06E-04	1.11E-04	1.06E-04	1.06E-04
INFANT	6.10E-05	6.10E-05	7.84E-08	6.10E-05	6.10E-05	6.58E-05	6.10E-05	6.10E-05

TABLE VII-A-3

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 3 RES
 AT 1.47 MILES NE

BETA AIR DOSE = 1.12E-03 MILLRADS
 GAMMA AIR DOSE = 6.09E-04 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.79E-04	3.79E-04	3.79E-04	3.79E-04	3.79E-04	3.79E-04	3.89E-04	8.88E-04
GROUND	1.04E-06	1.04E-06	1.04E-06	1.04E-06	1.04E-06	1.04E-06	1.04E-06	1.21E-08
INHAL								
ADULT	2.00E-04	2.00E-04	2.06E-07	2.00E-04	2.00E-04	2.06E-04	2.00E-04	2.00E-04
TEEN	2.01E-04	2.01E-04	2.43E-07	2.01E-04	2.01E-04	2.09E-04	2.01E-04	2.01E-04
CHILD	1.78E-04	1.78E-04	2.62E-07	1.78E-04	1.78E-04	1.87E-04	1.78E-04	1.78E-04
INFANT	1.02E-04	1.02E-04	1.34E-07	1.02E-04	1.02E-04	1.10E-04	1.02E-04	1.02E-04

TABLE VII-A-4

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 4 VEG
 AT 3.32 MILES NE

BETA AIR DOSE = 1.98E-04 MILLRADS
 GAMMA AIR DOSE = 9.04E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.52E-05	5.52E-05	5.52E-05	5.52E-05	5.52E-05	5.52E-05	5.71E-05	1.40E-04
GROUND	1.51E-07	1.51E-07	1.51E-07	1.51E-07	1.51E-07	1.51E-07	1.51E-07	1.76E-07
VEGET								
ADULT	6.78E-05	6.77E-05	2.90E-07	6.78E-05	6.77E-05	6.93E-05	6.77E-05	6.77E-05
TEEN	7.76E-05	7.75E-05	4.00E-07	7.77E-05	7.76E-05	7.88E-05	7.75E-05	7.75E-05
CHILD	1.20E-04	1.20E-04	7.96E-07	1.20E-04	1.20E-04	1.22E-04	1.20E-04	1.20E-04

TABLE VII-A-5

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 5 RES, VEG
 AT 4.79 MILES ENE

BETA AIR DOSE = 1.42E-04 MILLRADS
 GAMMA AIR DOSE = 5.96E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.74E-05	9.47E-05
GROUND	9.87E-08	9.87E-08	9.87E-08	9.87E-08	9.87E-08	9.87E-08	9.87E-08	1.15E-07
VEGET								
ADULT	5.01E-05	5.00E-05	1.90E-07	5.01E-05	5.00E-05	5.10E-05	5.00E-05	5.00E-05
TEEN	5.73E-05	5.72E-05	2.62E-07	5.74E-05	5.73E-05	5.81E-05	5.72E-05	5.72E-05
CHILD	8.87E-05	8.86E-05	5.21E-07	8.89E-05	8.87E-05	8.99E-05	8.86E-05	8.86E-05
INHAL								
ADULT	2.77E-05	2.77E-05	2.54E-08	2.77E-05	2.77E-05	2.85E-05	2.77E-05	2.77E-05
TEEN	2.79E-05	2.79E-05	2.99E-08	2.79E-05	2.79E-05	2.89E-05	2.79E-05	2.79E-05
CHILD	2.46E-05	2.46E-05	3.23E-08	2.46E-05	2.46E-05	2.58E-05	2.46E-05	2.46E-05
INFANT	1.42E-05	1.42E-05	1.66E-08	1.42E-05	1.42E-05	1.52E-05	1.42E-05	1.42E-05

TABLE VII-A-6

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 6 RES
 AT 4.67 MILES E

BETA AIR DOSE = 1.78E-04 MILLRADS
 GAMMA AIR DOSE = 8.01E-05 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.88E-05	4.88E-05	4.88E-05	4.88E-05	4.88E-05	4.88E-05	5.06E-05	1.24E-04
GROUND	1.56E-07	1.56E-07	1.56E-07	1.56E-07	1.56E-07	1.56E-07	1.56E-07	1.82E-07
INHAL								
ADULT	3.38E-05	3.38E-05	3.11E-08	3.38E-05	3.38E-05	3.49E-05	3.38E-05	3.38E-05
TEEN	3.41E-05	3.40E-05	3.67E-08	3.41E-05	3.41E-05	3.53E-05	3.41E-05	3.40E-05
CHILD	3.01E-05	3.01E-05	3.97E-08	3.01E-05	3.01E-05	3.15E-05	3.01E-05	3.01E-05
INFANT	1.73E-05	1.73E-05	2.03E-08	1.73E-05	1.73E-05	1.86E-05	1.73E-05	1.73E-05

TABLE VII-A-7

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 7 VEG
 AT 4.92 MILES E

BETA AIR DOSE = 1.63E-04 MILLRADS
 GAMMA AIR DOSE = 7.25E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.42E-05	4.42E-05	4.42E-05	4.42E-05	4.42E-05	4.42E-05	4.57E-05	1.13E-04
GROUND	1.46E-07	1.46E-07	1.46E-07	1.46E-07	1.46E-07	1.46E-07	1.46E-07	1.70E-07
VEGET								
ADULT	5.61E-05	5.59E-05	2.81E-07	5.61E-05	5.60E-05	5.75E-05	5.59E-05	5.59E-05
TEEN	6.42E-05	6.41E-05	3.87E-07	6.42E-05	6.41E-05	6.53E-05	6.41E-05	6.40E-05
CHILD	9.93E-05	9.92E-05	7.71E-07	9.95E-05	9.93E-05	1.01E-04	9.92E-05	9.92E-05

TABLE VII-A-8

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 8 RES, VEG
 AT 4.19 MILES ESE

BETA AIR DOSE = 1.96E-04 MILLRADS
 GAMMA AIR DOSE = 9.14E-05 MILLRADS

PATHWAY	BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.60E-05	5.60E-05	5.60E-05	5.60E-05	5.60E-05	5.60E-05	5.78E-05	1.40E-04
GROUND	3.44E-07	3.44E-07	3.44E-07	3.44E-07	3.44E-07	3.44E-07	3.44E-07	4.02E-07
VEGET								
ADULT	6.65E-05	6.62E-05	6.63E-07	6.65E-05	6.63E-05	6.98E-05	6.62E-05	6.62E-05
TEEN	7.61E-05	7.58E-05	9.13E-07	7.63E-05	7.60E-05	7.88E-05	7.58E-05	7.58E-05
CHILD	1.18E-04	1.17E-04	1.82E-06	1.18E-04	1.18E-04	1.22E-04	1.17E-04	1.17E-04
INHAL								
ADULT	3.67E-05	3.67E-05	3.41E-08	3.67E-05	3.67E-05	3.78E-05	3.67E-05	3.67E-05
TEEN	3.69E-05	3.69E-05	4.02E-08	3.69E-05	3.69E-05	3.83E-05	3.69E-05	3.69E-05
CHILD	3.26E-05	3.26E-05	4.34E-08	3.26E-05	3.26E-05	3.42E-05	3.26E-05	3.26E-05
INFANT	1.88E-05	1.88E-05	2.23E-08	1.88E-05	1.88E-05	2.02E-05	1.88E-05	1.88E-05

TABLE VII-A-9

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 9 RES, VEG
 AT 1.68 MILES SE

BETA AIR DOSE = 1.13E-03 MILLRADS
 GAMMA AIR DOSE = 6.71E-04 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.20E-04	4.20E-04	4.20E-04	4.20E-04	4.20E-04	4.20E-04	4.30E-04	9.53E-04
GROUND	3.20E-06	3.20E-06	3.20E-06	3.20E-06	3.20E-06	3.20E-06	3.20E-06	3.73E-06
VEGET ADULT	3.57E-04	3.54E-04	6.16E-06	3.57E-04	3.55E-04	3.88E-04	3.54E-04	3.54E-04
TEEN	4.08E-04	4.06E-04	8.48E-06	4.10E-04	4.07E-04	4.34E-04	4.06E-04	4.05E-04
CHILD	6.31E-04	6.28E-04	1.69E-05	6.36E-04	6.31E-04	6.71E-04	6.29E-04	6.28E-04
INHAL ADULT	1.96E-04	1.96E-04	2.00E-07	1.96E-04	1.96E-04	2.03E-04	1.96E-04	1.96E-04
TEEN	1.97E-04	1.97E-04	2.36E-07	1.98E-04	1.98E-04	2.05E-04	1.97E-04	1.97E-04
CHILD	1.75E-04	1.75E-04	2.55E-07	1.75E-04	1.75E-04	1.83E-04	1.75E-04	1.75E-04
INFANT	1.00E-04	1.00E-04	1.30E-07	1.00E-04	1.00E-04	1.08E-04	1.00E-04	1.00E-04

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R1, 03/15/93

TABLE VII-A-10

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 10 RES
 AT 0.88 MILES SSE

BETA AIR DOSE = 2.18E-03 MILLRADS
 GAMMA AIR DOSE = 1.43E-03 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	8.99E-04	8.99E-04	8.99E-04	8.99E-04	8.99E-04	8.99E-04	9.19E-04	1.97E-03
GROUND	7.50E-06	7.50E-06	7.50E-06	7.50E-06	7.50E-06	7.50E-06	7.50E-06	8.75E-06
INHAL								
ADULT	3.66E-04	3.66E-04	3.89E-07	3.66E-04	3.66E-04	3.78E-04	3.66E-04	3.66E-04
TEEN	3.68E-04	3.68E-04	4.59E-07	3.68E-04	3.68E-04	3.83E-04	3.68E-04	3.68E-04
CHILD	3.26E-04	3.26E-04	4.95E-07	3.26E-04	3.26E-04	3.42E-04	3.26E-04	3.26E-04
INFANT	1.87E-04	1.87E-04	2.53E-07	1.87E-04	1.87E-04	2.02E-04	1.87E-04	1.87E-04

TABLE VII-A-11

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 11 VEG
 AT 1.11 MILES SSE

BETA AIR DOSE = 1.25E-03 MILLRADS
 GAMMA AIR DOSE = 8.19E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.17E-04	5.17E-04	5.17E-04	5.17E-04	5.17E-04	5.17E-04	5.28E-04	1.13E-03
GROUND	3.98E-06	3.98E-06	3.98E-06	3.98E-06	3.98E-06	3.98E-06	3.98E-06	4.64E-06
VEGET								
ADULT	3.79E-04	3.76E-04	7.66E-06	3.79E-04	3.77E-04	4.18E-04	3.76E-04	3.76E-04
TEEN	4.33E-04	4.30E-04	1.06E-05	4.36E-04	4.32E-04	4.65E-04	4.31E-04	4.30E-04
CHILD	6.70E-04	6.66E-04	2.10E-05	6.75E-04	6.69E-04	7.20E-04	6.67E-04	6.66E-04

TABLE VII-A-12

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 12 BEEF
 AT 2.51 MILES SSE

BETA AIR DOSE = 1.87E-04 MILLRADS
 GAMMA AIR DOSE = 1.05E-04 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.57E-05	6.57E-05	6.57E-05	6.57E-05	6.57E-05	6.57E-05	6.74E-05	1.52E-04
GROUND	5.31E-07	5.31E-07	5.31E-07	5.31E-07	5.31E-07	5.31E-07	5.31E-07	6.19E-07
MEAT								
ADULT	8.62E-06	8.59E-06	4.57E-08	8.63E-06	8.61E-06	9.27E-06	8.59E-06	8.59E-06
TEEN	5.14E-06	5.12E-06	3.64E-08	5.16E-06	5.14E-06	5.62E-06	5.13E-06	5.12E-06
CHILD	6.20E-06	6.19E-06	6.42E-08	6.24E-06	6.21E-06	6.94E-06	6.19E-06	6.19E-06

TABLE VII-A-13

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 13 RES, VEG
 AT 0.72 MILES S

BETA AIR DOSE = 2.81E-03 MILLRADS
 GAMMA AIR DOSE = 1.78E-03 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.12E-03	1.12E-03	1.12E-03	1.12E-03	1.12E-03	1.12E-03	1.15E-03	2.48E-03
GROUND	6.44E-06	6.44E-06	6.44E-06	6.44E-06	6.44E-06	6.44E-06	6.44E-06	7.52E-06
VEGET ADULT	8.64E-04	8.59E-04	1.24E-05	8.65E-04	8.61E-04	9.28E-04	8.59E-04	8.59E-04
TEEN	9.89E-04	9.84E-04	1.71E-05	9.92E-04	9.87E-04	1.04E-03	9.84E-04	9.83E-04
CHILD	1.53E-03	1.52E-03	3.40E-05	1.54E-03	1.53E-03	1.61E-03	1.52E-03	1.52E-03
INHAL ADULT	4.76E-04	4.76E-04	5.11E-07	4.76E-04	4.76E-04	4.92E-04	4.76E-04	4.76E-04
TEEN	4.79E-04	4.79E-04	6.02E-07	4.79E-04	4.79E-04	4.98E-04	4.79E-04	4.79E-04
CHILD	4.23E-04	4.23E-04	6.50E-07	4.24E-04	4.24E-04	4.45E-04	4.24E-04	4.23E-04
INFANT	2.44E-04	2.43E-04	3.32E-07	2.44E-04	2.44E-04	2.63E-04	2.44E-04	2.43E-04

TABLE VII-A-14

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 14 BEEF
 AT 1.98 MILES S

BETA AIR DOSE = 2.55E-04 MILLRADS
 GAMMA AIR DOSE = 1.42E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	8.84E-05	8.84E-05	8.84E-05	8.84E-05	8.84E-05	8.84E-05	9.08E-05	2.06E-04
GROUND	5.02E-07	5.02E-07	5.02E-07	5.02E-07	5.02E-07	5.02E-07	5.02E-07	5.86E-07
MEAT								
ADULT	1.17E-05	1.17E-05	4.32E-08	1.17E-05	1.17E-05	1.24E-05	1.17E-05	1.17E-05
TEEN	6.99E-06	6.98E-06	3.45E-08	7.02E-06	7.00E-06	7.45E-06	6.99E-06	6.98E-06
CHILD	8.44E-06	8.43E-06	6.07E-08	8.48E-06	8.45E-06	9.14E-06	8.44E-06	8.43E-06

TABLE VII-A-15

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 15 COW
 AT 2.74 MILES S

BETA AIR DOSE = 1.22E-04 MILLRADS
 GAMMA AIR DOSE = 6.55E-05 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.06E-05	4.06E-05	4.06E-05	4.06E-05	4.06E-05	4.06E-05	4.18E-05	9.60E-05
GROUND	2.36E-07	2.36E-07	2.36E-07	2.36E-07	2.36E-07	2.36E-07	2.36E-07	2.75E-07
COW MILK								
ADULT	1.35E-05	1.34E-05	1.16E-07	1.35E-05	1.35E-05	1.76E-05	1.34E-05	1.34E-05
TEEN	1.76E-05	1.75E-05	2.06E-07	1.77E-05	1.76E-05	2.41E-05	1.75E-05	1.75E-05
CHILD	2.77E-05	2.76E-05	4.67E-07	2.80E-05	2.78E-05	4.08E-05	2.76E-05	2.76E-05
INFANT	4.20E-05	4.19E-05	7.87E-07	4.27E-05	4.22E-05	7.38E-05	4.19E-05	4.19E-05

TABLE VII-A-16

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 16 RES
 AT 0.63 MILES SSW

BETA AIR DOSE = 2.45E-03 MILLRADS
 GAMMA AIR DOSE = 1.57E-03 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	9.88E-04	9.88E-04	9.88E-04	9.88E-04	9.88E-04	9.88E-04	1.01E-03	2.18E-03
GROUND	3.25E-07	3.25E-07	3.25E-07	3.25E-07	3.25E-07	3.25E-07	3.25E-07	3.79E-07
INHAL ADULT	4.13E-04	4.13E-04	4.49E-07	4.13E-04	4.13E-04	4.26E-04	4.13E-04	4.13E-04
TEEN	4.15E-04	4.15E-04	5.29E-07	4.15E-04	4.15E-04	4.32E-04	4.15E-04	4.15E-04
CHILD	3.67E-04	3.67E-04	5.70E-07	3.67E-04	3.67E-04	3.86E-04	3.67E-04	3.67E-04
INFANT	2.11E-04	2.11E-04	2.91E-07	2.11E-04	2.11E-04	2.28E-04	2.11E-04	2.11E-04

TABLE VII-A-17

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 1 VEG
 AT 1.14 MILES SSW

BETA AIR DOSE = 6.89E-04 MILLRADS
 GAMMA AIR DOSE = 4.04E-04 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.53E-04	2.53E-04	2.53E-04	2.53E-04	2.53E-04	2.53E-04	2.59E-04	5.76E-04
GROUND	3.83E-07	3.83E-07	3.83E-07	3.83E-07	3.83E-07	3.83E-07	3.83E-07	4.47E-07
VEGET ADULT	2.17E-04	2.17E-04	7.37E-07	2.17E-04	2.17E-04	2.21E-04	2.17E-04	2.17E-04
TEEN	2.49E-04	2.48E-04	1.01E-06	2.49E-04	2.48E-04	2.52E-04	2.48E-04	2.48E-04
CHILD	3.85E-04	3.84E-04	2.02E-06	3.85E-04	3.85E-04	3.90E-04	3.85E-04	3.84E-04

TABLE VII-A-18

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 2 BEEF
 AT 1.99 MILES SSW

BETA AIR DOSE = 1.88E-04 MILLRADS
 GAMMA AIR DOSE = 1.06E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.59E-05	6.59E-05	6.59E-05	6.59E-05	6.59E-05	6.59E-05	6.77E-05	1.53E-04
GROUND	3.58E-07	3.58E-07	3.58E-07	3.58E-07	3.58E-07	3.58E-07	3.58E-07	4.17E-07
MEAT								
ADULT	8.63E-06	8.61E-06	3.08E-08	8.64E-06	8.62E-06	9.07E-06	8.61E-06	8.61E-06
TEEN	5.15E-06	5.14E-06	2.45E-08	5.16E-06	5.15E-06	5.47E-06	5.14E-06	5.14E-06
CHILD	6.21E-06	6.20E-06	4.32E-08	6.24E-06	6.22E-06	6.71E-06	6.21E-06	6.20E-06

TABLE VII-A-19

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 3 RES
 AT 0.72 MILES SW

BETA AIR DOSE = 2.07E-03 MILLRADS
 GAMMA AIR DOSE = 1.31E-03 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	8.25E-04	8.25E-04	8.25E-04	8.25E-04	8.25E-04	8.25E-04	8.44E-04	1.83E-03
GROUND	9.52E-07	9.52E-07	9.52E-07	9.52E-07	9.52E-07	9.52E-07	9.52E-07	1.11E-06
INHAL ADULT	3.51E-04	3.51E-04	3.77E-07	3.51E-04	3.51E-04	3.63E-04	3.51E-04	3.51E-04
TEEN	3.53E-04	3.53E-04	4.44E-07	3.54E-04	3.53E-04	3.68E-04	3.53E-04	3.53E-04
CHILD	3.13E-04	3.12E-04	4.79E-07	3.13E-04	3.13E-04	3.28E-04	3.13E-04	3.12E-04
INFANT	1.80E-04	1.80E-04	2.45E-07	1.80E-04	1.80E-04	1.94E-04	1.80E-04	1.80E-04

TABLE VII-A-20

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 4 BEEF
 AT 0.82 MILES SW

BETA AIR DOSE = 1.55E-03 MILLRADS
 GAMMA AIR DOSE = 9.53E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.99E-04	5.99E-04	5.99E-04	5.99E-04	5.99E-04	5.99E-04	6.13E-04	1.34E-03
GROUND	4.00E-06	4.00E-06	4.00E-06	4.00E-06	4.00E-06	4.00E-06	4.00E-06	4.67E-06
MEAT								
ADULT	6.90E-05	6.88E-05	3.45E-07	6.91E-05	6.89E-05	7.39E-05	6.88E-05	6.87E-05
TEEN	4.11E-05	4.10E-05	2.75E-07	4.13E-05	4.11E-05	4.48E-05	4.10E-05	4.10E-05
CHILD	4.96E-05	4.95E-05	4.84E-07	4.99E-05	4.97E-05	5.52E-05	4.96E-05	4.95E-05

TABLE VII-A-21

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 5 VEG
 AT 2.35 MILES SW

BETA AIR DOSE = $1.41\text{E-}04$ MILLRADS
 GAMMA AIR DOSE = $7.50\text{E-}05$ MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	$4.65\text{E-}05$	$4.65\text{E-}05$	$4.65\text{E-}05$	$4.65\text{E-}05$	$4.65\text{E-}05$	$4.65\text{E-}05$	$4.78\text{E-}05$	$1.10\text{E-}04$
GROUND	$1.61\text{E-}08$	$1.61\text{E-}08$	$1.61\text{E-}08$	$1.61\text{E-}08$	$1.61\text{E-}08$	$1.61\text{E-}08$	$1.61\text{E-}08$	$1.88\text{E-}08$
VEGET								
ADULT	$4.57\text{E-}05$	$4.57\text{E-}05$	$3.10\text{E-}08$	$4.57\text{E-}05$	$4.57\text{E-}05$	$4.58\text{E-}05$	$4.57\text{E-}05$	$4.57\text{E-}05$
TEEN	$5.23\text{E-}05$	$5.23\text{E-}05$	$4.27\text{E-}08$	$5.23\text{E-}05$	$5.23\text{E-}05$	$5.24\text{E-}05$	$5.23\text{E-}05$	$5.23\text{E-}05$
CHILD	$8.10\text{E-}05$	$8.10\text{E-}05$	$8.50\text{E-}08$	$8.10\text{E-}05$	$8.10\text{E-}05$	$8.12\text{E-}05$	$8.10\text{E-}05$	$8.10\text{E-}05$

TABLE VII-A-22

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 6 RES
 AT 1.05 MILES WSW

BETA AIR DOSE = 1.34E-03 MILLRADS
 GAMMA AIR DOSE = 8.46E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.32E-04	5.32E-04	5.32E-04	5.32E-04	5.32E-04	5.32E-04	5.44E-04	1.18E-03
GROUND	8.13E-08	8.13E-08	8.13E-08	8.13E-08	8.13E-08	8.13E-08	8.13E-08	9.48E-08
INHAL								
ADULT	2.27E-04	2.27E-04	2.41E-07	2.27E-04	2.27E-04	2.35E-04	2.27E-04	2.27E-04
TEEN	2.29E-04	2.29E-04	2.84E-07	2.29E-04	2.29E-04	2.38E-04	2.29E-04	2.29E-04
CHILD	2.02E-04	2.02E-04	3.06E-07	2.02E-04	2.02E-04	2.13E-04	2.02E-04	2.07E-04
INFANT	1.16E-04	1.16E-04	1.56E-07	1.16E-04	1.16E-04	1.26E-04	1.16E-04	1.16E-04

TABLE VII-A-23

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 7 VEG
 AT 1.23 MILES WSW

BETA AIR DOSE = 9.12E-04 MILLRADS
 GAMMA AIR DOSE = 5.54E-04 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.47E-04	3.47E-04	3.47E-04	3.47E-04	5.47E-04	3.47E-04	3.56E-04	7.81E-04
GROUND	3.01E-07	3.01E-07	3.01E-07	3.01E-07	3.01E-07	3.01E-07	3.01E-07	3.52E-07
VEGET								
ADULT	2.83E-04	2.83E-04	5.81E-07	2.83E-04	2.83E-04	2.86E-04	2.83E-04	2.83E-04
TEEN	3.24E-04	3.24E-04	7.99E-07	3.24E-04	3.24E-04	3.27E-04	3.24E-04	3.24E-04
CHILD	5.02E-04	5.02E-04	1.59E-06	5.03E-04	5.02E-04	5.06E-04	5.02E-04	5.02E-04

TABLE VII-A-24

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 8 BEEF
 AT 2.45 MILES WSW

BETA AIR DOSE = 1.92E-04 MILLRADS
 GAMMA AIR DOSE = 1.08E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.76E-05	6.76E-05	6.76E-05	6.76E-05	6.76E-05	6.76E-05	6.93E-05	1.56E-04
GROUND	3.66E-07	3.66E-07	3.66E-07	3.66E-07	3.66E-07	3.66E-07	3.66E-07	4.27E-07
MEAT								
ADULT	8.80E-06	8.78E-06	3.15E-08	8.81E-06	8.79E-06	9.25E-06	8.78E-06	8.78E-06
TEEN	5.25E-06	5.24E-06	2.51E-08	5.26E-06	5.25E-06	5.58E-06	5.24E-06	5.24E-06
CHILD	6.33E-06	6.32E-06	4.42E-08	6.36E-06	6.34E-06	6.84E-06	6.33E-06	6.32E-06

TABLE VII-A-25

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 9 RES
 AT 1.17 MILES W

BETA AIR DOSE = 1.53E-03 MILLRADS
 GAMMA AIR DOSE = 9.76E-04 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.28E-04	1.36E-03
GROUND	3.98E-06	3.98E-06	3.98E-06	3.98E-06	3.98E-06	3.98E-06	3.98E-06	4.64E-06
INHAL								
ADULT	2.59E-04	2.59E-04	2.68E-07	2.59E-04	2.59E-04	2.67E-04	2.59E-04	2.59E-04
TEEN	2.60E-04	2.60E-04	3.17E-07	2.60E-04	2.60E-04	2.71E-04	2.60E-04	2.60E-04
CHILD	2.30E-04	2.30E-04	3.42E-07	2.30E-04	2.30E-04	2.42E-04	2.30E-04	2.30E-04
INFANT	1.32E-04	1.32E-04	1.75E-07	1.32E-04	1.32E-04	1.43E-04	1.32E-04	1.32E-04

TABLE VII-A-26

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 10 VEG
 AT 1.20 MILES W

BETA AIR DOSE = 1.52E-03 MILLRADS
 GAMMA AIR DOSE = 9.69E-04 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.10E-04	6.10E-04	6.10E-04	6.10E-04	6.10E-04	6.10E-04	6.23E-04	1.35E-03
GROUND	3.96E-06	3.96E-06	3.96E-06	3.96E-06	3.96E-06	3.96E-06	3.96E-06	4.62E-06
VEGET								
ADULT	4.67E-04	4.64E-04	7.63E-06	4.67E-04	4.65E-04	5.06E-04	4.64E-04	4.63E-04
TEEN	5.34E-04	5.31E-04	1.05E-05	5.36E-04	5.33E-04	5.66E-04	5.31E-04	5.30E-04
CHILD	8.25E-04	8.22E-04	2.09E-05	8.31E-04	8.25E-04	8.75E-04	8.23E-04	8.22E-04

TABLE VII-A-27

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 11 BEEF
 AT 2.06 MILES W

BETA AIR DOSE = 4.38E-04 MILLRADS
 GAMMA AIR DOSE = 2.62E-04 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.64E-04	1.64E-04	1.64E-04	1.64E-04	1.64E-04	1.64E-04	1.68E-04	3.71E-04
GROUND	9.83E-07	9.83E-07	9.83E-07	9.83E-07	9.83E-07	9.83E-07	9.83E-07	1.15E-06
IN AT								
ADULT	1.97E-05	1.97E-05	8.47E-08	1.98E-05	1.97E-05	2.09E-05	1.97E-05	1.97E-05
TEEN	1.18E-05	1.17E-05	6.75E-08	1.18E-05	1.18E-05	1.27E-05	1.17E-05	1.17E-05
CHILD	1.42E-05	1.42E-05	1.19E-07	1.43E-05	1.42E-05	1.56E-05	1.42E-05	1.42E-05

TABLE VII-A-28

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 12 RES. VEG
 AT 2.04 MILES WNW

BETA AIR DOSE = 8.93E-04 MILLRADS
 GAMMA AIR DOSE = 5.11E-04 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.19E-04	3.19E-04	3.19E-04	3.19E-04	3.19E-04	3.19E-04	3.27E-04	7.34E-04
GROUND	1.62E-06	1.62E-06	1.62E-06	1.62E-06	1.62E-06	1.62E-06	1.62E-06	1.89E-06
VEGET ADULT	2.84E-04	2.83E-04	3.11E-06	2.84E-04	2.84E-04	3.00E-04	2.83E-04	2.83E-04
TEEN	3.25E-04	3.24E-04	4.28E-06	3.26E-04	3.25E-04	3.38E-04	3.24E-04	3.24E-04
CHILD	5.03E-04	5.02E-04	8.53E-06	5.06E-04	5.03E-04	5.23E-04	5.02E-04	5.02E-04
INHAL ADULT	1.57E-04	1.57E-04	1.58E-07	1.57E-04	1.57E-04	1.62E-04	1.57E-04	1.57E-04
TEEN	1.58E-04	1.58E-04	1.87E-07	1.58E-04	1.58E-04	1.64E-04	1.58E-04	1.58E-04
CHILD	1.40E-04	1.40E-04	2.01E-07	1.40E-04	1.40E-04	1.46E-04	1.40E-04	1.40E-04
INFANT	8.02E-05	8.02E-05	1.03E-07	8.03E-05	8.03E-05	8.65E-05	8.03E-05	8.02E-05

TABLE VII-A-29

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 13 BEEF
 AT 2.74 MILES WNW

BETA AIR DOSE = 4.85E-04 MILLRADS
 GAMMA AIR DOSE = 2.63E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.63E-04	1.63E-04	1.63E-04	1.63E-04	1.63E-04	1.63E-04	1.68E-04	3.84E-04
GROUND	8.26E-07	8.26E-07	8.26E-07	8.26E-07	8.26E-07	8.26E-07	8.26E-07	9.64E-07
MEAT								
ADULT	2.25E-05	2.25E-05	7.12E-08	2.26E-05	2.25E-05	2.35E-05	2.25E-05	2.25E-05
TEEN	1.34E-05	1.34E-05	5.67E-08	1.35E-05	1.34E-05	1.42E-05	1.34E-05	1.34E-05
CHILD	1.62E-05	1.62E-05	9.99E-08	1.63E-05	1.62E-05	1.74E-05	1.62E-05	1.62E-05

TABLE VII-A-30

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 14 RES, VEG
 AT 2.43 MILES NW

BETA AIR DOSE = 4.45E-04 MILLRADS
 GAMMA AIR DOSE = 2.40E-04 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.49E-04	1.49E-04	1.49E-04	1.49E-04	1.49E-04	1.49E-04	1.53E-04	3.51E-04
GROUND	9.52E-07	9.52E-07	9.52E-07	9.52E-07	9.52E-07	9.52E-07	9.52E-07	1.11E-06
VEGET								
ADULT	1.45E-04	1.44E-04	1.83E-06	1.45E-04	1.44E-04	1.54E-04	1.44E-04	1.44E-04
TEEN	1.66E-04	1.65E-04	2.52E-06	1.66E-04	1.65E-04	1.73E-04	1.65E-04	1.65E-04
CHILD	2.56E-04	2.55E-04	5.03E-06	2.58E-04	2.56E-04	2.68E-04	2.56E-04	2.55E-04
INHAL								
ADULT	7.98E-05	7.98E-05	7.89E-08	7.98E-05	7.98E-05	8.23E-05	7.98E-05	7.98E-05
TEEN	8.03E-05	8.03E-05	9.31E-08	8.03E-05	8.03E-05	8.34E-05	8.03E-05	8.03E-05
CHILD	7.10E-05	7.10E-05	1.01E-07	7.10E-05	7.10E-05	7.44E-05	7.10E-05	7.10E-05
INFANT	4.08E-05	4.08E-05	5.14E-08	4.08E-05	4.08E-05	4.40E-05	4.08E-05	4.08E-05

TABLE VII-A-31

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 15 COW,PORK,BEEF
 AT 3.47 MILES NW

BETA AIR DOSE = 2.16E-04 MILLRADS
 GAMMA AIR DOSE = 1.07E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.58E-05	6.58E-05	6.58E-05	6.58E-05	6.58E-05	6.58E-05	6.78E-05	1.61E-04
GROUND	4.06E-07	4.06E-07	4.06E-07	4.06E-07	4.06E-07	4.06E-07	4.06E-07	4.74E-07
MEAT								
ADULT	1.03E-05	1.03E-05	3.50E-08	1.04E-05	1.03E-05	1.08E-05	1.03E-05	1.03E-05
TEEN	6.17E-06	6.16E-06	2.79E-08	6.19E-06	6.17E-06	6.54E-06	6.16E-06	6.16E-06
CHILD	7.45E-06	7.44E-06	4.91E-08	7.48E-06	7.45E-06	8.01E-06	7.44E-06	7.44E-06
COW MILK								
ADULT	2.44E-05	2.43E-05	2.00E-07	2.45E-05	2.44E-05	3.15E-05	2.43E-05	2.42E-05
TEEN	3.17E-05	3.16E-05	3.55E-07	3.20E-05	3.18E-05	4.30E-05	3.16E-05	3.16E-05
CHILD	5.00E-05	4.99E-05	8.38E-07	5.06E-05	5.02E-05	7.25E-05	5.00E-05	4.99E-05
INFANT	7.59E-05	7.57E-05	1.35E-06	7.72E-05	7.62E-05	1.31E-04	7.58E-05	7.57E-05

TABLE VII-A-32

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 16 RES
 AT 2.02 MILES NNW

BETA AIR DOSE = 5.68E-04 MILLRADS
 GAMMA AIR DOSE = 3.23E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.01E-04	2.01E-04	2.01E-04	2.01E-04	2.01E-04	2.01E-04	2.06E-04	4.64E-04
GROUND	1.19E-06	1.19E-06	1.19E-06	1.19E-06	1.19E-06	1.19E-06	1.19E-06	1.39E-06
INHAL								
ADULT	1.00E-04	9.99E-05	1.01E-07	1.00E-04	1.00E-04	1.03E-04	9.99E-05	9.99E-05
TEEN	1.01E-04	1.01E-04	1.19E-07	1.01E-04	1.01E-04	1.05E-04	1.01E-04	1.01E-04
CHILD	8.89E-05	8.89E-05	1.28E-07	8.90E-05	8.90E-05	9.33E-05	8.90E-05	8.89E-05
INFANT	5.11E-05	5.11E-05	6.56E-08	5.12E-05	5.12E-05	5.51E-05	5.12E-05	5.11E-05

TABLE VII-A-33

FORT CALHOUN 1 RECEPTORS IN ALL SECTORS 03-15-93
 SPECIAL LOCATION # 1 VEG
 AT 4.14 MILES NNW

BETA AIR DOSE = 1.30E-04 MILLRADS
 GAMMA AIR DOSE = 6.14E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.76E-05	3.76E-05	3.76E-05	3.76E-05	3.76E-05	3.76E-05	3.89E-05	9.38E-05
GROUND	2.26E-07	2.26E-07	2.26E-07	2.26E-07	2.26E-07	2.26E-07	2.26E-07	2.63E-07
VEGET								
ADULT	4.42E-05	4.40E-05	4.35E-07	4.42E-05	4.41E-05	4.64E-05	4.40E-05	4.40E-05
TEEN	5.06E-05	5.04E-05	5.99E-07	5.07E-05	5.05E-05	5.24E-05	5.04E-05	5.04E-05
CHILD	7.83E-05	7.81E-05	1.19E-06	7.86E-05	7.82E-05	8.11E-05	7.81E-05	7.81E-05

TABLE VII-C-1

FORT CALHOUN SEMIANNUAL 07/92-12/92 TRI-EX TOWER DATA 03-15-93
ALARA INTEGRATED POPULATION DOSE SUMMARY (MAHREM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.13E-03 22.49%	1.13E-03 22.53%	1.13E-03 97.03%	1.13E-03 22.46%	1.13E-03 22.50%	1.13E-03 20.88%	1.20E-03 23.44%	3.54E-03 47.57%
GROUND	7.66E-06 0.15%	7.66E-06 0.15%	7.66E-06 0.66%	7.66E-06 0.15%	7.66E-06 0.15%	7.66E-06 0.14%	7.66E-06 0.15%	8.94E-06 0.12%
INHAL	1.22E-03 24.24%	1.22E-03 24.28%	1.10E-06 0.09%	1.22E-03 24.22%	1.22E-03 24.26%	1.26E-03 23.23%	1.22E-03 23.99%	1.22E-03 16.43%
VEGET	1.82E-03 36.03%	1.81E-03 35.98%	2.04E-05 1.75%	1.82E-03 36.05%	1.82E-03 36.00%	2.04E-03 37.57%	1.81E-03 35.55%	1.81E-03 24.33%
COW MILK	4.53E-04 8.97%	4.51E-04 8.95%	4.24E-06 0.36%	4.55E-04 9.01%	4.53E-04 8.98%	5.61E-04 10.33%	4.51E-04 8.85%	4.51E-04 6.06%
MEAT	4.09E-04 8.11%	4.09E-04 8.11%	1.30E-06 0.11%	4.10E-04 8.11%	4.09E-04 8.11%	4.27E-04 7.85%	4.09E-04 8.02%	4.09E-04 5.49%
TOTAL	5.05E-03	5.04E-03	1.17E-03	5.05E-03	5.04E-03	5.43E-03	5.10E-03	7.45E-03

DISCHARGE=8.02E+02 CFS SOURCE TERM MULTIPLIER=1.00E+00

50-MILE POPULATION=7.60E+05 FRACTION --- ADULT=0.66
TEENAGER=0.14
CHILD=0.20

FRESHWATER SITE

FT. CALHOUN S. TERMS07/92-12/92

NO RECONCENTRATION OF NUCLIDES

* * * ADULT DOSE FACTORS * * *

NUCLIDE	CURIE/5VR	INGESTION DOSE FACTORS (MREM/PCY INTAKE)										SHORELINE (MREM/HR)/(PCI/M**2)			
		BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI	SKIN	TOTAL BODY	RECON				
38SR	89	7.28E-05	3.08E-04	0.00E+00	8.84E-06	0.00E+00	0.00E+00	4.94E-05	6.50E-13	5.60E-13	1.00E+00				
38SR	90	9.60E-05	7.58E-03	0.00E+00	1.86E-03	0.00E+00	0.00E+00	2.19E-04	0.00E+00	0.00E+00	1.00E+00				
58CE	141	5.16E-05	9.36E-09	6.33E-09	7.18E-10	0.00E+00	2.94E-09	2.42E-05	6.20E-10	5.56E-10	1.00E+00				
58CE	144	5.21E-04	4.88E-07	2.04E-07	2.62E-08	0.00E+00	1.21E-07	0.00E+00	1.65E-04	3.70E-10	1.00E+00				
45RH	103M	3.09E-04	1.85E-07	0.00E+00	7.97E-08	0.00E+00	7.06E-07	2.16E-05	4.20E-09	3.60E-09	1.00E+00				
50SN	113	2.81E-04	7.91E-06	2.18E-07	4.53E-07	1.29E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00				
52TE	132	7.03E-06	2.52E-05	1.63E-06	1.53E-06	1.80E-06	1.57E-05	7.71E-05	2.00E-09	1.70E-09	1.00E+00				
90TH	234	6.39E-05	8.01E-08	4.71E-09	2.31E-09	0.00E+00	2.67E-08	1.13E-04	1.30E-10	1.10E-10	1.00E+00				
50SN	117M	1.37E-05	2.15E-06	5.69E-08	1.65E-07	3.37E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00				
48E	7	1.76E-04	2.74E-09	6.21E-09	3.05E-09	0.00E+00	6.56E-09	1.08E-06	0.00E+00	0.00E+00	1.00E+00				
39Y	90	9.60E-05	9.62E-09	0.00E+00	2.58E-10	0.00E+00	0.00E+00	1.02E-04	2.60E-12	2.20E-12	1.00E+00				
53I	131	1.50E-04	4.16E-06	5.95E-06	3.41E-06	1.95E-03	1.02E-05	1.57E-06	3.40E-03	2.80E-09	1.00E+00				
55CS	137	1.50E-03	7.97E-05	1.09E-04	7.14E-05	0.00E+00	3.70E-05	1.23E-05	4.90E-09	4.20E-09	1.00E+00				
41NB	95	8.66E-03	6.22E-09	3.46E-09	1.86E-09	0.00E+00	3.42E-09	2.10E-05	6.00E-09	5.10E-09	1.00E+00				
55CS	134	3.79E-04	6.22E-05	1.48E-04	1.21E-04	0.00E+00	4.79E-05	1.59E-05	1.40E-08	1.20E-08	1.00E+00				
27CO	58	2.77E-02	0.00E+00	7.45E-07	1.67E-06	0.00E+00	0.00E+00	1.51E-05	8.20E-09	7.00E-09	1.00E+00				
25MH	54	6.86E-04	0.00E+00	4.57E-06	8.72E-07	0.00E+00	1.36E-06	0.00E+00	1.40E-05	6.80E-09	1.00E+00				
27CO	60	7.77E-03	0.00E+00	2.14E-06	4.72E-05	0.00E+00	0.00E+00	4.02E-05	2.00E-08	1.70E-08	1.00E+00				
27CO	57	4.71E-05	0.00E+00	1.75E-07	2.91E-07	0.00E+00	0.00E+00	4.44E-06	1.00E-09	9.10E-10	1.00E+00				
57LA	140	3.21E-03	2.50E-09	1.26E-09	3.33E-10	0.00E+00	0.00E+00	9.25E-05	1.70E-04	1.50E-08	1.00E+00				
51SB	122	5.87E-06	2.25E-07	4.41E-09	6.55E-08	3.16E-09	0.00E+00	1.17E-07	6.59E-05	0.00E+00	1.00E+00				
51SB	125	3.36E-02	1.79E-06	2.00E-08	4.26E-07	1.82E-09	0.00E+00	1.38E-06	1.97E-05	3.50E-09	1.00E+00				
51SB	124	3.10E-03	2.80E-06	5.29E-08	1.11E-06	6.79E-09	0.00E+00	2.18E-06	7.95E-05	1.50E-08	1.00E+00				
51SB	126	8.00E-06	1.15E-06	2.34E-08	4.15E-07	7.04E-09	0.00E+00	7.05E-07	9.40E-05	1.00E-08	1.00E+00				
47AG	110M	7.10E-03	1.60E-07	1.48E-07	8.79E-08	0.00E+00	2.91E-07	0.00E+00	6.04E-05	2.10E-08	1.00E+00				
1H	3	6.89E+01	0.00E+00	1.05E-07	1.05E-07	1.05E-07	1.05E-07	1.05E-07	0.00E+00	0.00E+00	1.00E+00				
6C	14	4.83E-02	2.84E-06	5.68E-07	5.68E-07	5.68E-07	5.68E-07	5.68E-07	0.00E+00	0.00E+00	1.00E+00				
26FE	55	3.53E-03	2.75E-06	1.90E-06	4.43E-07	0.00E+00	0.00E+00	1.06E-06	1.09E-06	0.00E+00	1.00E+00				
26FE	59	1.59E-04	4.34E-06	1.02E-05	3.91E-06	0.00E+00	0.00E+00	2.85E-06	3.40E-05	9.40E-09	1.00E+00				
56BA	140	5.35E-03	2.03E-05	2.55E-08	1.33E-06	0.00E+00	8.67E-09	1.46E-08	4.18E-05	2.40E-09	1.00E+00				
43TC	99	5.83E-05	1.25E-07	1.86E-07	5.02E-08	0.00E+00	2.34E-06	1.58E-08	6.08E-06	0.00E+00	1.00E+00				
53I	133	2.05E-06	1.42E-06	2.47E-06	7.53E-07	3.63E-04	4.31E-06	0.00E+00	2.22E-06	4.50E-09	1.00E+00				
24CR	51	1.08E-02	0.00E+00	0.00E+00	2.66E-09	1.59E-09	5.86E-10	3.53E-09	6.69E-07	2.60E-10	1.00E+00				
44RU	103	3.09E-04	1.85E-07	0.00E+00	7.97E-08	0.00E+00	7.06E-07	0.00E+00	2.16E-05	4.20E-09	1.00E+00				
44RU	106	9.70E-04	2.75E-06	0.00E+00	3.48E-07	0.00E+00	5.31E-05	0.00E+00	1.78E-04	1.80E-09	1.00E+00				
30ZN	65	5.18E-05	4.84E-06	1.54E-05	6.96E-06	0.00E+00	1.03E-05	0.00E+00	9.70E-06	4.60E-09	1.00E+00				
40ZR	95	5.63E-03	3.04E-08	9.75E-09	6.60E-09	0.00E+00	1.53E-08	0.00E+00	3.09E-05	5.80E-09	1.00E+00				
72HF	181	2.04E-04	4.70E-09	2.56E-08	2.08E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00				
59PR	144	4.63E-04	4.88E-07	2.04E-07	2.62E-08	0.00E+00	1.21E-07	0.00E+00	1.55E-04	3.70E-10	1.00E+00				
45RH	106	9.70E-04	2.75E-06	0.00E+00	3.48E-07	0.00E+00	5.31E-05	0.00E+00	1.78E-04	1.80E-09	1.00E+00				

TABLE VII-D-1
(CONT.)

NUCLIDE	CURIE/ 5YR	* * * * * TEENAGER DOSE FACTORS * * *										INGESTION DOSE FACTORS (MREM/PCI INTAKE)				SHORELINE (MREM/HR)/(PCI/M**2)			
		BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI	SKIN	TOTAL BODY	RECON								
38SR 89	7.28E-05	4.40E-04	0.00E+00	1.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-05								
38SR 90	9.60E-05	8.30E-03	0.00E+00	2.05E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-04								
58CE 141	5.16E-05	1.33E-08	8.88E-09	1.02E-09	0.00E+00	4.18E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-05								
58CE 144	5.21E-04	6.96E-07	2.88E-07	3.74E-08	0.00E+00	0.00E+00	1.72E-07	0.00E+00	0.00E+00	0.00E+00	1.75E-04								
45RH 103M	3.09E-04	2.55E-07	0.00E+00	1.09E-07	0.00E+00	8.99E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-05								
50SN 113	2.81E-04	1.13E-05	3.08E-07	6.48E-07	1.72E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00								
52TE 132	7.03E-06	3.49E-06	2.21E-06	2.08E-06	2.33E-06	2.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-05								
50SN 117M	1.37E-05	3.07E-06	8.07E-08	2.36E-07	4.49E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00								
48E 7	1.76E-04	3.92E-09	8.79E-09	4.35E-09	0.00E+00	9.37E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-06								
39Y 90	9.60E-05	1.37E-08	0.00E+00	3.69E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-04								
531 131	1.50E-04	5.85E-06	8.19E-06	4.40E-06	2.39E-03	1.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-06								
55CS 137	1.50E-03	1.12E-04	1.49E-04	5.19E-05	0.00E+00	5.07E-05	1.97E-05	0.00E+00	0.00E+00	0.00E+00	2.12E-06								
41NB 95	8.66E-03	8.22E-09	4.56E-09	2.51E-09	0.00E+00	4.42E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-05								
55CS 134	3.79E-04	8.37E-05	1.97E-04	9.14E-05	0.00E+00	6.26E-05	2.39E-05	0.00E+00	0.00E+00	0.00E+00	2.45E-06								
27CO 58	2.77E-02	0.00E+00	9.72E-07	2.24E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-05								
27CO 60	7.77E-03	0.00E+00	2.81E-06	6.33E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-05								
57LA 140	3.21E-03	3.48E-09	1.71E-09	4.55E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.82E-05								
51SB 122	5.87E-06	3.21E-07	6.24E-09	9.35E-08	4.22E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.91E-05								
47AG 110M	7.10E-03	2.05E-07	1.94E-07	1.18E-07	0.00E+00	3.70E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-05								
1H 3	6.69E+01	0.00E+00	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07	1.06E-07								
6C 14	4.83E-02	4.06E-06	8.12E-07	8.12E-07	8.12E-07	8.12E-07	8.12E-07	8.12E-07	8.12E-07	8.12E-07	8.12E-07								
56BA 140	5.35E-03	2.84E-05	3.48E-08	1.83E-06	0.00E+00	1.18E-08	2.34E-08	4.38E-05											
531 133	2.05E-06	2.01E-06	3.41E-06	1.04E-06	4.76E-04	5.98E-06	0.00E+00	2.58E-06											
44RU 103	3.09E-04	2.55E-07	0.00E+00	1.09E-07	0.00E+00	8.99E-07	0.00E+00	2.13E-05											
44RU 106	9.70E-04	3.92E-06	0.00E+00	4.94E-07	0.00E+00	7.56E-06	0.00E+00	1.88E-04											
40ZR 95	5.63E-03	4.12E-08	1.30E-08	8.94E-09	0.00E+00	1.91E-08	0.00E+00	3.00E-05											
72HF 181	2.04E-04	6.72E-09	3.63E-08	2.97E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00											
59PR 144	4.63E-04	6.96E-07	2.88E-07	3.74E-08	0.00E+00	1.72E-07	0.00E+00	1.75E-04											
45RH 106	9.70E-04	3.92E-06	0.00E+00	4.94E-07	0.00E+00	7.56E-06	0.00E+00	1.88E-04											

TABLE VII-D-1
(CONT.)

NUCLIDE	CURIE/ 5YR	* * * CHILD DOSE FACTORS * * *										SHORELINE (MREM/HR)/(PCI/M**2)			RECON
		INGESTION DOSE FACTORS (MREM/PCI INTAKE)										SKIN	TOTAL BODY		
		BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI							
38SR 89	7.28E-05	1.32E-03	0.00E+00	3.77E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.11E-05						
38SR 90	9.60E-05	1.70E-02	0.00E+00	4.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-04						
58CE 141	5.16E-05	3.97E-08	1.98E-08	2.94E-09	0.00E+00	8.68E-09	0.00E+00	0.00E+00	2.47E-05						
58CE 144	5.21E-04	2.08E-06	6.52E-07	1.11E-07	0.00E+00	3.61E-07	0.00E+00	0.00E+00	1.70E-04						
45RH 103M	3.09E-04	7.31E-07	0.00E+00	2.81E-07	0.00E+00	1.84E-06	0.00E+00	0.00E+00	1.89E-05						
50SN 113	2.81E-04	3.38E-05	6.98E-07	1.94E-06	5.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00						
52TE 132	7.03E-06	1.01E-05	4.47E-06	5.40E-06	6.51E-06	4.15E-05	0.00E+00	0.00E+00	4.50E-05						
50SN 117M	1.37E-05	9.17E-06	1.83E-07	7.06E-07	1.35E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00						
48E 7	1.76E-04	1.17E-08	1.99E-08	1.30E-08	0.00E+00	1.97E-08	0.00E+00	0.00E+00	1.12E-06						
39Y 90	9.60E-05	4.11E-08	0.00E+00	1.10E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04						
531 131	1.50E-04	1.72E-05	1.73E-05	9.83E-06	5.72E-03	2.84E-05	0.00E+00	0.00E+00	1.54E-06						
55CS 137	1.50E-03	3.27E-04	3.13E-04	4.62E-05	0.00E+00	1.02E-04	3.67E-05	1.96E-06	0.00E+00						
41NB 95	8.66E-03	2.25E-08	8.76E-09	6.26E-09	0.00E+00	8.23E-09	0.00E+00	1.62E-05	0.00E+00						
55CS 134	3.79E-04	2.34E-04	3.84E-04	8.10E-05	0.00E+00	1.19E-04	4.27E-05	2.07E-06	0.00E+00						
27CO 58	2.77E-02	0.00E+00	1.80E-06	5.51E-06	0.00E+00	0.00E+00	0.00E+00	1.05E-05	0.00E+00						
27CO 60	7.77E-03	0.00E+00	5.29E-06	1.56E-05	0.00E+00	0.00E+00	0.00E+00	2.93E-05	0.00E+00						
57LA 140	3.21E-03	1.01E-08	3.53E-09	1.19E-09	0.00E+00	0.00E+00	0.00E+00	9.84E-05	0.00E+00						
51SB 122	5.87E-06	9.60E-07	1.41E-08	2.79E-07	1.27E-08	0.00E+00	3.91E-07	7.55E-05	0.00E+00						
47AG 110M	7.10E-03	5.39E-07	3.64E-07	2.91E-07	0.00E+00	6.78E-07	0.00E+00	4.33E-05	0.00E+00						
1H 3	6.69E+01	0.00E+00	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.03E-07						
6C 14	4.83E-02	1.21E-05	2.42E-06	2.42E-06	2.42E-06	2.42E-06	2.42E-06	2.42E-06	2.42E-06						
56BA 140	5.35E-03	8.31E-05	7.28E-08	4.85E-06	0.00E+00	2.37E-08	4.34E-08	4.21E-05	0.00E+00						
531 133	2.05E-06	5.92E-06	7.32E-06	2.77E-06	1.36E-03	1.22E-05	0.00E+00	2.95E-06	0.00E+00						
44RU 103	3.09E-04	7.31E-07	0.00E+00	2.81E-07	0.00E+00	1.84E-06	0.00E+00	1.89E-05	0.00E+00						
44RU 106	9.70E-04	1.17E-05	0.00E+00	1.46E-06	0.00E+00	1.58E-05	0.00E+00	1.82E-04	0.00E+00						
40ZR 95	5.63E-03	1.16E-07	2.55E-08	2.27E-08	0.00E+00	3.65E-08	0.00E+00	2.66E-05	0.00E+00						
72HF 181	2.04E-04	2.01E-08	8.22E-08	8.88E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00						
59PR 144	4.63E-04	2.08E-06	6.52E-07	1.11E-07	0.00E+00	3.61E-07	0.00E+00	1.70E-04	0.00E+00						
45RH 106	9.70E-04	1.17E-05	0.00E+00	1.46E-06	0.00E+00	1.58E-05	0.00E+00	1.82E-04	0.00E+00						

TABLE VII-D-1
(CONT.)

NUCLIDE	CURIE/5YR	* * * * * INFANT DOSE FACTORS * * *										INGESTION DOSE FACTORS (MREM/PCI INTAKE)		SHORELINE (MREM/HR)/(PCI/M**2)			
		BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI	SKIN	TOTAL BODY	RECON						
38SR 89	7.28E-05	2.51E-03	0.00E+00	7.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38SR 90	9.60E-05	1.85E-02	0.00E+00	4.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58CE 141	5.16E-05	7.87E-08	4.80E-08	5.65E-09	0.00E+00	0.00E+00	1.48E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58CE 144	5.21E-04	2.98E-06	1.22E-06	1.67E-07	0.00E+00	0.00E+00	4.93E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45RH 103M	3.09E-04	1.48E-06	0.00E+00	4.95E-07	0.00E+00	0.00E+00	3.08E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50SM 113	2.81E-04	6.39E-05	1.65E-06	3.89E-06	1.15E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
52TE 132	7.03E-06	2.08E-05	1.03E-05	9.61E-06	1.52E-05	6.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50SN 117M	1.37E-05	1.90E-05	4.70E-07	1.47E-06	3.28E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48E 7	1.76E-04	2.25E-08	4.70E-08	2.53E-08	0.00E+00	0.00E+00	3.34E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
39Y 90	9.60E-05	8.69E-08	0.00E+00	2.33E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53I 131	1.50E-04	3.59E-05	4.23E-05	1.86E-05	1.39E-02	4.94E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
55CS 137	1.50E-03	5.22E-04	6.11E-04	4.33E-05	0.00E+00	0.00E+00	1.64E-04	6.64E-05	1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06
41NB 95	8.66E-03	4.20E-08	1.73E-08	1.00E-08	0.00E+00	0.00E+00	1.24E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
55CS 134	3.79E-04	3.77E-04	7.03E-04	7.10E-05	0.00E+00	0.00E+00	1.81E-04	7.42E-05	1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06
27CO 58	2.77E-02	0.00E+00	3.60E-06	8.98E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
27CO 60	7.77E-03	0.00E+00	1.08E-05	2.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57LA 140	3.21E-03	2.11E-08	8.32E-09	2.14E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51SB 122	5.87E-06	2.03E-06	3.72E-08	5.92E-07	3.15E-08	0.00E+00	1.04E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47AG 110M	7.10E-03	9.96E-07	7.27E-07	4.81E-07	0.00E+00	0.00E+00	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07
1H 3	6.69E+01	0.00E+00	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07
6C 14	4.83E-02	2.37E-05	5.06E-06	5.06E-06	5.06E-06	5.06E-06	5.06E-06	5.06E-06	5.06E-06	5.06E-06	5.06E-06	5.06E-06	5.06E-06	5.06E-06	5.06E-06	5.06E-06	5.06E-06
56BA 140	5.35E-03	1.71E-04	1.71E-07	8.81E-06	0.00E+00	0.00E+00	4.06E-08	1.05E-07	4.20E-05	4.20E-05	4.20E-05	4.20E-05	4.20E-05	4.20E-05	4.20E-05	4.20E-05	4.20E-05
53I 133	2.05E-06	1.25E-05	1.82E-05	5.33E-06	3.31E-03	2.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
44RU 103	3.09E-04	1.48E-06	0.00E+00	4.95E-07	0.00E+00	0.00E+00	3.08E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
44RU 106	9.70E-04	2.41E-05	0.00E+00	3.01E-06	0.00E+00	0.00E+00	2.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
40ZR 95	5.63E-03	2.06E-07	5.02E-08	3.56E-08	0.00E+00	0.00E+00	5.41E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
72HF 181	2.04E-04	3.92E-08	1.97E-07	1.74E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
59PR 144	4.63E-04	2.98E-06	1.22E-06	1.67E-07	0.00E+00	0.00E+00	4.93E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45RH 106	9.70E-04	1.1E-05	0.00E+00	3.01E-06	0.00E+00	0.00E+00	2.85E-05	0.00E+00	0.00E+00	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 VII-D-2

* * * * AS LOW AS REASONABLY ACHIEVABLE * * *

A D U L T D O S E S

DOSE (MREM PER 5YR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		3.78E-03	2.32E-03	1.80E-03	5.48E-04	1.13E-03	7.30E-04	2.23E-02
DRINKING		4.04E-05	2.42E-04	2.48E-04	2.42E-04	2.36E-04	2.36E-04	3.42E-04
SHORELINE	2.09E-05	1.80E-05	1.80E-05	1.80E-05	1.80E-05	1.80E-05	1.80E-05	1.80E-05
SWIMMING	0.00E+00	4.59E-07	4.59E-07	4.59E-07	4.59E-07	4.59E-07	4.59E-07	4.59E-07
BOATING	0.00E+00	2.30E-07	2.30E-07	2.30E-07	2.30E-07	2.30E-07	2.30E-07	2.30E-07
TOTAL	2.09E-05	3.84E-03	2.58E-03	2.07E-03	8.08E-04	1.39E-03	9.84E-04	2.26E-02

SHOREWIDTH FACTOR=0.2

TIME(HR)

DILUTION

USAGE (KG/YR,HR/YR)

FISH	21.0	7.3	24.00
DRINKING	730.0	30.8	18.60
SHORELINE	12.0	7.3	0.00
SWIMMING	12.0	7.3	0.00
BOATING	12.0	7.3	0.00

* * * ISOTOPE CONTRIBUTION * * *

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		SR 90 2%	CS 137 56%	SR 90 1%	I 131 2%	CS 137 39%	CS 137 20%	NB 95 96%
		CS 137 25%	CS 134 19%	CS 137 47%	H 3 4%	CS 134 12%	CS 134 6%	C 14 2%
		CS 134 4%	H 3 1%	CS 134 20%	C 14 92%	H 3 2%	H 3 3%	
		C 14 66%	C 14 21%	H 3 1%	C 14 44%	C 14 44%	C 14 69%	
				C 14 28%				
DRINKING		SR 89 1%	CS 137 2%	SR 90 2%	I 131 3%	H 3 98%	H 3 98%	NB 95 1%
		SR 90 59%	H 3 95%	CS 137 1%	H 3 95%	CO 58 3%	CO 58 3%	CO 58 3%
		CS 137 9%		H 3 93%		CO 60 2%	CO 60 2%	LA 140 2%
		CS 134 1%				SB 125 6%	SB 125 6%	SB 124 2%
		SB 125 4%				AG 110M 4%	AG 110M 4%	H 3 66%
		C 14 11%				BA 140 2%	BA 140 2%	RU 1 6 1%
		BA 140 8%				ZR 95 1%	ZR 95 1%	RH 1 6 1%
SHORELINE	CS 137 5%	CS 137 5%	CS 137 2%	SR 90 2%	I 131 3%	H 3 98%	H 3 98%	NB 95 1%
	CO 58 3%	CO 58 3%	H 3 95%	CS 137 1%	H 3 95%	CO 58 3%	CO 58 3%	CO 58 3%
	CO 60 55%	CO 60 54%		H 3 93%		CO 60 2%	CO 60 2%	LA 140 2%
	SB 125 24%	SB 125 25%				SB 125 6%	SB 125 6%	SB 124 2%
	AG 110M 8%	AG 110M 8%				AG 110M 4%	AG 110M 4%	H 3 66%
SWIMMING		NB 95 6%				BA 140 2%	BA 140 2%	RU 1 6 1%
		CO 58 24%				ZR 95 1%	ZR 95 1%	RH 1 6 1%
		CO 60 17%						
		LA 140 6%						
		SB 125 13%						
		SB 124 5%						
		AG 110M 17%						
		BA 140 1%						

TABLE VII-D-3

* * * AS LOW AS REASONABLY ACHIEVABLE * * *

TEENAGER DOSES

	DOSE (MREM PER .5YR INTAKE)							
PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		4.07E-03	2.42E-03	1.30E-03	5.86E-04	1.19E-03	8.08E-04	1.60E-02
DRINKING		3.37E-05	1.73E-04	1.75E-04	1.72E-04	1.67E-04	1.67E-04	2.42E-04
SHORELINE	1.17E-04	1.00E-04	1.00E-04	1.00E-04	1.00E-04	1.00E-04	1.00E-04	1.00E-04
SWIMMING	0.00E+00	2.56E-06	2.56E-06	2.56E-06	2.56E-06	2.56E-06	2.56E-06	2.56E-06
BOATING	0.00E+00	1.28E-06	1.28E-06	1.28E-06	1.28E-06	1.28E-06	1.28E-06	1.28E-06
TOTAL	1.17E-04	4.20E-03	2.69E-03	1.58E-03	8.62E-04	1.46E-03	1.08E-03	1.63E-02

	USAGE (KG/YR,HR/YR)	DILUTION	TIME(HR)	SHOREWIDTH FACTOR=0.2
FISH	16.0	7.3	24.00	
DRINKING	510.0	30.8	18.60	
SHORELINE	67.0	7.3	0.00	
SWIMMING	67.0	7.3	0.00	
BOATING	67.0	7.3	0.00	

* * * ISOTOPE CONTRIBUTION * * *

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH	SR 90 1%	CS 137 56%	SR 90 1%	I 131 2%	CS 137 39%	CS 137 22%	NB 95 95%	
	CS 137 25%	CS 134 18%	CS 137 36%	H 3 3%	CS 134 12%	CS 134 6%	C 14 3%	
	CS 134 4%	C 14 22%	CS 134 16%	C 14 94%	H 3 1%	H 3 2%		
	C 14 67%		H 3 1%		C 14 46%	C 14 68%		
			C 14 42%					
DRINKING	SR 89 2%	CS 137 2%	SR 90 2%	I 131 4%	CS 137 1%	H 3 98%	NB 95 1%	
	SR 90 54%	H 3 94%	CS 137 1%	H 3 94%	H 3 97%		CO 58 3%	
	CS 137 11%		H 3 93%				CO 60 2%	
	CS 134 2%						LA 140 2%	
	SB 125 4%						SB 125 6%	
	C 14 13%						SB 124 2%	
	BA 140 9%						AG 110M 3%	
							H 3 67%	
							BA 140 2%	
							RU 1 6 1%	
						RH 1 6 1%		
SHORELINE	CS 137 5%	CS 137 5%						
	CO 58 3%	CO 58 3%						
	CO 60 55%	CO 60 54%						
	SB 125 24%	SB 125 25%						
	AG 110M 8%	AG 110M 8%						
SWIMMING		NB 95 6%						
		CO 58 24%						
		CO 60 17%						
		LA 140 6%						
		SB 125 13%						
		SB 124 5%						
		AG 110M 17%						
		BA 140 1%						
		ZR 95 4%						

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RI, 03/15/93

TABLE VII-D-4

* * * * AS LOW AS REASONABLY ACHIEVABLE * * *

CHILD DOSES

DOSE (MREM PER .5YR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		5.15E-03	2.36E-03	1.03E-03	7.40E-04	1.25E-03	9.13E-04	6.24E-03
DRINKING		7.92E-05	3.33E-04	3.36E-04	3.35E-04	3.22E-04	3.19E-04	3.87E-04
SHORELINE	2.44E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05
SWIMMING	0.00E+00	5.36E-07	5.36E-07	5.36E-07	5.36E-07	5.36E-07	5.36E-07	5.36E-07
BOATING	0.00E+00	2.68E-07	2.68E-07	2.68E-07	2.68E-07	2.68E-07	2.68E-07	2.68E-07
TOTAL	2.44E-05	5.25E-03	2.71E-03	1.38E-03	1.10E-03	1.60E-03	1.25E-03	6.65E-03

SHOREWIDTH FACTOR=0.2

TIME(HR)

DILUTION

USAGE (KG/YR, HR/YR)

FISH	6.9	7.3	24.00
DRINKING	510.0	30.8	18.60
SHORELINE	14.0	7.3	0.00
SWIMMING	14.0	7.3	0.00
BOATING	14.0	7.3	0.00

* * * ISOTOPE CONTRIBUTION * * *

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		SR 90 1%	CS 137 52%	SR 90 1%	I 131 2%	CS 137 32%	CS 137 15%	GI-LLI
		CS 137 25%	CS 134 16%	CS 137 17%	H 3 2%	CS 134 9%	CS 134 4%	NB 95 87%
		CS 134 4%	C 14 30%	CS 134 7%	C 14 95%	H 3 1%	H 3 1%	C 14 11%
		C 14 68%	C 14 69%	C 14 69%		C 14 56%	C 14 77%	

DRINKING		SR 89 2%	CS 137 3%	SR 90 2%	I 131 5%	CS 137 1%	H 3 98%	CO 58 1%
		SR 90 47%	CS 134 1%	CO 58 1%	H 3 93%	H 3 97%		CO 60 1%
		CS 137 14%	H 3 94%	H 3 93%				LA 140 1%
		CS 134 2%						SB 125 3%
		SB 125 1%						SB 124 1%
		C 14 17%						AG 110M 1%
		BA 140 12%						H 3 81%
								BA 140 1%
								RU 1 6 1%
								RH 1 6 1%

SHORELINE	CS 137 5%	CS 137 5%						
	CO 58 3%	CO 58 3%						
	CO 60 55%	CO 60 54%						
	SB 125 24%	SB 125 25%						
	AG 110M 8%	AG 110M 8%						

SWIMMING		NB 95 6%						
		CO 58 24%						
		CO 60 17%						
		LA 140 6%						
		SB 125 13%						
		SB 124 5%						
		AG 110M 17%						
		BA 140 1%						
		ZR 95 4%						

TABLE VII-D-5

* * * * AS LOW AS REASONABLY ACHIEVABLE * * *									
I N F A N T D O S E S				DOSE (MHREM PER .5YR INTAKE)					
PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI	
FISH		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
DRINKING		7.54E-05	3.32E-04	3.28E-04	3.41E-04	3.17E-04	3.14E-04	3.55E-04	
SHORELINE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
TOTAL	0.00E+00	7.54E-05	3.32E-04	3.28E-04	3.41E-04	3.17E-04	3.14E-04	3.55E-04	
USAGE (KG/YR,HR/YR)				SHOREWIDTH FACTOR=0.2					
FISH	0.0			TIME(HR)					
DRINKING	330.0			7.3					
				30.8					
* * * ISOTOPE CONTRIBUTION * * *									
PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI	
DRINKING	SR 89	3%	CS 137	SR 90	I 131	CS 137	H 3	CO 58	1%
	SR 90	35%	CS 134	CO 58	H 3	H 3	CO 58	SB 125	2%
	CS 137	15%	H 3	H 3	C 14	C 14	SB 124	SB 124	1%
	CS 134	2%	C 14	C 14	C 14	C 14	AG 110M	AG 110M	1%
	SB 125	1%	C 14	C 14	C 14	C 14	H 3	H 3	86%
	C 14	22%	C 14	C 14	C 14	C 14	C 14	C 14	1%
	BA 140	17%	C 14	C 14	C 14	C 14	C 14	C 14	1%

TABLE VII-D-6

* * * SELECTED LOCATION * * *

LOCATION IS SITE DISCHG.

A D U L T D O S E S

DOSE (MREM PER .5YR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		2.76E-02	1.69E-02	1.32E-02	4.00E-03	8.27E-03	5.33E-03	1.63E-01
DRINKING		1.25E-03	7.46E-03	7.63E-03	7.47E-03	7.27E-03	7.26E-03	1.07E-02
SHORELINE	1.52E-04	1.31E-04	1.31E-04	1.31E-04	1.31E-04	1.31E-04	1.31E-04	1.31E-04
SWIMMING	0.00E+00	3.35E-06	3.35E-06	3.35E-06	3.35E-06	3.35E-06	3.35E-06	3.35E-06
BOATING	0.00E+00	1.68E-06	1.68E-06	1.68E-06	1.68E-06	1.68E-06	1.68E-06	1.68E-06
TOTAL	1.52E-04	2.90E-02	2.45E-02	2.09E-02	1.16E-02	1.57E-02	1.27E-02	1.73E-01

	USAGE (KG/YR,HR/YR)	DILUTION	TIME(HR)	SHOREWIDTH FACTOR=0.2
FISH	21.0	1.0	24.00	
DRINKING	730.0	1.0	12.00	
SHORELINE	12.0	1.0	0.00	
SWIMMING	12.0	1.0	0.00	
BOATING	12.0	1.0	0.00	

* * * ISOTOPE CONTRIBUTION * * *

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH	SR 90 2% CS 137 25% CS 134 4% C 14 66%	CS 137 56% CS 134 19% H 3 1% C 14 21%	SR 90 1% CS 137 47% CS 134 20% H 3 1% C 14 26%	I 131 2% H 3 4% C 14 92%	CS 137 39% CS 134 12% H 3 2% C 14 44%	CS 137 20% CS 134 6% H 3 3% C 14 69%	NB 95 96% C 14 2%	
DRINKING	SR 89 1% SR 90 59% CS 137 9% CS 134 1% SB 125 4% C 14 11% BA 140 8%	CS 137 2% H 3 95%	SR 90 2% CS 137 1% H 3 93%	I 131 3% H 3 95%	H 3 98% H 3 98%	NB 95 1% CO 58 3% CO 60 2% LA 140 2% SB 125 6% SB 124 2% AG 110M 4% H 3 66% BA 140 2% RU 1 6 1% ZR 95 1% RH 1 6 1%		
SHORELINE	CS 137 5% CO 58 3% CO 60 55% SB 125 24% AG 110M 8%	CS 137 5% CO 58 3% CO 60 54% SB 125 25% AG 110M 8%						
SWIMMING		NB 95 6% CO 58 24% CO 60 17% LA 140 6% SB 125 13% SB 124 5% AG 110M 17% BA 140 1% ZR 95 4%						

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TABLE VII-D-7

* * * * * SELECTED LOCATION * * *

LOCATION IS SITE DISCHG.

T E N A G E R D O S E S

DOSE (MREM PER .5VR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		2.97E-02	1.76E-02	9.48E-03	4.28E-03	8.68E-03	5.90E-03	1.16E-01
DRINKING		1.04E-03	5.33E-03	5.40E-03	5.32E-03	5.16E-03	5.14E-03	7.49E-03
SHORELINE	8.51E-04	7.32E-04	7.32E-04	7.32E-04	7.32E-04	7.32E-04	7.32E-04	7.32E-04
SWIMMING	0.00E+00	1.87E-05	1.87E-05	1.87E-05	1.87E-05	1.87E-05	1.87E-05	1.87E-05
BOATING	0.00E+00	9.36E-06	9.36E-06	9.36E-06	9.36E-06	9.36E-06	9.36E-06	9.36E-06
TOTAL	8.51E-04	3.15E-02	2.37E-02	1.56E-02	1.04E-02	1.46E-02	1.18E-02	1.25E-01

SHOREWIDTH FACTOR=0.2

USAGE (KG/YR,HR/YR)	DILUTION	TIME(HR)
FISH	1.0	24.00
DRINKING	1.0	12.00
SHORELINE	1.0	0.00
SWIMMING	1.0	0.00
BOATING	1.0	0.00

* * * * * ISOTOPE CONTRIBUTION * * *

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		SR 90 1% CS 137 25% CS 134 4% C 14 67%	CS 137 56% CS 134 18% C 14 22%	SR 90 1% CS 137 36% CS 134 16% H 3 1% C 14 42%	I 131 2% H 3 3% C 14 94%	CS 137 39% CS 134 12% H 3 1% C 14 46%	CS 137 22% CS 134 6% H 3 2% C 14 68%	NB 95 95% C 14 3%
DRINKING		SR 89 2% SR 90 54% CS 137 11% CS 134 2% SB 125 4% C 14 13% BA 140 10%	CS 137 2% H 3 94%	SR 90 2% CS 137 1% H 3 93%	I 131 4% H 3 94%	CS 137 1% H 3 97%	H 3 98%	NB 95 1% CO 58 3% CO 60 2% LA 140 2% SB 125 6% SB 124 2% AG 110M 3% H 3 67% BA 140 2% RU 1 6 1% ZR 95 1% RH 1 6 1%
SHORELINE	CS 137 5% CO 58 3% CO 60 55% SB 125 24% AG 110M 8%	CS 137 5% CO 58 3% CO 60 54% SB 125 25% AG 110M 8%						
SWIMMING		NB 95 6% CO 58 24% CO 60 17% LA 140 6% SB 125 13% SB 124 5% AG 110M 17% BA 140 1% ZR 95 4%						

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TABLE VII-D-8

* * SELECTED LOCATION * * *

LOCATION IS SITE DISCHG.

C H I L D D O S E S

DOSE (MREM PER .5YR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		3.76E-02	1.72E-02	7.49E-03	5.40E-03	9.14E-03	6.66E-03	4.55E-02
DRINKING		2.44E-03	1.03E-02	1.03E-02	1.03E-02	9.91E-03	9.83E-03	1.19E-02
SHORELINE	1.78E-04	1.53E-04	1.53E-04	1.53E-04	1.53E-04	1.53E-04	1.53E-04	1.53E-04
SWIMMING	0.00E+00	3.91E-06	3.91E-06	3.91E-06	3.91E-06	3.91E-06	3.91E-06	3.91E-06
BOATING	0.00E+00	1.96E-06	1.96E-06	1.96E-06	1.96E-06	1.96E-06	1.96E-06	1.96E-06
TOTAL	1.78E-04	4.02E-02	2.76E-02	1.80E-02	1.59E-02	1.92E-02	1.67E-02	5.77E-02

	USAGE (KG/YR,HR/YR)	DILUTION	TIME(HR)	SHOREWIDTH FACTOR=0.2
FISH	6.9	1.0	24.00	
DRINKING	510.0	1.0	12.00	
SHORELINE	14.0	1.0	0.00	
SWIMMING	14.0	1.0	0.00	
BOATING	14.0	1.0	0.00	

* * * ISOTOPE CONTRIBUTION * * *

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		SR 90 1% CS 137 25% CS 134 4% C 14 68%	CS 137 52% CS 134 16% C 14 30%	SR 90 1% CS 137 17% CS 134 7% H 3 1% C 14 69%	I 131 2% H 3 2% C 14 95%	CS 137 32% CS 134 9% H 3 1% C 14 56%	CS 137 15% CS 134 4% H 3 1% C 14 77%	NB 95 87% C 14 11%
DRINKING		SR 89 2% SR 90 47% CS 137 14% CS 134 2% SB 125 1% C 14 16% BA 140 12%	CS 137 3% CS 134 1% H 3 94%	SR 90 2% CO 58 1% H 3 93%	I 131 5% H 3 93%	CS 137 1% H 3 97%	H 3 98%	CO 58 1% CO 60 1% LA 140 1% SB 125 3% SB 124 1% AG 110M 1% H 3 80% EA 140 1% RU 1 6 1% RH 1 6 1%
SHORELINE	CS 137 5% CO 58 3% CO 60 55% SB 125 24% AG 110M 8%	CS 137 5% CO 58 3% CO 60 54% SB 125 25% AG 110M 8%						
SWIMMING		NB 95 6% CO 58 24% CO 60 17% LA 140 6% SB 125 13% CB 124 5% AG 110M 17% BA 140 1% ZR 95 4%						

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TABLE VII-D-9

* * * SELECTED LOCATION * * *

LOCATION IS SITE DISCHG.

I N F A N T D O S E S

DOSE (MREM PER .5YR INTAKE)

PATHWAY	SKIN	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DRINKING		2.33E-03	1.02E-02	1.01E-02	1.05E-02	9.78E-03	9.68E-03	1.10E-02
SHOPCLINE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL	0.00E+00	2.33E-03	1.02E-02	1.01E-02	1.05E-02	9.78E-03	9.68E-03	1.10E-02

USAGE (KG/YR,HR/YR)

DILUTION

TIME(HR)

SHOREWIDTH FACTOR=0.2

FISH	0.0	1.0	24.00
DRINKING	330.0	1.0	12.00

* * * ISOTOPE CONTRIBUTION * * *

PATHWAY	SKIN		BONE		LIVER		TOTAL BODY		THYROID		KIDNEY		LUNG		GI-LLI						
DRINKING	SR	89	3%	CS	137	4%	SR	90	2%	I	131	8%	CS	137	1%	H	3	97%	CO	58	1%
	SR	90	35%	CS	134	1%	CO	58	1%	H	3	90%	H	3	97%	C	14	1%	LA	140	1%
	CS	137	15%	H	3	92%	H	3	93%	C	14	1%	C	14	1%				SB	125	2%
	CS	134	2%	C	14	1%	C	14	1%										SB	124	1%
	SB	125	1%																AG	110M	1%
	C	14	22%																H	3	86%
	BA	140	17%																C	14	1%

TABLE VII-E-1

* * * FISH CONSUMPTION POPULATION DOSES * * *

MAN-REM

SPORTFISH HARVEST

-----DOSE (MAN-REM)-----										
PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI	
FISH	ADULT	5.81E+04	1.03E-02	6.30E-03	4.90E-03	1.47E-03	3.08E-03	1.98E-03	5.39E-02	
FISH	TEENAGER	9.29E+03	2.32E-03	1.38E-03	7.40E-04	3.31E-04	6.78E-04	4.61E-04	8.12E-03	
FISH	CHILD	5.61E+03	4.12E-03	1.88E-03	8.20E-04	5.87E-04	1.00E-03	7.30E-04	4.49E-03	
FISH	TOTAL	7.30E+04	1.67E-02	9.56E-03	6.46E-03	2.39E-03	4.75E-03	3.17E-03	6.65E-02	

DILUTION CATCH TIME(HR)-INCLUDES FOOD PROCESSING TIME OF 1.68E+02 HR POPULATION=1.28E+04
 7.30E+00 7.30E+04 1.69E+02

AVERAGE INDIVIDUAL CONSUMPTION (KG/YR) ADULT=6.90E+00 TEEN=5.20E+00 CHILD=2.20E+00

* * * ISOTOPE CONTRIBUTION * * *

AGE GROUP	BONE			LIVER			TOTAL BODY			THYROID			KIDNEY			LUNG			GI-LLI		
ADULT	SR	90	2%	CS	137	56%	SR	90	1%	I	131	1%	CS	137	39%	CS	137	20%	NB	95	96%
	CS	137	25%	CS	134	19%	CS	137	47%	H	3	4%	CS	134	12%	CS	134	6%	C	14	2%
	CS	134	4%	H	3	1%	CS	134	20%	C	14	93%	H	3	2%	H	3	3%			
	C	14	66%	C	14	21%	H	3	1%				C	14	44%	C	14	69%			
							C	14	28%												
TEENAGER	SR	90	1%	CS	137	56%	SR	90	1%	I	131	1%	CS	137	39%	CS	137	22%	NB	95	94%
	CS	137	25%	CS	134	18%	CS	137	36%	H	3	3%	CS	134	12%	CS	134	6%	C	14	3%
	CS	134	4%	C	14	22%	CS	134	16%	C	14	95%	H	3	1%	H	3	2%			
	C	14	67%				H	3	1%				C	14	46%	C	14	68%			
							C	14	42%												
CHILD	SR	90	1%	CS	137	52%	SR	90	1%	I	131	1%	CS	137	32%	CS	137	15%	NB	95	85%
	CS	137	25%	CS	134	16%	CS	137	17%	H	3	2%	CS	134	9%	CS	134	4%	C	14	12%
	CS	134	4%	C	14	30%	CS	134	7%	C	14	96%	H	3	1%	H	3	1%			
	C	14	68%				H	3	1%				C	14	56%	C	14	77%			
							C	14	69%												

TABLE VII-E-2

* * * FISH CONSUMPTION POPULATION DOSES * * *

MAN-REM

COMMERCIAL HARVEST

-----DOSE (MAN-REM)-----									
PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH	ADULT	3.46E+06	1.02E-03	6.22E-04	4.84E-04	1.45E-04	3.04E-04	1.96E-04	5.04E-03
FISH	TEENAGER	5.54E+05	2.29E-04	1.36E-04	7.31E-05	3.26E-05	6.70E-05	4.56E-05	7.59E-04
FISH	CHILD	3.35E+05	4.07E-04	1.86E-04	8.10E-05	5.79E-05	9.89E-05	7.22E-05	4.22E-04
FISH	TOTAL	4.35E+06	1.65E-03	9.44E-04	6.38E-04	2.35E-04	4.70E-04	3.14E-04	6.22E-03

DILUTION CATCH TIME(HR)-INCLUDES FOOD PROCESSING TIME OF 2.40E+02 HR POPULATION=7.60E+05
 7.30E+00 7.30E+04 2.41E+02

AVERAGE INDIVIDUAL CONSUMPTION (KG/YR) ADULT=6.90E+00 TEEN=5.20E+00 CHILD=2.20E+00

* * * ISOTOPE CONTRIBUTION * * *

AGE GROUP	BONE			LIVER			TOTAL BODY			THYROID			KIDNEY			LUNG			GI-LLI		
ADULT	SR	90	2%	CS	137	56%	SR	90	1%	I	131	1%	CS	137	39%	CS	137	20%	NB	95	95%
	CS	137	25%	CS	134	19%	CS	137	47%	H	3	4%	CS	134	12%	CS	134	6%	C	14	2%
	CS	134	4%	H	3	1%	CS	134	20%	C	14	93%	H	3	2%	H	3	3%			
	C	14	66%	C	14	21%	H	3	1%				C	14	44%	C	14	69%			
							C	14	28%												
TEENAGER	SR	90	1%	CS	137	56%	SR	90	1%	I	131	1%	CS	137	39%	CS	137	22%	NB	95	94%
	CS	137	25%	CS	134	18%	CS	137	36%	H	3	3%	CS	134	12%	CS	134	6%	C	14	4%
	CS	134	4%	C	14	22%	CS	134	16%	C	14	95%	H	3	1%	H	3	2%			
	C	14	67%				H	3	1%				C	14	46%	C	14	68%			
							C	14	42%												
CHILD	SR	90	1%	CS	137	52%	SR	90	1%	H	3	2%	CS	137	32%	CS	137	15%	NB	95	85%
	CS	137	25%	CS	134	16%	CS	137	17%	C	14	96%	CS	134	9%	CS	134	4%	C	14	13%
	CS	134	4%	C	14	30%	CS	134	7%				H	3	1%	H	3	1%			
	C	14	68%				H	3	1%				C	14	56%	C	14	77%			
							C	14	69%												

NEPA DOSES

NOTE--TOTAL NEPA DOSE MUST INCLUDE SPORT CATCH, DOSES BELOW ARE FOR COMMERCIAL CATCH ONLY

-----DOSE (MAN-REM)-----									
PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
FISH	ADULT	5.81E+04	1.03E-02	6.29E-03	4.89E-03	1.47E-03	3.07E-03	1.98E-03	5.09E-02
FISH	TEENAGER	9.29E+03	2.32E-03	1.38E-03	7.39E-04	3.30E-04	6.77E-04	4.61E-04	7.67E-03
FISH	CHILD	5.61E+03	4.11E-03	1.88E-03	8.19E-04	5.85E-04	1.00E-03	7.30E-04	4.27E-03
FISH	TOTAL	7.30E+04	1.67E-02	9.55E-03	6.45E-03	2.38E-03	4.75E-03	3.17E-03	6.29E-02

TABLE VII-E-3

* * * POPULATION WATER CONSUMPTION DOSES * * *

-----DOSE (MAN-REM)-----																					
PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI												
DRINKING	ADULT	1.29E+08	7.13E-03	4.28E-02	4.38E-02	4.28E-02	4.18E-02	4.17E-02	6.10E-02												
DRINKING	TEENAGER	1.93E+07	1.27E-03	6.53E-03	6.61E-03	6.50E-03	6.32E-03	6.30E-03	9.09E-03												
DRINKING	CHILD	2.75E+07	4.26E-03	1.80E-02	1.81E-02	1.80E-02	1.74E-02	1.72E-02	2.08E-02												
DRINKING	TOTAL	1.76E+08	1.27E-02	6.73E-02	6.86E-02	6.73E-02	6.55E-02	6.52E-02	9.09E-02												
POPULATION=5.29E+05		DILUTION=3.08E+01		TRANSIT TIME=3.06E+01 HR (INCLUDING 24 HR FOR TREATMENT FACILITY)																	
AVERAGE INDIVIDUAL CONSUMPTION (L/YR)				ADULT=3.70E+02				TEEN=2.60E+02				CHILD=2.60E+02									
* * * ISOTOPE CONTRIBUTION * * *																					
AGE GROUP	BONE		LIVER		TOTAL BODY		THYROID		KIDNEY		LUNG		GI-LLI								
ADULT	SR	89	1%	CS	137	2%	SR	90	2%	I	131	3%	H	3	98%	NB	95	1%			
	SR	90	59%	H	3	95%	CS	137	1%	H	3	96%				CO	58	3%			
	CS	137	9%				H	3	93%							CO	60	2%			
	CS	134	1%													LA	140	1%			
	SB	125	4%													SB	125	6%			
	C	14	11%													SB	124	2%			
	BA	140	8%													AG	110M	4%			
																H	3	67%			
TEENAGER	SR	89	2%	CS	137	2%	SR	90	2%	I	131	4%	CS	137	1%	H	3	98%	NB	95	1%
	SR	90	54%	H	3	94%	CS	137	1%	H	3	95%	H	3	97%				CO	58	3%
	CS	137	11%				H	3	93%							CO	60	2%			
	CS	134	2%													LA	140	1%			
	SB	125	4%													SB	125	6%			
	C	14	13%													SB	124	2%			
	BA	140	9%													AG	110M	3%			
																H	3	67%			
CHILD	SR	89	2%	CS	137	3%	SR	90	2%	I	131	5%	CS	137	1%	H	3	98%	CO	58	1%
	SR	90	47%	CS	134	1%	CO	58	1%	H	3	93%	H	3	97%				CO	60	1%
	CS	137	14%	H	3	94%	H	3	93%							LA	140	1%			
	CS	134	2%													SB	125	3%			
	SB	125	1%													SB	124	1%			
	C	14	17%													AG	110M	1%			
	BA	140	12%													H	3	81%			
																BA	140	1%			

TABLE VII-E-4

* * * POPULATION WATER CONSUMPTION DOSES * * *

-----DOSE (MAN-REM)-----											
PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI		
DRINKING	ADULT	2.12E+07	1.15E-03	6.93E-03	7.10E-03	6.92E-03	6.76E-03	6.75E-03	9.87E-03		
DRINKING	TEENAGER	3.17E+06	2.05E-04	1.06E-03	1.07E-03	1.05E-03	1.02E-03	1.02E-03	1.47E-03		
DRINKING	CHILD	4.52E+06	6.89E-04	2.91E-03	2.93E-03	2.92E-03	2.81E-03	2.79E-03	3.37E-03		
DRINKING	TOTAL	2.89E+07	2.05E-03	1.09E-02	1.11E-02	1.09E-02	1.06E-02	1.06E-02	1.47E-02		
POPULATION=8.70E+04 DILUTION=3.13E+01 TRANSIT TIME=3.10E+01 HR (INCLUDING 24 HR FOR TREATMENT FACILITY)											
AVERAGE INDIVIDUAL CONSUMPTION (L/YR) ADULT=3.70E+02 TEEN=2.60E+02 CHILD=2.60E+02											
* * * ISOTOPE CONTRIBUTION * * *											
AGE GROUP	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI				
ADULT	SR 89 1% SR 90 59% CS 137 9% CS 134 1% SB 125 4% C 14 11% BA 140 8%	CS 137 2% H 3 95%	SR 90 2% CS 137 1% H 3 93%	I 131 3% H 3 96%	H 3 98% H 3 97%	H 3 98%	NB 95 1% CO 58 3% CO 60 2% LA 140 1% SB 125 6% SB 124 2% AG 110M 4% H 3 67%				
TEENAGER	SR 89 2% SR 90 54% CS 137 11% CS 134 2% SB 125 4% C 14 13% BA 140 9%	CS 137 2% H 3 94%	SR 90 2% CS 137 1% H 3 95%	I 131 4% H 3 95%	CS 137 1% H 3 97%	H 3 98%	NB 95 1% CO 58 3% CO 60 2% LA 140 1% SB 125 6% SB 124 2% AG 110M 3% H 3 67%				
CHILD	SR 89 2% SR 90 47% CS 137 14% CS 134 2% SB 125 1% C 14 17% BA 140 12%	CS 137 3% CS 134 1% H 3 94%	SR 90 2% CO 58 1% H 3 93%	I 131 5% H 3 93%	CS 137 1% H 3 97%	H 3 98%	CO 58 1% CO 60 1% LA 140 1% SB 125 3% SB 124 1% AG 110M 1% H 3 81% BA 140 1%				

-----CUMULATIVE TOTAL-----

PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
DRINKING	CUMUL TOTAL	2.05E+08	1.47E-02	7.82E-02	7.17E-02	7.62E-02	7.60E-02	7.58E-02	1.06E-01
HYDROSPHERE TRITIUM DOSE									
PATHWAY	AGE GROUP	USAGE	BONE	LIVER	TOTAL BODY	THYROID	KIDNEY	LUNG	GI-LLI
WATER	TOTAL	2.20E+00	5.97E-10	5.97E-10	5.97E-10	5.97E-10	5.97E-10	5.97E-10	5.97E-10

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TABLE VII-E-5

* * * RECREATION POPULATION DOSES * * *

		DOSE (MAN-REM)			
PATHWAY	AGE GROUP	USAGE	SKIN	TOTAL BODY	THYROID
SHORELINE	TOTAL POPUL	4.10E+07	7.13E-02	6.14E-02	6.14E-02
LOCATION- DOWN STREAM					
DILUTION=0.73E+01		TRANSIT TIME=0.67E+00 HR		SWF=0.2	

* * * ISOTOPE CONTRIBUTION * * *

AGE GROUP	SKIN	TOTAL BODY
ADULT		
	CS 137 5%	CS 137 5%
	CO 58 3%	CO 58 3%
	CO 60 55%	CO 60 54%
	SB 125 24%	SB 125 25%
	AG 110M 8%	AG 110M 8%

DOSE (MAN-REM)

		DOSE (MAN-REM)			
PATHWAY	AGE GROUP	USAGE	SKIN	TOTAL BODY	THYROID
SWIMMING	TOTAL POPUL	4.10E+07	0.00E+00	1.57E-03	1.57E-03
LOCATION- DOWN STREAM					
DILUTION=0.73E+01		TRANSIT TIME=0.67E+00 HR			

* * * ISOTOPE CONTRIBUTION * * *

AGE GROUP	SKIN	TOTAL BODY
ADULT		
	NB 95 6%	
	CO 58 24%	
	CO 60 17%	
	LA 140 6%	
	SB 125 13%	
	SB 124 5%	
	AG 110M 17%	
	BA 140 1%	
	ZR 95 4%	

DOSE (MAN-REM)

		DOSE (MAN-REM)			
PATHWAY	AGE GROUP	USAGE	SKIN	TOTAL BODY	THYROID
BOATING	TOTAL POPUL	4.10E+07	0.00E+00	7.84E-04	7.84E-04
LOCATION- DOWN STREAM					
DILUTION=0.73E+01		TRANSIT TIME=0.67E+00 HR			

TABLE VII-E-6

* * * DOSE TO BIOTA * * *

MRADS PER .5YR

DILUTION=	1.00E+00	TRANSIT TIME=	0.00E+00 HR
	INTERNAL	EXTERNAL	TOTAL
FISH	9.52E-01	4.81E-01	1.43E+00
INVERTEBRATE	8.68E-01	9.60E-01	1.83E+00
ALGAE	1.20E+00	2.45E-03	1.20E+00
MUSKRAT	1.03E+00	3.20E-01	1.35E+00
RACCOON	1.92E-01	2.39E-01	4.31E-01
HERON	1.53E+00	3.20E-01	1.85E+00
DUCK	1.00E+00	4.80E-01	1.48E+00

* * * ISOTOPE CONTRIBUTION * * *

PATHWAY	BODY		
FISH	CS 137	2%	
	NB 95	64%	
	C 14	30%	
INVERTEBRATE	CE 144	2%	
	CO 58	1%	
	MN 54	9%	
	CO 60	1%	
	LA 140	7%	
	AG 110M	3%	
	H 3	1%	
	C 14	66%	
	BA 140	1%	
	RU 1 6	1%	
	PR 144	1%	
	RH 1 6	1%	
ALGAE	CE 144	6%	
	NB 95	1%	
	CO 58	1%	
	LA 140	25%	
	SB 125	12%	
	SB 124	5%	
	C 14	24%	
	BA 140	1%	
	RU 1 6	6%	
	ZR 95	3%	
	PR 144	6%	
MUSKRAT	SR 90	30%	
	CS 137	10%	
	CS 134	3%	
	CO 58	1%	
	SB 125	3%	
	H 3	1%	
	C 14	43%	
RACCOON	SR 90	5%	
	CS 137	2%	
	CO 58	1%	
	MN 54	7%	
	CO 60	1%	
	H 3	1%	
	C 14	77%	
	FE 55	1%	
HERON	SR 90	1%	
	CS 137	43%	
	CS 134	14%	
	H 3	1%	
	C 14	38%	
DUCK	SR 90	31%	
	CS 137	10%	
	CS 134	2%	
	SB 125	3%	
	H 3	1%	
	C 14	44%	