

NRC RA17-040

2016 Annual Radioactive Effluent Release Report

Part 6

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Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Kr-83m

Downwind Unrestricted Direction	Area Bound (meters)	Elevated(Stack) Release		Mixed Mode(Vent) Release		Ground Level Release	
		Radius (meters)	S (mrad/yr)/(uCi/sec)	Radius (meters)	V (mrad/yr)/(uCi/sec)	Radius (meters)	G (mrad/yr)/(uCi/sec)
N	1036.	1036.	4.787E-07	1036.	5.281E-07	1036.	1.785E-04
NNE	1378.	1378.	8.751E-07	1378.	6.905E-07	1378.	1.139E-04
NE	2408.	2408.	6.471E-07	2408.	6.697E-07	2408.	4.355E-05
ENE	4450.	4450.	5.700E-07	4450.	5.653E-07	4450.	1.466E-05
E	1996.	1996.	4.687E-07	1996.	7.359E-07	1996.	5.491E-05
ESE	1465.	1465.	5.252E-07	1465.	1.002E-06	1465.	8.270E-05
SE	969.	969.	3.545E-07	969.	1.267E-06	969.	1.333E-04
SSE	838.	838.	3.051E-07	838.	1.512E-06	838.	1.323E-04
S	829.	829.	2.840E-07	829.	1.040E-06	829.	1.330E-04
SSW	835.	835.	3.185E-07	835.	1.071E-06	835.	9.326E-05
SW	628.	628.	3.177E-07	628.	2.826E-06	628.	2.305E-04
WSW	533.	533.	2.617E-07	533.	2.674E-06	533.	2.568E-04
W	524.	524.	2.327E-07	524.	1.658E-06	524.	3.352E-04
WNW	643.	643.	1.714E-07	643.	7.235E-07	643.	2.728E-04
NW	762.	762.	1.744E-07	762.	4.391E-07	762.	2.219E-04
NNW	890.	890.	2.397E-07	890.	3.334E-07	890.	1.823E-04

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Based on Sargent & Lundy, Analysis and Technology Division, LaSalle calculation no. ATD-0164, revisions 0, 1, 2, and 3.

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Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Kr-85m

Downwind Unrestricted		Elevated(Stack) Release		Mixed Mode(Vent) Release		Ground Level Release				
Direction	Area Bound	Radius	S	SBAR	Radius	V	VBAR	Radius	G	GBAR
	(meters)	(meters)	(mrad/yr)/(uCi/sec)		(meters)	(mrad/yr)/(uCi/sec)		(meters)	(mrad/yr)/(uCi/sec)	
N	1036.	1036.	5.747E-05	5.560E-05	1036.	6.602E-05	6.388E-05	1036.	9.660E-04	9.252E-04
NNE	1378.	1378.	5.063E-05	4.896E-05	1378.	5.514E-05	5.334E-05	1378.	6.776E-04	6.496E-04
NE	2408.	2408.	2.592E-05	2.506E-05	2408.	2.727E-05	2.636E-05	2408.	2.969E-04	2.849E-04
ENE	4450.	4450.	1.351E-05	1.304E-05	4450.	1.332E-05	1.286E-05	4450.	1.156E-04	1.111E-04
E	1996.	1996.	2.705E-05	2.616E-05	1996.	2.863E-05	2.767E-05	1996.	3.557E-04	3.412E-04
ESE	1465.	1465.	4.351E-05	4.209E-05	1465.	4.624E-05	4.470E-05	1465.	5.201E-04	4.989E-04
SE	969.	969.	5.596E-05	5.415E-05	969.	6.610E-05	6.391E-05	969.	7.793E-04	7.470E-04
SSE	838.	838.	5.518E-05	5.339E-05	838.	6.630E-05	6.410E-05	838.	7.683E-04	7.364E-04
S	829.	829.	4.712E-05	4.560E-05	829.	5.330E-05	5.154E-05	829.	7.986E-04	7.657E-04
SSW	835.	835.	4.422E-05	4.279E-05	835.	5.351E-05	5.174E-05	835.	5.684E-04	5.450E-04
SW	628.	628.	7.281E-05	7.046E-05	628.	9.952E-05	9.618E-05	628.	1.285E-03	1.231E-03
WSW	533.	533.	7.757E-05	7.507E-05	533.	9.714E-05	9.388E-05	533.	1.389E-03	1.331E-03
W	524.	524.	7.601E-05	7.356E-05	524.	9.705E-05	9.385E-05	524.	1.687E-03	1.614E-03
WNW	643.	643.	5.286E-05	5.116E-05	643.	6.615E-05	6.399E-05	643.	1.327E-03	1.270E-03
NW	762.	762.	4.668E-05	4.518E-05	762.	5.688E-05	5.503E-05	762.	1.094E-03	1.047E-03
NNW	890.	890.	4.663E-05	4.532E-05	890.	5.142E-05	4.976E-05	890.	9.282E-04	8.885E-04

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Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Kr-85

Downwind Unrestricted	Elevated(Stack) Release	Mixed Mode(Vent) Release	Ground Level Release
Direction Area Bound	Radius S SBAR	Radius V VBAR	Radius G GBAR
(meters)	(meters) (mrad/yr)/(uCi/sec)	(meters) (mrad/yr)/(uCi/sec)	(meters) (mrad/yr)/(uCi/sec)
N	1036. 1036. 8.547E-07 8.265E-07	1036. 9.889E-07 9.563E-07	1036. 1.056E-05 1.021E-05
NNE	1378. 1378. 7.309E-07 7.068E-07	1378. 8.077E-07 7.811E-07	1378. 7.474E-06 7.227E-06
NE	2408. 2408. 3.651E-07 3.530E-07	2408. 3.909E-07 3.780E-07	2408. 3.369E-06 3.252E-06
ENE	4450. 4450. 1.885E-07 1.823E-07	4450. 1.856E-07 1.795E-07	4450. 1.377E-06 1.332E-06
E	1996. 1996. 3.912E-07 3.782E-07	1996. 4.096E-07 3.961E-07	1996. 4.008E-06 3.876E-06
ESE	1465. 1465. 6.359E-07 6.149E-07	1465. 6.632E-07 6.413E-07	1465. 5.783E-06 5.593E-06
SE	969. 969. 8.386E-07 8.110E-07	969. 9.583E-07 9.267E-07	969. 8.555E-06 8.273E-06
SSE	838. 838. 8.350E-07 8.075E-07	838. 9.612E-07 9.294E-07	838. 8.432E-06 8.154E-06
S	829. 829. 7.262E-07 7.023E-07	829. 8.067E-07 7.801E-07	829. 8.741E-06 8.453E-06
SSW	835. 835. 6.857E-07 6.630E-07	835. 8.402E-07 8.124E-07	835. 6.270E-06 6.063E-06
SW	628. 628. 1.142E-06 1.104E-06	628. 1.494E-06 1.444E-06	628. 1.401E-05 1.355E-05
WSW	533. 533. 1.211E-06 1.171E-06	533. 1.433E-06 1.386E-06	533. 1.510E-05 1.460E-05
W	524. 524. 1.172E-06 1.134E-06	524. 1.443E-06 1.395E-06	524. 1.824E-05 1.763E-05
WNW	643. 643. 8.185E-07 7.915E-07	643. 1.000E-06 9.670E-07	643. 1.436E-05 1.389E-05
NW	762. 762. 7.192E-07 6.954E-07	762. 8.694E-07 8.407E-07	762. 1.188E-05 1.148E-05
NNW	890. 890. 7.128E-07 6.893E-07	890. 7.849E-07 7.590E-07	890. 1.011E-05 9.778E-06

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Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Kr-87

Downwind Unrestricted Direction	Area Bound (meters)	Elevated(Stack) Release		Mixed Mode(Vent) Release		Ground Level Release	
		Radius (meters)	S (mrad/yr)/(uCi/sec)	Radius (meters)	V (mrad/yr)/(uCi/sec)	Radius (meters)	G (mrad/yr)/(uCi/sec)
N	1036.	1036.	3.226E-04	1036.	3.758E-04	1036.	2.879E-03
NNE	1378.	1378.	2.672E-04	1378.	3.005E-04	1378.	2.019E-03
NE	2408.	2408.	1.283E-04	2408.	1.359E-04	2408.	8.605E-04
ENE	4450.	4450.	5.904E-05	4450.	5.859E-05	4450.	3.133E-04
E	1996.	1996.	1.412E-04	1996.	1.458E-04	1996.	1.030E-03
ESE	1465.	1465.	2.351E-04	1465.	2.426E-04	1465.	1.545E-03
SE	969.	969.	3.211E-04	969.	3.612E-04	969.	2.355E-03
SSE	838.	838.	3.254E-04	838.	3.655E-04	838.	2.329E-03
S	829.	829.	2.850E-04	829.	3.081E-04	829.	2.431E-03
SSW	835.	835.	2.742E-04	835.	3.400E-04	835.	1.706E-03
SW	628.	628.	4.614E-04	628.	5.936E-04	628.	3.903E-03
WSW	533.	533.	4.880E-04	533.	5.683E-04	533.	4.251E-03
W	524.	524.	4.675E-04	524.	5.708E-04	524.	5.136E-03
WNW	643.	643.	3.224E-04	643.	3.914E-04	643.	4.001E-03
NW	762.	762.	2.823E-04	762.	3.397E-04	762.	3.276E-03
NNW	890.	890.	2.747E-04	890.	3.031E-04	890.	2.763E-03

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Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Kr-88

Downwind Unrestricted Direction Area Bound	Radius (meters)	Elevated(Stack) Release		Mixed Mode(Vent) Release		Ground Level Release	
		S (meters)	SBAR (mrad/yr)/(uCi/sec)	V (meters)	VBAR (mrad/yr)/(uCi/sec)	G (meters)	GBAR (mrad/yr)/(uCi/sec)
N	1036.	1036.	8.602E-04	1036.	1.003E-03	1036.	6.988E-03
NNE	1378.	1378.	7.111E-04	1378.	7.989E-04	1378.	4.940E-03
NE	2408.	2408.	3.435E-04	2408.	3.694E-04	2408.	2.162E-03
ENE	4450.	4450.	1.648E-04	4450.	1.646E-04	4450.	8.502E-04
E	1996.	1996.	3.781E-04	1996.	3.928E-04	1996.	2.599E-03
ESE	1465.	1465.	6.235E-04	1465.	6.445E-04	1465.	3.816E-03
SE	969.	969.	8.537E-04	969.	9.571E-04	969.	5.712E-03
SSE	838.	838.	8.671E-04	838.	9.702E-04	838.	5.645E-03
S	829.	829.	7.696E-04	829.	8.417E-04	829.	5.862E-03
SSW	835.	835.	7.427E-04	835.	9.375E-04	835.	4.167E-03
SW	628.	628.	1.246E-03	628.	1.601E-03	628.	9.396E-03
WSW	533.	533.	1.314E-03	533.	1.525E-03	533.	1.017E-02
W	524.	524.	1.249E-03	524.	1.520E-03	524.	1.225E-02
WNW	643.	643.	8.669E-04	643.	1.045E-03	643.	9.595E-03
NW	762.	762.	7.580E-04	762.	9.125E-04	762.	7.895E-03
NNW	890.	890.	7.369E-04	890.	8.161E-04	890.	6.693E-03

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Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Kr-89

Downwind Unrestricted Direction Area Bound	Radius (meters)	Elevated(Stack) Release		Mixed Mode(Vent) Release Radius (meters)	Ground Level Release		Radius (meters)	G (mrad/yr)/(uCi/sec)	GBAR (mrad/yr)/(uCi/sec)
		S (mrad/yr)/(uCi/sec)	SBAR		V (mrad/yr)/(uCi/sec)	VBAR			
N	1036.	1036.	3.904E-04 3.794E-04	1036.	4.258E-04 4.139E-04	1036.	2.051E-03 1.992E-03		
NNE	1378.	1378.	2.820E-04 2.741E-04	1378.	2.988E-04 2.904E-04	1378.	1.151E-03 1.118E-03		
NE	2408.	2408.	8.306E-05 8.072E-05	2408.	7.403E-05 7.195E-05	2408.	2.060E-04 2.001E-04		
ENE	4450.	4450.	1.570E-05 1.526E-05	4450.	1.153E-05 1.121E-05	4450.	1.701E-05 1.653E-05		
E	1996.	1996.	1.052E-04 1.023E-04	1996.	9.299E-05 9.037E-05	1996.	3.031E-04 2.944E-04		
ESE	1465.	1465.	2.365E-04 2.299E-04	1465.	2.240E-04 2.177E-04	1465.	7.762E-04 7.540E-04		
SE	969.	969.	3.891E-04 3.782E-04	969.	4.188E-04 4.070E-04	969.	1.846E-03 1.793E-03		
SSE	838.	838.	4.108E-04 3.993E-04	838.	4.365E-04 4.243E-04	838.	1.831E-03 1.778E-03		
S	829.	829.	3.408E-04 3.312E-04	829.	3.253E-04 3.162E-04	829.	2.034E-03 1.976E-03		
SSW	835.	835.	2.921E-04 2.839E-04	835.	2.779E-04 2.702E-04	835.	1.021E-03 9.916E-04		
SW	628.	628.	5.830E-04 5.667E-04	628.	6.600E-04 6.415E-04	628.	3.274E-03 3.180E-03		
WSW	533.	533.	6.913E-04 6.720E-04	533.	7.525E-04 7.314E-04	533.	4.592E-03 4.460E-03		
W	524.	524.	6.961E-04 6.766E-04	524.	8.259E-04 8.028E-04	524.	5.987E-03 5.796E-03		
WNW	643.	643.	4.295E-04 4.174E-04	643.	5.147E-04 5.003E-04	643.	3.746E-03 3.638E-03		
NW	762.	762.	3.500E-04 3.402E-04	762.	4.035E-04 3.922E-04	762.	2.561E-03 2.488E-03		
NNW	890.	890.	3.301E-04 3.208E-04	890.	3.415E-04 3.319E-04	890.	1.966E-03 1.909E-03		

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Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Kr-90

Downwind Unrestricted Direction	Area Bound (meters)	Elevated(Stack) Radius (meters)	Release		Mixed Mode(Vent) Radius (meters)	Release		Ground Level Release Radius (meters)	Release	
			S	SBAR		V	VBAR		G	GBAR
			(mrad/yr)/(uCi/sec)			(mrad/yr)/(uCi/sec)			(mrad/yr)/(uCi/sec)	
N	1036.	1036.	6.785E-05	6.586E-05	1036.	5.199E-05	5.047E-05	1036.	8.203E-05	7.954E-05
NNE	1378.	1378.	3.195E-05	3.102E-05	1378.	2.161E-05	2.098E-05	1378.	2.265E-05	2.196E-05
NE	2408.	2408.	2.160E-06	2.097E-06	2408.	9.136E-07	8.868E-07	2408.	5.870E-07	5.693E-07
ENE	4450.	4450.	1.109E-07	1.076E-07	4450.	3.907E-08	3.792E-08	4450.	1.814E-08	1.759E-08
E	1996.	1996.	4.713E-06	4.575E-06	1996.	2.562E-06	2.486E-06	1996.	2.865E-06	2.779E-06
ESE	1465.	1465.	2.134E-05	2.072E-05	1465.	1.551E-05	1.506E-05	1465.	2.503E-05	2.427E-05
SE	969.	969.	5.843E-05	5.673E-05	969.	5.324E-05	5.168E-05	969.	1.365E-04	1.324E-04
SSE	838.	838.	6.863E-05	6.663E-05	838.	6.174E-05	5.993E-05	838.	1.227E-04	1.190E-04
S	829.	829.	5.057E-05	4.909E-05	829.	3.745E-05	3.635E-05	829.	1.055E-04	1.023E-04
SSW	835.	835.	3.062E-05	2.972E-05	835.	1.274E-05	1.237E-05	835.	1.835E-05	1.779E-05
SW	628.	628.	9.754E-05	9.470E-05	628.	6.538E-05	6.347E-05	628.	1.410E-04	1.368E-04
WSW	533.	533.	1.892E-04	1.836E-04	533.	1.525E-04	1.480E-04	533.	4.861E-04	4.713E-04
W	524.	524.	2.165E-04	2.101E-04	524.	2.185E-04	2.121E-04	524.	8.427E-04	8.170E-04
WNW	643.	643.	1.018E-04	9.883E-05	643.	1.008E-04	9.787E-05	643.	3.141E-04	3.045E-04
NW	762.	762.	6.634E-05	6.440E-05	762.	5.815E-05	5.645E-05	762.	1.306E-04	1.267E-04
NNW	890.	890.	5.725E-05	5.558E-05	890.	4.336E-05	4.209E-05	890.	8.819E-05	8.551E-05

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Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Xe-131m

Downwind Unrestricted		Elevated(Stack) Release		Mixed Mode(Vent) Release		Ground Level Release				
Direction	Area Bound	Radius	S	SBAR	Radius	V	VBAR	Radius	G	GBAR
	(meters)	(meters)	(mrad/yr)/(uCi/sec)		(meters)	(mrad/yr)/(uCi/sec)		(meters)	(mrad/yr)/(uCi/sec)	
N	1036.	1036.	1.606E-06	1.473E-06	1036.	1.827E-06	1.679E-06	1036.	1.645E-04	1.283E-04
NNE	1378.	1378.	1.778E-06	1.572E-06	1378.	1.726E-06	1.553E-06	1378.	1.072E-04	8.384E-05
NE	2408.	2408.	1.086E-06	9.376E-07	2408.	1.136E-06	9.826E-07	2408.	4.347E-05	3.412E-05
ENE	4450.	4450.	7.931E-07	6.617E-07	4450.	7.858E-07	6.550E-07	4450.	1.623E-05	1.279E-05
E	1996.	1996.	9.572E-07	8.457E-07	1996.	1.230E-06	1.058E-06	1996.	5.428E-05	4.253E-05
ESE	1465.	1465.	1.347E-06	1.215E-06	1465.	1.789E-06	1.560E-06	1465.	7.935E-05	6.215E-05
SE	969.	969.	1.472E-06	1.365E-06	969.	2.406E-06	2.115E-06	969.	1.240E-04	9.696E-05
SSE	838.	838.	1.415E-06	1.318E-06	838.	2.598E-06	2.260E-06	838.	1.228E-04	9.597E-05
S	829.	829.	1.231E-06	1.144E-06	829.	1.966E-06	1.727E-06	829.	1.232E-04	9.639E-05
SSW	835.	835.	1.196E-06	1.103E-06	835.	2.003E-06	1.755E-06	835.	8.798E-05	6.885E-05
SW	628.	628.	1.802E-06	1.691E-06	628.	4.345E-06	3.728E-06	628.	2.109E-04	1.646E-04
WSW	533.	533.	1.859E-06	1.755E-06	533.	4.161E-06	3.577E-06	533.	2.324E-04	1.813E-04
W	524.	524.	1.800E-06	1.703E-06	524.	3.359E-06	2.972E-06	524.	3.000E-04	2.335E-04
WNW	643.	643.	1.263E-06	1.194E-06	643.	1.976E-06	1.791E-06	643.	2.446E-04	1.902E-04
NW	762.	762.	1.135E-06	1.069E-06	762.	1.561E-06	1.437E-06	762.	2.005E-04	1.560E-04
NNW	890.	890.	1.191E-06	1.112E-06	890.	1.363E-06	1.263E-06	890.	1.664E-04	1.295E-04

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Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Xe-133m

Downwind Unrestricted Direction	Area Bound (meters)	Elevated(Stack) Release			Mixed Mode(Vent) Release			Ground Level Release		
		Radius (meters)	S (mrad/yr)/(uCi/sec)	SBAR (mrad/yr)/(uCi/sec)	Radius (meters)	V (mrad/yr)/(uCi/sec)	VBAR (mrad/yr)/(uCi/sec)	Radius (meters)	G (mrad/yr)/(uCi/sec)	GBAR (mrad/yr)/(uCi/sec)
N	1036.	1036.	8.557E-06	8.199E-06	1036.	9.814E-06	9.407E-06	1036.	2.822E-04	2.410E-04
NNE	1378.	1378.	7.917E-06	7.509E-06	1378.	8.400E-06	8.009E-06	1378.	1.901E-04	1.633E-04
NE	2408.	2408.	4.246E-06	3.993E-06	2408.	4.482E-06	4.217E-06	2408.	8.032E-05	6.950E-05
ENE	4450.	4450.	2.488E-06	2.298E-06	4450.	2.450E-06	2.262E-06	4450.	3.108E-05	2.706E-05
E	1996.	1996.	4.247E-06	4.028E-06	1996.	4.721E-06	4.433E-06	1996.	9.835E-05	8.482E-05
ESE	1465.	1465.	6.614E-06	6.309E-06	1465.	7.393E-06	6.978E-06	1465.	1.432E-04	1.234E-04
SE	969.	969.	8.229E-06	7.903E-06	969.	1.039E-05	9.834E-06	969.	2.189E-04	1.879E-04
SSE	838.	838.	8.070E-06	7.758E-06	838.	1.060E-05	9.998E-06	838.	2.163E-04	1.856E-04
S	829.	829.	6.932E-06	6.660E-06	829.	8.449E-06	7.995E-06	829.	2.201E-04	1.893E-04
SSW	835.	835.	6.541E-06	6.276E-06	835.	8.500E-06	8.036E-06	835.	1.574E-04	1.354E-04
SW	628.	628.	1.059E-05	1.020E-05	628.	1.637E-05	1.535E-05	628.	3.668E-04	3.140E-04
WSW	533.	533.	1.121E-05	1.081E-05	533.	1.588E-05	1.490E-05	533.	4.005E-04	3.423E-04
W	524.	524.	1.096E-05	1.056E-05	524.	1.504E-05	1.427E-05	524.	5.039E-04	4.287E-04
WNW	643.	643.	7.648E-06	7.374E-06	643.	9.956E-06	9.510E-06	643.	4.055E-04	3.441E-04
NW	762.	762.	6.774E-06	6.526E-06	762.	8.435E-06	8.088E-06	762.	3.334E-04	2.831E-04
NNW	890.	890.	6.855E-06	6.594E-06	890.	7.588E-06	7.286E-06	890.	2.794E-04	2.377E-04

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Table 4-6 (Page 10 of 15)

Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Xe-133

Downwind Unrestricted Direction	Area Bound (meters)	Elevated(Stack) Release		Mixed Mode(Vent) Release		Ground Level Release	
		Radius (meters)	S (mrad/yr)/(uCi/sec)	Radius (meters)	V (mrad/yr)/(uCi/sec)	Radius (meters)	G (mrad/yr)/(uCi/sec)
N	1036.	1036.	7.010E-06	1036.	7.933E-06	1036.	3.136E-04
NNE	1378.	1378.	6.939E-06	1378.	7.149E-06	1378.	2.132E-04
NE	2408.	2408.	3.989E-06	2408.	4.106E-06	2408.	9.094E-05
ENE	4450.	4450.	2.442E-06	4450.	2.384E-06	4450.	3.540E-05
E	1996.	1996.	3.841E-06	1996.	4.310E-06	1996.	1.109E-04
ESE	1465.	1465.	5.762E-06	1465.	6.599E-06	1465.	1.612E-04
SE	969.	969.	6.641E-06	969.	8.978E-06	969.	2.450E-04
SSE	838.	838.	6.364E-06	838.	9.231E-06	838.	2.418E-04
S	829.	829.	5.333E-06	829.	6.962E-06	829.	2.476E-04
SSW	835.	835.	4.969E-06	835.	6.598E-06	835.	1.770E-04
SW	628.	628.	7.798E-06	628.	1.362E-05	628.	4.090E-04
WSW	533.	533.	8.245E-06	533.	1.326E-05	533.	4.447E-04
W	524.	524.	8.166E-06	524.	1.220E-05	524.	5.551E-04
WNW	643.	643.	5.715E-06	643.	7.885E-06	643.	4.444E-04
NW	762.	762.	5.117E-06	762.	6.538E-06	762.	3.661E-04
NNW	890.	890.	5.340E-06	890.	5.911E-06	890.	3.080E-04

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Table 4-6 (Page 11 of 15)

Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Xe-135m

Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth For Xe135m

Downwind Unrestricted Direction Area Bound	Elevated(Stack) Release Radius S SBAR	Mixed Mode(Vent) Release Radius V VBAR	Ground Level Release Radius G GBAR
(meters)	(meters) (mrad/yr)/(uCi/sec)	(meters) (mrad/yr)/(uCi/sec)	(meters) (mrad/yr)/(uCi/sec)
N	1036. 1036. 1.396E-04 1.349E-04	1036. 1.598E-04 1.545E-04	1036. 1.531E-03 1.475E-03
NNE	1378. 1378. 1.151E-04 1.113E-04	1378. 1.274E-04 1.232E-04	1378. 1.019E-03 9.821E-04
NE	2408. 2408. 5.077E-05 4.907E-05	2408. 5.129E-05 4.958E-05	2408. 3.516E-04 3.390E-04
ENE	4450. 4450. 1.919E-05 1.854E-05	4450. 1.778E-05 1.718E-05	4450. 8.758E-05 8.445E-05
E	1996. 1996. 5.672E-05 5.483E-05	1996. 5.675E-05 5.486E-05	1996. 4.329E-04 4.172E-04
ESE	1465. 1465. 1.005E-04 9.716E-05	1465. 1.024E-04 9.902E-05	1465. 7.369E-04 7.103E-04
SE	969. 969. 1.389E-04 1.343E-04	969. 1.575E-04 1.522E-04	969. 1.262E-03 1.216E-03
SSE	838. 838. 1.402E-04 1.356E-04	838. 1.591E-04 1.538E-04	838. 1.254E-03 1.209E-03
S	829. 829. 1.183E-04 1.144E-04	829. 1.235E-04 1.194E-04	829. 1.341E-03 1.292E-03
SSW	835. 835. 1.104E-04 1.068E-04	835. 1.260E-04 1.218E-04	835. 8.762E-04 8.444E-04
SW	628. 628. 1.904E-04 1.841E-04	628. 2.444E-04 2.363E-04	628. 2.173E-03 2.094E-03
WSW	533. 533. 2.063E-04 1.995E-04	533. 2.427E-04 2.345E-04	533. 2.479E-03 2.388E-03
W	524. 524. 2.039E-04 1.966E-04	524. 2.511E-04 2.427E-04	524. 3.050E-03 2.937E-03
WNW	643. 643. 1.363E-04 1.318E-04	643. 1.687E-04 1.631E-04	643. 2.286E-03 2.201E-03
NW	762. 762. 1.187E-04 1.148E-04	762. 1.423E-04 1.376E-04	762. 1.806E-03 1.739E-03
NNW	890. 890. 1.161E-04 1.122E-04	890. 1.259E-04 1.217E-04	890. 1.482E-03 1.427E-03

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Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Xe-135

Downwind Unrestricted Direction Area Bound	Radius (meters)	Elevated(Stack) Release		Mixed Mode(Vent) Release	Radius (meters)	Ground Level Release		Radius (meters)	G	GBAR
		S	SBAR			V	VBAR			
		(mrad/yr)/(uCi/sec)				(mrad/yr)/(uCi/sec)			(mrad/yr)/(uCi/sec)	
N	1036.	1036.	8.165E-05	7.902E-05	1036.	9.387E-05	9.085E-05	1036.	1.302E-03	1.257E-03
NNE	1378.	1378.	7.171E-05	6.940E-05	1378.	7.821E-05	7.569E-05	1378.	9.178E-04	8.856E-04
NE	2408.	2408.	3.669E-05	3.550E-05	2408.	3.876E-05	3.751E-05	2408.	4.075E-04	3.937E-04
ENE	4450.	4450.	1.928E-05	1.866E-05	4450.	1.899E-05	1.837E-05	4450.	1.625E-04	1.570E-04
E	1996.	1996.	3.838E-05	3.714E-05	1996.	4.056E-05	3.925E-05	1996.	4.869E-04	4.704E-04
ESE	1465.	1465.	6.171E-05	5.972E-05	1465.	6.539E-05	6.328E-05	1465.	7.073E-04	6.833E-04
SE	969.	969.	7.953E-05	7.697E-05	969.	9.346E-05	9.044E-05	969.	1.052E-03	1.017E-03
SSE	838.	838.	7.845E-05	7.593E-05	838.	9.367E-05	9.064E-05	838.	1.037E-03	1.002E-03
S	829.	829.	6.719E-05	6.503E-05	829.	7.587E-05	7.342E-05	829.	1.078E-03	1.041E-03
SSW	835.	835.	6.306E-05	6.103E-05	835.	7.636E-05	7.389E-05	835.	7.699E-04	7.438E-04
SW	628.	628.	1.039E-04	1.006E-04	628.	1.409E-04	1.363E-04	628.	1.729E-03	1.670E-03
WSW	533.	533.	1.106E-04	1.071E-04	533.	1.372E-04	1.328E-04	533.	1.854E-03	1.801E-03
W	524.	524.	1.082E-04	1.048E-04	524.	1.374E-04	1.329E-04	524.	2.256E-03	2.179E-03
WNW	643.	643.	7.538E-05	7.296E-05	643.	9.395E-05	9.092E-05	643.	1.775E-03	1.713E-03
NW	762.	762.	6.654E-05	6.440E-05	762.	8.098E-05	7.838E-05	762.	1.466E-03	1.415E-03
NNW	890.	890.	6.671E-05	6.456E-05	890.	7.327E-05	7.092E-05	890.	1.247E-03	1.204E-03

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Table 4-6 (Page 13 of 15)

Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Xe-137

Downwind Unrestricted		Elevated(Stack) Release		Mixed Mode(Vent) Release		Ground Level Release				
Direction	Area Bound	Radius	S	SBAR	Radius	V	VBAR	Radius	G	GBAR
	(meters)	(meters)	(mrad/yr)/(uCi/sec)		(meters)	(mrad/yr)/(uCi/sec)		(meters)	(mrad/yr)/(uCi/sec)	
N	1036.	1036.	4.780E-05	4.627E-05	1036.	5.242E-05	5.074E-05	1036.	3.409E-04	3.298E-04
NNE	1378.	1378.	3.585E-05	3.471E-05	1378.	3.814E-05	3.692E-05	1378.	1.975E-04	1.911E-04
NE	2408.	2408.	1.153E-05	1.116E-05	2408.	1.052E-05	1.018E-05	2408.	3.979E-05	3.850E-05
ENE	4450.	4450.	2.512E-06	2.432E-06	4450.	1.933E-06	1.871E-06	4450.	3.949E-06	3.821E-06
E	1996.	1996.	1.420E-05	1.374E-05	1996.	1.285E-05	1.244E-05	1996.	5.599E-05	5.418E-05
ESE	1465.	1465.	3.033E-05	2.936E-05	1465.	2.918E-05	2.825E-05	1465.	1.327E-04	1.284E-04
SE	969.	969.	4.743E-05	4.591E-05	969.	5.188E-05	5.023E-05	969.	2.989E-04	2.892E-04
SSE	838.	838.	4.926E-05	4.769E-05	838.	5.357E-05	5.186E-05	838.	2.970E-04	2.874E-04
S	829.	829.	4.072E-05	3.942E-05	829.	3.975E-05	3.849E-05	829.	3.298E-04	3.191E-04
SSW	835.	835.	3.521E-05	3.408E-05	835.	3.424E-05	3.315E-05	835.	1.748E-04	1.691E-04
SW	628.	628.	6.779E-05	6.563E-05	628.	7.938E-05	7.685E-05	628.	5.333E-04	5.161E-04
WSW	533.	533.	7.919E-05	7.667E-05	533.	8.829E-05	8.548E-05	533.	7.164E-04	6.932E-04
W	524.	524.	7.990E-05	7.736E-05	524.	9.608E-05	9.302E-05	524.	9.223E-04	8.924E-04
WNW	643.	643.	5.023E-05	4.863E-05	643.	6.090E-05	5.896E-05	643.	6.002E-04	5.808E-04
NW	762.	762.	4.160E-05	4.028E-05	762.	4.841E-05	4.687E-05	762.	4.228E-04	4.090E-04
NNW	890.	890.	3.985E-05	3.858E-05	890.	4.152E-05	4.020E-05	890.	3.279E-04	3.172E-04

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Table 4-6 (Page 14 of 15)

Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Xe-138

Direction	Unrestricted Area Bound (meters)	Elevated(Stack) Release Radius (meters)	S		Mixed Mode(Vent) Release Radius (meters)	V		Ground Level Release Radius (meters)	G	
			(mrad/yr)/(uCi/sec)	SBAR		(mrad/yr)/(uCi/sec)	VBAR		(mrad/yr)/(uCi/sec)	GBAR
N	1036.	1036.	3.926E-04	3.816E-04	1036.	4.523E-04	4.396E-04	1036.	3.178E-03	3.084E-03
NNE	1378.	1378.	3.160E-04	3.071E-04	1378.	3.536E-04	3.437E-04	1378.	2.117E-03	2.055E-03
NE	2408.	2408.	1.356E-04	1.318E-04	2408.	1.379E-04	1.340E-04	2408.	7.244E-04	7.032E-04
ENE	4450.	4450.	4.939E-05	4.799E-05	4450.	4.572E-05	4.443E-05	4450.	1.769E-04	1.718E-04
E	1996.	1996.	1.540E-04	1.497E-04	1996.	1.535E-04	1.492E-04	1996.	8.921E-04	8.659E-04
ESE	1465.	1465.	2.766E-04	2.689E-04	1465.	2.804E-04	2.725E-04	1465.	1.532E-03	1.487E-03
SE	969.	969.	3.938E-04	3.828E-04	969.	4.408E-04	4.285E-04	969.	2.641E-03	2.564E-03
SSE	838.	838.	4.037E-04	3.924E-04	838.	4.484E-04	4.358E-04	838.	2.628E-03	2.551E-03
S	829.	829.	3.457E-04	3.360E-04	829.	3.560E-04	3.460E-04	829.	2.809E-03	2.727E-03
SSW	835.	835.	3.277E-04	3.186E-04	835.	3.832E-04	3.724E-04	835.	1.828E-03	1.774E-03
SW	628.	628.	5.698E-04	5.538E-04	628.	7.209E-04	7.007E-04	628.	4.546E-03	4.412E-03
WSW	533.	533.	6.144E-04	5.973E-04	533.	7.121E-04	6.921E-04	533.	5.206E-03	5.053E-03
W	524.	524.	5.976E-04	5.809E-04	524.	7.318E-04	7.113E-04	524.	6.383E-03	6.195E-03
WNW	643.	643.	3.986E-04	3.875E-04	643.	4.887E-04	4.750E-04	643.	4.757E-03	4.616E-03
NW	762.	762.	3.457E-04	3.360E-04	762.	4.131E-04	4.016E-04	762.	3.746E-03	3.635E-03
NNW	890.	890.	3.330E-04	3.236E-04	890.	3.626E-04	3.525E-04	890.	3.069E-03	2.978E-03

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Table 4-6 (Page 15 of 15)

Maximum Offsite Finite Plume Gamma Dose Factors Based on 1 cm Depth at the Unrestricted Area Boundary for Ar-41

Downwind Unrestricted Direction	Area Bound (meters)	Elevated(Stack) Release		Mixed Mode(Vent) Release		Ground Level Release	
		Radius (meters)	S (mrad/yr)/(uCi/sec)	Radius (meters)	V (mrad/yr)/(uCi/sec)	Radius (meters)	G (mrad/yr)/(uCi/sec)
N	1036.	1036.	4.746E-04	1036.	5.526E-04	1036.	4.557E-03
NNE	1378.	1378.	3.954E-04	1378.	4.439E-04	1378.	3.203E-03
NE	2408.	2408.	1.925E-04	2408.	2.045E-04	2408.	1.387E-03
ENE	4450.	4450.	9.141E-05	4450.	9.061E-05	4450.	5.219E-04
E	1996.	1996.	2.110E-04	1996.	2.180E-04	1996.	1.658E-03
ESE	1465.	1465.	3.480E-04	1465.	3.593E-04	1465.	2.459E-03
SE	969.	969.	4.711E-04	969.	5.320E-04	969.	3.715E-03
SSE	838.	838.	4.761E-04	838.	5.378E-04	838.	3.671E-03
S	829.	829.	4.168E-04	829.	4.533E-04	829.	3.823E-03
SSW	835.	835.	3.994E-04	835.	4.930E-04	835.	2.700E-03
SW	628.	628.	6.711E-04	628.	8.591E-04	628.	6.139E-03
WSW	533.	533.	7.089E-04	533.	8.229E-04	533.	6.667E-03
W	524.	524.	6.802E-04	524.	8.291E-04	524.	8.057E-03
WNW	643.	643.	4.708E-04	643.	5.716E-04	643.	6.300E-03
NW	762.	762.	4.123E-04	762.	4.970E-04	762.	5.173E-03
NNW	890.	890.	4.025E-04	890.	4.447E-04	890.	4.374E-03

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Table 4-7 Deleted

Table 4-8

Parameters for Calculations of N-16 Skyshine Radiation From LaSalle

Location Number K	Activity	Occupancy Hours OH_k^a	Occupancy Factor ^c OF_k	Shielding Factor SF_k	Distance R_k (m)
1	Living at home (nearest resident)	8360	0.95	0.7	1100 ^b
2	Fishing	400	0.05	1.0	2100
3	Living at National Guard Facility	2500		0.7	2400

$$M_h = 5$$

$$K = 2.28 \text{ E-5 mrem / (MWe-hr)}$$

These parameters are used to obtain an initial estimate of skyshine dose to the maximally exposed member of the public using ODCM Part II, Section 5, Equation 5-1. If desired, more realistic parameters could be used in place of these to refine the estimate. For example, one could determine whether the nearest resident really fishes the specified number of hours at the specified location.

Notes:

- ^a The amount of time in a year that a maximally exposed fisherman would spend fishing near the site is estimates as 12 hours per week for 8 months per year. This yields an estimate of:

$$\left(12 \frac{\text{Hours}}{\text{Week}} \right) \left[\frac{8 \left(\frac{\text{months}}{\text{year}} \right)}{12 \left(\frac{\text{months}}{\text{year}} \right)} \right] \left(52 \frac{\text{weeks}}{\text{year}} \right) = 416 \frac{\text{hours}}{\text{year}}$$

- ^b Distance to nearest residence. (See Table 4-1)

- ^c The OF_k is the quotient of the number of hours a location is occupied and the number of hours in a year. Thus, $OH_k / 8760 \text{ hours} = OF_k$ rounded to the nearest 0.01 digit.

In determining the maximally exposed individual, the following possibilities were considered: the nearest resident, fisherman, and persons at the National Guard facility north of the site. The annual exposure time and location of a maximally exposed fisherman were estimated on the basis of discussion with a member of the station staff. The nearest resident was found to have the greatest exposure to skyshine. For details, see Based on Sargent & Lundy, Nuclear Safeguards and Licensing Division, LaSalle calculation no. ATD-0139, "N-16 Skyshine Ground Level Doses from LaSalle Turbine Systems & Piping, Revision 0.

Table 4-9 (page 1 of 2)

Elevated Level Joint Frequency Distribution Table Summary

375 Foot Elevation Data

Summary Table of Percent by Direction and Class

Class	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
A	.024	.032	.067	.057	.062	.040	.030	.060	.056	.169	.087	.051	.056	.064	.063	.024	.943
B	.149	.175	.227	.149	.080	.047	.056	.070	.233	.463	.330	.189	.145	.192	.153	.163	2.843
C	.300	.262	.351	.255	.138	.069	.104	.130	.375	.579	.454	.361	.344	.420	.329	.332	4.805
D	3.100	2.634	3.282	3.192	2.780	1.945	1.767	2.053	2.810	2.875	2.270	2.460	3.248	4.533	3.922	3.681	46.551
E	1.018	.913	1.162	1.431	1.823	1.495	1.460	1.752	2.867	2.978	2.124	1.531	1.575	2.065	1.670	1.196	27.061
F	.320	.182	.248	.260	.469	.707	.905	.995	1.459	1.735	1.561	1.041	1.012	1.099	.894	.553	13.438
G	.055	.039	.022	.012	.041	.081	.278	.507	.674	.658	.660	.460	.309	.242	.217	.103	4.358
Total	4.965	4.237	5.359	5.356	5.394	4.385	4.601	5.567	8.474	9.457	7.487	6.093	6.688	8.615	7.248	6.073	100.000

Summary Table of Percent by Direction and Speed

Speed	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
.45	.018	.017	.015	.010	.006	.010	.013	.008	.018	.010	.000	.013	.000	.000	.001	.000	.137
1.05	.016	.033	.030	.027	.021	.023	.032	.027	.027	.017	.017	.028	.021	.024	.034	.027	.402
2.05	.162	.260	.276	.215	.147	.149	.159	.171	.165	.168	.155	.135	.147	.115	.136	.160	2.721
3.05	.381	.479	.551	.477	.369	.287	.311	.278	.323	.317	.272	.302	.321	.317	.302	.311	5.599
4.05	.508	.647	.785	.547	.494	.428	.437	.404	.453	.455	.428	.400	.387	.482	.487	.455	7.798
5.05	.489	.598	.792	.515	.451	.403	.420	.505	.477	.489	.492	.472	.493	.540	.542	.533	8.213
6.05	.577	.599	.861	.595	.506	.419	.479	.483	.556	.584	.523	.487	.556	.598	.668	.656	9.150
8.05	1.297	.918	1.353	1.289	1.207	.972	.969	1.062	1.415	1.500	1.371	1.164	1.207	1.622	1.669	1.623	20.637
10.05	.912	.421	.487	.845	.998	.751	.736	.947	1.385	1.552	1.325	1.088	1.240	1.671	1.557	1.270	17.188
13.05	.482	.210	.183	.594	.858	.692	.749	1.187	2.107	2.440	1.822	1.338	1.432	1.962	1.428	.800	18.256
18.00	.120	.055	.026	.231	.326	.240	.283	.459	1.476	1.815	1.043	.581	.746	1.137	.404	.222	9.163
99.00	.002	.000	.000	.011	.011	.011	.013	.035	.072	.109	.038	.085	.137	.147	.019	.015	.706
Total	4.965	4.237	5.359	5.356	5.394	4.385	4.601	5.567	8.474	9.457	7.487	6.093	6.688	8.615	7.248	6.073	100.000

NOTE: Wind direction in tables are presented in "wind from" and not "wind to" direction.

Table 4-9 (page 2 of 2)

Elevated Level Joint Frequency Distribution Table Summary

375 Foot Elevation Data

Summary Table of Percent by Speed and Class

Class Speed	A	B	C	D	E	F	G
.45	.000	.000	.000	.052	.058	.023	.004
1.05	.001	.004	.004	.176	.153	.060	.005
2.05	.017	.041	.109	1.540	.656	.307	.050
3.05	.046	.159	.290	3.269	1.193	.547	.096
4.05	.102	.249	.499	4.364	1.629	.788	.166
5.05	.102	.335	.547	4.159	1.945	.916	.210
6.05	.106	.341	.565	4.563	2.320	.986	.268
8.05	.225	.701	1.116	10.191	5.190	2.460	.755
10.05	.141	.429	.785	7.441	4.924	2.591	.878
13.05	.134	.404	.598	6.977	5.670	3.208	1.296
18.00	.068	.163	.256	3.424	3.126	1.511	.615
99.00	.001	.017	.036	.396	.198	.043	.015

Table 4-10 (Page 1 of 2)

Mid Elevation Joint Frequency Distribution Table Summaries

200 Foot Elevation Data

Summary Table of Percent by Direction and Class

Class	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
A	.024	.032	.067	.057	.062	.040	.030	.060	.056	.169	.087	.051	.056	.064	.063	.024	.943
B	.149	.175	.227	.149	.080	.047	.056	.070	.233	.463	.330	.189	.145	.192	.153	.183	2.843
C	.300	.262	.351	.255	.138	.069	.104	.130	.375	.579	.454	.361	.344	.420	.329	.332	4.805
D	3.100	2.634	3.282	3.192	2.780	1.945	1.767	2.053	2.810	2.875	2.270	2.460	3.248	4.533	3.922	3.681	46.551
E	1.018	.913	1.162	1.431	1.823	1.495	1.460	1.752	2.867	2.978	2.124	1.531	1.575	2.065	1.670	1.196	27.061
F	.320	.182	.248	.260	.469	.707	.905	.995	1.459	1.735	1.561	1.041	1.012	1.099	.894	.553	13.438
G	.055	.039	.022	.012	.041	.081	.278	.507	.674	.658	.660	.460	.309	.242	.217	.103	4.358
Total	4.965	4.237	5.359	5.356	5.394	4.385	4.601	5.567	8.474	9.457	7.487	6.093	6.688	8.615	7.248	6.073	100.000

Summary Table of Percent by Direction and Speed

Speed	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
.45	.018	.017	.015	.010	.006	.010	.013	.008	.018	.010	.000	.013	.000	.000	.001	.000	.137
1.05	.016	.033	.030	.027	.021	.023	.032	.027	.027	.017	.017	.028	.021	.024	.034	.027	.402
2.05	.162	.260	.276	.215	.147	.149	.159	.171	.165	.168	.155	.135	.147	.115	.136	.160	2.721
3.05	.381	.479	.551	.477	.369	.287	.311	.278	.323	.317	.272	.302	.321	.317	.302	.311	5.599
4.05	.508	.647	.785	.547	.494	.428	.437	.404	.453	.455	.428	.400	.387	.482	.487	.455	7.798
5.05	.489	.598	.792	.515	.451	.403	.420	.505	.477	.489	.492	.472	.493	.540	.542	.533	8.213
6.05	.577	.599	.861	.596	.506	.419	.479	.483	.556	.584	.523	.487	.556	.598	.668	.656	9.150
8.05	1.297	.918	1.353	1.289	1.207	.972	.969	1.062	1.415	1.500	1.371	1.164	1.207	1.622	1.669	1.623	20.637
10.05	.912	.421	.487	.845	.998	.751	.736	.947	1.385	1.552	1.325	1.088	1.240	1.671	1.557	1.270	17.188
13.05	.482	.210	.183	.594	.858	.692	.749	1.187	2.107	2.440	1.922	1.338	1.432	1.962	1.428	.800	18.286
18.00	.120	.055	.026	.231	.326	.240	.283	.459	1.476	1.815	1.043	.581	.746	1.137	.404	.222	9.163
99.00	.002	.000	.000	.011	.011	.011	.013	.035	.072	.109	.038	.085	.137	.147	.019	.015	.706
Total	4.965	4.237	5.359	5.356	5.394	4.385	4.601	5.567	8.474	9.457	7.487	6.093	6.688	8.615	7.248	6.073	100.000

NOTE: Wind direction in tables are presented in "wind from" and not "wind to" direction.

Table 4-10 (Page 2 of 2)

Mid Elevation Joint Frequency Distribution Table Summaries

200 Foot Elevation Data

Summary Table of Percent by Speed and Class

Class Speed	A	B	C	D	E	F	G
.45	.000	.000	.001	.046	.037	.021	.009
1.05	.013	.004	.022	.219	.175	.116	.053
2.05	.172	.130	.291	1.946	.732	.437	.207
3.05	.600	.453	.809	3.533	1.531	.642	.378
4.05	.776	.588	.970	4.134	2.329	.930	.591
5.05	.828	.588	.966	3.915	2.455	1.150	.690
6.05	.835	.533	.921	4.389	2.742	1.461	1.079
8.05	1.542	1.208	1.671	8.019	5.377	3.357	2.616
10.05	1.030	.780	.979	5.271	4.154	2.319	2.160
13.05	.874	.558	.754	4.155	2.854	.935	.597
18.00	.331	.207	.231	1.621	.630	.046	.020
99.00	.029	.012	.018	.162	.020	.005	.001

Table 4-11 (Page 1 of 2)

Ground Level Joint Frequency Distribution Table Summary

33 Foot Elevation Data

Summary Table of Percent by Direction and Class

Class	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
A	.411	.318	.688	.887	.594	.308	.133	.135	.212	.407	.478	.447	.532	.665	.844	.904	7.962
B	.314	.150	.278	.310	.276	.177	.108	.071	.172	.239	.268	.222	.293	.405	.505	.501	4.288
C	.380	.233	.330	.328	.262	.270	.189	.172	.285	.385	.424	.343	.380	.507	.638	.501	5.626
D	3.149	1.449	2.178	2.504	2.687	1.735	1.577	1.540	2.195	2.673	2.178	1.925	2.243	3.240	3.269	2.509	37.051
E	1.131	.661	1.168	1.021	1.758	1.434	1.303	1.561	2.556	2.795	1.968	1.480	1.557	1.945	1.692	.917	24.947
F	.166	.087	.177	.160	.646	.840	.750	.817	1.259	1.280	1.376	1.039	1.048	.867	.609	.378	11.499
G	.019	.008	.017	.025	.127	.615	.873	1.023	1.183	1.050	.998	.966	.925	.490	.214	.093	8.627
Total	5.570	2.906	4.836	5.235	6.349	5.379	4.932	5.319	7.862	8.829	7.690	6.422	6.979	8.118	7.771	5.803	100.000

Summary Table of Percent by Direction and Speed

Speed	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
.45	.000	.004	.000	.002	.002	.000	.000	.002	.006	.002	.002	.004	.002	.000	.002	.002	.029
1.05	.052	.048	.073	.046	.056	.056	.052	.073	.081	.075	.079	.067	.102	.093	.066	.066	1.085
2.05	.378	.609	.813	.517	.424	.601	.686	.582	.532	.441	.457	.466	.613	.626	.497	.488	8.731
3.05	1.124	1.183	1.802	1.268	1.191	1.270	1.276	1.222	1.149	1.156	1.112	1.031	1.095	1.079	.931	1.043	18.932
4.05	1.326	.621	1.122	1.230	1.420	1.116	1.058	1.079	1.731	1.719	1.648	1.550	1.274	1.023	1.000	.896	19.813
5.05	1.129	.247	.617	1.106	1.189	.694	.642	.738	1.276	1.509	1.305	1.129	1.029	1.104	1.014	.777	15.505
6.05	.667	.091	.297	.597	.879	.551	.509	.586	1.047	1.434	1.112	.808	.894	.914	.966	.813	12.163
8.05	.628	.102	.106	.422	.817	.767	.480	.642	1.262	1.636	1.291	.827	1.072	1.478	1.644	1.014	14.189
10.05	.145	.002	.006	.042	.303	.227	.172	.289	.561	.588	.532	.358	.480	.942	.933	.457	6.036
13.05	.114	.000	.000	.002	.067	.093	.056	.094	.202	.256	.119	.121	.254	.634	.563	.220	2.797
18.00	.008	.000	.000	.002	.000	.004	.002	.012	.015	.012	.031	.046	.145	.212	.154	.029	.671
99.00	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.002	.013	.019	.012	.002	.000	.048
Total	5.570	2.906	4.836	5.235	6.349	5.379	4.932	5.319	7.862	8.829	7.690	6.422	6.979	8.118	7.771	5.803	100.000

NOTE: Wind direction in tables are presented in "wind from" and not "wind to" direction.

Table 4-11 (Page 2 of 2)

Ground Level Joint Frequency Distribution Table Summary

33 Foot Elevation Data

Summary Table of Percent by Speed and Class

Class Speed	A	B	C	D	E	F	G
.45	.000	.000	.004	.002	.008	.010	.006
1.05	.021	.008	.012	.197	.355	.299	.195
2.05	.326	.202	.272	2.282	2.334	1.764	1.552
3.05	.998	.578	.798	5.133	5.350	3.267	2.808
4.05	1.247	.686	.862	6.435	4.793	3.064	2.725
5.05	1.203	.646	.852	6.115	3.880	1.773	1.037
6.05	1.201	.570	.804	5.472	3.049	.817	.251
8.05	1.629	.900	1.208	6.605	3.334	.463	.050
10.05	.775	.422	.518	2.955	1.334	.031	.002
13.05	.428	.212	.245	1.469	.438	.004	.002
18.00	.112	.052	.052	.382	.069	.004	.000
99.00	.023	.012	.000	.006	.004	.004	.000

Table 4-12

Station Characteristics

STATION: LaSalle

LOCATION: Six miles South of Marseilles, Illinois - LaSalle County

CHARACTERISTICS OF ELEVATED RELEASE POINT

- | | |
|--|---|
| 1) Release Height = 112.8 m ^a | 2) Diameter = 5.64 m |
| 3) Exit Speed = 14.7 m/s ^a | 4) Heat Content = 0 Kcal/s ^a |

CHARACTERISTICS OF VENT STACK RELEASE POINT: NOT APPLICABLE

- | | |
|--|-----------------------|
| 1) Release Height = _____ m ^a | 2) Diameter = _____ m |
| 3) Exit Speed = _____ m/s ^a | |

CHARACTERISTICS OF GROUND LEVEL RELEASE

- | |
|--|
| 1) Release Height = 0 m |
| 2) Building Factor (D) = 56.4 m ^a |

METEOROLOGICAL DATA

A 400 foot tower is located 725 meters Southeast of elevated release point.

Release Point	Wind Speed & Direction	Differential Temperature
Elevated	375 ft	375 – 33 ft
Vent	(N/A)	(N/A)
Ground	33 ft	200 – 33 ft

^a Used in calculating the meteorological and dose factors in Tables 4-3, and 4-5 through 4-7.

Table 4 - 13
Dose Factors for Noble Gases

	Beta Air Dose Factor	Beta Skin Dose Factor	Gamma Air Dose Factor	Gamma Total Body Dose Factor
<u>Nuclide</u>	<u>N_i</u> <u>(mrad/yr per</u> <u>uCi/m³)</u>	<u>L_i</u> <u>(mrem/yr per</u> <u>uCi/m³)</u>	<u>M_i</u> <u>(mrad/yr per</u> <u>uCi/m³)</u>	<u>K_i</u> <u>(mrem/yr per</u> <u>uCi/m³)</u>
Kr-83m	2.88E+02	---	1.93E+01	7.56E-02
Kr-85m	1.97E+03	1.46E+03	1.23E+03	1.17E+03
Kr-85	1.95E+03	1.34E+03	1.72E+01	1.61E+01
Kr-87	1.03E+04	9.73E+03	6.17E+03	5.92E+03
Kr-88	2.93E+03	2.37E+03	1.52E+04	1.47E+04
Kr-89	1.06E+04	1.01E+04	1.73E+04	1.66E+04
Kr-90	7.83E+03	7.29E+03	1.63E+04	1.56E+04
Xe-	1.11E+03	4.76E+02	1.56E+02	9.15E+01
131m				
Xe-	1.48E+03	9.94E+02	3.27E+02	2.51E+02
133m				
Xe-133	1.05E+03	3.06E+02	3.53E+02	2.94E+02
Xe-	7.39E+02	7.11E+02	3.36E+03	3.12E+03
135m				
Xe-135	2.46E+03	1.86E+03	1.92E+03	1.81E+03
Xe-137	1.27E+04	1.22E+04	1.51E+03	1.42E+03
Xe-138	4.75E+03	4.13E+03	9.21E+03	8.83E+03
Ar-41	3.28E+03	2.69E+03	9.30E+03	8.84E+03

Source: Table B-1 of Reference 6.

Table 4 - 14 (Page 1 of 3)
External Dose Factors for Standing on Contaminated Ground
DFG_{ij} (mrem/hr per pCi/ m²)

<u>Element</u>	<u>Whole Body Dose Factor</u>	<u>Reference</u>	<u>Element</u>	<u>Dose Factor</u>	<u>Reference</u>
H-3	0.00E+00	6	Be-7	5.95E-10	99
C-14	0.00E+00	6	F-18	1.19E-08	99
Na-22	2.42E-08	99	Na-24	2.50E-08	6
Mg-27	1.14E-08	99	Mg-28	1.48E-08	99
Al-26	2.95E-08	99	Al-28	2.00E-08	99
P-32	0.00E+00	6	Cl-38	1.70E-08	99
Ar-41	1.39E-08	99	K-40	2.22E-09	99
K-42	4.64E-09	99	K-43	1.19E-08	99
Ca-47	1.14E-08	99	Sc-44	2.50E-08	99
Sc-46m	1.21E-09	99	Sc-46	2.24E-08	99
Sc-47	1.46E-09	99	Ti-44	1.95E-09	99
V-48	3.21E-08	99	Cr-51	2.20E-10	6
Mn-52m	2.79E-08	99	Mn-52	3.80E-08	99
Mn-54	5.80E-09	6	Mn-56	1.10E-08	6
Fe-52	9.12E-09	99	Fe-55	0.00E+00	6
Fe-59	8.00E-09	6	Co-57	1.65E-09	99
Co-58	7.00E-09	6	Co-60	1.70E-08	6
Ni-63	0.00E+00	6	Ni-65	3.70E-09	6
Cu-64	1.50E-09	6	Cu-67	1.52E-09	99
Cu-68	8.60E-09 ¹	—	Zn-65	4.00E-09	6
Zn-69m	5.06E-09	99	Zn-69	0.00E+00	6
Ga-66	2.70E-08	99	Ga-67	1.89E-09	99
Ga-68	1.24E-08	99	Ga-72	3.00E-08	99
Ge-77	1.34E-08	99	As-72	2.23E-08	99
As-73	1.16E-10	99	As-74	9.41E-09	99
As-76	6.46E-09	99	As-77	1.79E-10	99
Se-73	1.38E-08	99	Se-75	4.98E-09	99
Br-77	3.84E-09	99	Br-80	2.01E-09	99
Br-82	3.00E-08	99	Br-83	6.40E-11	6
Br-84	1.20E-08	6	Br-85	0.00E+00	6
Kr-79	3.07E-09	99	Kr-81	1.59E-10	99
Kr-83m	1.42E-11	99	Kr-85m	2.24E-09	99
Kr-85	1.35E-10	99	Kr-87	1.03E-08	99
Kr-88	2.07E-08	99	Kr-90	1.56E-08	99
Rb-84	1.07E-08	99	Rb-86	6.30E-10	6
Rb-87	0.00E+00	99	Rb-88	3.50E-09	6
Rb-89	1.50E-08	6	Sr-85	6.16E-09	99
Sr-87m	3.92E-09	99	Sr-89	5.60E-13	6
Sr-90	1.84E-11	99	Sr-91	7.10E-09	6
Sr-92	9.00E-09	6	Y-86	4.00E-08	99
Y-87	5.53E-09	99	Y-88	2.88E-08	99
Y-90	2.20E-12	6	Y-91m	3.80E-09	6
Y-91	2.40E-11	6	Y-92	1.60E-09	6
Y-93	5.70E-10	6	Zr-95	5.00E-09	6
Zr-97	5.50E-09	6	Nb-94	1.84E-08	99
Nb-95	5.10E-09	6	Nb-97m	8.57E-09	99
Nb-97	8.48E-09	99	Mo-99	1.90E-09	6
Tc-99m	9.60E-10	6	Tc-101	2.70E-09	6
Tc-104	1.83E-08 ¹	—	Ru-97	2.99E-09	99
Ru-103	3.60E-09	6	Ru-105	4.50E-09	6
Ru/Rh-106	5.76E-09 ³	6, 99	Pc-109	3.80E-10	99
Cc-109	1.12E-10	99	In-111	5.11E-09	99
In-115m	2.01E-09	99	In-116	0.00E+00 ²	—
Sn-113	1.15E-09	99	Sn-117m	1.96E-08	99
Sn-119m	7.05E-11	99	Sb-117	0.00E+00 ²	—
Sb-122	2.71E-09 ¹	—	Sb-124	1.16E-08 ¹	—
Sb-125	4.56E-09	99	Sb-126	7.13E-10	99
Ag-108m	1.92E-08	99	Ag-108	1.14E-09	99
Ag-110m	1.80E-08	6	Ag-111	6.75E-10	99
Te-121m	2.65E-09	99	Te-121	6.75E-09	99

Table 4 - 14 (Page 2 of 3)
External Dose Factors for Standing on Contaminated Ground
DFG_{ij} (mrem/hr per pCi/ m²)

<u>Element</u>	<u>Whole Body Dose Factor</u>	<u>Reference</u>	<u>Element</u>	<u>Dose Factor</u>	<u>Reference</u>
Te-123m	1.88E-09	99	Te-125m	3.50E-11	6
Te-125	0.00E+00 ²	—	Te-127m	1.10E-12	6
Te-127	1.00E-11	6	Te-129m	7.70E-10	6
Te-129	7.10E-10	6	Te-131m	8.40E-09	6
Te-131	2.20E-09	6	Te-I-132	3.40E-09 ⁵	6
Te-134	1.05E-08	99	I-123	2.12E-09	99
I-124	1.23E-08	99	I-125	2.89E-10	99
I-130	1.40E-08	6	I-131	2.80E-09	6
I-133	3.70E-09	6	I-134	1.60E-08	6
I-135	1.20E-08	6	Xe-127	3.44E-09	99
Xe-129m	5.57E-10	99	Xe-131m	2.13E-10	99
Xe-133m	4.81E-10	99	Xe-133	5.91E-10	99
Xe-135m	5.23E-09	99	Xe-135	3.36E-09	99
Xe-137	4.26E-09	99	Xe-138	1.30E-08	99
Cs-129	3.39E-09	99	Cs-132	8.40E-09	99
Cs-134	1.20E-08	6	Cs-136	1.50E-08	6
Cs-137/Ba-137m	1.14E-08 ⁴	6, 99	Cs-138	2.10E-08	6
Cs-139	5.15E-09	99	Ba-131	5.74E-09	99
Ba-133m	8.10E-10	99	Ba-133	4.85E-09	99
Ba-135m	7.26E-10	99	Ba-137m	7.17E-09	99
Ba-137	0.00E+00 ²	—	Ba-139	2.40E-09	6
Ba-La-140	1.71E-08 ⁶	6	Ba-141	4.30E-09	6
Ba-142	7.90E-09	6	La-142	1.50E-08	6
Ce-139	2.04E-09	99	Ce-141	5.50E-10	6
Ce-143	2.20E-09	6	Ce-Pr-144	5.20E-10 ⁷	6
Pr-142	1.84E-09	99	Pr-143	0.00E+00	6
Nc-147	1.00E-09	6	Nc-149	5.32E-09	99
Pm-145	3.38E-10	99	Pm-148m	2.35E-08	99
Pm-148	7.22E-09	99	Pm-149	5.32E-10	99
Sm-153	8.95E-10	99	Eu-152	1.30E-08	99
Eu-154	1.41E-08	99	Eu-155	8.27E-10	99
Gc-153	1.46E-09	99	Dy-157	4.39E-09	99
Er-169	6.12E-14	99	Er-171	5.11E-09	99
Tm-170	3.41E-10	99	Yb-169	4.12E-09	99
Yb-175	4.94E-10	99	Lu-177	4.60E-10	99
Hf-181	6.67E-09	99	Ta-182	1.42E-08	99
Ta-183	2.93E-09 ¹	—	W-187	3.10E-09	6
Re-188	1.89E-09	99	Os-191	9.83E-10	99
Ir-194	2.31E-09	99	Pt-195m	9.79E-10	99
Pt-197	3.57E-10	99	Au-195m	2.54E-09	99
Au-195	1.14E-09	99	Au-198	5.19E-09	99
Au-199	1.18E-09	99	Hg-197	9.33E-10	99
Hg-203	2.89E-09	99	Tl-201	1.24E-09	99
Tl-206	0.00E+00 ²	—	Tl-208	3.58E-08	99
Pb-203	3.88E-09	99	Pb-210	3.57E-11	99
Pb-212	1.91E-09	99	Pb-214	3.18E-09	99
Bi-206	3.74E-08	99	Bi-207	1.77E-08	99
Bi-214	1.71E-08	99	Ra-226	8.78E-11	99
Th-232	8.14E-12	99	U-238	7.98E-12	99
Np-239	9.50E-10	6	Am-241	3.48E-10	99

¹ Valued derived by comparing the percentage and MeV of the nuclide's gammas and then comparing to Cesium-137, as a value was not available in the literature.

² 0.0 due to low yield and short half-life. A value was not available in the literature.

Table 4 - 14 (Page 3 of 3)
External Dose Factors for Standing on Contaminated Ground
 DFG_{ij} (mrem/hr per pCi/ m²)

- ³ Value is the sum of Ru-106 (1.50E-9) and Rh-106 (4.26E-9). The Rh-106 value is from Reference 99 and the Ru-106 value is from Reference 6.
- ⁴ Value is the sum of Cs-137 (4.20E-9) and Ba-137m (7.17E-9). The values are from references 6 and 99, respectively.
- ⁵ Value is the sum of Te-132 (1.70E-9) and I-132 (1.70E-9).
- ⁶ Value is the sum of Ba-140 (2.10E-9) and La-140 (1.50E-8) from reference 6. In Reference 6, see Table E-6.
- ⁷ Value is the sum of Ce-144 (3.20E-10) and Pr-144 (2.00E-10) from reference 6.

Note: Dose assessments for 10CFR20 and 40CFR190 compliance are made for an adult only.

Dose assessments for 10CFR50 Appendix are made using dose factors of Regulatory Guide 1.109 (Reference 6) for all age groups.

Table 4-15 (page 1 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Kr-83m

Direction	Distance (meters)	Total Body	Gamma	Air
		Annual	Annual	500 hour
		V_i	B_i	b_i
		<u>(mrem*sec)</u>	<u>(mrad*sec)</u>	<u>(mrad*sec)</u>
		(yr* μ Ci)	(yr* μ Ci)	(yr* μ Ci)
N	1036	1.93E-10	1.43E-08	1.43E-08
NNE	1378	2.73E-10	4.24E-08	4.24E-08
NE	2408	3.21E-10	9.37E-08	9.37E-08
ENE	4450	2.73E-10	1.25E-07	1.25E-07
E	1996	2.54E-10	5.39E-08	5.39E-08
ESE	1465	2.64E-10	2.83E-08	2.83E-08
SE	969	2.32E-10	8.97E-09	8.97E-09
SSE	838	1.62E-10	6.53E-09	6.53E-09
S	829	1.70E-10	1.37E-08	1.37E-08
SSW	835	1.51E-10	8.61E-09	8.61E-09
SW	628	2.16E-10	4.62E-09	4.62E-09
WSW	533	2.05E-10	5.53E-10	5.53E-10
W	524	1.70E-10	4.24E-10	4.24E-10
WNW	643	1.23E-10	1.11E-09	1.11E-09
NW	762	1.06E-10	1.41E-09	1.41E-09
NNW	890	1.27E-10	2.89E-09	2.89E-09

Table 4-15 (page 2 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Kr-85m

Direction	Distance (meters)	Total Body	Gamma	Air
		Annual	Annual	500 hour
		V_i	B_i	b_i
		$\frac{(\text{mrem} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$	$\frac{(\text{mrad} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$	$\frac{(\text{mrad} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$
N	1036	2.60E-05	3.86E-05	3.86E-05
NNE	1378	2.51E-05	3.72E-05	3.72E-05
NE	2408	1.69E-05	2.51E-05	2.51E-05
ENE	4450	8.36E-06	1.24E-05	1.24E-05
E	1996	1.69E-05	2.50E-05	2.50E-05
ESE	1465	2.40E-05	3.56E-05	3.56E-05
SE	969	3.18E-05	4.72E-05	4.72E-05
SSE	838	2.60E-05	3.86E-05	3.86E-05
S	829	2.66E-05	3.96E-05	3.96E-05
SSW	835	2.54E-05	3.78E-05	3.78E-05
SW	628	3.90E-05	5.79E-05	5.79E-05
WSW	533	4.13E-05	6.13E-05	6.13E-05
W	524	3.52E-05	5.23E-05	5.23E-05
WNW	643	2.37E-05	3.52E-05	3.52E-05
NW	762	1.96E-05	2.91E-05	2.91E-05
NNW	890	2.12E-05	3.15E-05	3.15E-05

Table 4-15 (page 3 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Kr-85

Direction	Distance (meters)	Total Body	Gamma Air	
		Annual	Annual	500 hour
		V_i	B_i	b_i
		<u>(mrem*sec)</u>	<u>(mrad*sec)</u>	<u>(mrad*sec)</u>
		(yr* μ Ci)	(yr* μ Ci)	(yr* μ Ci)
N	1036	4.71E-07	7.14E-07	7.14E-07
NNE	1378	4.35E-07	6.59E-07	6.59E-07
NE	2408	2.79E-07	4.23E-07	4.23E-07
ENE	4450	1.30E-07	1.97E-07	1.97E-07
E	1996	2.87E-07	4.35E-07	4.35E-07
ESE	1465	4.16E-07	6.31E-07	6.31E-07
SE	969	5.76E-07	8.72E-07	8.72E-07
SSE	838	4.85E-07	7.35E-07	7.35E-07
S	829	5.04E-07	7.64E-07	7.64E-07
SSW	835	4.83E-07	7.32E-07	7.32E-07
SW	628	7.33E-07	1.11E-06	1.11E-06
WSW	533	7.82E-07	1.19E-06	1.19E-06
W	524	6.68E-07	1.01E-06	1.01E-06
WNW	643	4.47E-07	6.77E-07	6.77E-07
NW	762	3.68E-07	5.58E-07	5.58E-07
NNW	890	3.94E-07	5.96E-07	5.96E-07

Table 4-15 (page 4 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Kr-87

Direction	Distance (meters)	Total Body Gamma Air		
		Annual	Annual	500 hour
		V_i	B_i	b_i
		<u>(mrem*sec)</u> (yr* μ Ci)	<u>(mrad*sec)</u> (yr* μ Ci)	<u>(mrad*sec)</u> (yr* μ Ci)
N	1036	1.56E-04	2.35E-04	2.35E-04
NNE	1378	1.42E-04	2.13E-04	2.13E-04
NE	2408	8.74E-05	1.31E-04	1.31E-04
ENE	4450	3.76E-05	5.66E-05	5.66E-05
E	1996	9.12E-05	1.37E-04	1.37E-04
ESE	1465	1.35E-04	2.04E-04	2.04E-04
SE	969	1.92E-04	2.88E-04	2.88E-04
SSE	838	1.63E-04	2.45E-04	2.45E-04
S	829	1.70E-04	2.55E-04	2.55E-04
SSW	835	1.62E-04	2.44E-04	2.44E-04
SW	628	2.48E-04	3.73E-04	3.73E-04
WSW	533	2.66E-04	4.01E-04	4.01E-04
W	524	2.27E-04	3.41E-04	3.41E-04
WNW	643	1.51E-04	2.27E-04	2.27E-04
NW	762	1.24E-04	1.86E-04	1.86E-04
NNW	890	1.32E-04	1.98E-04	1.98E-04

Table 4-15 (page 5 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Kr-88

Direction	Distance (meters)	Total Body Annual V_i (mrem*sec) (yr* μ Ci)	Gamma Air Annual B_i (mrad*sec) (yr* μ Ci)	500 hour b_i (mrad*sec) (yr* μ Ci)
N	1036	4.07E-04	6.11E-04	6.11E-04
NNE	1378	3.70E-04	5.56E-04	5.56E-04
NE	2408	2.38E-04	3.57E-04	3.57E-04
ENE	4450	1.11E-04	1.67E-04	1.67E-04
E	1996	2.47E-04	3.71E-04	3.71E-04
ESE	1465	3.56E-04	5.35E-04	5.35E-04
SE	969	4.95E-04	7.44E-04	7.44E-04
SSE	838	4.23E-04	6.35E-04	6.35E-04
S	829	4.44E-04	6.67E-04	6.67E-04
SSW	835	4.26E-04	6.40E-04	6.40E-04
SW	628	6.36E-04	9.54E-04	9.54E-04
WSW	533	6.80E-04	1.02E-03	1.02E-03
W	524	5.81E-04	8.72E-04	8.72E-04
WNW	643	3.89E-04	5.84E-04	5.84E-04
NW	762	3.21E-04	4.82E-04	4.82E-04
NNW	890	3.42E-04	5.14E-04	5.14E-04

Table 4-15 (page 6 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Kr-89

Direction	Distance (meters)	Total Body	Gamma	Air
		Annual	Annual	500 hour
		V_i	B_i	b_i
		$\frac{(\text{mrem} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$	$\frac{(\text{mrad} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$	$\frac{(\text{mrad} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$
N	1036	2.85E-04	4.28E-04	4.28E-04
NNE	1378	2.47E-04	3.71E-04	3.71E-04
NE	2408	1.13E-04	1.70E-04	1.70E-04
ENE	4450	2.89E-05	4.35E-05	4.35E-05
E	1996	1.23E-04	1.85E-04	1.85E-04
ESE	1465	2.23E-04	3.34E-04	3.34E-04
SE	969	3.62E-04	5.45E-04	5.45E-04
SSE	838	3.08E-04	4.63E-04	4.63E-04
S	829	3.11E-04	4.67E-04	4.67E-04
SSW	835	2.92E-04	4.39E-04	4.39E-04
SW	628	5.16E-04	7.75E-04	7.75E-04
WSW	533	5.77E-04	8.68E-04	8.68E-04
W	524	4.85E-04	7.29E-04	7.29E-04
WNW	643	3.04E-04	4.57E-04	4.57E-04
NW	762	2.37E-04	3.55E-04	3.55E-04
NNW	890	2.46E-04	3.70E-04	3.70E-04

Table 4-15 (page 7 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Xe-131m

Direction	Distance (meters)	Total Body	Gamma	Air
		Annual	Annual	500 hour
		V_i	B_i	b_i
		$\frac{(\text{mrem} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$	$\frac{(\text{mrad} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$	$\frac{(\text{mrad} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$
N	1036	5.60E-06	8.50E-06	8.50E-06
NNE	1378	5.55E-06	8.53E-06	8.53E-06
NE	2408	3.99E-06	6.29E-06	6.29E-06
ENE	4450	2.18E-06	3.58E-06	3.58E-06
E	1996	3.86E-06	6.02E-06	6.02E-06
ESE	1465	5.32E-06	8.18E-06	8.18E-06
SE	969	6.83E-06	1.04E-05	1.04E-05
SSE	838	5.53E-06	8.36E-06	8.36E-06
S	829	5.67E-06	8.57E-06	8.57E-06
SSW	835	5.39E-06	8.15E-06	8.15E-06
SW	628	8.24E-06	1.24E-05	1.24E-05
WSW	533	8.66E-06	1.30E-05	1.30E-05
W	524	7.39E-06	1.11E-05	1.11E-05
WNW	643	5.00E-06	7.53E-06	7.53E-06
NW	762	4.14E-06	6.25E-06	6.25E-06
NNW	890	4.51E-06	6.82E-06	6.82E-06

Table 4-15 (page 8 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Xe-133m

Direction	Distance (meters)	Total Body	Gamma	Air
		Annual	Annual	500 hour
		V_i	B_i	b_i
		<u>(mrem*sec)</u>	<u>(mrad*sec)</u>	<u>(mrad*sec)</u>
		(yr* μ Ci)	(yr* μ Ci)	(yr* μ Ci)
N	1036	4.54E-06	7.05E-06	7.05E-06
NNE	1378	4.43E-06	6.98E-06	6.98E-06
NE	2408	3.13E-06	5.11E-06	5.11E-06
ENE	4450	1.70E-06	2.91E-06	2.91E-06
E	1996	3.06E-06	4.91E-06	4.91E-06
ESE	1465	4.24E-06	6.69E-06	6.69E-06
SE	969	5.54E-06	8.60E-06	8.60E-06
SSE	838	4.54E-06	7.01E-06	7.01E-06
S	829	4.68E-06	7.23E-06	7.23E-06
SSW	835	4.46E-06	6.88E-06	6.88E-06
SW	628	6.79E-06	1.05E-05	1.05E-05
WSW	533	7.17E-06	1.10E-05	1.10E-05
W	524	6.12E-06	9.39E-06	9.39E-06
WNW	643	4.12E-06	6.34E-06	6.34E-06
NW	762	3.41E-06	5.25E-06	5.25E-06
NNW	890	3.69E-06	5.70E-06	5.70E-06

Table 4-15 (page 9 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Xe-133

Direction	Distance (meters)	Total Body	Gamma	Air
		Annual	Annual	500 hour
		V_i	B_i	b_i
		<u>(mrem*sec)</u>	<u>(mrad*sec)</u>	<u>(mrad*sec)</u>
		(yr* μ Ci)	(yr* μ Ci)	(yr* μ Ci)
N	1036	3.86E-06	5.83E-06	5.83E-06
NNE	1378	3.98E-06	6.08E-06	6.08E-06
NE	2408	3.02E-06	4.74E-06	4.74E-06
ENE	4450	1.76E-06	2.86E-06	2.86E-06
E	1996	2.85E-06	4.42E-06	4.42E-06
ESE	1465	3.82E-06	5.85E-06	5.85E-06
SE	969	4.71E-06	7.11E-06	7.11E-06
SSE	838	3.73E-06	5.61E-06	5.61E-06
S	829	3.79E-06	5.71E-06	5.71E-06
SSW	835	3.59E-06	5.40E-06	5.40E-06
SW	628	5.50E-06	8.25E-06	8.25E-06
WSW	533	5.72E-06	8.56E-06	8.56E-06
W	524	4.88E-06	7.30E-06	7.30E-06
WNW	643	3.32E-06	4.97E-06	4.97E-06
NW	762	2.77E-06	4.15E-06	4.15E-06
NNW	890	3.04E-06	4.58E-06	4.58E-06

Table 4-15 (page 10 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Xe-135m

Direction	Distance (meters)	Total Body Gamma Air		
		Annual	Annual	500 hour
		V_i	B_i	b_i
		<u>(mrem*sec)</u>	<u>(mrad*sec)</u>	<u>(mrad*sec)</u>
		(yr* μ Ci)	(yr* μ Ci)	(yr* μ Ci)
N	1036	7.99E-05	1.21E-04	1.21E-04
NNE	1378	7.23E-05	1.10E-04	1.10E-04
NE	2408	4.11E-05	6.23E-05	6.23E-05
ENE	4450	1.46E-05	2.21E-05	2.21E-05
E	1996	4.32E-05	6.55E-05	6.55E-05
ESE	1465	6.81E-05	1.03E-04	1.03E-04
SE	969	9.95E-05	1.51E-04	1.51E-04
SSE	838	8.38E-05	1.27E-04	1.27E-04
S	829	8.60E-05	1.30E-04	1.30E-04
SSW	835	8.18E-05	1.24E-04	1.24E-04
SW	628	1.31E-04	1.98E-04	1.98E-04
WSW	533	1.42E-04	2.15E-04	2.15E-04
W	524	1.20E-04	1.82E-04	1.82E-04
WNW	643	7.87E-05	1.19E-04	1.19E-04
NW	762	6.36E-05	9.64E-05	9.64E-05
NNW	890	6.76E-05	1.02E-04	1.02E-04

Table 4-15 (page 11 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Xe-135

Direction	Distance (meters)	Total Body	Gamma	Air
		Annual	Annual	500 hour
		V_i	B_i	b_i
		$\frac{(\text{mrem} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$	$\frac{(\text{mrad} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$	$\frac{(\text{mrad} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$
N	1036	4.50E-05	6.76E-05	6.76E-05
NNE	1378	4.26E-05	6.40E-05	6.40E-05
NE	2408	2.82E-05	4.24E-05	4.24E-05
ENE	4450	1.36E-05	2.05E-05	2.05E-05
E	1996	2.84E-05	4.27E-05	4.27E-05
ESE	1465	4.08E-05	6.12E-05	6.12E-05
SE	969	5.50E-05	8.26E-05	8.26E-05
SSE	838	4.55E-05	6.84E-05	6.84E-05
S	829	4.69E-05	7.05E-05	7.05E-05
SSW	835	4.48E-05	6.74E-05	6.74E-05
SW	628	6.85E-05	1.03E-04	1.03E-04
WSW	533	7.27E-05	1.09E-04	1.09E-04
W	524	6.22E-05	9.34E-05	9.34E-05
WNW	643	4.17E-05	6.26E-05	6.26E-05
NW	762	3.44E-05	5.17E-05	5.17E-05
NNW	890	3.71E-05	5.57E-05	5.57E-05

Table 4-15 (page 12 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Xe-137

Direction	Distance (meters)	Total Body	Gamma	Air
		Annual	Annual	500 hour
		V_i	B_i	b_i
		<u>(mrem*sec)</u>	<u>(mrad*sec)</u>	<u>(mrad*sec)</u>
		(yr* μ Ci)	(yr* μ Ci)	(yr* μ Ci)
N	1036	2.34E-05	3.53E-05	3.53E-05
NNE	1378	2.04E-05	3.08E-05	3.08E-05
NE	2408	8.68E-06	1.31E-05	1.31E-05
ENE	4450	1.69E-06	2.55E-06	2.55E-06
E	1996	9.48E-06	1.43E-05	1.43E-05
ESE	1465	1.80E-05	2.73E-05	2.73E-05
SE	969	2.99E-05	4.53E-05	4.53E-05
SSE	838	2.51E-05	3.80E-05	3.80E-05
S	829	2.51E-05	3.79E-05	3.79E-05
SSW	835	2.34E-05	3.53E-05	3.53E-05
SW	628	4.28E-05	6.47E-05	6.47E-05
WSW	533	4.81E-05	7.27E-05	7.27E-05
W	524	4.03E-05	6.09E-05	6.09E-05
WNW	643	2.51E-05	3.79E-05	3.79E-05
NW	762	1.93E-05	2.92E-05	2.92E-05
NNW	890	2.01E-05	3.04E-05	3.04E-05

Table 4-15 (page 13 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Xe-138

Direction	Distance (meters)	Total Body	Gamma	Air
		Annual	Annual	500 hour
		V_i	B_i	b_i
		<u>(mrem*sec)</u>	<u>(mrad*sec)</u>	<u>(mrad*sec)</u>
		(yr* μ Ci)	(yr* μ Ci)	(yr* μ Ci)
N	1036	2.47E-04	3.71E-04	3.71E-04
NNE	1378	2.24E-04	3.37E-04	3.37E-04
NE	2408	1.38E-04	2.07E-04	2.07E-04
ENE	4450	5.80E-05	8.72E-05	8.72E-05
E	1996	1.44E-04	2.17E-04	2.17E-04
ESE	1465	2.15E-04	3.22E-04	3.22E-04
SE	969	3.04E-04	4.56E-04	4.56E-04
SSE	838	2.58E-04	3.87E-04	3.87E-04
S	829	2.69E-04	4.03E-04	4.03E-04
SSW	835	2.57E-04	3.86E-04	3.86E-04
SW	628	3.92E-04	5.89E-04	5.89E-04
WSW	533	4.21E-04	6.32E-04	6.32E-04
W	524	3.59E-04	5.39E-04	5.39E-04
WNW	643	2.39E-04	3.58E-04	3.58E-04
NW	762	1.96E-04	2.94E-04	2.94E-04
NNW	890	2.09E-04	3.13E-04	3.13E-04

Table 4-15 (page 14 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Xe-139

Direction	Distance (meters)	Total Body	Gamma	Air
		Annual	Annual	500 hour
		V_i	B_i	b_i
		$\frac{(\text{mrem} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$	$\frac{(\text{mrad} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$	$\frac{(\text{mrad} \cdot \text{sec})}{(\text{yr} \cdot \mu\text{Ci})}$
N	1036	1.23E-05	1.84E-05	1.84E-05
NNE	1378	8.83E-06	1.33E-05	1.33E-05
NE	2408	2.03E-06	3.04E-06	3.04E-06
ENE	4450	3.82E-07	5.73E-07	5.73E-07
E	1996	2.51E-06	3.77E-06	3.77E-06
ESE	1465	6.50E-06	9.77E-06	9.77E-06
SE	969	1.51E-05	2.27E-05	2.27E-05
SSE	838	1.30E-05	1.95E-05	1.95E-05
S	829	1.20E-05	1.80E-05	1.80E-05
SSW	835	1.00E-05	1.50E-05	1.50E-05
SW	628	2.90E-05	4.36E-05	4.36E-05
WSW	533	3.67E-05	5.51E-05	5.51E-05
W	524	3.07E-05	4.61E-05	4.61E-05
WNW	643	1.67E-05	2.51E-05	2.51E-05
NW	762	1.12E-05	1.69E-05	1.69E-05
NNW	890	1.06E-05	1.59E-05	1.59E-05

Table 4-15 (page 15 of 15)

Maximum Bi and Vi at or Beyond the Unrestricted Area Boundary for Ar-41

Direction	Distance (meters)	Total Body	Gamma	Air
		Annual	Annual	500 hour
		V_i	B_i	b_i
		<u>(mrem*sec)</u>	<u>(mrad*sec)</u>	<u>(mrad*sec)</u>
		(yr* μ Ci)	(yr* μ Ci)	(yr* μ Ci)
N	1036	3.05E-04	4.57E-04	4.57E-04
NNE	1378	2.75E-04	4.13E-04	4.13E-04
NE	2408	1.70E-04	2.55E-04	2.55E-04
ENE	4450	7.37E-05	1.11E-04	1.11E-04
E	1996	1.78E-04	2.67E-04	2.67E-04
ESE	1465	2.63E-04	3.95E-04	3.95E-04
SE	969	3.74E-04	5.61E-04	5.61E-04
SSE	838	3.19E-04	4.79E-04	4.79E-04
S	829	3.34E-04	5.01E-04	5.01E-04
SSW	835	3.20E-04	4.80E-04	4.80E-04
SW	628	4.85E-04	7.28E-04	7.28E-04
WSW	533	5.22E-04	7.83E-04	7.83E-04
W	524	4.44E-04	6.67E-04	6.67E-04
WNW	643	2.96E-04	4.44E-04	4.44E-04
NW	762	2.43E-04	3.64E-04	3.64E-04
NNW	890	2.58E-04	3.87E-04	3.87E-04

Table 4-16 (Page 1 of 4)

Infant Drinking Water A_{it} mrem*mL/hr* μ Ci

Nuclide	Bone	Liver	T Body	Thyroid	Kidney	Lung	GI-LLI	Skin
H-3	0.00E+00	6.63E+00	6.63E+00	6.63E+00	6.63E+00	6.63E+00	6.63E+00	0.00E+00
C-14	8.93E+02	1.91E+02	1.91E+02	1.91E+02	1.91E+02	1.91E+02	1.91E+02	0.00E+00
NA-22	3.70E+03	3.70E+03	3.70E+03	3.70E+03	3.70E+03	3.70E+03	3.70E+03	0.00E+00
NA-24	2.19E+02	2.19E+02	2.19E+02	2.19E+02	2.19E+02	2.19E+02	2.19E+02	0.00E+00
P-32	6.25E+04	3.68E+03	2.42E+03	0.00E+00	0.00E+00	0.00E+00	8.46E+02	0.00E+00
CA-41	1.41E+04	0.00E+00	1.54E+03	0.00E+00	0.00E+00	0.00E+00	7.20E+00	0.00E+00
SC-46	1.41E+00	2.03E+00	6.34E-01	0.00E+00	1.34E+00	0.00E+00	1.32E+03	0.00E+00
CR-51	0.00E+00	0.00E+00	5.25E-01	3.42E-01	7.48E-02	6.66E-01	1.53E+01	0.00E+00
MN-54	0.00E+00	7.49E+02	1.70E+02	0.00E+00	1.66E+02	0.00E+00	2.75E+02	0.00E+00
FE-55	5.23E+02	3.38E+02	9.04E+01	0.00E+00	0.00E+00	1.65E+02	4.29E+01	0.00E+00
MN-56	0.00E+00	1.22E+00	2.11E-01	0.00E+00	1.05E+00	0.00E+00	1.11E+02	0.00E+00
CO-57	0.00E+00	4.33E+01	7.04E+01	0.00E+00	0.00E+00	0.00E+00	1.47E+02	0.00E+00
CO-58	0.00E+00	1.35E+02	3.37E+02	0.00E+00	0.00E+00	0.00E+00	3.36E+02	0.00E+00
FE-59	1.15E+03	2.01E+03	7.92E+02	0.00E+00	0.00E+00	5.94E+02	9.61E+02	0.00E+00
CO-60	0.00E+00	4.07E+02	9.60E+02	0.00E+00	0.00E+00	0.00E+00	9.68E+02	0.00E+00
NI-59	1.78E+03	5.46E+02	3.08E+02	0.00E+00	0.00E+00	0.00E+00	2.70E+01	0.00E+00
NI-63	2.39E+04	1.48E+03	8.29E+02	0.00E+00	0.00E+00	0.00E+00	7.35E+01	0.00E+00
CU-64	0.00E+00	1.19E+01	5.52E+00	0.00E+00	2.02E+01	0.00E+00	2.45E+02	0.00E+00
NI-65	6.53E+00	7.39E-01	3.36E-01	0.00E+00	0.00E+00	0.00E+00	5.62E+01	0.00E+00
ZN-65	6.92E+02	2.37E+03	1.09E+03	0.00E+00	1.15E+03	0.00E+00	2.01E+03	0.00E+00
ZN-69m	3.09E+01	6.30E+01	5.74E+00	0.00E+00	2.55E+01	0.00E+00	8.73E+02	0.00E+00
ZN-69	4.44E-04	8.00E-04	5.95E-05	0.00E+00	3.32E-04	0.00E+00	6.52E-02	0.00E+00
SE-79	0.00E+00	7.91E+02	1.47E+02	0.00E+00	9.15E+02	0.00E+00	2.10E+01	0.00E+00
BR-82	0.00E+00	0.00E+00	3.78E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BR-83	0.00E+00	0.00E+00	4.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BR-84	0.00E+00	0.00E+00	2.20E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BR-85	0.00E+00	0.00E+00	1.80E-76	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RB-86	0.00E+00	6.29E+03	3.11E+03	0.00E+00	0.00E+00	0.00E+00	1.61E+02	0.00E+00
RB-87	0.00E+00	3.35E+03	1.33E+03	0.00E+00	0.00E+00	0.00E+00	2.25E+01	0.00E+00
RB-88	0.00E+00	1.25E-11	6.85E-12	0.00E+00	0.00E+00	0.00E+00	1.22E-11	0.00E+00
RB-89	0.00E+00	9.88E-14	6.80E-14	0.00E+00	0.00E+00	0.00E+00	3.36E-14	0.00E+00
SR-89	9.39E+04	0.00E+00	2.69E+03	0.00E+00	0.00E+00	0.00E+00	1.93E+03	0.00E+00
SR-90	1.07E+06	0.00E+00	2.16E+04	0.00E+00	0.00E+00	0.00E+00	8.70E+03	0.00E+00
Y-90	2.88E+00	0.00E+00	7.71E-02	0.00E+00	0.00E+00	0.00E+00	3.97E+03	0.00E+00
SR-91	7.85E+02	0.00E+00	2.84E+01	0.00E+00	0.00E+00	0.00E+00	9.29E+02	0.00E+00
Y-91m	1.33E-06	0.00E+00	4.54E-08	0.00E+00	0.00E+00	0.00E+00	4.44E-03	0.00E+00
Y-91	4.23E+01	0.00E+00	1.13E+00	0.00E+00	0.00E+00	0.00E+00	3.03E+03	0.00E+00

Table 4-16 (Page 2 of 4)

Infant Drinking Water A_{it} mrem*mL/hr* μ Ci

Nuclide	Bone	Liver	T Body	Thyroid	Kidney	Lung	GI-LLI	Skin
SR-92	3.36E+01	0.00E+00	1.25E+00	0.00E+00	0.00E+00	0.00E+00	3.62E+02	0.00E+00
Y-92	2.75E-02	0.00E+00	7.73E-04	0.00E+00	0.00E+00	0.00E+00	5.25E+02	0.00E+00
Y-93	4.02E-01	0.00E+00	1.09E-02	0.00E+00	0.00E+00	0.00E+00	3.17E+03	0.00E+00
NB-93m	4.63E+00	1.25E+00	3.92E-01	0.00E+00	1.22E+00	0.00E+00	1.50E+02	0.00E+00
NB-95	1.57E+00	6.45E-01	3.73E-01	0.00E+00	4.63E-01	0.00E+00	5.45E+02	0.00E+00
NB-97	1.70E-05	3.64E-06	1.31E-06	0.00E+00	2.84E-06	0.00E+00	1.15E+00	0.00E+00
ZR-93	7.27E+00	3.46E+00	2.09E+00	0.00E+00	1.02E+01	0.00E+00	9.00E+02	0.00E+00
ZR-95	7.72E+00	1.88E+00	1.33E+00	0.00E+00	2.03E+00	0.00E+00	9.37E+02	0.00E+00
ZR-97	3.41E-01	5.85E-02	2.67E-02	0.00E+00	5.90E-02	0.00E+00	3.73E+03	0.00E+00
MO-93	0.00E+00	2.13E+03	6.86E+01	0.00E+00	4.26E+02	0.00E+00	4.56E+01	0.00E+00
MO-99	0.00E+00	1.13E+03	2.20E+02	0.00E+00	1.69E+03	0.00E+00	3.72E+02	0.00E+00
TC-99	4.07E+01	5.50E+01	1.71E+01	0.00E+00	4.63E+02	5.35E+00	2.38E+02	0.00E+00
TC-99m	1.82E-02	3.75E-02	4.83E-01	0.00E+00	4.03E-01	1.96E-02	1.09E+01	0.00E+00
TC-101	4.66E-17	5.87E-17	5.81E-16	0.00E+00	6.98E-16	3.20E-17	9.98E-15	0.00E+00
RU-103	5.53E+01	0.00E+00	1.85E+01	0.00E+00	1.15E+02	0.00E+00	6.72E+02	0.00E+00
RU-105	7.87E-01	0.00E+00	2.65E-01	0.00E+00	5.79E+00	0.00E+00	3.13E+02	0.00E+00
RU-106	9.07E+02	0.00E+00	1.13E+02	0.00E+00	1.07E+03	0.00E+00	6.89E+03	0.00E+00
RH-105	3.25E+01	2.12E+01	1.43E+01	0.00E+00	5.90E+01	0.00E+00	5.27E+02	0.00E+00
PD-107	0.00E+00	4.48E+01	3.18E+00	0.00E+00	2.56E+02	0.00E+00	3.56E+01	0.00E+00
PD-109	0.00E+00	3.04E+01	7.35E+00	0.00E+00	1.12E+02	0.00E+00	7.47E+02	0.00E+00
AG-110m	3.75E+01	2.73E+01	1.81E+01	0.00E+00	3.91E+01	0.00E+00	1.42E+03	0.00E+00
AG-111	1.87E+01	7.26E+00	3.85E+00	0.00E+00	1.52E+01	0.00E+00	1.73E+03	0.00E+00
CD-113m	0.00E+00	6.67E+02	2.46E+01	0.00E+00	5.05E+02	0.00E+00	1.00E+03	0.00E+00
CD-115m	0.00E+00	5.31E+02	1.84E+01	0.00E+00	2.77E+02	0.00E+00	3.02E+03	0.00E+00
SN-123	9.36E+03	1.46E+02	2.44E+02	1.47E+02	0.00E+00	0.00E+00	2.47E+03	0.00E+00
SN-125	2.69E+03	5.02E+01	1.20E+02	4.94E+01	0.00E+00	0.00E+00	4.03E+03	0.00E+00
SN-126	2.08E+04	2.73E+02	6.78E+02	7.20E+01	0.00E+00	0.00E+00	9.49E+02	0.00E+00
SB-124	8.02E+02	1.18E+01	2.48E+02	2.13E+00	0.00E+00	5.02E+02	2.47E+03	0.00E+00
SB-125	4.63E+02	4.48E+00	9.53E+01	5.80E-01	0.00E+00	2.68E+02	6.18E+02	0.00E+00
SB-126	2.95E+02	5.79E+00	1.07E+02	2.27E+00	0.00E+00	1.86E+02	3.06E+03	0.00E+00
SB-127	7.68E+01	1.37E+00	2.38E+01	9.78E-01	0.00E+00	3.96E+01	2.03E+03	0.00E+00
TE-125m	8.73E+02	2.92E+02	1.18E+02	2.94E+02	0.00E+00	0.00E+00	4.16E+02	0.00E+00
TE-127m	2.20E+03	7.29E+02	2.66E+02	6.35E+02	5.41E+03	0.00E+00	8.86E+02	0.00E+00
TE-127	1.55E+01	5.18E+00	3.33E+00	1.26E+01	3.78E+01	0.00E+00	3.25E+02	0.00E+00
TE-129m	3.73E+03	1.28E+03	5.74E+02	1.43E+03	9.32E+03	0.00E+00	2.23E+03	0.00E+00
TE-129	8.23E-03	2.84E-03	1.92E-03	6.89E-03	2.05E-02	0.00E+00	6.58E-01	0.00E+00
TE-133m	1.80E-03	8.25E-04	7.88E-04	1.59E-03	5.62E-03	0.00E+00	8.90E-02	0.00E+00

Table 4-16 (Page 3 of 4)

Infant Drinking Water A_{it} mrem*mL/hr* μ Ci

<u>Nuclide</u>	<u>Bone</u>	<u>Liver</u>	<u>T Body</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>
TE-134	6.57E-05	3.30E-05	3.39E-05	5.88E-05	2.22E-04	0.00E+00	7.53E-04	0.00E+00
I-129	1.08E+03	7.99E+02	5.84E+02	5.12E+05	9.46E+02	0.00E+00	1.60E+01	0.00E+00
I-130	1.15E+02	2.54E+02	1.02E+02	2.84E+04	2.79E+02	0.00E+00	5.44E+01	0.00E+00
I-131	1.30E+03	1.53E+03	6.71E+02	5.02E+05	1.78E+03	0.00E+00	5.45E+01	0.00E+00
TE-131m	4.34E+02	1.75E+02	1.44E+02	3.54E+02	1.20E+03	0.00E+00	2.94E+03	0.00E+00
TE-131	1.42E-08	5.24E-09	3.98E-09	1.27E-08	3.63E-08	0.00E+00	5.73E-07	0.00E+00
I-132	1.68E+00	3.41E+00	1.22E+00	1.60E+02	3.81E+00	0.00E+00	2.76E+00	0.00E+00
TE-132	7.04E+02	3.49E+02	3.25E+02	5.15E+02	2.18E+03	0.00E+00	1.29E+03	0.00E+00
I-133	3.16E+02	4.60E+02	1.35E+02	8.36E+04	5.40E+02	0.00E+00	7.78E+01	0.00E+00
CS-134m	3.77E-01	6.27E-01	3.17E-01	0.00E+00	2.42E-01	5.56E-02	4.96E-01	0.00E+00
CS-134	1.42E+04	2.65E+04	2.67E+03	0.00E+00	6.82E+03	2.79E+03	7.19E+01	0.00E+00
I-134	2.48E-03	5.08E-03	1.81E-03	1.18E-01	5.68E-03	0.00E+00	5.25E-03	0.00E+00
I-135	3.90E+01	7.75E+01	2.83E+01	6.95E+03	8.64E+01	0.00E+00	2.80E+01	0.00E+00
CS-135	5.01E+03	4.56E+03	2.37E+02	0.00E+00	1.30E+03	4.93E+02	1.65E+01	0.00E+00
CS-136	1.68E+03	4.95E+03	1.85E+03	0.00E+00	1.97E+03	4.04E+02	7.52E+01	0.00E+00
CS-137	1.97E+04	2.30E+04	1.63E+03	0.00E+00	6.18E+03	2.50E+03	7.19E+01	0.00E+00
CS-138	3.37E-06	5.47E-06	2.65E-06	0.00E+00	2.73E-06	4.26E-07	8.75E-06	0.00E+00
CS-139	1.02E-22	1.40E-22	5.34E-23	0.00E+00	7.22E-23	1.09E-23	8.78E-24	0.00E+00
BA-139	8.18E-02	5.42E-05	2.37E-03	0.00E+00	3.26E-05	3.29E-05	5.18E+00	0.00E+00
BA-140	6.27E+03	6.27E+00	3.23E+02	0.00E+00	1.49E+00	3.85E+00	1.54E+03	0.00E+00
LA-140	6.46E-01	2.55E-01	6.56E-02	0.00E+00	0.00E+00	0.00E+00	2.99E+03	0.00E+00
BA-141	2.19E-11	1.50E-14	6.92E-13	0.00E+00	9.03E-15	9.14E-15	2.68E-10	0.00E+00
LA-141	1.32E-02	3.82E-03	6.66E-04	0.00E+00	0.00E+00	0.00E+00	4.38E+02	0.00E+00
CE-141	2.93E+00	1.79E+00	2.11E-01	0.00E+00	5.52E-01	0.00E+00	9.24E+02	0.00E+00
BA-142	3.84E-20	3.20E-23	1.89E-21	0.00E+00	1.84E-23	1.93E-23	1.58E-19	0.00E+00
LA-142	2.22E-04	8.14E-05	1.95E-05	0.00E+00	0.00E+00	0.00E+00	1.38E+01	0.00E+00
CE-143	4.33E-01	2.88E+02	3.28E-02	0.00E+00	8.37E-02	0.00E+00	1.68E+03	0.00E+00
PR-143	2.99E+00	1.12E+00	1.48E-01	0.00E+00	4.15E-01	0.00E+00	1.58E+03	0.00E+00
CE-144	1.12E+02	4.59E+01	6.28E+00	0.00E+00	1.85E+01	0.00E+00	6.43E+03	0.00E+00
PR-144	2.96E-15	1.14E-15	1.49E-16	0.00E+00	4.14E-16	0.00E+00	5.32E-11	0.00E+00
ND-147	2.02E+00	2.07E+00	1.27E-01	0.00E+00	7.99E-01	0.00E+00	1.31E+03	0.00E+00
PM-147	1.46E+01	1.23E+00	5.99E-01	0.00E+00	1.84E+00	0.00E+00	3.49E+02	0.00E+00
PM-148m	6.16E+00	1.56E+00	1.23E+00	0.00E+00	1.79E+00	0.00E+00	2.03E+03	0.00E+00
PM-148	2.23E+00	3.22E-01	1.62E-01	0.00E+00	3.85E-01	0.00E+00	3.44E+03	0.00E+00
PM-149	4.44E-01	5.83E-02	2.54E-02	0.00E+00	7.09E-02	0.00E+00	1.57E+03	0.00E+00
PM-151	1.74E-01	2.53E-02	1.28E-02	0.00E+00	3.01E-02	0.00E+00	1.17E+03	0.00E+00
SM-151	1.09E+01	2.51E+00	5.42E-01	0.00E+00	1.71E+00	0.00E+00	2.10E+02	0.00E+00

Table 4-16 (Page 4 of 4)

Infant Drinking Water A_{it} mrem*mL/hr* μ Ci

<u>Nuclide</u>	<u>Bone</u>	<u>Liver</u>	<u>T Body</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>
SM-153	2.43E-01	1.88E-01	1.44E-02	0.00E+00	3.94E-02	0.00E+00	9.84E+02	0.00E+00
EU-152	2.54E+01	6.74E+00	5.69E+00	0.00E+00	1.89E+01	0.00E+00	5.99E+02	0.00E+00
EU-154	9.94E+01	1.38E+01	8.29E+00	0.00E+00	3.75E+01	0.00E+00	1.73E+03	0.00E+00
EU-155	2.04E+01	2.35E+00	1.22E+00	0.00E+00	5.27E+00	0.00E+00	3.15E+03	0.00E+00
EU-156	4.20E+00	2.60E+00	4.12E-01	0.00E+00	1.20E+00	0.00E+00	2.46E+03	0.00E+00
TB-160	9.71E+00	0.00E+00	1.21E+00	0.00E+00	2.76E+00	0.00E+00	1.29E+03	0.00E+00
HO-166m	4.71E+01	1.01E+01	8.02E+00	0.00E+00	1.34E+01	0.00E+00	3.77E-17	0.00E+00
W-181	3.32E+00	1.02E+00	1.14E-01	0.00E+00	0.00E+00	0.00E+00	1.43E+01	0.00E+00
W-185	1.36E+02	4.24E+01	4.84E+00	0.00E+00	0.00E+00	0.00E+00	6.07E+02	0.00E+00
W-187	2.40E+01	1.67E+01	5.77E+00	0.00E+00	0.00E+00	0.00E+00	9.81E+02	0.00E+00
NP-239	3.61E-01	3.23E-02	1.82E-02	0.00E+00	6.44E-02	0.00E+00	9.33E+02	0.00E+00
U-232	9.12E+05	0.00E+00	8.14E+04	0.00E+00	8.93E+04	0.00E+00	2.65E+03	0.00E+00
U-233	1.91E+05	0.00E+00	1.46E+04	0.00E+00	4.07E+04	0.00E+00	2.45E+03	0.00E+00
U-234	1.84E+05	0.00E+00	1.43E+04	0.00E+00	3.99E+04	0.00E+00	2.40E+03	0.00E+00
U-235	1.76E+05	0.00E+00	1.34E+04	0.00E+00	3.74E+04	0.00E+00	3.05E+03	0.00E+00
U-236	1.76E+05	0.00E+00	1.37E+04	0.00E+00	3.80E+04	0.00E+00	2.25E+03	0.00E+00
U-237	1.77E+01	0.00E+00	4.72E+00	0.00E+00	4.40E+01	0.00E+00	7.55E+02	0.00E+00
U-238	1.68E+05	0.00E+00	1.25E+04	0.00E+00	3.50E+04	0.00E+00	2.15E+03	0.00E+00
NP-237	9.04E+04	5.99E+03	3.96E+03	0.00E+00	2.39E+04	0.00E+00	3.10E+03	0.00E+00
NP-238	3.97E+00	9.98E-02	6.14E-02	0.00E+00	2.18E-01	0.00E+00	1.33E+03	0.00E+00
PU-238	4.82E+04	5.65E+03	1.28E+03	0.00E+00	4.56E+03	0.00E+00	2.85E+03	0.00E+00
PU-239	5.20E+04	5.84E+03	1.33E+03	0.00E+00	4.82E+03	0.00E+00	2.60E+03	0.00E+00
PU-240	5.20E+04	5.84E+03	1.33E+03	0.00E+00	4.82E+03	0.00E+00	2.65E+03	0.00E+00
PU-241	1.60E+03	6.63E+01	3.32E+01	0.00E+00	1.19E+02	0.00E+00	5.46E+01	0.00E+00
PU-242	4.82E+04	5.61E+03	1.28E+03	0.00E+00	4.63E+03	0.00E+00	2.55E+03	0.00E+00
PU-244	5.61E+04	6.44E+03	1.47E+03	0.00E+00	5.31E+03	0.00E+00	3.80E+03	0.00E+00
AM-241	5.50E+04	4.78E+04	4.11E+03	0.00E+00	2.47E+04	0.00E+00	2.90E+03	0.00E+00
AM-242m	5.69E+04	4.60E+04	4.26E+03	0.00E+00	2.50E+04	0.00E+00	3.65E+03	0.00E+00
AM-243	5.42E+04	4.63E+04	3.99E+03	0.00E+00	2.40E+04	0.00E+00	3.40E+03	0.00E+00
CM-242	5.15E+03	4.77E+03	3.42E+02	0.00E+00	9.85E+02	0.00E+00	3.09E+03	0.00E+00
CM-243	5.27E+04	4.33E+04	3.38E+03	0.00E+00	1.23E+04	0.00E+00	3.05E+03	0.00E+00
CM-244	4.44E+04	3.65E+04	2.86E+03	0.00E+00	1.02E+04	0.00E+00	2.95E+03	0.00E+00
CM-245	6.74E+04	5.46E+04	4.26E+03	0.00E+00	1.63E+04	0.00E+00	2.75E+03	0.00E+00
CM-246	6.67E+04	5.46E+04	4.26E+03	0.00E+00	1.62E+04	0.00E+00	2.70E+03	0.00E+00
CM-247	6.52E+04	5.39E+04	4.18E+03	0.00E+00	1.60E+04	0.00E+00	3.55E+03	0.00E+00
CM-248	5.39E+05	4.45E+05	3.45E+04	0.00E+00	1.32E+05	0.00E+00	5.73E+04	0.00E+00
CF-252	4.59E+04	0.00E+00	1.11E+03	0.00E+00	0.00E+00	0.00E+00	1.13E+04	0.00E+00

Table 4-17 (Page 1 of 4)

Child Drinking Water A_{it} mrem*mL/hr* μ Ci

Nuclide	Bone	Liver	T Body	Thyroid	Kidney	Lung	GI-LLI	Skin
H-3	0.00E+00	6.75E+00	6.75E+00	6.75E+00	6.75E+00	6.75E+00	6.75E+00	0.00E+00
C-14	7.04E+02	1.41E+02	1.41E+02	1.41E+02	1.41E+02	1.41E+02	1.41E+02	0.00E+00
NA-22	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	3.42E+03	0.00E+00
NA-24	1.94E+02	1.94E+02	1.94E+02	1.94E+02	1.94E+02	1.94E+02	1.94E+02	0.00E+00
P-32	4.69E+04	2.19E+03	1.81E+03	0.00E+00	0.00E+00	0.00E+00	1.30E+03	0.00E+00
CA-41	2.02E+04	0.00E+00	2.21E+03	0.00E+00	0.00E+00	0.00E+00	1.11E+01	0.00E+00
SC-46	1.14E+00	1.57E+00	6.03E-01	0.00E+00	1.39E+00	0.00E+00	2.29E+03	0.00E+00
CR-51	0.00E+00	0.00E+00	5.12E-01	2.84E-01	7.76E-02	5.19E-01	2.71E+01	0.00E+00
MN-54	0.00E+00	6.22E+02	1.66E+02	0.00E+00	1.74E+02	0.00E+00	5.22E+02	0.00E+00
FE-55	6.69E+02	3.55E+02	1.10E+02	0.00E+00	0.00E+00	2.01E+02	6.58E+01	0.00E+00
MN-56	0.00E+00	7.72E-01	1.74E-01	0.00E+00	9.34E-01	0.00E+00	1.12E+02	0.00E+00
CO-57	0.00E+00	2.87E+01	5.80E+01	0.00E+00	0.00E+00	0.00E+00	2.35E+02	0.00E+00
CO-58	0.00E+00	1.04E+02	3.19E+02	0.00E+00	0.00E+00	0.00E+00	6.08E+02	0.00E+00
FE-59	9.53E+02	1.54E+03	7.68E+02	0.00E+00	0.00E+00	4.47E+02	1.61E+03	0.00E+00
CO-60	0.00E+00	3.08E+02	9.08E+02	0.00E+00	0.00E+00	0.00E+00	1.71E+03	0.00E+00
NI-59	2.34E+03	6.23E+02	3.97E+02	0.00E+00	0.00E+00	0.00E+00	4.13E+01	0.00E+00
NI-63	3.13E+04	1.68E+03	1.07E+03	0.00E+00	0.00E+00	0.00E+00	1.13E+02	0.00E+00
CU-64	0.00E+00	7.41E+00	4.48E+00	0.00E+00	1.79E+01	0.00E+00	3.48E+02	0.00E+00
NI-65	4.76E+00	4.48E-01	2.62E-01	0.00E+00	0.00E+00	0.00E+00	5.49E+01	0.00E+00
ZN-65	7.96E+02	2.12E+03	1.32E+03	0.00E+00	1.34E+03	0.00E+00	3.73E+02	0.00E+00
ZN-69m	2.26E+01	3.85E+01	4.55E+00	0.00E+00	2.24E+01	0.00E+00	1.25E+03	0.00E+00
ZN-69	3.22E-04	4.66E-04	4.31E-05	0.00E+00	2.83E-04	0.00E+00	2.94E-02	0.00E+00
SE-79	0.00E+00	4.91E+02	1.09E+02	0.00E+00	7.98E+02	0.00E+00	3.22E+01	0.00E+00
BR-82	0.00E+00	0.00E+00	3.47E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BR-83	0.00E+00	0.00E+00	3.07E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BR-84	0.00E+00	0.00E+00	1.76E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BR-85	0.00E+00	0.00E+00	1.31E-76	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RB-86	0.00E+00	3.83E+03	2.35E+03	0.00E+00	0.00E+00	0.00E+00	2.46E+02	0.00E+00
RB-87	0.00E+00	2.30E+03	1.07E+03	0.00E+00	0.00E+00	0.00E+00	3.45E+01	0.00E+00
RB-88	0.00E+00	7.37E-12	5.12E-12	0.00E+00	0.00E+00	0.00E+00	3.61E-13	0.00E+00
RB-89	0.00E+00	6.25E-14	5.55E-14	0.00E+00	0.00E+00	0.00E+00	5.45E-16	0.00E+00
SR-89	7.63E+04	0.00E+00	2.18E+03	0.00E+00	0.00E+00	0.00E+00	2.95E+03	0.00E+00
SR-90	1.49E+06	0.00E+00	3.00E+04	0.00E+00	0.00E+00	0.00E+00	1.33E+04	0.00E+00
Y-90	2.10E+00	0.00E+00	5.62E-02	0.00E+00	0.00E+00	0.00E+00	5.98E+03	0.00E+00
SR-91	5.82E+02	0.00E+00	2.20E+01	0.00E+00	0.00E+00	0.00E+00	1.29E+03	0.00E+00
Y-91m	9.71E-07	0.00E+00	3.53E-08	0.00E+00	0.00E+00	0.00E+00	1.90E-03	0.00E+00
Y-91	3.48E+01	0.00E+00	9.32E-01	0.00E+00	0.00E+00	0.00E+00	4.64E+03	0.00E+00

Table 4-17 (Page 2 of 4)

Child Drinking Water A_{it} mrem*mL/hr* μ Ci

Nuclide	Bone	Liver	T Body	Thyroid	Kidney	Lung	GI-LLI	Skin
SR-92	2.44E+01	0.00E+00	9.79E-01	0.00E+00	0.00E+00	0.00E+00	4.62E+02	0.00E+00
Y-92	2.00E-02	0.00E+00	5.72E-04	0.00E+00	0.00E+00	0.00E+00	5.78E+02	0.00E+00
Y-93	2.91E-01	0.00E+00	8.00E-03	0.00E+00	0.00E+00	0.00E+00	4.34E+03	0.00E+00
NB-93m	6.11E+00	1.53E+00	5.01E-01	0.00E+00	1.65E+00	0.00E+00	2.30E+02	0.00E+00
NB-95	1.30E+00	5.05E-01	3.61E-01	0.00E+00	4.74E-01	0.00E+00	9.34E+02	0.00E+00
NB-97	1.25E-05	2.25E-06	1.05E-06	0.00E+00	2.50E-06	0.00E+00	6.95E-01	0.00E+00
ZR-93	9.72E+00	3.64E+00	2.59E+00	0.00E+00	1.41E+01	0.00E+00	1.38E+03	0.00E+00
ZR-95	6.72E+00	1.48E+00	1.31E+00	0.00E+00	2.11E+00	0.00E+00	1.54E+03	0.00E+00
ZR-97	2.49E-01	3.59E-02	2.12E-02	0.00E+00	5.16E-02	0.00E+00	5.45E+03	0.00E+00
MO-93	0.00E+00	1.40E+03	5.04E+01	0.00E+00	3.70E+02	0.00E+00	7.10E+01	0.00E+00
MO-99	0.00E+00	6.83E+02	1.69E+02	0.00E+00	1.46E+03	0.00E+00	5.65E+02	0.00E+00
TC-99	3.11E+01	3.47E+01	1.25E+01	0.00E+00	4.09E+02	3.07E+00	3.64E+02	0.00E+00
TC-99m	1.35E-02	2.65E-02	4.39E-01	0.00E+00	3.85E-01	1.34E-02	1.51E+01	0.00E+00
TC-101	3.40E-17	3.55E-17	4.51E-16	0.00E+00	6.06E-16	1.88E-17	1.13E-16	0.00E+00
RU-103	4.22E+01	0.00E+00	1.62E+01	0.00E+00	1.06E+02	0.00E+00	1.09E+03	0.00E+00
RU-105	5.77E-01	0.00E+00	2.09E-01	0.00E+00	5.07E+00	0.00E+00	3.76E+02	0.00E+00
RU-106	6.81E+02	0.00E+00	8.49E+01	0.00E+00	9.19E+02	0.00E+00	1.06E+04	0.00E+00
RH-105	2.37E+01	1.27E+01	1.09E+01	0.00E+00	5.06E+01	0.00E+00	7.87E+02	0.00E+00
PD-107	0.00E+00	2.75E+01	2.33E+00	0.00E+00	2.30E+02	0.00E+00	5.46E+01	0.00E+00
PD-109	0.00E+00	1.78E+01	5.33E+00	0.00E+00	9.54E+01	0.00E+00	1.05E+03	0.00E+00
AG-110m	3.13E+01	2.12E+01	1.69E+01	0.00E+00	3.94E+01	0.00E+00	2.52E+03	0.00E+00
AG-111	1.38E+01	4.31E+00	2.85E+00	0.00E+00	1.30E+01	0.00E+00	2.64E+03	0.00E+00
CD-113m	0.00E+00	5.94E+02	2.53E+01	0.00E+00	6.11E+02	0.00E+00	1.53E+03	0.00E+00
CD-115m	0.00E+00	3.40E+02	1.45E+01	0.00E+00	2.53E+02	0.00E+00	4.63E+03	0.00E+00
SN-123	7.72E+03	9.58E+01	1.88E+02	1.02E+02	0.00E+00	0.00E+00	3.79E+03	0.00E+00
SN-125	1.99E+03	3.00E+01	8.93E+01	3.12E+01	0.00E+00	0.00E+00	6.18E+03	0.00E+00
SN-126	1.94E+04	2.42E+02	5.51E+02	6.64E+01	0.00E+00	0.00E+00	1.46E+03	0.00E+00
SB-124	6.43E+02	8.34E+00	2.25E+02	1.42E+00	0.00E+00	3.57E+02	4.02E+03	0.00E+00
SB-125	4.17E+02	3.21E+00	8.73E+01	3.86E-01	0.00E+00	2.32E+02	9.95E+02	0.00E+00
SB-126	2.49E+02	3.81E+00	8.95E+01	1.46E+00	0.00E+00	1.19E+02	5.02E+03	0.00E+00
SB-127	5.64E+01	8.73E-01	1.96E+01	6.28E-01	0.00E+00	2.45E+01	3.18E+03	0.00E+00
TE-125m	6.60E+02	1.79E+02	8.80E+01	1.85E+02	0.00E+00	0.00E+00	6.37E+02	0.00E+00
TE-127m	1.68E+03	4.52E+02	1.99E+02	4.01E+02	4.78E+03	0.00E+00	1.36E+03	0.00E+00
TE-127	1.13E+01	3.04E+00	2.42E+00	7.80E+00	3.20E+01	0.00E+00	4.40E+02	0.00E+00
TE-129m	2.81E+03	7.84E+02	4.36E+02	9.05E+02	8.24E+03	0.00E+00	3.42E+03	0.00E+00
TE-129	6.00E-03	1.67E-03	1.42E-03	4.28E-03	1.75E-02	0.00E+00	3.73E-01	0.00E+00
TE-133m	1.33E-03	5.39E-04	6.68E-04	1.03E-03	5.12E-03	0.00E+00	4.11E-02	0.00E+00

Table 4-17 (Page 3 of 4)

Child Drinking Water A_{R} mrem*mL/hr* μ Ci

Nuclide	Bone	Liver	T Body	Thyroid	Kidney	Lung	GI-LLI	Skin
TE-134	4.90E-05	2.20E-05	2.94E-05	3.88E-05	2.04E-04	0.00E+00	2.24E-04	0.00E+00
I-129	8.09E+02	4.97E+02	4.44E+02	3.25E+05	8.38E+02	0.00E+00	2.50E+01	0.00E+00
I-130	8.67E+01	1.75E+02	9.03E+01	1.93E+04	2.62E+02	0.00E+00	8.20E+01	0.00E+00
I-131	9.59E+02	9.65E+02	5.48E+02	3.19E+05	1.58E+03	0.00E+00	8.59E+01	0.00E+00
TE-131m	3.18E+02	1.10E+02	1.17E+02	2.26E+02	1.06E+03	0.00E+00	4.46E+03	0.00E+00
TE-131	1.03E-08	3.15E-09	3.08E-09	7.91E-09	3.13E-08	0.00E+00	5.43E-08	0.00E+00
I-132	1.25E+00	2.30E+00	1.06E+00	1.07E+02	3.52E+00	0.00E+00	2.71E+00	0.00E+00
TE-132	5.29E+02	2.34E+02	2.83E+02	3.41E+02	2.17E+03	0.00E+00	2.36E+03	0.00E+00
I-133	2.31E+02	2.86E+02	1.08E+02	5.31E+04	4.76E+02	0.00E+00	1.15E+02	0.00E+00
CS-134m	2.79E-01	4.13E-01	2.70E-01	0.00E+00	2.18E-01	3.60E-02	5.22E-01	0.00E+00
CS-134	1.36E+04	2.23E+04	4.71E+03	0.00E+00	6.92E+03	2.48E+03	1.20E+02	0.00E+00
I-134	1.85E-03	3.43E-03	1.58E-03	7.90E-02	5.25E-03	0.00E+00	2.28E-03	0.00E+00
I-135	2.89E+01	5.21E+01	2.46E+01	4.61E+03	7.99E+01	0.00E+00	3.97E+01	0.00E+00
CS-135	4.83E+03	3.37E+03	3.45E+02	0.00E+00	1.19E+03	3.96E+02	2.52E+01	0.00E+00
CS-136	1.33E+03	3.66E+03	2.37E+03	0.00E+00	1.95E+03	2.91E+02	1.29E+02	0.00E+00
CS-137	1.90E+04	1.82E+04	2.69E+03	0.00E+00	5.94E+03	2.14E+03	1.14E+02	0.00E+00
CS-138	2.47E-06	3.43E-06	2.17E-06	0.00E+00	2.41E-06	2.60E-07	1.58E-06	0.00E+00
CS-139	7.39E-23	8.21E-23	3.95E-23	0.00E+00	6.17E-23	6.22E-24	7.39E-27	0.00E+00
BA-139	5.94E-02	3.17E-05	1.72E-03	0.00E+00	2.77E-05	1.87E-05	3.43E+00	0.00E+00
BA-140	4.71E+03	4.13E+00	2.75E+02	0.00E+00	1.34E+00	2.46E+00	2.39E+03	0.00E+00
LA-140	4.78E-01	1.67E-01	5.63E-02	0.00E+00	0.00E+00	0.00E+00	4.66E+03	0.00E+00
BA-141	1.60E-11	8.93E-15	5.19E-13	0.00E+00	7.73E-15	5.25E-14	9.09E-12	0.00E+00
LA-141	9.59E-03	2.24E-03	4.85E-04	0.00E+00	0.00E+00	0.00E+00	4.97E+02	0.00E+00
CE-141	2.29E+00	1.14E+00	1.69E-01	0.00E+00	5.00E-01	0.00E+00	1.42E+03	0.00E+00
BA-142	2.82E-20	2.03E-23	1.57E-21	0.00E+00	1.64E-23	1.19E-23	3.68E-22	0.00E+00
LA-142	1.63E-04	5.20E-05	1.63E-05	0.00E+00	0.00E+00	0.00E+00	1.03E+01	0.00E+00
CE-143	3.16E-01	1.71E+02	2.48E-02	0.00E+00	7.19E-02	0.00E+00	2.51E+03	0.00E+00
PR-143	2.23E+00	6.70E-01	1.11E-01	0.00E+00	3.63E-01	0.00E+00	2.41E+03	0.00E+00
CE-144	1.21E+02	3.79E+01	6.45E+00	0.00E+00	2.10E+01	0.00E+00	9.89E+03	0.00E+00
PR-144	2.15E-15	6.65E-16	1.08E-16	0.00E+00	3.52E-16	0.00E+00	1.43E-12	0.00E+00
ND-147	1.57E+00	1.27E+00	9.87E-02	0.00E+00	6.99E-01	0.00E+00	2.02E+03	0.00E+00
PM-147	1.85E+01	1.32E+00	7.10E-01	0.00E+00	2.33E+00	0.00E+00	5.35E+02	0.00E+00
PM-148m	5.95E+00	1.18E+00	1.18E+00	0.00E+00	1.76E+00	0.00E+00	3.34E+03	0.00E+00
PM-148	1.65E+00	1.98E-01	1.28E-01	0.00E+00	3.37E-01	0.00E+00	5.29E+03	0.00E+00
PM-149	3.23E-01	3.43E-02	1.86E-02	0.00E+00	6.07E-02	0.00E+00	2.34E+03	0.00E+00
PM-151	1.27E-01	1.54E-02	1.00E-02	0.00E+00	2.61E-02	0.00E+00	1.75E+03	0.00E+00
SM-151	1.49E+01	2.22E+00	6.99E-01	0.00E+00	2.29E+00	0.00E+00	3.22E+02	0.00E+00

Table 4-17 (Page 4 of 4)

Child Drinking Water A_R mrem*mL/hr* μ Ci

<u>Nuclide</u>	<u>Bone</u>	<u>Liver</u>	<u>T Body</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>
SM-153	1.78E-01	1.11E-01	1.07E-02	0.00E+00	3.37E-02	0.00E+00	1.47E+03	0.00E+00
EU-152	3.58E+01	6.52E+00	7.74E+00	0.00E+00	2.75E+01	0.00E+00	1.07E+03	0.00E+00
EU-154	1.34E+02	1.21E+01	1.10E+01	0.00E+00	5.29E+01	0.00E+00	2.80E+03	0.00E+00
EU-155	2.81E+01	2.02E+00	1.58E+00	0.00E+00	7.57E+00	0.00E+00	5.06E+03	0.00E+00
EU-156	3.20E+00	1.71E+00	3.55E-01	0.00E+00	1.10E+00	0.00E+00	3.89E+03	0.00E+00
TB-160	9.62E+00	0.00E+00	1.19E+00	0.00E+00	2.86E+00	0.00E+00	2.13E+03	0.00E+00
HO-166m	6.29E+01	1.32E+01	1.11E+01	0.00E+00	1.87E+01	0.00E+00	5.82E-17	0.00E+00
W-181	2.46E+00	6.04E-01	8.30E-02	0.00E+00	0.00E+00	0.00E+00	2.20E+01	0.00E+00
W-185	1.00E+02	2.50E+01	3.51E+00	0.00E+00	0.00E+00	0.00E+00	9.33E+02	0.00E+00
W-187	1.76E+01	1.04E+01	4.68E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+03	0.00E+00
NP-239	2.64E-01	1.89E-02	1.33E-02	0.00E+00	5.48E-02	0.00E+00	1.40E+03	0.00E+00
U-232	1.02E+06	0.00E+00	7.34E+04	0.00E+00	7.80E+04	0.00E+00	4.06E+03	0.00E+00
U-233	2.17E+05	0.00E+00	1.31E+04	0.00E+00	3.55E+04	0.00E+00	3.76E+03	0.00E+00
U-234	2.08E+05	0.00E+00	1.29E+04	0.00E+00	3.48E+04	0.00E+00	3.68E+03	0.00E+00
U-235	1.99E+05	0.00E+00	1.21E+04	0.00E+00	3.27E+04	0.00E+00	4.68E+03	0.00E+00
U-236	1.99E+05	0.00E+00	1.23E+04	0.00E+00	3.34E+04	0.00E+00	3.45E+03	0.00E+00
U-237	1.31E+01	0.00E+00	3.47E+00	0.00E+00	3.77E+01	0.00E+00	1.15E+03	0.00E+00
U-238	1.90E+05	0.00E+00	1.13E+04	0.00E+00	3.05E+04	0.00E+00	3.30E+03	0.00E+00
NP-237	1.30E+05	8.56E+03	5.70E+03	0.00E+00	3.52E+04	0.00E+00	4.75E+03	0.00E+00
NP-238	2.88E+00	5.83E-02	4.49E-02	0.00E+00	1.86E-01	0.00E+00	2.00E+03	0.00E+00
PU-238	6.93E+04	8.03E+03	1.84E+03	0.00E+00	6.70E+03	0.00E+00	4.37E+03	0.00E+00
PU-239	7.51E+04	8.03E+03	1.93E+03	0.00E+00	7.10E+03	0.00E+00	3.99E+03	0.00E+00
PU-240	7.45E+04	8.33E+03	1.93E+03	0.00E+00	7.10E+03	0.00E+00	4.06E+03	0.00E+00
PU-241	2.25E+03	9.20E+01	4.68E+01	0.00E+00	1.72E+02	0.00E+00	8.38E+01	0.00E+00
PU-242	6.93E+04	8.03E+03	1.86E+03	0.00E+00	6.81E+03	0.00E+00	3.91E+03	0.00E+00
PU-244	8.09E+04	9.20E+04	2.13E+03	0.00E+00	7.86E+03	0.00E+00	5.82E+03	0.00E+00
AM-241	7.92E+04	6.81E+04	5.94E+03	0.00E+00	3.63E+04	0.00E+00	4.45E+03	0.00E+00
AM-242m	8.15E+04	6.52E+04	6.05E+03	0.00E+00	3.67E+04	0.00E+00	5.59E+03	0.00E+00
AM-243	7.80E+04	6.58E+04	5.72E+03	0.00E+00	3.53E+04	0.00E+00	5.21E+03	0.00E+00
CM-242	5.10E+03	4.07E+03	3.39E+02	0.00E+00	1.09E+03	0.00E+00	4.74E+03	0.00E+00
CM-243	7.45E+04	6.05E+04	4.80E+03	0.00E+00	1.79E+04	0.00E+00	4.67E+03	0.00E+00
CM-244	6.29E+04	5.09E+04	4.03E+03	0.00E+00	1.48E+04	0.00E+00	4.52E+03	0.00E+00
CM-245	9.72E+04	7.80E+04	6.11E+03	0.00E+00	2.39E+04	0.00E+00	4.22E+03	0.00E+00
CM-246	9.61E+04	7.80E+04	6.11E+03	0.00E+00	2.39E+04	0.00E+00	4.14E+03	0.00E+00
CM-247	9.37E+04	7.68E+04	6.00E+03	0.00E+00	2.35E+04	0.00E+00	5.44E+03	0.00E+00
CM-248	7.80E+05	6.35E+05	4.96E+04	0.00E+00	1.94E+05	0.00E+00	8.79E+04	0.00E+00
CF-252	6.11E+04	0.00E+00	1.48E+03	0.00E+00	0.00E+00	0.00E+00	1.72E+04	0.00E+00

Table 4-18 (Page 1 of 4)

Teen Drinking Water A_{H} mrem*mL/hr* μ Ci

<u>Nuclide</u>	<u>Bone</u>	<u>Liver</u>	<u>T Body</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>
H-3	0.00E+00	3.52E+00	3.52E+00	3.52E+00	3.52E+00	3.52E+00	3.52E+00	0.00E+00
C-14	2.36E+02	4.73E+01	4.73E+01	4.73E+01	4.73E+01	4.73E+01	4.73E+01	0.00E+00
NA-22	1.36E+03	1.36E+03	1.36E+03	1.36E+03	1.36E+03	1.36E+03	1.36E+03	0.00E+00
NA-24	7.69E+01	7.69E+01	7.69E+01	7.69E+01	7.69E+01	7.69E+01	7.69E+01	0.00E+00
P-32	1.57E+04	9.72E+02	6.08E+02	0.00E+00	0.00E+00	0.00E+00	1.32E+03	0.00E+00
CA-41	1.15E+04	0.00E+00	1.24E+03	0.00E+00	0.00E+00	0.00E+00	1.14E+01	0.00E+00
SC-46	4.20E-01	8.18E-01	2.42E-01	0.00E+00	7.83E-01	0.00E+00	2.78E+03	0.00E+00
CR-51	0.00E+00	0.00E+00	2.07E-01	1.15E-01	4.54E-02	2.96E-01	3.48E+01	0.00E+00
MN-54	0.00E+00	3.43E+02	6.80E+01	0.00E+00	1.02E+02	0.00E+00	7.04E+02	0.00E+00
FE-55	2.20E+02	1.56E+02	3.64E+01	0.00E+00	0.00E+00	9.89E+01	6.75E+01	0.00E+00
MN-56	0.00E+00	3.65E-01	6.50E-02	0.00E+00	4.63E-01	0.00E+00	2.41E+01	0.00E+00
CO-57	0.00E+00	1.38E+01	2.32E+01	0.00E+00	0.00E+00	0.00E+00	2.58E+02	0.00E+00
CO-58	0.00E+00	5.63E+01	1.30E+02	0.00E+00	0.00E+00	0.00E+00	7.76E+02	0.00E+00
FE-59	3.39E+02	7.91E+02	3.06E+02	0.00E+00	0.00E+00	2.50E+02	1.87E+03	0.00E+00
CO-60	0.00E+00	1.64E+02	3.68E+02	0.00E+00	0.00E+00	0.00E+00	2.13E+03	0.00E+00
NI-59	7.68E+02	2.71E+02	1.30E+02	0.00E+00	0.00E+00	0.00E+00	4.26E+01	0.00E+00
NI-63	1.03E+04	7.28E+02	3.49E+02	0.00E+00	0.00E+00	0.00E+00	1.16E+02	0.00E+00
CU-64	0.00E+00	3.48E+00	1.64E+00	0.00E+00	8.80E+00	0.00E+00	2.70E+02	0.00E+00
NI-65	1.61E+00	2.05E-01	9.36E-02	0.00E+00	0.00E+00	0.00E+00	1.11E+01	0.00E+00
ZN-65	3.35E+02	1.16E+03	5.42E+02	0.00E+00	7.44E+02	0.00E+00	4.92E+02	0.00E+00
ZN-69m	7.63E+00	1.80E+01	1.65E+00	0.00E+00	1.09E+01	0.00E+00	9.89E+02	0.00E+00
ZN-69	1.08E-04	2.06E-04	1.44E-05	0.00E+00	1.35E-04	0.00E+00	3.80E-04	0.00E+00
SE-79	0.00E+00	2.17E+02	3.65E+01	0.00E+00	3.78E+02	0.00E+00	3.32E+01	0.00E+00
BR-82	0.00E+00	0.00E+00	1.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BR-83	0.00E+00	0.00E+00	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BR-84	0.00E+00	0.00E+00	6.42E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BR-85	0.00E+00	0.00E+00	4.38E-77	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RB-86	0.00E+00	1.70E+03	8.00E+02	0.00E+00	0.00E+00	0.00E+00	2.52E+02	0.00E+00
RB-87	0.00E+00	1.02E+03	3.56E+02	0.00E+00	0.00E+00	0.00E+00	3.56E+01	0.00E+00
RB-88	0.00E+00	3.30E-12	1.76E-12	0.00E+00	0.00E+00	0.00E+00	2.83E-19	0.00E+00
RB-89	0.00E+00	2.94E-14	2.08E-14	0.00E+00	0.00E+00	0.00E+00	4.50E-23	0.00E+00
SR-89	2.54E+04	0.00E+00	7.29E+02	0.00E+00	0.00E+00	0.00E+00	3.03E+03	0.00E+00
SR-90	5.94E+05	0.00E+00	1.19E+04	0.00E+00	0.00E+00	0.00E+00	1.36E+04	0.00E+00
Y-90	7.01E-01	0.00E+00	1.89E-02	0.00E+00	0.00E+00	0.00E+00	5.78E+03	0.00E+00
SR-91	1.96E+02	0.00E+00	7.79E+00	0.00E+00	0.00E+00	0.00E+00	8.88E+02	0.00E+00
Y-91m	3.28E-07	0.00E+00	1.25E-08	0.00E+00	0.00E+00	0.00E+00	1.55E-05	0.00E+00
Y-91	1.16E+01	0.00E+00	3.12E-01	0.00E+00	0.00E+00	0.00E+00	4.77E+03	0.00E+00

Table 4-18 (Page 2 of 4)

Teen Drinking Water A_{it} mrem*mL/hr* μ Ci

<u>Nuclide</u>	<u>Bone</u>	<u>Liver</u>	<u>T Body</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-LLI</u>	<u>Skin</u>
SR-92	8.25E+00	0.00E+00	3.52E-01	0.00E+00	0.00E+00	0.00E+00	2.10E+02	0.00E+00
Y-92	6.72E-03	0.00E+00	1.94E-04	0.00E+00	0.00E+00	0.00E+00	1.84E+02	0.00E+00
Y-93	9.79E-02	0.00E+00	2.68E-03	0.00E+00	0.00E+00	0.00E+00	2.99E+03	0.00E+00
NB-93m	2.00E+00	6.58E-01	1.65E-01	0.00E+00	7.68E-01	0.00E+00	2.37E+02	0.00E+00
NB-95	4.74E-01	2.63E-01	1.45E-01	0.00E+00	2.55E-01	0.00E+00	1.12E+03	0.00E+00
NB-97	4.23E-06	1.05E-06	3.83E-07	0.00E+00	1.23E-06	0.00E+00	2.51E-02	0.00E+00
ZR-93	3.22E+00	1.59E+00	8.67E-01	0.00E+00	5.62E+00	0.00E+00	1.50E+03	0.00E+00
ZR-95	2.39E+00	7.53E-01	5.18E-01	0.00E+00	1.11E+00	0.00E+00	1.74E+03	0.00E+00
ZR-97	8.43E-02	1.67E-02	7.69E-03	0.00E+00	2.53E-02	0.00E+00	4.52E+03	0.00E+00
MO-93	0.00E+00	6.17E+02	1.69E+01	0.00E+00	1.77E+02	0.00E+00	7.51E+01	0.00E+00
MO-99	0.00E+00	3.10E+02	5.90E+01	0.00E+00	7.08E+02	0.00E+00	5.54E+02	0.00E+00
TC-99	1.04E+01	1.53E+01	4.17E+00	0.00E+00	1.94E+02	1.58E+00	3.75E+02	0.00E+00
TC-99m	4.85E-03	1.35E-02	1.75E-01	0.00E+00	2.02E-01	7.52E-03	8.89E+00	0.00E+00
TC-101	1.14E-17	1.62E-17	1.60E-16	0.00E+00	2.94E-16	9.90E-18	2.78E-24	0.00E+00
RU-103	1.47E+01	0.00E+00	6.29E+00	0.00E+00	5.19E+01	0.00E+00	1.23E+03	0.00E+00
RU-105	1.95E-01	0.00E+00	7.57E-02	0.00E+00	2.46E+00	0.00E+00	1.57E+02	0.00E+00
RU-106	2.28E+02	0.00E+00	2.87E+01	0.00E+00	4.40E+02	0.00E+00	1.09E+04	0.00E+00
RH-105	7.96E+00	5.75E+00	3.77E+00	0.00E+00	2.44E+01	0.00E+00	7.32E+02	0.00E+00
PD-107	0.00E+00	1.21E+01	7.80E-01	0.00E+00	1.09E+02	0.00E+00	5.62E+01	0.00E+00
PD-109	0.00E+00	7.87E+00	1.79E+00	0.00E+00	4.55E+01	0.00E+00	7.94E+02	0.00E+00
AG-110m	1.19E+01	1.13E+01	6.86E+00	0.00E+00	2.15E+01	0.00E+00	3.17E+03	0.00E+00
AG-111	4.61E+00	1.91E+00	9.61E-01	0.00E+00	6.22E+00	0.00E+00	2.67E+03	0.00E+00
CD-113m	0.00E+00	2.63E+02	8.44E+00	0.00E+00	2.90E+02	0.00E+00	1.58E+03	0.00E+00
CD-115m	0.00E+00	1.50E+02	4.85E+00	0.00E+00	1.20E+02	0.00E+00	4.75E+03	0.00E+00
SN-123	2.58E+03	4.23E+01	6.27E+01	3.39E+01	0.00E+00	0.00E+00	3.90E+03	0.00E+00
SN-125	6.68E+02	1.33E+01	3.02E+01	1.04E+01	0.00E+00	0.00E+00	6.29E+03	0.00E+00
SN-126	6.75E+03	1.26E+02	1.92E+02	3.31E+01	0.00E+00	0.00E+00	1.50E+03	0.00E+00
SB-124	2.24E+02	4.13E+00	8.74E+01	5.08E-01	0.00E+00	1.96E+02	4.52E+03	0.00E+00
SB-125	1.44E+02	1.58E+00	3.38E+01	1.38E-01	0.00E+00	1.27E+02	1.12E+03	0.00E+00
SB-126	9.00E+01	1.84E+00	3.23E+01	5.09E-01	0.00E+00	6.45E+01	5.33E+03	0.00E+00
SB-127	1.93E+01	4.13E-01	7.29E+00	2.17E-01	0.00E+00	1.31E+01	3.28E+03	0.00E+00
TE-125m	2.22E+02	7.99E+01	2.96E+01	6.19E+01	0.00E+00	0.00E+00	6.54E+02	0.00E+00
TE-127m	5.61E+02	1.99E+02	6.67E+01	1.33E+02	2.27E+03	0.00E+00	1.40E+03	0.00E+00
TE-127	3.78E+00	1.34E+00	8.13E-01	2.61E+00	1.53E+01	0.00E+00	2.92E+02	0.00E+00
TE-129m	9.39E+02	3.49E+02	1.49E+02	3.03E+02	3.93E+03	0.00E+00	3.53E+03	0.00E+00
TE-129	2.01E-03	7.48E-04	4.88E-04	1.43E-03	8.42E-03	0.00E+00	1.10E-02	0.00E+00
TE-133m	4.59E-04	2.61E-04	2.54E-04	3.64E-04	2.58E-03	0.00E+00	1.05E-03	0.00E+00

Table 4-18 (Page 3 of 4)

Teen Drinking Water A_{H} mrem*mL/hr* μ Ci

Nuclide	Bone	Liver	T Body	Thyroid	Kidney	Lung	GI-LLI	Skin
TE-134	1.70E-05	1.09E-05	1.14E-05	1.39E-05	1.04E-04	0.00E+00	6.31E-07	0.00E+00
I-129	2.71E+02	2.28E+02	3.81E+02	2.78E+05	4.08E+02	0.00E+00	2.66E+01	0.00E+00
I-130	3.06E+01	8.85E+01	3.53E+01	7.22E+03	1.36E+02	0.00E+00	6.80E+01	0.00E+00
I-131	3.26E+02	4.57E+02	2.45E+02	1.33E+05	7.86E+02	0.00E+00	9.03E+01	0.00E+00
TE-131m	1.08E+02	5.16E+01	4.31E+01	7.77E+01	5.38E+02	0.00E+00	4.14E+03	0.00E+00
TE-131	3.48E-09	1.43E-09	1.09E-09	2.68E-09	1.52E-08	0.00E+00	2.85E-10	0.00E+00
I-132	4.37E-01	1.14E+00	4.10E-01	3.85E+01	1.80E+00	0.00E+00	4.98E-01	0.00E+00
TE-132	1.83E+02	1.16E+02	1.09E+02	1.22E+02	1.11E+03	0.00E+00	3.66E+03	0.00E+00
I-133	7.84E+01	1.33E+02	4.06E+01	1.86E+04	2.33E+02	0.00E+00	1.01E+02	0.00E+00
CS-134m	9.72E-02	2.01E-01	1.04E-01	0.00E+00	1.12E-01	1.97E-02	1.34E-01	0.00E+00
CS-134	4.87E+03	1.15E+04	5.32E+03	0.00E+00	3.64E+03	1.39E+03	1.43E+02	0.00E+00
I-134	6.44E-04	1.71E-03	6.13E-04	2.84E-02	2.69E-03	0.00E+00	2.25E-05	0.00E+00
I-135	1.01E+01	2.60E+01	9.63E+00	1.67E+03	4.10E+01	0.00E+00	2.88E+01	0.00E+00
CS-135	1.62E+03	1.48E+03	3.47E+02	0.00E+00	5.66E+02	2.05E+02	2.60E+01	0.00E+00
CS-136	4.87E+02	1.92E+03	1.29E+03	0.00E+00	1.04E+03	1.64E+02	1.54E+02	0.00E+00
CS-137	6.52E+03	8.67E+03	3.02E+03	0.00E+00	2.95E+03	1.15E+03	1.23E+02	0.00E+00
CS-138	8.39E-07	1.61E-06	8.06E-07	0.00E+00	1.19E-06	1.38E-07	7.31E-10	0.00E+00
CS-139	2.48E-23	3.66E-23	1.34E-23	0.00E+00	2.95E-23	3.23E-24	1.70E-38	0.00E+00
BA-139	1.99E-02	1.40E-05	5.81E-04	0.00E+00	1.32E-05	9.67E-06	1.78E-01	0.00E+00
BA-140	1.61E+03	1.97E+00	1.04E+02	0.00E+00	6.69E-01	1.33E+00	2.48E+03	0.00E+00
LA-140	1.65E-01	8.10E-02	2.15E-02	0.00E+00	0.00E+00	0.00E+00	4.65E+03	0.00E+00
BA-141	5.35E-12	4.00E-15	1.79E-13	0.00E+00	3.71E-15	2.74E-15	1.14E-17	0.00E+00
LA-141	3.21E-03	9.87E-04	1.63E-04	0.00E+00	0.00E+00	0.00E+00	1.75E+02	0.00E+00
CE-141	7.66E-01	5.12E-01	5.88E-02	0.00E+00	2.41E-01	0.00E+00	1.46E+03	0.00E+00
BA-142	9.65E-21	9.65E-24	5.94E-22	0.00E+00	8.17E-24	6.42E-24	2.96E-32	0.00E+00
LA-142	5.57E-05	2.47E-05	6.16E-06	0.00E+00	0.00E+00	0.00E+00	7.53E-01	0.00E+00
CE-143	1.06E-01	7.74E+01	8.64E-03	0.00E+00	3.47E-02	0.00E+00	2.33E+03	0.00E+00
PR-143	7.43E-01	2.97E-01	3.70E-02	0.00E+00	1.73E-01	0.00E+00	2.45E+03	0.00E+00
CE-144	4.05E+01	1.67E+01	2.17E+00	0.00E+00	1.00E+01	0.00E+00	1.02E+04	0.00E+00
PR-144	7.17E-16	2.94E-16	3.64E-17	0.00E+00	1.68E-16	0.00E+00	7.91E-19	0.00E+00
ND-147	5.29E-01	5.75E-01	3.45E-02	0.00E+00	3.38E-01	0.00E+00	2.08E+03	0.00E+00
PM-147	6.11E+00	5.80E-01	2.36E-01	0.00E+00	1.11E+00	0.00E+00	5.51E+02	0.00E+00
PM-148m	2.39E+00	6.06E-01	4.74E-01	0.00E+00	9.18E-01	0.00E+00	3.82E+03	0.00E+00
PM-148	5.57E-01	9.06E-02	4.56E-02	0.00E+00	1.64E-01	0.00E+00	5.40E+03	0.00E+00
PM-149	1.08E-01	1.52E-02	6.22E-03	0.00E+00	2.89E-02	0.00E+00	2.23E+03	0.00E+00
PM-151	4.29E-02	7.08E-03	3.58E-03	0.00E+00	1.27E-02	0.00E+00	1.59E+03	0.00E+00
SM-151	5.08E+00	9.78E-01	2.29E-01	0.00E+00	1.07E+00	0.00E+00	3.32E+02	0.00E+00

Table 4-18 (Page 4 of 4)

Teen Drinking Water A_{H} mrem*mL/hr* μ Ci

Nuclide	Bone	Liver	T Body	Thyroid	Kidney	Lung	GI-LLI	Skin
SM-153	5.94E-02	4.92E-02	3.62E-03	0.00E+00	1.61E-02	0.00E+00	1.39E+03	0.00E+00
EU-152	1.43E+01	3.43E+00	3.03E+00	0.00E+00	1.60E+01	0.00E+00	1.26E+03	0.00E+00
EU-154	4.60E+01	5.94E+00	4.19E+00	0.00E+00	2.65E+01	0.00E+00	3.14E+03	0.00E+00
EU-155	1.01E+01	9.78E-01	6.05E-01	0.00E+00	3.82E+00	0.00E+00	5.61E+03	0.00E+00
EU-156	1.09E+00	8.19E-01	1.34E-01	0.00E+00	5.51E-01	0.00E+00	4.19E+03	0.00E+00
TB-160	3.75E+00	0.00E+00	4.68E-01	0.00E+00	1.48E+00	0.00E+00	2.43E+03	0.00E+00
HO-166m	2.08E+01	6.40E+00	4.63E+00	0.00E+00	9.37E+00	0.00E+00	5.82E-17	0.00E+00
W-181	8.24E-01	2.66E-01	2.78E-02	0.00E+00	0.00E+00	0.00E+00	2.26E+01	0.00E+00
W-185	3.36E+01	1.11E+01	1.17E+00	0.00E+00	0.00E+00	0.00E+00	9.56E+02	0.00E+00
W-187	6.00E+00	4.89E+00	1.71E+00	0.00E+00	0.00E+00	0.00E+00	1.32E+03	0.00E+00
NP-239	8.84E-02	8.34E-03	4.63E-03	0.00E+00	2.62E-02	0.00E+00	1.34E+03	0.00E+00
U-232	3.43E+05	0.00E+00	2.45E+04	0.00E+00	3.71E+04	0.00E+00	4.19E+03	0.00E+00
U-233	7.22E+04	0.00E+00	4.39E+03	0.00E+00	1.69E+04	0.00E+00	3.87E+03	0.00E+00
U-234	6.93E+04	0.00E+00	4.30E+03	0.00E+00	1.66E+04	0.00E+00	3.79E+03	0.00E+00
U-235	6.64E+04	0.00E+00	4.04E+03	0.00E+00	1.55E+04	0.00E+00	4.82E+03	0.00E+00
U-236	6.64E+04	0.00E+00	4.13E+03	0.00E+00	1.59E+04	0.00E+00	3.56E+03	0.00E+00
U-237	4.36E+00	0.00E+00	1.16E+00	0.00E+00	1.79E+01	0.00E+00	1.16E+03	0.00E+00
U-238	6.35E+04	0.00E+00	3.78E+03	0.00E+00	1.46E+04	0.00E+00	3.39E+03	0.00E+00
NP-237	7.74E+04	5.56E+03	3.41E+03	0.00E+00	2.52E+04	0.00E+00	4.90E+03	0.00E+00
NP-238	9.64E-01	2.58E-02	1.50E-02	0.00E+00	8.85E-02	0.00E+00	1.89E+03	0.00E+00
PU-238	3.90E+04	5.00E+03	1.06E+03	0.00E+00	4.54E+03	0.00E+00	4.50E+03	0.00E+00
PU-239	4.45E+04	5.41E+03	1.17E+03	0.00E+00	4.99E+03	0.00E+00	4.11E+03	0.00E+00
PU-240	4.45E+04	5.40E+03	1.17E+03	0.00E+00	4.98E+03	0.00E+00	4.19E+03	0.00E+00
PU-241	1.02E+03	4.89E+01	2.15E+01	0.00E+00	9.95E+01	0.00E+00	8.62E+01	0.00E+00
PU-242	4.13E+04	5.20E+03	1.13E+03	0.00E+00	4.80E+03	0.00E+00	4.03E+03	0.00E+00
PU-244	4.82E+04	5.94E+03	1.29E+03	0.00E+00	5.50E+03	0.00E+00	6.00E+03	0.00E+00
AM-241	4.65E+04	4.38E+04	3.35E+03	0.00E+00	2.51E+04	0.00E+00	4.58E+03	0.00E+00
AM-242m	4.70E+04	4.14E+04	3.38E+03	0.00E+00	2.50E+04	0.00E+00	5.76E+03	0.00E+00
AM-243	4.63E+04	4.28E+04	3.27E+03	0.00E+00	2.46E+04	0.00E+00	5.37E+03	0.00E+00
CM-242	1.71E+03	1.80E+03	1.13E+02	0.00E+00	5.16E+02	0.00E+00	4.88E+03	0.00E+00
CM-243	3.78E+04	3.51E+04	2.38E+03	0.00E+00	1.11E+04	0.00E+00	4.82E+03	0.00E+00
CM-244	2.93E+04	2.78E+04	1.86E+03	0.00E+00	8.67E+03	0.00E+00	4.66E+03	0.00E+00
CM-245	5.76E+04	5.07E+04	3.55E+03	0.00E+00	1.66E+04	0.00E+00	4.34E+03	0.00E+00
CM-246	5.72E+04	5.07E+04	3.55E+03	0.00E+00	1.65E+04	0.00E+00	4.27E+03	0.00E+00
CM-247	5.57E+04	4.99E+04	3.49E+03	0.00E+00	1.63E+04	0.00E+00	5.61E+03	0.00E+00
CM-248	4.63E+05	4.11E+05	2.88E+04	0.00E+00	1.34E+05	0.00E+00	9.02E+04	0.00E+00
CF-252	2.02E+04	0.00E+00	4.87E+02	0.00E+00	0.00E+00	0.00E+00	1.78E+04	0.00E+00