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**Results of Calculations of External  
Gamma Radiation Exposure Rates  
from Fallout and the Related  
Radionuclide Compositions  
Operation Upshot-Knothole, 1953**

Harry G. Hicks

Manuscript date: July 1981

**LAWRENCE LIVERMORE LABORATORY**  
University of California • Livermore, California • 94550 



# Lawrence Livermore National Laboratory

TO: All holders of UCRL-53152, "Results of Calculations of External Gamma Radiation Exposure Rates from Fallout and the Related Radionuclide Compositions," Part 4, "Operation Upshot-Knothole, 1953"

FROM: Technical Information Department

## ADDENDUM

For purposes of clarification, the following information (underlined below) is being added to your copy of UCRL-53152 Part 4:

Each Appendix contains 11 pages of calculated results relating to one Event in Table 1. Each set of 11 pages is marked Page 2 through Page 12 at the top and A2 through A12 (or B2 through B12, etc.) at the bottom. Page 2 of each set gives the external gamma-ray exposure rates and associated values of total microcuries per square meter at 30 decay intervals and at zero time. Note that the totals at zero time include only the nuclides listed in pages 3 through 12, not all the nuclides present at zero time. Calculated values for each radionuclide at various decay intervals are given in the remaining pages--from 1 to 21 hr in Pages 3-7, from 1 to 300 d in Pages 8-11, and from 1 to 50 y in Page 12. Unless otherwise indicated, the value for each nuclide at zero time is the result of a radiochemical measurement. The measurements were performed on debris samples taken by aircraft approximately 1 to 4 hr after detonation. The production of nuclides designated by (\*) has been estimated. When no estimate could be made, the value appears as zero.

To incorporate this addendum, please staple or affix the attached page so as to cover the existing Page 2 in your document.

  
 Technical Information Department



## FOREWORD

This document is one of eight parts of Report UCRL-53152. Each part contains results for Events (shots) from a specific Operation or Operations, as listed here.

- Part 1. Operation Ranger, Events Able, Baker, Easy, Baker-2 and Fox.
- Part 2. Operation Buster-Jangle, Events Buster Baker, Buster Charlie, Buster Dog, Buster Easy, Jangle Sugar and Jangle Uncle.
- Part 3. Operation Tumbler-Snapper, Events Able, Baker, Charlie, Dog, Easy, Fox, George and How.
- Part 4. Operation Upshot-Knothole, Events Annie, Nancy, Ruth, Dixie, Ray, Badger, Simon, Encore, Harry, Grable and Climax.
- Part 5. Operation Teapot, Events Wasp, Moth, Tesla, Turk, Hornet, Bee, Ess, Apple I, Wasp Prime, HA, Post, Met, Apple II and Zucchini.
- Part 6. Operation Plumbob, Events Boltzmann, Franklin, Wilson, Priscilla, Hood, Diablo, John, Kepler, Owens, Pascal A, Stokes, Shasta, Doppler, Franklin Prime, Smoky, Galileo, Wheeler, Coulomb B, Laplace, Fizeau, Newton, Whitney, Charleston, Morgan and Coulomb C.
- Part 7. Operation Hardtack II, Events Otero, Eddy, Mora, Hidalgo, Quay, Lea, Hamilton, Dona Ana, Vesta, Rio Arriba, Socorro, Wrangell, Rushmore, Catron, Sanford, Debaca, Chavez, Humboldt, Titania and Santa Fe.
- Part 8. Operations Nougat through Bowline, Events Danny Boy, Sedan, Johnny Boy, Small Boy, Little Feller I, Sulky, Palanquin, Cabriolet, Buggy and Schooner.

Each part of the report contains 11 pages of data relating to each Event covered by that part of the report.



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# Results of Calculations of External Gamma Radiation Exposure Rates from Fallout and the Related Radionuclide Compositions

## Operation Upshot-Knothole, 1953

### ABSTRACT

This report presents data on calculated gamma radiation exposure rates and ground deposition of related radionuclides resulting from Events that deposited detectable radioactivity outside the Nevada Test Site complex.

### INTRODUCTION

The Events which deposited detectable radioactivity outside the Nevada Test Site complex<sup>1</sup> are listed in Table. 1.

TABLE 1. Yield, date and placement of Events of Operation Upshot-Knothole, 1953.

Event	Yield (kt)	Date	Placement
Annie	16	March 17	300 ft Tower
Nancy	24	March 24	300 ft Tower
Ruth	0.2	March 31	300 ft Tower
Dixie	11	April 6	Air drop 6020 ft
Ray	0.2	April 11	100 ft Tower
Badger	23	April 18	300 ft Tower
Simon	43	April 25	300 ft Tower
Encore	27	May 8	Air drop 2425 ft
Harry	32	May 19	300 ft Tower
Grable	15	May 25	Artillery shell, 524 ft
Climax	61	June 4	Air drop 1334 ft

### RESULTS

Results of the calculations of relative external gamma radiation exposure rate and related radionuclide ground deposition are given in the Appendices. These calculations are described in detail in Ref. 2. The output of the calculation has 30 decay times, 10 from 1 to 21 h, 10 from 1 to 300 d, and 10 from 1 to 50 y. For each of these times and for zero time there are values of the external gamma radiation exposure rate normalized to 1 mR/h, 1 m above the surface, 12 h after the event, the associated values of  $\mu\text{Ci}/\text{m}^2$  for each radionuclide, and the total  $\mu\text{Ci}/\text{m}^2$ .



The  $^{233}\text{U}$ ,  $^{235}\text{U}$ ,  $^{238}\text{U}$ , and  $^{239,240}\text{Pu}$  data were omitted primarily to keep the output unclassified. Furthermore, the natural uranium content of the soil is about one million times that received from fallout and at least half of the plutonium in Nevada and Utah soils comes from worldwide fallout.<sup>3</sup>

Surface roughness effects are simulated by using Beck's values<sup>4</sup> of  $(\text{mR/h})/(\mu\text{Ci}/\text{m}^2)$  for a relaxation length of  $0.16 \text{ g}/\text{cm}^2$ . According to Beck, the concentration of fallout varies exponentially with soil depth,  $Z$ , according to the relation  $C = C_0 e^{-\alpha Z}$ . He defines relaxation length as  $1/\alpha$ .

Fractionation effects were simulated by the removal of a fraction of the refractory nuclides from the calculation. In general, air drops were assumed to be unfractionated, surface and cratering Events were assumed to have 0.4 of the refractory elements present, and all other Events were assumed to have 0.5 of the refractory elements present.

Each Appendix contains 11 pages of calculated results relating to one Event in Table 1. Each set of 11 pages is marked Page 2 through Page 12 at the top and A2 through A12 (or B2 through B12, etc.) at the bottom. Page 2 of each set gives the external gamma-ray exposure rates and associated values of total microcuries per square meter at 30 decay intervals and at zero time. Note that the totals at zero time include only the nuclides listed in Pages 3 through 12, not all the nuclides present at zero time. Calculated values for each radionuclide at various decay intervals are given in the remaining pages—from 1 to 21 h in Pages 3–7, from 1 to 300 d in Page 8–11, and from 1 to 50 y in Page 12. Unless otherwise indicated, the value for each nuclide at zero time is the result of a radiochemical measurement. The measurements were performed on debris samples taken by aircraft approximately 1 to 4 h after detonation. The production of nuclides designated by (\*) has been estimated. When no estimate could be made, the value appears as zero.

## REFERENCES

1. *Announced United States Nuclear Tests, July, 1945, through December, 1980*, Office of Public Affairs, Nevada Operations Office, Department of Energy, Las Vegas, NV, NVO-209, Rev. 1, January 1981.
2. H. G. Hicks, *Calculation of the Concentration of Any Radionuclide Deposited on the Ground by Fallout from a Nuclear Detonation*, Lawrence Livermore National Laboratory, Livermore, CA, Preprint UCRL-86177 (1981). Accepted for publication in *Health Physics*.
3. E. Hardy, *Plutonium in Soil Northeast of the Nevada Test Site*, Environmental Measurements Laboratory, Department of Energy, New York, NY, HASL-306, pg. 1-51, July 1, 1976.
4. H. L. Beck, *Exposure Rate Conversion Factors for Radionuclides Deposited on the Ground*, Environmental Measurements Laboratory, Department of Energy, New York, NY, EML-387, July, 1980.

**APPENDIX A**  
**DETAILED RESULTS FOR EVENT ANNIE**

ANNIE  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 3.648E-13

TIME	MR/HR	MICROCURIES/SQ METER
ZERO TIME HOURS	1.10E+02	1.20E+04
1.00E+00	3.46E+01	2.47E+03
2.00E+00	1.37E+01	9.25E+02
3.00E+00	7.29E+00	5.47E+02
4.00E+00	4.51E+00	3.95E+02
6.00E+00	2.34E+00	2.62E+02
9.00E+00	1.38E+00	1.80E+02
1.20E+01	1.00E+00	1.38E+02
1.50E+01	7.84E-01	1.11E+02
1.80E+01	6.40E-01	9.28E+01
2.10E+01	5.36E-01	7.93E+01
1.00E+00 DAYS	4.52E-01	6.82E+01
2.00E+00	2.04E-01	3.25E+01
5.00E+00	8.08E-02	1.22E+01
1.00E+01	3.75E-02	5.12E+00
2.00E+01	1.49E-02	2.00E+00
3.00E+01	8.51E-03	1.22E+00
5.00E+01	3.84E-03	6.72E-01
1.00E+02	1.27E-03	2.88E-01
2.00E+02	4.27E-04	1.01E-01
3.00E+02	1.68E-04	4.99E-02
1.00E+00 YEARS	1.00E-04	3.65E-02
1.50E+00	3.55E-05	2.12E-02
2.00E+00	2.27E-05	1.52E-02
3.50E+00	1.37E-05	7.50E-03
5.00E+00	1.07E-05	4.93E-03
7.00E+00	9.05E-06	3.73E-03
1.00E+01	7.96E-06	3.09E-03
2.00E+01	5.98E-06	2.25E-03
3.50E+01	4.18E-06	1.55E-03
5.00E+01	2.95E-06	1.08E-03

ANNIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 3.648E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BE 7	9.63E-06	9.62E-06	9.62E-06	9.62E-06	9.62E-06	9.60E-06	9.59E-06	9.56E-06	9.54E-06	9.53E-06	9.51E-06
NA 24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
* MN 54	3.30E-05	3.30E-05	3.30E-05	3.30E-05	3.30E-05	3.30E-05	3.30E-05	3.27E-05	3.27E-05	3.27E-05	3.27E-05
FE 55	7.12E-05	7.12E-05	7.12E-05	7.12E-05	7.12E-05	7.12E-05	7.12E-05	7.12E-05	7.12E-05	7.12E-05	7.12E-05
FE 59	2.33E-04	2.33E-04	2.33E-04	2.33E-04	2.33E-04	2.32E-04	2.32E-04	2.31E-04	2.31E-04	2.30E-04	2.30E-04
CO 57	5.12E-05	5.12E-05	5.12E-05	5.12E-05	5.12E-05	5.12E-05	5.12E-05	5.12E-05	5.12E-05	5.12E-05	5.12E-05
CO 58	4.53E-04	4.53E-04	4.53E-04	4.53E-04	4.52E-04	4.52E-04	4.51E-04	4.51E-04	4.50E-04	4.50E-04	4.49E-04
CO 60	3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.60E-05
CU 64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 67	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.06E-01	1.05E-01	1.05E-01	1.04E-01	1.04E-01	1.03E-01	1.01E-01	1.00E-01	9.90E-02	9.76E-02	9.64E-02
U239	2.12E+03	3.62E+02	6.18E+01	1.05E+01	1.79E+00	5.21E-02	2.58E-04	1.27E-06	6.30E-09	3.12E-11	1.54E-13
U240	3.63E-01	3.46E-01	3.29E-01	3.13E-01	2.98E-01	2.70E-01	2.33E-01	2.01E-01	1.74E-01	1.50E-01	1.29E-01
NP239	7.27E-03	1.22E+01	1.41E+01	1.43E+01	1.42E+01	1.39E+01	1.33E+01	1.29E+01	1.24E+01	1.20E+01	1.15E+01
NP240M	5.74E-04	3.47E-01	3.32E-01	3.16E-01	3.01E-01	2.72E-01	2.35E-01	2.03E-01	1.75E-01	1.51E-01	1.30E-01
NP240	1.45E-11	7.48E-12	3.88E-12	2.00E-12	1.04E-12	2.77E-13	3.82E-14	5.27E-15	7.27E-16	1.00E-16	1.39E-17
* AM241	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09
* CM242	3.10E-07	3.10E-07	3.10E-07	3.10E-07	3.10E-07	3.10E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07	3.08E-07
GE 75	7.75E-06	3.75E-02	2.26E-02	1.36E-02	8.20E-03	2.97E-03	6.49E-04	1.42E-04	3.10E-05	6.76E-06	1.48E-06
GE 77	5.22E-03	1.34E-02	1.26E-02	1.19E-02	1.12E-02	9.90E-03	8.24E-03	6.85E-03	5.71E-03	4.74E-03	3.95E-03
AS 77	5.40E-05	8.53E-03	8.63E-03	8.68E-03	8.74E-03	8.80E-03	8.80E-03	8.74E-03	8.61E-03	8.43E-03	8.22E-03
SE 77M	2.13E-09	2.55E-05	2.59E-05	2.61E-05	2.61E-05	2.63E-05	2.65E-05	2.63E-05	2.59E-05	2.53E-05	2.46E-05
GE 78	8.12E-01	5.08E-01	3.16E-01	1.97E-01	1.23E-01	4.79E-02	1.16E-02	2.82E-03	6.88E-04	1.67E-04	4.06E-05
AS 78	1.46E-02	2.43E-01	2.99E-01	2.80E-01	2.34E-01	1.38E-01	5.13E-02	1.70E-02	5.27E-03	1.58E-03	4.57E-04
AS 79	1.59E+01	1.56E-01	1.54E-03	1.52E-05	1.49E-07	1.45E-11	1.38E-17	1.32E-23	1.26E-29	1.20E-35	1.14E-41
SE 79M	2.35E-02	2.76E-01	2.72E-03	2.68E-05	2.64E-07	2.55E-11	2.43E-17	2.32E-23	2.22E-29	2.12E-35	2.02E-41
BR 80	9.81E-02	9.25E-03	8.69E-04	8.18E-05	7.70E-06	6.83E-08	5.72E-11	4.76E-14	3.97E-17	3.31E-20	2.77E-23
SE 81M	8.03E-02	3.75E+00	1.81E+00	8.69E-01	4.18E-01	9.77E-02	1.09E-02	1.23E-03	1.37E-04	1.54E-05	1.73E-06
SE 81	9.81E-01	4.43E+00	2.56E+00	1.28E+00	6.21E-01	1.45E-01	1.62E-02	1.82E-03	2.04E-04	2.28E-05	2.56E-06
BR 82	4.82E-04	4.73E-04	4.63E-04	4.55E-04	4.45E-04	4.28E-04	4.04E-04	3.81E-04	3.59E-04	3.38E-04	3.19E-04
SE 83	4.41E+01	8.35E+00	1.58E+00	3.00E-01	5.67E-02	2.04E-03	1.39E-05	9.43E-08	6.44E-10	4.37E-12	2.77E-14
BR 83	3.66E-01	5.46E+00	5.06E+00	3.98E+00	3.02E+00	1.71E+00	7.22E-01	3.04E-01	1.28E-01	5.41E-02	2.28E-02
KR 83M	1.89E-05	1.24E+00	2.53E+00	3.14E+00	3.24E+00	2.70E+00	1.59E+00	8.20E-01	3.95E-01	1.82E-01	8.20E-02

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DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BR 84	9.21E-02	1.59E+01	4.29E+00	1.16E+00	3.14E-01	2.30E-02	4.54E-04	8.97E-06	1.77E-07	3.51E-09	6.93E-11	6.93E-11
KR 85M	4.33E-03	9.29E+00	7.90E+00	6.75E+00	5.77E+00	4.21E+00	2.63E+00	1.64E+00	1.02E+00	6.35E-01	3.96E-01	3.96E-01
KR 87	7.22E+01	4.17E+01	2.41E+01	1.39E+01	8.04E+00	2.70E+00	5.23E-01	1.01E-01	1.96E-02	3.80E-03	7.35E-04	7.35E-04
KR 88	4.10E+01	3.20E+01	2.50E+01	1.95E+01	1.52E+01	9.25E+00	4.42E+00	2.10E+00	9.99E-01	4.76E-01	2.26E-01	2.26E-01
RB 88	1.04E+01	3.24E+01	2.76E+01	2.18E+01	1.70E+01	1.04E+01	4.95E+00	2.36E+00	1.12E+00	5.34E-01	2.54E-01	2.54E-01
RB 89	5.01E+01	4.71E+01	3.17E+00	2.13E-01	1.43E-02	6.45E-05	1.95E-08	5.89E-12	1.80E-15	5.44E-19	1.65E-22	1.65E-22
SR 89	3.84E-06	1.35E-01	1.44E-01	1.44E-01	1.44E-01	1.44E-01	1.44E-01	1.43E-01	1.43E-01	1.43E-01	1.43E-01	1.43E-01
SR 90	7.71E-06	7.92E-04	7.92E-04	7.92E-04	7.92E-04	7.92E-04	7.92E-04	7.92E-04	7.92E-04	7.92E-04	7.92E-04	7.92E-04
SR 91	9.12E-01	1.70E+01	1.58E+01	1.47E+01	1.37E+01	1.19E+01	9.57E+00	7.74E+00	6.25E+00	5.02E+00	4.05E+00	4.05E+00
Y 91M	6.13E-05	5.85E+00	7.97E+00	8.54E+00	8.43E+00	7.57E+00	6.19E+00	4.98E+00	4.02E+00	3.24E+00	2.61E+00	2.61E+00
Y 91	2.51E-08	5.20E-03	1.20E-02	1.91E-02	2.61E-02	3.92E-02	5.56E-02	6.88E-02	7.97E-02	8.83E-02	9.52E-02	9.52E-02
SR 92	6.68E+00	2.98E+01	2.31E+01	1.79E+01	1.39E+01	8.29E+00	3.85E+00	1.79E+00	8.29E-01	3.85E-01	1.79E-01	1.79E-01
Y 92	3.08E-01	6.28E+00	9.85E+00	1.17E+01	1.24E+01	1.18E+01	9.07E+00	6.18E+00	3.98E+00	2.45E+00	1.49E+00	1.49E+00
SR 93	2.71E+02	4.67E+00	2.58E-02	1.43E-04	7.86E-07	2.40E-11	4.05E-18	6.84E-25	1.15E-31	1.95E-38	3.28E-45	3.28E-45
Y 93	3.31E-01	1.07E+01	1.01E+01	9.40E+00	8.79E+00	7.67E+00	6.25E+00	5.10E+00	4.15E+00	3.40E+00	2.77E+00	2.77E+00
Y 94	3.96E+01	5.41E+01	6.95E+00	8.97E-01	1.16E-01	1.92E-03	4.12E-06	8.83E-09	1.89E-11	4.12E-14	2.28E-15	2.28E-15
Y 95	1.72E+02	1.62E+01	3.56E-01	7.86E-03	1.73E-04	8.39E-08	8.99E-13	9.61E-18	1.03E-22	1.10E-27	1.17E-32	1.17E-32
ZR 95	6.44E-04	8.42E-02	8.59E-02	8.59E-02	8.59E-02	8.59E-02	8.59E-02	8.56E-02	8.56E-02	8.53E-02	8.53E-02	8.53E-02
NB 95	7.18E-11	5.20E-05	1.21E-04	1.90E-04	2.60E-04	3.98E-04	6.05E-04	8.14E-04	1.02E-03	1.22E-03	1.43E-03	1.43E-03
ZR 97	1.57E+00	6.82E+00	6.52E+00	6.28E+00	6.01E+00	5.55E+00	4.90E+00	4.34E+00	3.85E+00	3.40E+00	3.02E+00	3.02E+00
NB 97M	8.06E-03	6.55E+00	6.28E+00	6.04E+00	5.79E+00	5.34E+00	4.72E+00	4.18E+00	3.69E+00	3.26E+00	2.88E+00	2.88E+00
NB 97	7.84E-01	3.42E+00	4.82E+00	5.50E+00	5.77E+00	5.74E+00	5.23E+00	4.66E+00	4.12E+00	3.64E+00	3.23E+00	3.23E+00
NB 98	8.91E+00	3.95E+00	1.74E+00	7.72E-01	3.42E-01	6.69E-02	5.79E-03	5.00E-04	4.36E-05	3.77E-06	3.24E-07	3.24E-07
M6 99	4.75E-03	1.96E+00	1.94E+00	1.92E+00	1.90E+00	1.86E+00	1.80E+00	1.75E+00	1.70E+00	1.64E+00	1.59E+00	1.59E+00
TC 99M	4.41E-08	1.87E-01	3.51E-01	4.96E-01	6.23E-01	8.31E-01	1.05E+00	1.20E+00	1.28E+00	1.33E+00	1.35E+00	1.35E+00
M6101	1.38E+02	6.24E+01	3.62E+00	2.10E-01	1.22E-02	4.08E-05	7.94E-09	1.55E-12	3.01E-16	5.84E-20	1.14E-23	1.14E-23
TC101	5.84E+00	1.75E+02	1.91E+01	1.57E+00	1.14E-01	5.16E-04	1.29E-07	2.89E-11	6.13E-15	1.26E-18	2.55E-22	2.55E-22
M6102	1.16E+03	2.65E+01	6.04E-01	1.38E-02	3.15E-04	1.63E-07	1.95E-12	2.31E-17	2.73E-22	3.24E-27	3.85E-32	3.85E-32
TC102M	7.48E-01	2.24E+01	5.14E-01	1.17E-02	2.68E-04	1.39E-07	1.65E-12	1.95E-17	2.31E-22	2.74E-27	3.26E-32	3.26E-32
TC102	3.50E+03	1.34E+01	3.05E-01	6.93E-03	1.58E-04	8.26E-08	9.81E-13	1.16E-17	1.38E-22	1.63E-27	1.94E-32	1.94E-32
RU103	8.52E-05	1.98E-01	1.97E-01	1.97E-01	1.97E-01	1.97E-01	1.96E-01	1.96E-01	1.96E-01	1.95E-01	1.94E-01	1.94E-01
RH103M	5.68E-09	1.02E-01	1.51E-01	1.75E-01	1.87E-01	1.94E-01	1.96E-01	1.96E-01	1.96E-01	1.95E-01	1.95E-01	1.95E-01
TC104	7.46E+01	5.36E+01	5.36E+00	5.31E-01	5.25E-02	5.17E-04	5.05E-07	4.93E-10	4.82E-13	4.71E-16	4.60E-19	4.60E-19
RU105	6.16E-01	2.13E+01	1.82E+01	1.56E+01	1.34E+01	9.76E+00	6.12E+00	3.82E+00	2.39E+00	1.50E+00	9.40E-01	9.40E-01
RH105M	4.05E-03	2.14E+01	1.83E+01	1.57E+01	1.34E+01	9.81E+00	6.12E+00	3.84E+00	2.40E+00	1.50E+00	9.40E-01	9.40E-01
RH105	6.66E-09	4.34E-01	8.05E-01	1.11E+00	1.37E+00	1.75E+00	2.09E+00	2.25E+00	2.29E+00	2.27E+00	2.21E+00	2.21E+00
RU106	5.39E-04	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02
RH106	5.84E-06	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02
RH107	1.38E-01	1.87E+01	2.84E+00	4.27E-01	6.45E-02	1.47E-03	5.07E-06	1.75E-08	6.01E-11	2.06E-14	2.05E-17	2.05E-17
PD107M	2.87E-04	3.81E+00	5.76E-01	8.70E-02	1.31E-02	2.99E-04	1.03E-06	3.56E-09	1.22E-11	4.22E-14	1.44E-16	1.44E-16

ANNIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 3.648E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
PD109	8.01E-03	6.65E-01	6.32E-01	5.99E-01	5.69E-01	5.13E-01	4.41E-01	3.78E-01	3.24E-01	2.78E-01	2.39E-01
AG109M	4.62E-05	6.65E-01	6.32E-01	6.00E-01	5.70E-01	5.15E-01	4.41E-01	3.78E-01	3.24E-01	2.78E-01	2.39E-01
PD111M	9.68E-01	8.53E-01	7.51E-01	6.65E-01	5.85E-01	4.55E-01	3.11E-01	2.13E-01	1.46E-01	1.00E-01	6.86E-02
PD111	3.45E-01	6.21E-01	5.96E-01	5.31E-01	4.70E-01	3.65E-01	2.50E-01	1.72E-01	1.17E-01	8.06E-02	5.53E-02
AG111M	2.74E-03	8.38E-01	7.87E-01	7.04E-01	6.21E-01	4.80E-01	3.28E-01	2.25E-01	1.54E-01	1.06E-01	7.22E-02
AG111	9.75E-10	2.89E-03	6.07E-03	8.92E-03	1.15E-02	1.56E-02	2.00E-02	2.30E-02	2.49E-02	2.61E-02	2.68E-02
PD112	1.84E-01	1.79E-01	1.73E-01	1.67E-01	1.62E-01	1.51E-01	1.37E-01	1.24E-01	1.12E-01	1.02E-01	9.22E-02
AG112	5.55E-06	3.54E-02	6.24E-02	8.38E-02	9.95E-02	1.19E-01	1.31E-01	1.30E-01	1.24E-01	1.16E-01	1.07E-01
AG113	1.65E-03	3.54E-01	3.10E-01	2.72E-01	2.39E-01	1.84E-01	1.24E-01	8.40E-02	5.67E-02	3.83E-02	2.59E-02
AG115	5.68E-01	6.09E-01	7.58E-02	9.47E-03	1.19E-03	1.85E-05	3.62E-08	7.08E-11	1.37E-13	1.36E-16	1.26E-16
CD115M	4.65E-09	1.24E-04	1.39E-04	1.41E-04	1.41E-04	1.41E-04	1.40E-04	1.40E-04	1.40E-04	1.39E-04	1.39E-04
CD115	1.80E-06	3.38E-02	3.64E-02	3.63E-02	3.59E-02	3.50E-02	3.37E-02	3.23E-02	3.11E-02	3.00E-02	2.88E-02
IN115M	2.24E-11	3.74E-03	8.30E-03	1.23E-02	1.57E-02	2.09E-02	2.59E-02	2.85E-02	2.97E-02	3.00E-02	2.97E-02
CD117	3.99E-02	6.64E-01	5.00E-01	3.73E-01	2.80E-01	1.57E-01	6.59E-02	2.78E-02	1.17E-02	4.91E-03	2.07E-03
IN117M	1.92E-06	2.31E-01	3.34E-01	3.63E-01	3.51E-01	2.76E-01	1.58E-01	8.09E-02	3.88E-02	1.80E-02	8.13E-03
IN117	7.71E-11	4.21E-02	1.02E-01	1.42E-01	1.58E-01	1.45E-01	9.25E-02	4.95E-02	2.46E-02	1.16E-02	5.33E-03
CD118	2.63E+00	1.13E+00	4.84E-01	2.06E-01	8.84E-02	1.62E-02	1.27E-03	9.92E-05	7.80E-06	6.11E-07	4.79E-08
IN118	1.74E-01	1.13E+00	4.84E-01	2.07E-01	8.84E-02	1.62E-02	1.27E-03	9.96E-05	7.80E-06	6.11E-07	4.79E-08
CD119	6.56E+00	1.02E-01	1.60E-03	2.50E-05	3.90E-07	9.55E-11	3.64E-16	1.39E-21	5.29E-27	2.02E-32	7.74E-38
IN119M	9.89E-03	1.11E+00	1.20E-01	1.21E-02	1.21E-03	1.19E-05	1.16E-08	1.14E-11	1.11E-14	1.08E-17	1.06E-20
IN119	4.88E-01	5.83E-02	6.76E-03	6.86E-04	6.86E-05	6.71E-07	6.56E-10	6.42E-13	6.27E-16	6.12E-19	5.98E-22
SN121	8.12E-04	8.36E-02	8.12E-02	7.93E-02	7.74E-02	7.36E-02	6.79E-02	6.31E-02	5.83E-02	5.40E-02	5.02E-02
SN123M	4.66E-01	8.71E-01	3.09E-01	1.09E-01	3.86E-02	4.82E-03	2.13E-04	9.44E-06	4.18E-07	1.84E-08	8.15E-10
SN123	4.38E-06	4.58E-04	4.58E-04	4.58E-04	4.58E-04	4.58E-04	4.58E-04	4.58E-04	4.58E-04	4.58E-04	4.58E-04
SN125	1.24E-02	1.24E-02	1.24E-02	1.23E-02	1.23E-02	1.22E-02	1.21E-02	1.20E-02	1.19E-02	1.17E-02	1.17E-02
SB125	7.46E-05	7.50E-05	7.53E-05	7.56E-05	7.59E-05	7.66E-05	7.79E-05	7.89E-05	7.98E-05	8.08E-05	8.18E-05
SB126	2.32E-03	2.31E-03	2.31E-03	2.30E-03	2.29E-03	2.28E-03	2.27E-03	2.25E-03	2.24E-03	2.22E-03	2.21E-03
SN127	3.25E+00	2.33E+00	1.68E+00	1.21E+00	8.69E-01	4.48E-01	1.66E-01	6.19E-02	2.29E-02	8.53E-03	3.17E-03
SB127	3.79E-02	1.31E-01	1.45E-01	1.54E-01	1.61E-01	1.68E-01	1.70E-01	1.69E-01	1.66E-01	1.62E-01	1.59E-01
TE127	2.14E-02	2.66E-02	3.24E-02	3.84E-02	4.44E-02	5.57E-02	7.13E-02	8.32E-02	9.26E-02	9.99E-02	1.05E-01
SN128	2.18E+01	1.08E+01	5.33E+00	2.63E+00	1.30E+00	3.18E-01	3.84E-02	4.63E-03	5.59E-04	6.78E-05	8.17E-06
SB128M	1.11E-02	1.23E+01	6.37E+00	3.14E+00	1.55E+00	3.80E-01	4.57E-02	5.52E-03	6.66E-04	8.05E-05	9.73E-06
SB128	9.21E-01	8.86E-01	8.34E-01	7.82E-01	7.30E-01	6.25E-01	4.99E-01	3.96E-01	3.14E-01	2.50E-01	1.98E-01
SN129M	1.39E+01	6.94E+00	3.48E+00	1.74E+00	8.71E-01	2.18E-01	2.72E-02	3.41E-03	4.25E-04	5.32E-05	6.65E-06
SN129	9.30E+01	9.12E-01	9.00E-03	8.86E-05	8.71E-07	8.47E-11	8.06E-17	7.71E-23	7.35E-29	7.00E-35	6.71E-41
SB129	5.23E+00	8.77E+00	8.24E+00	7.35E+00	6.47E+00	4.81E+00	2.99E+00	1.85E+00	1.14E+00	7.06E-01	4.34E-01
TE129M	9.88E-08	1.09E-03	2.25E-03	3.31E-03	4.25E-03	5.77E-03	7.30E-03	8.24E-03	8.83E-03	9.18E-03	9.41E-03
TE129	3.77E+00	5.18E+00	6.06E+00	6.30E+00	6.06E+00	5.02E+00	3.34E+00	2.11E+00	1.31E+00	8.12E-01	5.04E-01
SB130M	5.29E-01	9.99E-01	2.62E-03	6.89E-06	1.81E-08	1.05E-13	2.28E-21	4.15E-29	7.52E-37	1.37E-44	2.49E-52
SB130	9.07E+01	2.74E+01	7.81E+00	2.21E+00	6.26E-01	5.04E-02	1.15E-03	2.62E-05	5.97E-07	1.36E-08	3.11E-10

A-5

ANNIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 3.648E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
I130	2.53E-02	2.39E-02	2.26E-02	2.14E-02	2.02E-02	1.81E-02	1.53E-02	1.29E-02	1.09E-02	9.24E-03	7.81E-03
SB131	2.10E+02	5.47E+01	8.94E+00	1.47E+00	2.41E-01	6.49E-03	2.86E-05	1.26E-07	5.55E-10	2.45E-12	1.22E-14
TE131M	1.01E-04	5.27E-01	6.01E-01	6.02E-01	5.91E-01	5.65E-01	5.27E-01	4.91E-01	4.59E-01	4.28E-01	3.99E-01
TE131	9.28E+01	1.01E+02	3.28E+01	8.54E+00	2.08E+00	1.95E-01	9.68E-02	8.94E-02	8.34E-02	7.81E-02	7.28E-02
I131	1.35E-02	4.67E-01	6.88E-01	7.54E-01	7.68E-01	7.74E-01	7.74E-01	7.68E-01	7.68E-01	7.61E-01	7.61E-01
TE132	1.06E+00	2.59E+00	2.56E+00	2.54E+00	2.52E+00	2.47E+00	2.41E+00	2.34E+00	2.28E+00	2.22E+00	2.16E+00
I132	2.61E+00	2.61E+00	2.60E+00	2.59E+00	2.57E+00	2.53E+00	2.48E+00	2.41E+00	2.35E+00	2.29E+00	2.23E+00
TE133M	1.29E-01	4.46E+01	1.94E+01	8.46E+00	3.68E+00	6.99E-01	5.75E-02	4.74E-03	3.91E-04	3.22E-05	2.66E-06
TE133	7.23E+02	4.10E+01	4.56E+00	1.51E+00	6.37E-01	1.21E-01	9.99E-03	8.21E-04	6.80E-05	5.60E-06	4.61E-07
I133	1.12E+00	1.21E+01	1.31E+01	1.31E+01	1.28E+01	1.21E+01	1.10E+01	9.99E+00	9.01E+00	8.21E+00	7.42E+00
XE133M	4.77E-08	2.72E-03	6.56E-03	1.05E-02	1.43E-02	2.15E-02	3.11E-02	3.94E-02	4.65E-02	5.25E-02	5.75E-02
XE133	8.34E-07	4.74E-02	1.15E-01	1.84E-01	2.53E-01	3.82E-01	5.61E-01	7.17E-01	8.58E-01	9.81E-01	1.09E+00
TE134	2.29E+02	1.06E+02	3.94E+01	1.47E+01	5.44E+00	7.54E-01	3.85E-02	1.97E-03	1.01E-04	5.19E-06	2.66E-07
I134	1.05E+02	1.40E+02	9.81E+01	5.75E+01	3.09E+01	7.84E+00	8.62E+01	8.80E-02	8.62E-03	8.26E-04	7.84E-05
I135	1.90E+01	3.35E+01	3.02E+01	2.72E+01	2.46E+01	1.99E+01	1.46E+01	1.07E+01	7.86E+00	5.79E+00	4.23E+00
XE135M	2.10E-03	9.67E+00	9.39E+00	8.52E+00	7.65E+00	6.23E+00	4.57E+00	3.35E+00	2.46E+00	1.80E+00	1.32E+00
XE135	2.19E+00	4.33E+00	6.34E+00	7.97E+00	9.28E+00	1.11E+01	1.23E+01	1.24E+01	1.18E+01	1.08E+01	9.61E+00
CS136	6.97E-03	6.95E-03	6.94E-03	6.93E-03	6.91E-03	6.87E-03	6.83E-03	6.78E-03	6.74E-03	6.70E-03	6.65E-03
CS137	9.34E-05	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03
BA137M	1.97E-07	9.40E-04	9.40E-04	9.40E-04	9.40E-04	9.40E-04	9.40E-04	9.40E-04	9.40E-04	9.40E-04	9.40E-04
XE138	7.15E+02	6.15E+01	5.35E+00	4.63E-01	4.01E-02	3.01E-04	1.96E-07	1.27E-10	8.26E-14	5.37E-17	3.49E-20
CS138	1.06E+02	1.79E+02	6.21E+01	1.82E+01	5.11E+00	3.89E-01	8.09E-03	1.68E-04	3.49E-06	7.26E-08	1.50E-09
CS139	6.87E+02	2.19E+01	2.75E-01	3.46E-03	4.33E-05	6.81E-09	1.35E-14	2.68E-20	5.30E-26	1.05E-31	2.07E-37
BA139	1.27E+01	1.41E+02	8.72E+01	5.30E+01	3.20E+01	1.18E+01	2.61E+00	5.80E-01	1.29E-01	2.85E-02	6.34E-03
BA140	1.11E-01	6.92E-01	6.92E-01	6.87E-01	6.87E-01	6.82E-01	6.82E-01	6.76E-01	6.71E-01	6.66E-01	6.61E-01
LA140	2.64E-07	1.18E-02	2.35E-02	3.48E-02	4.60E-02	6.76E-02	9.88E-02	1.28E-01	1.55E-01	1.81E-01	2.06E-01
BA141	1.66E+02	5.02E+01	4.98E+00	4.94E-01	4.90E-02	4.86E-04	4.74E-07	4.62E-10	4.51E-13	4.43E-16	4.31E-19
LA141	1.53E+00	3.25E+01	3.03E+01	2.57E+01	2.15E+01	1.51E+01	8.85E+00	5.18E+00	3.05E+00	1.79E+00	1.05E+00
CE141	1.90E-07	2.11E-02	4.94E-02	7.43E-02	9.53E-02	1.28E-01	1.59E-01	1.76E-01	1.87E-01	1.92E-01	1.96E-01
BA142	3.33E+02	1.32E+01	3.02E-01	6.88E-03	1.57E-04	8.15E-08	9.67E-13	1.15E-17	1.36E-22	1.62E-27	1.92E-32
LA142	7.64E+00	5.30E+01	3.50E+01	2.22E+01	1.42E+01	5.72E+00	1.48E+00	3.81E-01	9.81E-02	2.53E-02	6.51E-03
LA143	1.25E+02	2.44E+01	1.25E+00	6.42E-02	3.30E-03	8.64E-06	1.17E-09	1.57E-13	2.12E-17	2.86E-21	3.85E-25
CE143	4.99E-02	3.18E+00	3.30E+00	3.21E+00	3.15E+00	3.04E+00	2.84E+00	2.67E+00	2.51E+00	2.35E+00	2.21E+00
PR143	1.46E-08	4.88E-03	1.18E-02	1.86E-02	2.53E-02	3.83E-02	5.64E-02	7.36E-02	8.93E-02	1.04E-01	1.18E-01
CE144	1.99E-03	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02
PR144	5.47E-07	1.30E-02	1.42E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02
PR145	8.04E-02	1.18E+01	1.05E+01	9.34E+00	8.34E+00	6.60E+00	4.66E+00	3.29E+00	2.33E+00	1.64E+00	1.16E+00
CE146	2.36E+02	1.21E+01	6.21E-01	3.18E-02	1.64E-03	4.31E-06	5.80E-10	7.82E-14	1.05E-17	1.42E-21	1.91E-25
PR146	4.89E+00	4.25E+01	9.64E+00	1.81E+00	3.26E-01	1.02E-02	5.66E-05	3.12E-07	1.73E-09	9.56E-12	5.22E-14
PR147	2.74E+01	7.94E+00	2.48E-01	7.73E-03	2.42E-04	2.36E-07	7.21E-12	2.20E-16	6.72E-21	2.05E-25	6.26E-30

A-6

ANNIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 3.648E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
ND147	9.79E-06	1.84E-01	1.89E-01	1.89E-01	1.89E-01	1.89E-01	1.88E-01	1.86E-01	1.85E-01	1.83E-01	1.82E-01	1.80E-01
ND149	1.42E+01	9.67E+00	6.58E+00	4.49E+00	3.04E+00	1.41E+00	4.43E-01	1.40E-01	4.41E-02	1.39E-02	4.38E-03	4.38E-03
PM149	1.98E-03	1.55E-01	2.57E-01	3.25E-01	3.68E-01	4.14E-01	4.30E-01	4.22E-01	4.11E-01	3.95E-01	3.81E-01	3.81E-01
PM150	1.64E-01	1.27E-01	9.81E-02	7.57E-02	5.86E-02	3.51E-02	1.63E-02	7.52E-03	3.49E-03	1.61E-03	7.47E-04	7.47E-04
ND151	5.63E+01	1.76E+00	5.50E-02	1.72E-03	5.37E-05	5.25E-08	1.60E-12	4.90E-17	1.49E-21	4.55E-26	1.39E-30	1.39E-30
PM151	3.57E-02	4.17E-01	4.19E-01	4.09E-01	3.99E-01	3.79E-01	3.52E-01	3.27E-01	3.04E-01	2.81E-01	2.61E-01	2.61E-01
PM152	9.07E+01	8.88E-02	8.65E-05	8.46E-08	8.26E-11	7.89E-17	7.34E-26	6.85E-35	6.38E-44	5.96E-53	5.54E-62	5.54E-62
SM153	1.22E-01	1.20E-01	1.18E-01	1.16E-01	1.15E-01	1.11E-01	1.07E-01	1.02E-01	9.76E-02	9.35E-02	8.94E-02	8.94E-02
SM155	6.81E+00	1.12E+00	1.83E-01	3.00E-02	4.91E-03	1.32E-04	5.84E-07	2.57E-09	1.13E-11	5.05E-14	1.24E-16	1.24E-16
EU155	5.00E-06	1.43E-04	1.65E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.69E-04
SM156	1.19E-01	1.10E-01	1.02E-01	9.52E-02	8.84E-02	7.63E-02	6.11E-02	4.90E-02	3.93E-02	3.15E-02	2.52E-02	2.52E-02
EU156	3.47E-04	5.67E-04	7.70E-04	9.58E-04	1.13E-03	1.45E-03	1.84E-03	2.13E-03	2.38E-03	2.57E-03	2.71E-03	2.71E-03
EU157	1.93E-02	6.40E-02	6.11E-02	5.84E-02	5.57E-02	5.09E-02	4.44E-02	3.88E-02	3.38E-02	2.94E-02	2.57E-02	2.57E-02
EU158	7.12E-01	2.89E-01	1.17E-01	4.73E-02	1.91E-02	3.13E-03	2.09E-04	1.38E-05	9.19E-07	6.10E-08	4.05E-09	4.05E-09
EU159	8.62E-01	8.56E-02	8.49E-03	8.43E-04	8.35E-05	8.24E-07	8.05E-10	7.86E-13	7.67E-16	7.50E-19	7.32E-22	7.32E-22
GD159	3.69E-03	1.62E-02	1.68E-02	1.63E-02	1.57E-02	1.45E-02	1.30E-02	1.15E-02	1.03E-02	9.15E-03	8.16E-03	8.16E-03
TB161	4.69E-05	3.38E-04	3.35E-04	3.34E-04	3.33E-04	3.30E-04	3.27E-04	3.22E-04	3.18E-04	3.14E-04	3.10E-04	3.10E-04
TOTAL	1.20E+04	2.47E+03	9.25E+02	5.47E+02	3.95E+02	2.62E+02	1.80E+02	1.38E+02	1.11E+02	9.28E+01	7.93E+01	7.93E+01



ANNIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 3.648E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
BE 7	9.63E-06	9.51E-06	9.38E-06	9.03E-06	8.46E-06	7.43E-06	6.52E-06	5.02E-06	2.63E-06	7.14E-07	1.94E-07
* NA 24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MN 54	3.30E-05	3.27E-05	3.27E-05	3.21E-05	3.18E-05	3.12E-05	3.06E-05	2.92E-05	2.61E-05	2.07E-05	1.65E-05
FE 55	7.12E-05	7.12E-05	7.12E-05	7.09E-05	7.07E-05	7.03E-05	6.96E-05	6.87E-05	6.60E-05	6.16E-05	5.71E-05
TE 59	2.33E-04	2.29E-04	2.26E-04	2.16E-04	2.00E-04	1.71E-04	1.47E-04	1.08E-04	5.01E-05	1.07E-05	2.29E-06
CO 57	5.12E-05	5.12E-05	5.08E-05	5.08E-05	5.01E-05	4.86E-05	4.74E-05	4.51E-05	3.98E-05	3.08E-05	2.38E-05
CO 58	4.53E-04	4.49E-04	4.44E-04	4.30E-04	4.11E-04	3.73E-04	3.38E-04	2.78E-04	1.71E-04	6.48E-05	2.45E-05
CO 60	3.60E-05	3.60E-05	3.60E-05	3.60E-05	3.57E-05	3.57E-05	3.55E-05	3.53E-05	3.45E-05	3.34E-05	3.21E-05
CU 64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 67	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.06E-01	9.53E-02	8.59E-02	6.32E-02	3.78E-02	1.35E-02	4.86E-03	6.21E-04	3.67E-06	3.94E-10	2.66E-10
U240	3.63E-01	1.12E-01	3.43E-02	9.94E-04	2.73E-06	2.05E-11	1.54E-16	8.71E-27	0.	0.	0.
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP239	7.27E-03	1.11E+01	8.26E+00	3.41E+00	7.80E-01	4.08E-02	2.13E-03	5.86E-06	2.30E-12	5.50E-22	5.50E-22
NP240M	5.74E-04	1.12E-01	3.46E-02	1.00E-03	2.75E-06	2.07E-11	1.56E-16	8.78E-27	0.	0.	0.
* AM241	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.19E-09
* CM242	3.10E-07	3.08E-07	3.07E-07	3.03E-07	2.97E-07	2.84E-07	2.73E-07	2.50E-07	2.04E-07	1.33E-07	8.67E-08
GE 77	5.22E-03	3.29E-03	7.52E-04	9.09E-06	5.78E-09	2.34E-15	9.44E-22	1.54E-34	0.	0.	0.
AS 77	5.40E-05	7.97E-03	5.76E-03	1.67E-03	1.95E-04	2.65E-06	3.60E-08	6.63E-12	3.08E-21	6.60E-40	1.42E-58
SE 77M	2.13E-09	2.40E-05	1.73E-05	5.01E-06	5.84E-07	7.95E-09	1.08E-10	1.99E-14	9.23E-24	1.97E-42	4.25E-61
AS 78	1.46E-02	1.30E-04	3.81E-09	3.22E-23	0.	0.	0.	0.	0.	0.	0.
BR 82	4.82E-04	3.01E-04	1.88E-04	4.57E-05	4.33E-06	3.89E-08	3.49E-10	2.82E-14	1.65E-24	5.65E-45	1.92E-65
BR 83	3.66E-01	9.64E-03	9.69E-06	9.85E-15	1.01E-29	0.	0.	0.	0.	0.	0.
KR 83M	1.89E-05	4.22E-02	4.79E-05	4.30E-14	4.42E-29	0.	0.	0.	0.	0.	0.
KR 85M	4.33E-03	2.48E-01	5.64E-03	6.69E-08	4.13E-16	1.57E-32	5.94E-49	0.	0.	0.	0.
KR 85	4.48E-06	1.18E-04	1.20E-04	1.20E-04	1.20E-04	1.20E-04	1.20E-04	1.19E-04	1.18E-04	1.16E-04	1.14E-04
KR 87	7.22E+01	1.42E-04	2.82E-10	2.18E-27	0.	0.	0.	0.	0.	0.	0.
KR 88	4.10E+01	1.08E-01	2.83E-04	5.14E-12	6.48E-25	0.	0.	0.	0.	0.	0.
RB 88	1.04E+01	1.20E-01	3.17E-04	5.76E-12	7.22E-25	0.	0.	0.	0.	0.	0.
SR 89	3.84E-06	1.15E-01	1.13E-01	1.09E-01	1.02E-01	8.92E-02	7.80E-02	6.00E-02	3.07E-02	8.08E-03	2.13E-03
SR 90	7.71E-06	7.92E-04	7.92E-04	7.92E-04	7.92E-04	7.92E-04	7.92E-04	7.92E-04	7.85E-04	7.85E-04	7.78E-04
Y 90	1.14E-11	1.82E-04	3.21E-04	5.77E-04	7.36E-04	7.85E-04	7.92E-04	7.92E-04	7.85E-04	7.85E-04	7.78E-04
SR 91	9.12E-01	3.26E+00	5.85E-01	3.35E-03	6.13E-07	2.08E-14	7.05E-22	8.03E-37	0.	0.	0.

A-8

ANNIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 3.648E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
Y 91M	6.13E-05	2.11E+00	3.77E-01	2.17E-03	3.98E-07	1.34E-14	4.54E-22	5.18E-37	0.	0.	0.	0.
Y 91	2.51E-08	1.00E-01	1.19E-01	1.19E-01	1.12E-01	9.92E-02	8.83E-02	6.99E-02	3.87E-02	1.19E-02	3.66E-03	
SR 92	6.68E+00	8.33E-02	1.80E-04	1.80E-12	8.45E-26	0.	0.	0.	0.	0.	0.	0.
Y 92	3.08E-01	8.73E-01	9.69E-03	7.46E-09	4.35E-19	1.49E-39	5.09E-60	0.	0.	0.	0.	0.
Y 93	3.31E-01	2.24E+00	4.36E-01	3.28E-03	9.44E-07	7.80E-14	6.43E-21	4.39E-35	0.	0.	0.	0.
ZR 95	6.44E-04	8.05E-02	7.97E-02	7.71E-02	7.32E-02	6.56E-02	5.91E-02	4.78E-02	2.80E-02	9.64E-03	3.31E-03	
NB 95M	1.37E-11	2.73E-04	4.97E-04	9.49E-04	1.28E-03	1.35E-03	1.25E-03	1.01E-03	5.93E-04	2.04E-04	7.04E-05	
NB 95	7.18E-11	1.56E-03	3.08E-03	7.38E-03	1.37E-02	2.37E-02	3.05E-02	3.79E-02	3.65E-02	1.75E-02	6.73E-03	
ZR 97	1.57E+00	2.67E+00	1.00E+00	5.31E-02	3.99E-04	2.24E-08	1.26E-12	3.99E-21	2.25E-42	0.	0.	0.
NB 97M	8.06E-03	2.56E+00	9.62E-01	5.12E-02	3.83E-04	2.16E-08	1.21E-12	3.83E-21	2.16E-42	0.	0.	0.
NB 97	7.84E-01	2.68E+00	1.01E+00	5.34E-02	4.02E-04	2.42E-08	1.36E-12	4.31E-21	2.43E-42	0.	0.	0.
MO 99	4.75E-03	1.54E+00	1.21E+00	5.71E-01	1.65E-01	1.38E-02	1.15E-03	8.04E-06	3.26E-11	5.38E-22	8.86E-33	
TC 99M	4.41E-08	1.36E+00	1.14E+00	5.47E-01	1.58E-01	1.32E-02	1.10E-03	7.68E-06	3.11E-11	5.14E-22	8.46E-33	
RU103	8.52E-05	1.94E-01	1.91E-01	1.81E-01	1.66E-01	1.39E-01	1.17E-01	8.25E-02	3.43E-02	5.96E-03	1.04E-03	
RH103M	5.68E-09	1.94E-01	1.91E-01	1.81E-01	1.66E-01	1.39E-01	1.17E-01	8.25E-02	3.44E-02	5.96E-03	1.04E-03	
RU105	6.16E-01	5.89E-01	1.39E-02	1.82E-07	1.33E-15	7.11E-32	3.81E-48	0.	0.	0.	0.	0.
RH105M	4.05E-03	5.89E-01	1.39E-02	1.83E-07	1.34E-15	7.15E-32	3.82E-48	0.	0.	0.	0.	0.
RH105	6.66E-09	2.13E+00	1.39E+00	3.46E-01	3.41E-02	3.32E-04	3.23E-06	3.05E-10	2.64E-20	1.98E-40	1.49E-60	
RU106	5.39E-04	1.02E-02	1.02E-02	1.01E-02	1.00E-02	9.86E-03	9.64E-03	9.28E-03	8.44E-03	6.98E-03	5.79E-03	
RH106	5.84E-06	1.02E-02	1.02E-02	1.01E-02	1.00E-02	9.86E-03	9.64E-03	9.28E-03	8.44E-03	6.98E-03	5.79E-03	
PD109	8.01E-03	2.04E-01	5.94E-02	1.48E-03	3.11E-06	1.39E-11	6.17E-17	1.22E-27	0.	0.	0.	0.
AG109M	4.62E-05	2.04E-01	5.96E-02	1.48E-03	3.12E-06	1.39E-11	6.17E-17	1.22E-27	0.	0.	0.	0.
PD111M	9.68E-01	4.70E-02	2.28E-03	2.62E-07	7.08E-14	5.17E-27	3.79E-40	0.	0.	0.	0.	0.
PD111	3.45E-01	3.79E-02	1.84E-03	2.11E-07	5.71E-14	4.15E-27	3.05E-40	0.	0.	0.	0.	0.
AG111M	2.74E-03	4.95E-02	2.41E-03	2.77E-07	7.48E-14	5.49E-27	4.01E-40	0.	0.	0.	0.	0.
AG111	9.75E-10	2.69E-02	2.59E-02	1.97E-02	1.24E-02	4.91E-03	1.95E-03	3.07E-04	3.02E-06	2.93E-10	2.84E-14	
PD112	1.84E-01	8.38E-02	3.79E-02	3.52E-03	6.69E-05	2.43E-08	8.83E-12	1.16E-18	7.31E-36	0.	0.	0.
AG112	5.55E-06	9.72E-02	4.47E-02	4.15E-03	7.93E-05	2.87E-08	1.04E-11	1.37E-18	8.60E-36	0.	0.	0.
AG113	1.65E-03	1.75E-02	7.56E-04	6.14E-08	9.39E-15	2.20E-28	5.14E-42	0.	0.	0.	0.	0.
CD115M	4.65E-09	1.34E-04	1.32E-04	1.26E-04	1.16E-04	9.88E-05	8.44E-05	6.09E-05	2.73E-05	5.41E-06	1.08E-06	
CD115	1.80E-06	2.70E-02	1.98E-02	7.81E-03	1.65E-03	7.35E-05	3.28E-06	6.54E-09	1.16E-15	3.62E-29	1.13E-42	
IN115M	2.24E-11	2.85E-02	2.16E-02	8.53E-03	1.80E-03	8.03E-05	3.58E-06	7.13E-09	1.26E-15	3.95E-29	1.24E-42	
CD117	3.99E-02	8.63E-04	8.46E-07	7.90E-16	7.01E-31	0.	0.	0.	0.	0.	0.	0.
IN117M	1.92E-06	3.61E-03	4.18E-06	4.03E-15	3.58E-30	0.	0.	0.	0.	0.	0.	0.
IN117	7.71E-11	2.38E-03	2.82E-06	2.73E-15	2.42E-30	0.	0.	0.	0.	0.	0.	0.
SN121	8.12E-04	4.63E-02	2.50E-02	3.94E-03	1.81E-04	3.81E-07	8.03E-10	3.58E-15	1.50E-28	0.	0.	0.
SN123	4.38E-06	4.58E-04	4.54E-04	4.46E-04	4.34E-04	4.10E-04	3.89E-04	3.48E-04	2.63E-04	1.51E-04	8.71E-05	
SN125	1.24E-02	1.16E-02	1.07E-02	8.60E-03	5.94E-03	2.85E-03	1.36E-03	3.11E-04	7.79E-06	4.90E-09	3.07E-12	
SB125	7.46E-05	8.28E-05	9.05E-05	1.11E-04	1.36E-04	1.64E-04	1.77E-04	1.84E-04	1.81E-04	1.69E-04	1.57E-04	
SB126	2.32E-03	2.19E-03	2.07E-03	1.76E-03	1.33E-03	7.62E-04	4.40E-04	1.45E-04	9.05E-06	4.40E-08	8.83E-09	

ANNIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 3.648E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SN127	3.25E+00	1.18E-03	4.27E-07	2.04E-17	1.28E-34	0.	0.	0.	0.	0.	0.
SB127	3.79E-02	1.56E-01	1.30E-01	7.60E-02	3.11E-02	5.20E-03	8.69E-04	2.43E-05	3.17E-09	5.41E-17	9.21E-25
TE127M	3.06E-10	2.37E-04	4.34E-04	8.43E-04	1.17E-03	1.29E-03	1.24E-03	1.10E-03	8.01E-04	4.23E-04	2.24E-04
TE127	2.14E-02	1.11E-01	1.09E-01	6.66E-02	2.81E-02	5.77E-03	1.98E-03	1.11E-03	7.91E-04	4.18E-04	2.21E-04
SB128	9.21E-01	1.57E-01	2.48E-02	9.67E-05	9.38E-09	8.80E-17	8.28E-25	7.30E-41	0.	0.	0.
SB129	5.23E+00	2.68E-01	5.99E-03	5.09E-08	2.02E-16	3.19E-33	5.04E-50	0.	0.	0.	0.
TE129M	9.88E-08	1.04E-02	1.04E-02	9.83E-03	8.88E-03	7.24E-03	5.88E-03	3.92E-03	1.41E-03	1.84E-04	2.39E-05
TE129	3.77E+00	3.14E-01	1.31E-02	6.30E-03	5.68E-03	4.63E-03	3.78E-03	2.51E-03	9.06E-04	1.18E-04	1.54E-05
I130	2.53E-02	6.60E-03	1.73E-03	3.09E-05	3.77E-08	5.62E-14	8.38E-20	1.87E-31	0.	0.	0.
TE131M	1.01E-04	3.52E-01	2.02E-01	3.83E-02	2.40E-03	9.35E-06	3.66E-08	5.58E-13	5.07E-25	0.	0.
TE131	9.28E+01	6.43E-02	3.69E-02	7.01E-03	4.37E-04	1.71E-06	6.67E-09	1.02E-13	9.28E-26	0.	0.
I131	1.35E-02	7.28E-01	6.88E-01	5.53E-01	3.64E-01	1.54E-01	6.50E-02	1.16E-02	1.57E-04	2.86E-08	5.21E-12
XE131M	3.66E-11	3.37E-04	6.40E-04	1.34E-03	1.91E-03	1.89E-03	1.40E-03	5.79E-04	3.86E-05	1.15E-07	3.26E-10
TE132	1.06E+00	2.11E+00	1.70E+00	8.96E-01	3.09E-01	3.66E-02	4.34E-03	6.09E-05	1.43E-09	7.80E-19	4.26E-28
I132	2.61E+00	2.17E+00	1.75E+00	9.22E-01	3.19E-01	3.77E-02	4.47E-03	6.28E-05	1.47E-09	8.00E-19	4.39E-28
I133	1.12E+00	6.25E+00	2.82E+00	2.62E-01	4.99E-03	1.81E-06	6.56E-10	8.64E-17	5.43E-34	0.	0.
XE133M	4.77E-08	5.90E-02	6.99E-02	4.10E-02	9.62E-03	4.52E-04	2.10E-05	4.56E-08	9.99E-15	4.77E-28	2.29E-41
XE133	8.34E-07	1.13E+00	1.52E+00	1.36E+00	7.42E-01	2.00E-01	5.39E-02	3.88E-03	5.41E-06	1.05E-11	2.03E-17
I135	1.90E+01	3.10E+00	2.59E-01	1.51E-04	6.12E-10	1.01E-20	1.66E-31	4.51E-53	0.	0.	0.
XE135M	2.10E-03	9.67E-01	8.08E-02	4.70E-05	1.91E-10	3.15E-21	5.18E-32	1.41E-53	0.	0.	0.
XE135	2.19E+00	8.36E+00	2.04E+00	1.17E-02	1.43E-06	2.01E-14	2.82E-22	5.57E-38	0.	0.	0.
CS136	6.97E-03	6.61E-03	6.26E-03	5.34E-03	4.09E-03	2.40E-03	1.41E-03	4.85E-04	3.37E-05	1.62E-07	7.87E-10
CS137	9.34E-05	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.00E-03	9.96E-04	9.90E-04
BA137M	1.97E-07	9.40E-04	9.40E-04	9.40E-04	9.40E-04	9.40E-04	9.40E-04	9.40E-04	9.34E-04	9.29E-04	9.23E-04
BA139	1.27E+01	1.35E-03	8.00E-09	1.65E-24	0.	0.	0.	0.	0.	0.	0.
BA140	1.11E-01	6.55E-01	6.24E-01	5.28E-01	4.03E-01	2.35E-01	1.36E-01	4.62E-02	3.09E-03	1.37E-05	6.08E-08
LA140	2.64E-07	2.28E-01	3.67E-01	5.08E-01	4.51E-01	2.70E-01	1.57E-01	5.34E-02	3.55E-03	1.58E-05	7.03E-08
LA141	1.53E+00	6.09E-01	8.54E-03	2.36E-08	1.29E-17	3.86E-36	1.15E-54	0.	0.	0.	0.
CE141	1.90E-07	2.10E-01	2.09E-01	1.96E-01	1.76E-01	1.42E-01	1.15E-01	7.47E-02	2.57E-02	3.02E-03	3.56E-04
LA142	7.64E+00	1.67E-03	3.24E-08	2.39E-22	0.	0.	0.	0.	0.	0.	0.
CE143	4.99E-02	2.05E+00	1.24E+00	2.73E-01	2.20E-02	1.42E-04	9.20E-07	3.85E-11	4.35E-22	0.	0.
PR143	1.46E-08	1.31E-01	2.04E-01	2.64E-01	2.26E-01	1.38E-01	8.32E-02	3.01E-02	2.41E-03	1.53E-05	9.69E-08
CE144	1.99E-03	1.43E-02	1.42E-02	1.41E-02	1.39E-02	1.36E-02	1.33E-02	1.26E-02	1.12E-02	8.76E-03	6.88E-03
PR144	5.47E-07	1.43E-02	1.42E-02	1.41E-02	1.39E-02	1.36E-02	1.33E-02	1.26E-02	1.12E-02	8.76E-03	6.88E-03
PR145	8.04E-02	8.22E-01	5.08E-02	1.21E-05	1.10E-11	9.10E-24	7.55E-36	0.	0.	0.	0.
ND147	9.79E-06	1.65E-01	1.55E-01	1.28E-01	9.38E-02	5.04E-02	2.69E-02	7.73E-03	3.39E-04	6.60E-07	1.28E-09
ND147	2.72E-14	1.23E-04	2.38E-04	5.45E-04	9.41E-04	1.44E-03	1.70E-03	1.89E-03	1.91E-03	1.78E-03	1.65E-03
PM149	1.42E+01	1.38E-03	1.33E-07	1.21E-19	1.04E-39	0.	0.	0.	0.	0.	0.
PM149	1.98E-03	3.65E-01	2.68E-01	1.05E-01	2.18E-02	9.51E-04	4.14E-05	7.87E-08	1.24E-14	3.06E-28	7.63E-42
PM150	1.64E-01	3.46E-04	7.29E-07	6.85E-15	2.86E-28	0.	0.	0.	0.	0.	0.

ANNIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 3.648E-13

## DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
PM151	3.57E-02	2.43E-01	1.34E-01	2.26E-02	1.16E-03	3.04E-06	8.01E-09	5.53E-14	6.93E-27	0.	0.
SM153	1.22E-01	8.55E-02	6.00E-02	2.07E-02	3.53E-03	1.03E-04	2.98E-06	2.50E-09	5.16E-17	2.20E-32	9.35E-48
SM156	1.19E-01	2.03E-02	3.46E-03	1.70E-05	2.45E-09	5.04E-17	1.04E-24	4.43E-40	0.	0.	0.
EU155	5.00E-06	1.69E-04	1.69E-04	1.69E-04	1.69E-04	1.68E-04	1.67E-04	1.66E-04	1.63E-04	1.56E-04	1.50E-04
EU156	3.47E-04	2.83E-03	3.13E-03	2.81E-03	2.23E-03	1.40E-03	8.84E-04	3.51E-04	3.47E-05	3.42E-07	3.37E-09
EU157	1.93E-02	2.23E-02	7.51E-03	2.82E-04	1.18E-06	2.09E-11	3.69E-16	1.15E-25	0.	0.	0.
GD159	3.69E-03	7.27E-03	2.89E-03	1.80E-04	1.78E-06	1.72E-10	1.67E-14	1.56E-22	1.34E-42	0.	0.
TB161	4.69E-05	3.07E-04	2.77E-04	2.05E-04	1.24E-04	4.54E-05	1.66E-05	2.23E-06	1.47E-08	6.37E-13	2.77E-17
TOTAL	3.06E+02	6.82E+01	3.25E+01	1.22E+01	5.12E+00	2.00E+00	1.22E+00	6.72E-01	2.88E-01	1.01E-01	4.99E-02

ANNIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 3.648E-13

DEBRIS DECAY FROM 1 TO 50 YEARS

	ZERO TIME	1.00E+00	1.50E+00	2.00E+00	3.50E+00	5.00E+00	7.00E+00	1.00E+01	2.00E+01	3.50E+01	5.00E+01
BE 7	9.63E-06	8.32E-08	7.73E-09	7.18E-10	5.78E-13	4.63E-16	3.46E-20	2.22E-26	0.	0.	0.
* MN 54	3.30E-05	1.42E-05	9.37E-06	6.16E-06	1.76E-06	5.02E-07	9.46E-08	7.73E-09	1.82E-12	6.57E-18	2.38E-23
FE 59	2.33E-04	8.40E-07	5.04E-08	3.03E-09	6.58E-13	1.42E-16	1.85E-21	8.68E-29	0.	0.	0.
CO 57	5.12E-05	2.02E-05	1.26E-05	7.93E-06	1.95E-06	4.82E-07	7.44E-09	4.51E-09	3.95E-13	3.24E-19	0.
CO 58	4.53E-04	1.30E-05	2.21E-06	3.74E-07	1.82E-09	8.86E-12	7.31E-15	1.73E-19	6.63E-35	0.	0.
CO 60	3.60E-05	3.15E-05	2.94E-05	2.74E-05	2.26E-05	1.85E-05	1.42E-05	9.59E-06	2.57E-06	3.57E-07	4.94E-08
W 181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U234	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.06E-01	2.63E-10	2.57E-10	2.50E-10	2.34E-10	2.17E-10	1.97E-10	1.71E-10	1.07E-10	5.22E-11	2.57E-11
* AM241	6.19E-09	6.19E-09	6.19E-09	6.19E-09	6.22E-09	6.25E-09	6.25E-09	6.27E-09	6.30E-09	6.25E-09	6.16E-09
* CM242	3.10E-07	6.56E-08	3.02E-08	1.39E-08	1.35E-09	1.32E-10	5.91E-12	5.59E-14	1.61E-18	1.50E-18	1.40E-18
KR 85	4.48E-06	1.11E-04	1.08E-04	1.04E-04	9.52E-05	8.60E-05	7.56E-05	6.23E-05	3.29E-05	1.26E-05	4.81E-06
SR 89	3.84E-06	8.98E-04	7.86E-05	6.90E-06	4.65E-09	3.14E-12	1.85E-16	8.42E-23	6.12E-44	0.	0.
SR 90	7.71E-06	7.71E-04	7.64E-04	7.57E-04	7.29E-04	7.01E-04	6.67E-04	6.20E-04	4.84E-04	3.34E-04	2.31E-04
Y 90	1.14E-11	7.71E-04	7.64E-04	7.57E-04	7.29E-04	7.01E-04	6.67E-04	6.20E-04	4.84E-04	3.34E-04	2.31E-04
Y 91	2.51E-08	1.70E-03	1.97E-04	2.29E-05	3.59E-08	5.64E-11	1.03E-14	2.53E-20	5.12E-39	0.	0.
ZR 95	6.44E-04	1.66E-03	2.36E-04	3.36E-05	9.81E-08	2.85E-10	1.18E-13	9.97E-19	1.22E-35	0.	0.
NB 95M	1.37E-11	3.50E-05	5.00E-06	7.15E-07	2.08E-09	6.05E-12	2.50E-15	2.11E-20	2.59E-37	0.	0.
NB 95	7.18E-11	3.56E-03	5.11E-04	7.29E-05	2.11E-07	6.13E-10	2.56E-13	2.16E-18	2.65E-35	0.	0.
RU103	8.52E-05	3.31E-04	1.35E-05	5.57E-07	3.80E-11	2.61E-15	7.32E-21	3.44E-29	0.	0.	0.
RH103M	5.68E-09	3.32E-04	1.35E-05	5.57E-07	3.81E-11	2.61E-15	7.32E-21	3.45E-29	0.	0.	0.
RU106	5.39E-04	5.13E-03	3.63E-03	2.57E-03	9.15E-04	3.25E-04	8.18E-05	1.03E-05	1.04E-08	3.36E-13	1.08E-17
RH106	5.84E-06	5.13E-03	3.63E-03	2.57E-03	9.15E-04	3.25E-04	8.18E-05	1.03E-05	1.04E-08	3.36E-13	1.08E-17
SN123	4.38E-06	6.06E-05	2.20E-05	7.99E-06	3.83E-07	1.84E-08	3.20E-10	7.39E-13	1.18E-21	7.63E-35	4.90E-48
SB125	7.46E-05	1.50E-04	1.32E-04	1.16E-04	7.92E-05	5.39E-05	3.22E-05	1.49E-05	1.15E-06	2.44E-08	5.19E-10
TE125M	2.01E-12	6.13E-06	5.45E-05	4.80E-05	3.28E-05	2.23E-05	1.33E-05	6.17E-06	4.74E-07	1.01E-08	2.15E-10
TE127M	2.06E-10	1.47E-04	4.59E-05	1.44E-05	4.42E-07	1.36E-08	1.31E-10	1.23E-13	1.01E-23	7.54E-39	5.62E-54
TE127	2.14E-02	1.45E-04	4.54E-05	1.42E-05	4.36E-07	1.34E-08	1.29E-10	1.22E-13	9.99E-24	7.44E-39	5.57E-54
CS137	9.34E-05	9.85E-04	9.73E-04	9.62E-04	9.29E-04	8.95E-04	8.56E-04	8.00E-04	6.32E-04	4.49E-04	3.17E-04
BA137M	1.97E-07	9.23E-04	9.12E-04	9.01E-04	8.67E-04	8.39E-04	8.00E-04	7.50E-04	5.93E-04	4.20E-04	2.97E-04
CE141	1.90E-07	8.18E-05	1.64E-06	3.30E-08	2.69E-13	2.19E-18	3.59E-25	2.38E-35	0.	0.	0.
CE144	1.99E-03	5.86E-03	3.77E-03	2.40E-03	6.31E-04	1.66E-04	2.79E-05	1.93E-06	2.59E-10	4.07E-16	6.34E-22
PR144	5.47E-07	5.66E-03	3.77E-03	2.40E-03	6.31E-04	1.66E-04	2.79E-05	1.93E-06	2.59E-10	4.07E-16	6.34E-22
PM147	2.72E-14	1.58E-03	1.38E-03	1.21E-03	8.14E-04	5.47E-04	3.21E-04	1.46E-04	1.04E-05	1.96E-07	3.71E-09
EU155	5.00E-06	1.46E-04	1.36E-04	1.27E-04	1.02E-04	8.18E-05	6.11E-05	3.94E-05	9.22E-06	1.04E-06	1.17E-07
TOTAL	1.31E-01	3.65E-02	2.12E-02	1.52E-02	7.50E-03	4.93E-03	3.73E-03	3.09E-03	2.25E-03	1.55E-03	1.08E-03

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**APPENDIX B**  
**DETAILED RESULTS FOR EVENT NANCY**

NANCY  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.409E-13

TIME	MR/HR	MICROCURIES/SQ METER
ZERO TIME HOURS	1.08E+02	1.17E+04
1.00E+00	3.41E+01	2.45E+03
2.00E+00	1.35E+01	9.22E+02
3.00E+00	7.18E+00	5.47E+02
4.00E+00	4.47E+00	3.96E+02
6.00E+00	2.34E+00	2.64E+02
9.00E+00	1.38E+00	1.81E+02
1.20E+01	1.00E+00	1.38E+02
1.50E+01	7.82E-01	1.11E+02
1.80E+01	6.37E-01	9.25E+01
2.10E+01	5.33E-01	7.90E+01
1.00E+00 DAYS	4.48E-01	6.79E+01
2.00E+00	2.02E-01	3.22E+01
5.00E+00	7.97E-02	1.21E+01
1.00E+01	3.69E-02	5.09E+00
2.00E+01	1.46E-02	1.98E+00
3.00E+01	8.29E-03	1.20E+00
5.00E+01	3.73E-03	6.58E-01
1.00E+02	1.23E-03	2.82E-01
2.00E+02	4.16E-04	9.95E-02
3.00E+02	1.65E-04	4.93E-02
1.00E+00 YEARS	9.88E-05	3.61E-02
1.50E+00	3.60E-05	2.10E-02
2.00E+00	2.34E-05	1.50E-02
3.50E+00	1.42E-05	7.52E-03
5.00E+00	1.10E-05	4.96E-03
7.00E+00	9.21E-06	3.74E-03
1.00E+01	7.94E-06	3.07E-03
2.00E+01	5.85E-06	2.20E-03
3.50E+01	4.08E-06	1.51E-03
5.00E+01	2.87E-06	1.06E-03

NANCY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.409E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BE 7	3.68E-05	3.68E-05	3.68E-05	3.68E-05	3.68E-05	3.67E-05	3.67E-05	3.65E-05	3.65E-05	3.64E-05	3.64E-05
NA 24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 55	2.66E-04	2.66E-04	2.66E-04	2.66E-04	2.66E-04	2.66E-04	2.66E-04	2.66E-04	2.66E-04	2.66E-04	2.66E-04
FE 59	5.77E-04	5.76E-04	5.76E-04	5.76E-04	5.76E-04	5.75E-04	5.74E-04	5.73E-04	5.71E-04	5.71E-04	5.70E-04
CO 57	5.07E-05	5.07E-05	5.07E-05	5.07E-05	5.07E-05	5.07E-05	5.07E-05	5.07E-05	5.07E-05	5.07E-05	5.07E-05
CO 58	2.45E-04	2.45E-04	2.45E-04	2.45E-04	2.44E-04	2.44E-04	2.43E-04	2.43E-04	2.43E-04	2.43E-04	2.42E-04
CO 60	3.44E-05	3.44E-05	3.44E-05	3.44E-05	3.44E-05	3.44E-05	3.44E-05	3.44E-05	3.44E-05	3.44E-05	3.44E-05
CU 64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 67	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	2.27E-01	2.26E-01	2.25E-01	2.24E-01	2.23E-01	2.21E-01	2.18E-01	2.15E-01	2.12E-01	2.09E-01	2.07E-01
U239	2.06E+03	3.51E+02	5.99E+01	1.02E+01	1.73E+00	5.05E-02	2.50E-04	1.24E-06	6.11E-09	3.02E-11	1.50E-13
U240	4.65E-01	4.43E-01	4.22E-01	4.02E-01	3.82E-01	3.46E-01	2.99E-01	2.57E-01	2.22E-01	1.92E-01	1.65E-01
NP239	7.05E-03	1.18E+01	1.37E+01	1.39E+01	1.38E+01	1.34E+01	1.29E+01	1.25E+01	1.20E+01	1.16E+01	1.12E+01
NP240M	7.35E-04	4.45E-01	4.25E-01	4.05E-01	3.86E-01	3.49E-01	3.01E-01	2.60E-01	2.24E-01	1.93E-01	1.67E-01
NP240	1.86E-11	9.58E-12	4.97E-12	2.57E-12	1.33E-12	3.55E-13	4.89E-14	6.76E-15	9.31E-16	1.28E-16	1.78E-17
*AM241	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09
*CM242	3.07E-07	3.07E-07	3.07E-07	3.07E-07	3.07E-07	3.07E-07	3.05E-07	3.05E-07	3.05E-07	3.05E-07	3.05E-07
GE 75	1.49E-05	7.21E-02	4.34E-02	2.62E-02	1.57E-02	5.71E-03	1.25E-03	2.73E-04	5.96E-05	1.30E-05	2.84E-06
GE 77	7.27E-03	1.87E-02	1.78E-02	1.66E-02	1.56E-02	1.38E-02	1.15E-02	9.53E-03	7.94E-03	6.60E-03	5.49E-03
AS 77	7.51E-05	1.19E-02	1.20E-02	1.21E-02	1.22E-02	1.23E-02	1.23E-02	1.22E-02	1.20E-02	1.17E-02	1.14E-02
SE 77M	2.96E-09	3.55E-05	3.61E-05	3.64E-05	3.64E-05	3.66E-05	3.69E-05	3.66E-05	3.61E-05	3.53E-05	3.42E-05
GE 78	9.82E-01	6.14E-01	3.82E-01	2.39E-01	1.49E-01	5.80E-02	1.41E-02	3.41E-03	8.32E-04	2.02E-04	4.91E-05
AS 78	1.77E-02	2.93E-01	3.62E-01	3.39E-01	2.83E-01	1.67E-01	6.21E-02	2.06E-02	6.38E-03	1.91E-03	5.53E-04
AS 79	1.79E+01	1.77E-01	1.74E-03	1.72E-05	1.69E-07	1.64E-11	1.56E-17	1.49E-23	1.42E-29	1.36E-35	1.30E-41
SE 79M	2.66E-02	3.12E-01	3.08E-03	3.03E-05	2.98E-07	2.89E-11	2.75E-17	2.63E-23	2.51E-29	2.39E-35	2.28E-41
BR 80	1.06E-01	1.00E-02	9.42E-04	8.86E-05	8.35E-06	7.40E-08	6.20E-11	5.16E-14	4.30E-17	3.59E-20	3.00E-23
SE 81M	8.45E-02	3.94E+00	1.90E+00	9.15E-01	4.40E-01	1.03E-01	1.15E-02	1.29E-03	1.45E-04	1.62E-05	1.82E-06
SE 81	1.03E+00	4.66E+00	2.70E+00	1.35E+00	6.54E-01	1.52E-01	1.71E-02	1.91E-03	2.14E-04	2.41E-05	2.69E-06
BR 82	4.94E-04	4.84E-04	4.75E-04	4.66E-04	4.56E-04	4.39E-04	4.14E-04	3.90E-04	3.68E-04	3.46E-04	3.27E-04
SE 83	4.52E+01	8.57E+00	1.62E+00	3.08E-01	5.82E-02	2.09E-03	1.42E-05	9.68E-08	6.61E-10	4.48E-12	2.85E-14
BR 83	3.76E-01	5.61E+00	5.19E+00	4.08E+00	3.10E+00	1.75E+00	7.41E-01	3.12E-01	1.32E-01	5.55E-02	2.34E-02
KR 83M	1.94E-05	1.27E+00	2.59E+00	3.22E+00	3.32E+00	2.77E+00	1.63E+00	8.41E-01	4.05E-01	1.87E-01	8.41E-02

B-3



NANCY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.409E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME 1	00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BR 84	9.42E-02	1.63E+01	4.39E+00	1.19E+00	3.21E-01	2.35E-02	4.64E-04	9.17E-06	1.81E-07	3.59E-09	7.09E-11	
KR 85M	4.44E-03	9.52E+00	8.10E+00	6.92E+00	5.91E+00	4.32E+00	2.69E+00	1.68E+00	1.05E+00	6.50E-01	4.06E-01	
KR 87	7.17E+01	4.14E+01	2.40E+01	1.38E+01	7.99E+00	2.68E+00	5.20E-01	1.01E-01	1.95E-02	3.77E-03	7.30E-04	
KR 88	4.11E+01	3.21E+01	2.50E+01	1.95E+01	1.53E+01	9.28E+00	4.43E+00	2.11E+00	1.00E+00	4.77E-01	2.27E-01	
RB 88	1.05E+01	3.25E+01	2.77E+01	2.18E+01	1.71E+01	1.04E+01	4.96E+00	2.36E+00	1.13E+00	5.35E-01	2.54E-01	
RB 89	4.98E+01	4.68E+01	3.15E+00	2.11E-01	1.42E-02	6.42E-05	1.94E-08	5.86E-12	1.79E-15	5.41E-19	1.64E-22	
SR 89	3.82E-06	1.34E-01	1.43E-01	1.43E-01	1.43E-01	1.43E-01	1.43E-01	1.42E-01	1.42E-01	1.42E-01	1.42E-01	
SR 90	7.53E-06	7.73E-04	7.73E-04	7.73E-04	7.73E-04	7.73E-04	7.73E-04	7.73E-04	7.73E-04	7.73E-04	7.73E-04	
SR 91	8.92E-01	1.66E+01	1.55E+01	1.44E+01	1.34E+01	1.16E+01	9.37E+00	7.58E+00	6.12E+00	4.91E+00	3.96E+00	
Y 91M	6.00E-05	5.72E+00	7.80E+00	8.36E+00	8.25E+00	7.41E+00	6.06E+00	4.88E+00	3.93E+00	3.17E+00	2.56E+00	
SR 92	2.46E-08	5.09E-03	1.17E-02	1.87E-02	2.56E-02	3.83E-02	5.44E-02	6.73E-02	7.80E-02	8.64E-02	9.32E-02	
SR 92M	6.55E+00	2.92E+01	2.26E+01	1.75E+01	1.36E+01	8.13E+00	3.77E+00	1.75E+00	8.13E-01	3.77E-01	1.76E-01	
SR 93	3.02E-01	6.15E+00	9.65E+00	1.15E+01	1.22E+01	1.16E+01	8.89E+00	6.06E+00	3.90E+00	2.40E+00	1.45E+00	
Y 93	2.64E+02	4.55E+00	2.51E-02	1.39E-04	7.66E-07	2.34E-11	3.95E-18	6.66E-25	1.12E-31	1.90E-38	3.20E-45	
Y 93M	3.23E-01	1.04E+01	9.80E+00	9.16E+00	8.56E+00	7.48E+00	6.09E+00	4.97E+00	4.04E+00	3.32E+00	2.70E+00	
Y 94	3.85E+01	5.26E+01	6.77E+00	8.73E-01	1.13E-01	1.87E-03	4.01E-06	8.60E-09	1.84E-11	4.01E-14	2.22E-15	
Y 95	1.67E+02	1.57E+01	3.46E-01	7.63E-03	1.68E-04	8.15E-08	8.73E-13	9.33E-18	9.96E-23	1.06E-27	1.14E-32	
ZR 95	6.26E-04	8.18E-02	8.34E-02	8.34E-02	8.34E-02	8.34E-02	8.34E-02	8.32E-02	8.32E-02	8.29E-02	8.29E-02	
NB 95	6.97E-11	5.05E-05	1.18E-04	1.85E-04	2.53E-04	3.67E-04	5.87E-04	7.90E-04	9.88E-04	1.19E-03	1.39E-03	
ZR 97	1.53E+00	6.65E+00	6.36E+00	6.12E+00	5.86E+00	5.41E+00	4.78E+00	4.23E+00	3.76E+00	3.31E+00	2.94E+00	
NB 97M	7.86E-03	6.39E+00	6.12E+00	5.89E+00	5.65E+00	5.20E+00	4.60E+00	4.07E+00	3.60E+00	3.18E+00	2.81E+00	
NB 97	7.65E-01	3.34E+00	4.70E+00	5.36E+00	5.62E+00	5.60E+00	5.10E+00	4.55E+00	4.02E+00	3.55E+00	3.15E+00	
NB 98	8.69E+00	3.84E+00	1.70E+00	7.52E-01	3.33E-01	6.52E-02	5.64E-03	4.87E-04	4.24E-05	3.67E-06	3.16E-07	
MO 99	4.61E-03	1.90E+00	1.88E+00	1.87E+00	1.85E+00	1.81E+00	1.75E+00	1.70E+00	1.65E+00	1.60E+00	1.55E+00	
TC 99M	4.29E-08	1.82E-01	3.41E-01	4.82E-01	6.05E-01	8.08E-01	1.03E+00	1.16E+00	1.25E+00	1.30E+00	1.32E+00	
MO101	1.34E+02	6.05E+01	3.51E+00	2.04E-01	1.18E-02	3.96E-05	7.69E-09	1.50E-12	2.91E-16	5.66E-20	1.10E-23	
TC101	5.66E+00	1.70E+02	1.86E+01	1.52E+00	1.11E-01	5.00E-04	1.25E-07	2.80E-11	5.94E-15	1.22E-18	2.47E-22	
MO102	1.13E+03	2.58E+01	5.86E-01	1.34E-02	3.05E-04	1.59E-07	1.89E-12	2.24E-17	2.65E-22	3.15E-27	3.74E-32	
TC102M	7.26E-01	2.18E+01	4.99E-01	1.14E-02	2.60E-04	1.34E-07	1.60E-12	1.89E-17	2.24E-22	2.66E-27	3.16E-32	
TC102	3.40E+03	1.30E+01	2.96E-01	6.72E-03	1.54E-04	8.01E-08	9.52E-13	1.13E-17	1.34E-22	1.59E-27	1.88E-32	
RU103	8.22E-05	1.91E-01	1.90E-01	1.90E-01	1.90E-01	1.90E-01	1.89E-01	1.89E-01	1.89E-01	1.88E-01	1.87E-01	
RH103M	5.48E-09	9.85E-02	1.46E-01	1.69E-01	1.80E-01	1.87E-01	1.89E-01	1.89E-01	1.89E-01	1.88E-01	1.88E-01	
TC104	7.19E+01	5.16E+01	5.16E+00	5.11E-01	5.06E-02	4.98E-04	4.87E-07	4.75E-10	4.64E-13	4.54E-16	4.43E-19	
RU105	6.01E-01	2.08E+01	1.78E+01	1.52E+01	1.30E+01	9.53E+00	5.97E+00	3.73E+00	2.34E+00	1.46E+00	9.18E-01	
RH105M	3.96E-03	2.09E+01	1.78E+01	1.53E+01	1.30E+01	9.57E+00	5.97E+00	3.74E+00	2.34E+00	1.47E+00	9.18E-01	
RH105	6.50E-09	4.23E-01	7.86E-01	1.08E+00	1.33E+00	1.71E+00	2.04E+00	2.20E+00	2.24E+00	2.22E+00	2.16E+00	
RU106	5.28E-04	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	
RH106	5.71E-06	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	9.99E-03	
RH107	1.52E-01	2.07E+01	3.14E+00	4.72E-01	7.12E-02	1.63E-03	5.60E-06	1.93E-08	6.64E-11	2.27E-14	2.26E-17	
PD107M	3.17E-04	4.21E+00	6.36E-01	9.61E-02	1.45E-02	3.31E-04	1.14E-06	3.93E-09	1.35E-11	4.66E-14	1.59E-16	

B-4

NANCY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.409E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
PD109	1.35E-02	1.12E+00	1.06E+00	1.01E+00	9.57E-01	8.63E-01	7.42E-01	6.36E-01	5.45E-01	4.67E-01	4.01E-01
AG109M	7.77E-05	1.12E+00	1.06E+00	1.01E+00	9.59E-01	8.66E-01	7.42E-01	6.36E-01	5.45E-01	4.67E-01	4.01E-01
PD111M	1.83E+00	1.61E+00	1.42E+00	1.26E+00	1.11E+00	8.60E-01	5.89E-01	4.04E-01	2.77E-01	1.89E-01	1.30E-01
PD111	6.51E-01	1.17E+00	1.13E+00	1.00E+00	8.88E-01	6.90E-01	4.73E-01	3.24E-01	2.22E-01	1.52E-01	1.04E-01
AG111M	5.18E-03	1.58E+00	1.49E+00	1.33E+00	1.17E+00	9.08E-01	6.21E-01	4.25E-01	2.92E-01	2.00E-01	1.37E-01
AG111	1.84E-09	5.46E-03	1.15E-02	1.69E-02	2.16E-02	2.95E-02	3.79E-02	4.34E-02	4.70E-02	4.93E-02	5.07E-02
PD112	4.62E-01	4.48E-01	4.32E-01	4.18E-01	4.06E-01	3.79E-01	3.44E-01	3.11E-01	2.82E-01	2.55E-01	2.31E-01
AG112	1.39E-05	8.86E-02	1.56E-01	2.10E-01	2.49E-01	2.99E-01	3.28E-01	3.27E-01	3.11E-01	2.90E-01	2.68E-01
AG113	5.34E-03	1.14E+00	1.00E+00	8.79E-01	7.71E-01	5.93E-01	4.01E-01	2.71E-01	1.83E-01	1.23E-01	8.35E-02
AG115	1.99E+00	2.13E+00	2.65E-01	3.31E-02	4.15E-03	6.48E-05	1.27E-07	2.48E-10	4.79E-13	4.76E-16	4.41E-16
CD115M	1.62E-08	4.32E-04	4.86E-04	4.92E-04	4.92E-04	4.92E-04	4.90E-04	4.90E-04	4.89E-04	4.87E-04	4.87E-04
CD115	6.27E-06	1.18E-01	1.27E-01	1.27E-01	1.25E-01	1.22E-01	1.18E-01	1.13E-01	1.09E-01	1.05E-01	1.01E-01
IN115M	7.82E-11	1.31E-02	2.90E-02	4.30E-02	5.49E-02	7.31E-02	9.03E-02	9.95E-02	1.04E-01	1.05E-01	1.04E-01
CD117	1.39E-01	2.31E+00	1.74E+00	1.30E+00	9.74E-01	5.46E-01	2.29E-01	9.66E-02	4.07E-02	1.71E-02	7.19E-03
IN117M	6.67E-06	8.03E-01	1.16E+00	1.26E+00	1.22E+00	9.61E-01	5.50E-01	2.81E-01	1.35E-01	6.26E-02	2.83E-02
IN117	2.68E-10	1.47E-01	3.55E-01	4.93E-01	5.50E-01	5.06E-01	3.22E-01	1.72E-01	8.57E-02	4.03E-02	1.85E-02
CD118	9.14E+00	3.92E+00	1.68E+00	7.17E-01	3.07E-01	5.61E-02	4.41E-03	3.44E-04	2.71E-05	2.12E-06	1.66E-07
IN118	6.06E-01	3.92E+00	1.68E+00	7.18E-01	3.07E-01	5.63E-02	4.41E-03	3.46E-04	2.71E-05	2.12E-06	1.66E-07
CD119	2.31E+01	3.60E-01	5.61E-03	8.78E-05	1.37E-06	3.36E-10	1.28E-15	4.89E-21	1.86E-26	7.11E-32	2.72E-37
IN119M	3.48E-02	3.89E+00	4.23E-01	4.27E-02	4.25E-03	4.18E-05	4.08E-08	3.99E-11	3.89E-14	3.80E-17	3.72E-20
IN119	1.71E+00	2.05E-01	2.36E-02	2.41E-03	2.41E-04	2.36E-06	2.31E-09	2.25E-12	2.20E-15	2.15E-18	2.10E-21
SN121	2.90E-03	2.99E-01	2.90E-01	2.84E-01	2.77E-01	2.63E-01	2.43E-01	2.25E-01	2.08E-01	1.93E-01	1.79E-01
SN123M	1.48E+00	2.76E+00	9.79E-01	3.46E-01	1.22E-01	1.53E-02	6.76E-04	2.99E-05	1.32E-06	5.84E-08	2.58E-09
SN123	1.39E-05	1.45E-03	1.45E-03	1.45E-03	1.45E-03	1.45E-03	1.45E-03	1.45E-03	1.45E-03	1.45E-03	1.45E-03
SN125	3.29E-02	3.28E-02	3.27E-02	3.26E-02	3.25E-02	3.23E-02	3.20E-02	3.17E-02	3.14E-02	3.11E-02	3.08E-02
SB125	1.98E-04	1.98E-04	1.99E-04	2.00E-04	2.01E-04	2.03E-04	2.06E-04	2.09E-04	2.11E-04	2.14E-04	2.16E-04
SB126	4.47E-03	4.46E-03	4.45E-03	4.44E-03	4.43E-03	4.41E-03	4.38E-03	4.35E-03	4.32E-03	4.29E-03	4.26E-03
SN127	4.69E+00	3.37E+00	2.42E+00	1.74E+00	1.25E+00	6.47E-01	2.40E-01	8.94E-02	3.31E-02	1.23E-02	4.58E-03
SB127	5.47E-02	1.89E-01	2.09E-01	2.22E-01	2.32E-01	2.42E-01	2.46E-01	2.43E-01	2.40E-01	2.34E-01	2.30E-01
TE127	3.09E-02	3.85E-02	4.67E-02	5.54E-02	6.41E-02	8.04E-02	1.03E-01	1.20E-01	1.34E-01	1.44E-01	1.51E-01
SN128	2.92E+01	1.44E+01	7.15E+00	3.53E+00	1.75E+00	4.26E-01	5.14E-02	6.21E-03	7.49E-04	9.08E-05	1.09E-05
SB128M	1.49E-02	1.64E+01	8.53E+00	4.21E+00	2.08E+00	5.09E-01	6.13E-02	7.40E-03	8.92E-04	1.08E-04	1.30E-05
SB128	1.23E+00	1.19E+00	1.12E+00	1.05E+00	9.77E-01	8.38E-01	6.69E-01	5.31E-01	4.21E-01	3.34E-01	2.65E-01
SN129M	1.69E+01	8.40E+00	4.21E+00	2.11E+00	1.05E+00	2.63E-01	3.29E-02	4.12E-03	5.14E-04	6.43E-05	8.04E-06
SN129	1.12E+02	1.10E+00	1.09E-02	1.07E-04	1.05E-06	1.02E-10	9.75E-17	9.32E-23	8.89E-29	8.47E-35	8.11E-41
SB129	6.32E+00	1.06E+01	9.96E+00	8.89E+00	7.83E+00	5.81E+00	3.62E+00	2.24E+00	1.38E+00	8.54E-01	5.25E-01
TE129M	1.20E-07	1.32E-03	2.72E-03	4.01E-03	5.14E-03	6.97E-03	8.82E-03	9.96E-03	1.07E-02	1.11E-02	1.14E-02
TE129	4.55E+00	6.26E+00	7.33E+00	7.61E+00	7.33E+00	6.07E+00	4.04E+00	2.55E+00	1.59E+00	9.82E-01	6.09E-01
SB130M	5.83E-01	1.10E+00	2.89E-03	7.58E-06	2.00E-08	1.38E-13	2.51E-21	4.56E-29	8.28E-37	1.50E-44	2.74E-52
SB130	9.99E+01	3.02E+01	8.60E+00	2.43E+00	6.89E-01	5.54E-02	1.26E-03	2.88E-05	6.57E-07	1.50E-08	3.42E-10

B-5

NANCY  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.409E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
I130	2.78E-02	2.63E-02	2.49E-02	2.35E-02	2.22E-02	1.99E-02	1.68E-02	1.42E-02	1.20E-02	1.02E-02	8.60E-03	
SB131	2.13E+02	5.57E+01	9.11E+00	1.50E+00	2.45E-01	6.61E-03	2.91E-05	1.28E-07	5.66E-10	2.49E-12	1.24E-14	
TE131M	1.03E-04	5.37E-01	6.13E-01	6.13E-01	6.02E-01	5.75E-01	5.36E-01	5.00E-01	4.67E-01	4.36E-01	4.07E-01	
TE131	9.45E+01	1.03E+02	3.34E+01	8.70E+00	2.11E+00	1.99E-01	9.86E-02	9.11E-02	8.50E-02	7.95E-02	7.41E-02	
I131	1.37E-02	4.76E-01	7.00E-01	7.68E-01	7.82E-01	7.89E-01	7.89E-01	7.82E-01	7.82E-01	7.75E-01	7.75E-01	
TE132	1.04E+00	2.53E+00	2.50E+00	2.48E+00	2.46E+00	2.42E+00	2.35E+00	2.29E+00	2.23E+00	2.17E+00	2.11E+00	
I132	2.55E+00	2.55E+00	2.54E+00	2.53E+00	2.51E+00	2.48E+00	2.42E+00	2.36E+00	2.30E+00	2.24E+00	2.18E+00	
TE133M	1.25E-01	4.33E+01	1.88E+01	8.20E+00	3.57E+00	6.78E-01	5.57E-02	4.60E-03	3.79E-04	3.13E-05	2.58E-06	
TE133	7.01E+02	3.98E+01	4.42E+00	1.46E+00	6.18E-01	1.17E-01	9.69E-03	7.96E-04	6.60E-05	5.43E-06	4.48E-07	
I133	1.09E+00	1.17E+01	1.27E+01	1.27E+01	1.24E+01	1.18E+01	1.07E+01	9.69E+00	8.74E+00	7.96E+00	7.19E+00	
XE133M	4.63E-08	2.63E-03	6.36E-03	1.02E-02	1.38E-02	2.08E-02	3.01E-02	3.82E-02	4.51E-02	5.09E-02	5.58E-02	
XE133	8.08E-07	4.60E-02	1.12E-01	1.78E-01	2.45E-01	3.71E-01	5.44E-01	6.95E-01	8.32E-01	9.51E-01	1.06E+00	
TE134	2.18E+02	1.01E+02	3.75E+01	1.40E+01	5.18E+00	7.18E-01	3.67E-02	1.88E-03	9.62E-05	4.94E-06	2.53E-07	
I134	9.97E+01	1.33E+02	9.34E+01	5.47E+01	2.94E+01	7.46E+00	8.20E-01	8.37E-02	8.20E-03	7.86E-04	7.46E-05	
I135	1.83E+01	3.23E+01	2.91E+01	2.62E+01	2.37E+01	1.92E+01	1.41E+01	1.03E+01	7.58E+00	5.58E+00	4.08E+00	
XE135M	2.03E-03	9.32E+00	9.06E+00	8.21E+00	7.37E+00	6.00E+00	4.41E+00	3.23E+00	2.37E+00	1.74E+00	1.27E+00	
XE135	2.11E+00	4.18E+00	6.11E+00	7.69E+00	8.95E+00	1.07E+01	1.19E+01	1.20E+01	1.14E+01	1.04E+01	9.27E+00	
CS136	1.28E-02	1.28E-02	1.28E-02	1.28E-02	1.27E-02	1.27E-02	1.26E-02	1.25E-02	1.24E-02	1.23E-02	1.22E-02	
CS137	9.11E-05	9.82E-04	9.82E-04	9.82E-04	9.82E-04	9.82E-04	9.82E-04	9.82E-04	9.82E-04	9.82E-04	9.82E-04	
BA137M	1.92E-07	9.16E-04	9.16E-04	9.16E-04	9.16E-04	9.16E-04	9.16E-04	9.16E-04	9.16E-04	9.16E-04	9.16E-04	
XE138	6.92E+02	5.96E+01	5.18E+00	4.49E-01	3.88E-02	2.91E-04	1.89E-07	1.23E-10	7.99E-14	5.19E-17	3.37E-20	
CS138	1.03E+02	1.73E+02	6.01E+01	1.77E+01	4.95E+00	3.77E-01	7.83E-03	1.63E-04	3.37E-06	7.03E-08	1.45E-09	
CS139	6.60E+02	2.11E+01	2.64E-01	3.32E-03	4.16E-05	6.53E-09	1.30E-14	2.57E-20	5.09E-26	1.01E-31	1.99E-37	
BA139	1.22E+01	1.36E+02	8.37E+01	5.09E+01	3.08E+01	1.13E+01	2.51E+00	5.56E+00	1.24E-01	2.74E-02	6.09E-03	
BA140	1.07E-01	6.65E-01	6.65E-01	6.60E-01	6.60E-01	6.55E-01	6.55E-01	6.50E-01	6.45E-01	6.40E-01	6.35E-01	
LA140	2.53E-07	1.14E-02	2.25E-02	3.35E-02	4.42E-02	6.50E-02	9.49E-02	1.23E-01	1.49E-01	1.74E-01	1.97E-01	
BA141	1.60E+02	4.85E+01	4.81E+00	4.78E-01	4.74E-02	4.70E-04	4.58E-07	4.47E-10	4.36E-13	4.28E-16	4.16E-19	
LA141	1.48E+00	3.14E+01	2.93E+01	2.48E+01	2.08E+01	1.46E+01	8.56E+00	5.00E+00	2.95E+00	1.73E+00	1.01E+00	
CE141	1.83E-07	2.04E-02	4.78E-02	7.18E-02	9.21E-02	1.23E-01	1.53E-01	1.70E-01	1.80E-01	1.86E-01	1.89E-01	
BA142	3.19E+02	1.27E+01	2.89E-01	6.59E-03	1.50E-04	7.81E-08	9.26E-13	1.10E-17	1.30E-22	1.55E-27	1.84E-32	
LA142	7.32E+00	5.08E+01	3.35E+01	2.13E+01	1.36E+01	5.48E+00	1.42E+00	3.65E-01	9.40E-02	2.42E-02	6.24E-03	
LA143	1.19E+02	2.33E+01	1.19E+00	6.13E-02	3.15E-03	8.25E-06	1.11E-09	1.50E-13	2.02E-17	2.73E-21	3.68E-25	
CE143	4.77E-02	3.04E+00	3.15E+00	3.07E+00	3.01E+00	2.90E+00	2.72E+00	2.55E+00	2.39E+00	2.25E+00	2.11E+00	
PR143	1.39E-08	4.66E-03	1.12E-02	1.78E-02	2.41E-02	3.65E-02	5.38E-02	7.03E-02	8.53E-02	9.95E-02	1.13E-01	
CE144	1.91E-03	1.37E-02	1.37E-02	1.37E-02	1.37E-02	1.37E-02	1.36E-02	1.36E-02	1.36E-02	1.36E-02	1.36E-02	
PR144	5.23E-07	1.24E-02	1.36E-02	1.36E-02	1.37E-02	1.37E-02	1.37E-02	1.37E-02	1.36E-02	1.36E-02	1.36E-02	
PR145	7.71E-02	1.13E+01	1.01E+01	8.96E+00	8.00E+00	6.34E+00	4.47E+00	3.15E+00	2.23E+00	1.58E+00	1.12E+00	
CE146	2.27E+02	1.16E+01	5.96E-01	3.05E-02	1.57E-03	4.13E-06	5.57E-10	7.50E-14	1.01E-17	1.36E-21	1.84E-25	
PR146	4.69E+00	4.08E+01	9.25E+00	1.74E+00	3.13E-01	9.83E-03	5.43E-05	3.00E-07	1.66E-09	9.17E-12	5.01E-14	
PR147	2.65E+01	7.66E+00	2.39E-01	7.46E-03	2.34E-04	2.28E-07	6.96E-12	2.13E-16	6.49E-21	1.98E-25	6.04E-30	

NANCY  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.409E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
ND147	9.45E-06	1.78E-01	1.83E-01	1.83E-01	1.82E-01	1.81E-01	1.80E-01	1.78E-01	1.77E-01	1.76E-01	1.74E-01
ND149	1.36E+01	9.23E+00	6.28E+00	4.28E+00	2.90E+00	1.35E+00	4.23E-01	1.34E-01	4.21E-02	1.32E-02	4.18E-03
PM149	1.89E-03	1.48E-01	2.45E-01	3.10E-01	3.51E-01	3.95E-01	4.10E-01	4.03E-01	3.92E-01	3.77E-01	3.64E-01
PM150	1.59E-01	1.23E-01	9.53E-02	7.36E-02	5.69E-02	3.41E-02	1.58E-02	7.31E-03	3.39E-03	1.57E-03	7.26E-04
ND151	5.47E+01	1.71E+00	5.35E-02	1.67E-03	5.23E-05	5.10E-08	1.56E-12	4.76E-17	1.45E-21	4.42E-26	1.35E-30
PM151	3.47E-02	4.05E-01	4.08E-01	3.98E-01	3.88E-01	3.69E-01	3.42E-01	3.17E-01	2.95E-01	2.73E-01	2.54E-01
PM152	8.85E+01	8.66E-02	8.44E-05	8.25E-08	8.06E-11	7.70E-17	7.17E-26	6.68E-35	6.22E-44	5.81E-53	5.40E-62
SM153	1.22E-01	1.20E-01	1.18E-01	1.17E-01	1.15E-01	1.12E-01	1.07E-01	1.02E-01	9.77E-02	9.36E-02	8.95E-02
SM155	9.45E+00	1.55E+00	2.54E-01	4.16E-02	6.82E-03	1.84E-04	8.11E-07	3.57E-09	1.57E-11	7.01E-14	1.72E-16
EU155	6.95E-06	1.98E-04	2.29E-04	2.34E-04	2.35E-04	2.35E-04	2.35E-04	2.35E-04	2.35E-04	2.35E-04	2.35E-04
SM156	1.27E-01	1.18E-01	1.10E-01	1.02E-01	9.46E-02	8.17E-02	6.54E-02	5.25E-02	4.21E-02	3.37E-02	2.70E-02
EU156	3.72E-04	6.07E-04	8.24E-04	1.03E-03	1.21E-03	1.55E-03	1.97E-03	2.28E-03	2.55E-03	2.75E-03	2.90E-03
EU157	1.96E-02	6.51E-02	6.21E-02	5.93E-02	5.66E-02	5.17E-02	4.51E-02	3.94E-02	3.43E-02	2.99E-02	2.61E-02
EU158	7.62E-01	3.09E-01	1.25E-01	5.06E-02	2.05E-02	3.35E-03	2.23E-04	1.48E-05	9.83E-07	6.53E-08	4.34E-09
EU159	9.24E-01	9.18E-02	9.09E-03	9.03E-04	8.95E-05	8.83E-07	8.63E-10	8.42E-13	8.22E-16	8.03E-19	7.85E-22
GD159	3.96E-03	1.73E-02	1.80E-02	1.75E-02	1.68E-02	1.56E-02	1.39E-02	1.24E-02	1.10E-02	9.81E-03	8.75E-03
TB161	6.75E-05	4.86E-04	4.82E-04	4.81E-04	4.79E-04	4.74E-04	4.70E-04	4.63E-04	4.57E-04	4.52E-04	4.46E-04
TOTAL	1.17E+04	2.45E+03	9.22E+02	5.47E+02	3.96E+02	2.64E+02	1.81E+02	1.38E+02	1.11E+02	9.25E+01	7.90E+01

NANCY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.409E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
BE 7	3.68E-05	3.64E-05	3.59E-05	3.45E-05	3.24E-05	2.84E-05	2.49E-05	1.92E-05	1.00E-05	2.73E-06	7.42E-07	
NA 24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 55	2.66E-04	2.66E-04	2.66E-04	2.65E-04	2.64E-04	2.63E-04	2.60E-04	2.57E-04	2.47E-04	2.30E-04	2.13E-04	
FE 59	5.77E-04	5.68E-04	5.59E-04	5.34E-04	4.94E-04	4.24E-04	3.63E-04	2.67E-04	1.24E-04	2.64E-05	5.68E-06	
CO 57	5.07E-05	5.07E-05	5.04E-05	5.04E-05	4.96E-05	4.81E-05	4.70E-05	4.47E-05	3.95E-05	3.05E-05	2.36E-05	
CO 58	2.45E-04	2.42E-04	2.40E-04	2.33E-04	2.22E-04	2.01E-04	1.83E-04	1.50E-04	9.26E-05	3.50E-05	1.32E-05	
CO 60	3.44E-05	3.44E-05	3.44E-05	3.44E-05	3.42E-05	3.42E-05	3.40E-05	3.38E-05	3.30E-05	3.20E-05	3.08E-05	
CU 64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 67	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W1 81	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W1 85	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W1 87	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W1 88	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	2.27E-01	2.04E-01	1.84E-01	1.36E-01	3.11E-02	2.90E-02	1.04E-02	1.33E-03	7.86E-06	8.45E-10	5.70E-10	
U240	4.65E-01	1.43E-01	4.39E-02	1.27E-03	3.50E-06	2.63E-11	1.98E-16	1.12E-26	0.	0.	0.	0.
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP239	7.05E-03	1.08E+01	8.01E+00	3.31E+00	7.57E-01	3.96E-02	2.07E-03	5.68E-06	2.23E-12	5.33E-22	5.33E-22	
NP240M	7.35E-04	1.44E-01	4.43E-02	1.28E-03	3.52E-06	2.65E-11	1.99E-16	1.12E-26	0.	0.	0.	0.
AM241	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	7.97E-09	
CM242	3.07E-07	3.05E-07	3.04E-07	3.00E-07	2.94E-07	2.81E-07	2.70E-07	2.48E-07	2.02E-07	1.31E-07	8.58E-08	
GE 77	7.27E-03	4.58E-03	1.05E-03	1.27E-05	8.05E-09	3.26E-15	1.31E-21	2.15E-34	0.	0.	0.	0.
AS 77	7.51E-05	1.11E-02	8.03E-03	2.32E-03	2.72E-04	3.69E-06	5.01E-08	9.24E-12	4.28E-21	9.18E-40	1.97E-58	
SE 77M	2.96E-09	3.34E-05	2.40E-05	6.98E-06	8.13E-07	1.11E-08	1.50E-10	2.77E-14	1.28E-23	2.75E-42	5.92E-61	
AS 78	1.77E-02	1.57E-04	4.60E-09	3.89E-23	0.	0.	0.	0.	0.	0.	0.	0.
BR 82	4.94E-04	3.08E-04	1.92E-04	4.68E-05	4.43E-06	3.98E-08	3.57E-10	2.89E-14	1.68E-24	5.78E-45	1.97E-65	
BR 83	3.76E-01	9.89E-03	9.95E-06	1.01E-14	1.03E-29	0.	0.	0.	0.	0.	0.	0.
KR 83M	1.94E-05	4.33E-02	4.91E-05	4.42E-14	4.53E-29	0.	0.	0.	0.	0.	0.	0.
KR 85M	4.44E-03	2.54E-01	5.78E-03	6.86E-08	4.23E-16	1.61E-32	6.09E-49	0.	0.	0.	0.	0.
KR 85	4.59E-06	1.21E-04	1.23E-04	1.23E-04	1.23E-04	1.23E-04	1.23E-04	1.22E-04	1.21E-04	1.19E-04	1.17E-04	
KR 87	7.17E+01	1.42E-04	2.80E-10	2.17E-27	0.	0.	0.	0.	0.	0.	0.	0.
KR 88	4.11E+01	1.08E-01	2.84E-04	5.16E-12	6.49E-25	0.	0.	0.	0.	0.	0.	0.
RB 88	1.05E+01	1.21E-01	3.18E-04	5.77E-12	7.23E-25	0.	0.	0.	0.	0.	0.	0.
SR 89	3.82E-06	1.14E-01	1.13E-01	1.08E-01	1.02E-01	8.87E-02	7.75E-02	5.97E-02	3.05E-02	8.03E-03	2.12E-03	
SR 90	7.53E-06	7.73E-04	7.73E-04	7.73E-04	7.73E-04	7.73E-04	7.73E-04	7.73E-04	7.66E-04	7.66E-04	7.60E-04	
Y 90	1.12E-11	1.77E-04	3.13E-04	5.63E-04	7.19E-04	7.66E-04	7.73E-04	7.73E-04	7.66E-04	7.66E-04	7.60E-04	
SR 91	8.92E-01	3.19E+00	5.72E-01	3.28E-03	6.00E-07	2.04E-14	6.90E-22	7.86E-37	0.	0.	0.	0.

B-8

NANCY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.409E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
Y 91M	6.00E-05	2.07E+00	3.69E-01	2.12E-03	3.89E-07	1.31E-14	4.44E-22	5.07E-37	0.	0.	0.
Y 91	2.46E-08	9.82E-02	1.16E-01	1.16E-01	1.09E-01	9.71E-02	8.64E-02	6.85E-02	3.79E-02	1.17E-02	3.59E-03
SR 92	6.55E+00	8.16E-02	1.76E-04	1.77E-12	8.28E-26	0.	0.	0.	0.	0.	0.
Y 92	3.02E-01	8.55E-01	9.50E-03	7.31E-09	4.26E-19	1.46E-39	4.99E-60	0.	0.	0.	0.
Y 93	3.23E-01	2.18E+00	4.25E-01	3.20E-03	9.20E-07	7.60E-14	6.27E-21	4.28E-35	0.	0.	0.
ZR 95	6.26E-04	7.82E-02	7.74E-02	7.49E-02	7.11E-02	6.37E-02	5.74E-02	4.64E-02	2.72E-02	9.36E-03	3.21E-03
NB 95M	1.33E-11	2.65E-04	4.83E-04	9.22E-04	1.24E-03	1.31E-03	1.21E-03	9.83E-04	5.76E-04	1.98E-04	6.83E-05
NB 95	6.97E-11	1.51E-03	2.99E-03	7.16E-03	1.33E-02	2.30E-02	2.96E-02	3.68E-02	3.54E-02	1.70E-02	6.53E-03
ZR 97	1.53E+00	2.60E+00	9.78E-01	5.18E-02	3.89E-04	2.19E-08	1.23E-12	3.89E-21	2.19E-42	0.	0.
NB 97M	7.86E-03	2.50E+00	9.38E-01	4.99E-02	3.73E-04	2.10E-08	1.18E-12	3.73E-21	2.11E-42	0.	0.
NB 97	7.65E-01	2.61E+00	9.80E-01	5.20E-02	3.92E-04	2.36E-08	1.32E-12	4.20E-21	2.37E-42	0.	0.
MO 99	4.61E-03	1.50E+00	1.17E+00	5.55E-01	1.61E-01	1.34E-02	1.12E-03	7.82E-06	3.17E-11	5.23E-22	9.61E-33
TC 99M	4.29E-08	1.32E+00	1.11E+00	5.32E-01	1.53E-01	1.28E-02	1.07E-03	7.46E-06	3.03E-11	5.00E-22	8.23E-33
RU103	8.22E-05	1.87E-01	1.84E-01	1.74E-01	1.60E-01	1.34E-01	1.13E-01	7.95E-02	3.31E-02	5.74E-03	1.00E-03
RH103M	5.48E-09	1.87E-01	1.84E-01	1.75E-01	1.60E-01	1.34E-01	1.13E-01	7.95E-02	3.31E-02	5.74E-03	1.00E-03
RU105	6.01E-01	5.75E-01	1.35E-02	1.76E-07	1.30E-15	6.94E-32	3.72E-48	0.	0.	0.	0.
RH105M	3.96E-03	5.75E-01	1.36E-02	1.78E-07	1.30E-15	6.98E-32	3.73E-48	0.	0.	0.	0.
RH105	6.50E-09	2.08E+00	1.36E+00	3.38E-01	3.33E-02	3.24E-04	3.15E-06	2.97E-10	2.58E-20	1.94E-40	1.45E-60
RU106	5.28E-04	9.99E-03	9.95E-03	9.90E-03	9.82E-03	9.64E-03	9.43E-03	9.08E-03	8.26E-03	6.83E-03	5.66E-03
RH106	5.71E-06	9.99E-03	9.95E-03	9.90E-03	9.82E-03	9.64E-03	9.43E-03	9.08E-03	8.26E-03	6.83E-03	5.66E-03
PD109	1.35E-02	3.43E-01	1.00E-01	2.43E-03	5.22E-06	2.33E-11	1.04E-16	2.05E-27	0.	0.	0.
AG109M	7.77E-05	3.43E-01	1.00E-01	2.48E-03	5.25E-06	2.33E-11	1.04E-16	2.05E-27	0.	0.	0.
PD111M	1.83E+00	8.88E-02	4.32E-03	4.95E-07	1.34E-13	9.76E-27	7.17E-40	0.	0.	0.	0.
PD111	6.51E-01	7.17E-02	3.47E-03	3.98E-07	1.08E-13	7.85E-27	5.76E-40	0.	0.	0.	0.
AG111M	5.18E-03	9.35E-02	4.55E-03	5.24E-07	1.41E-13	1.04E-26	7.58E-40	0.	0.	0.	0.
AG111	1.84E-09	5.09E-02	4.89E-02	3.72E-02	2.34E-02	9.29E-03	3.69E-03	5.81E-04	5.72E-06	5.54E-10	5.37E-14
PD112	4.62E-01	2.10E-01	9.49E-02	8.82E-03	1.68E-04	6.09E-08	2.21E-11	2.90E-18	1.83E-35	0.	0.
AG112	1.39E-05	2.44E-01	1.12E-01	1.04E-02	1.99E-04	7.18E-08	2.61E-11	3.44E-18	2.16E-35	0.	0.
AG113	5.34E-03	5.64E-02	2.44E-03	1.98E-07	3.03E-14	7.10E-28	1.66E-41	0.	0.	0.	0.
CD115M	1.62E-08	4.70E-04	4.62E-04	4.40E-04	4.07E-04	3.45E-04	2.95E-04	2.13E-04	9.52E-05	1.89E-05	3.78E-06
CD115	6.27E-06	9.44E-02	6.92E-02	2.73E-02	5.75E-03	2.57E-04	1.15E-05	2.29E-08	4.04E-15	1.26E-28	3.96E-42
IN115M	7.82E-11	9.96E-02	7.55E-02	2.98E-02	6.27E-03	2.81E-04	1.25E-05	2.49E-08	4.41E-15	1.38E-28	4.32E-42
CD117	1.39E-01	3.02E-03	2.94E-06	2.75E-15	2.44E-30	0.	0.	0.	0.	0.	0.
IN117M	6.67E-06	1.26E-02	1.45E-05	1.40E-14	1.25E-29	0.	0.	0.	0.	0.	0.
IN117	2.68E-10	8.28E-03	9.81E-06	9.50E-15	8.42E-30	0.	0.	0.	0.	0.	0.
SN121	2.90E-03	1.66E-01	8.93E-02	1.41E-02	6.46E-04	1.36E-06	2.87E-09	1.28E-14	5.35E-28	0.	0.
SN123	1.39E-05	1.45E-03	1.44E-03	1.41E-03	1.38E-03	1.30E-03	1.23E-03	1.10E-03	8.35E-04	4.80E-04	2.76E-04
SN125	3.29E-02	3.06E-02	2.84E-02	2.28E-02	1.57E-02	7.53E-03	3.60E-03	8.24E-04	2.06E-05	1.30E-08	8.13E-12
SB125	1.98E-04	2.19E-04	2.40E-04	2.93E-04	3.59E-04	4.35E-04	4.68E-04	4.88E-04	4.78E-04	4.47E-04	4.17E-04
SB126	4.47E-03	4.23E-03	4.01E-03	3.39E-03	2.57E-03	1.47E-03	8.49E-04	2.80E-04	1.75E-05	8.49E-08	1.71E-08

NANCY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.409E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME 1	00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SN127	4.69E+00	1.70E-03	6.17E-07	2.95E-17	1.85E-34	0.	0.	0.	0.	0.	0.	0.
SB127	5.47E-02	2.25E-01	1.88E-01	1.10E-01	4.49E-02	7.51E-03	1.25E-03	3.51E-05	4.58E-09	7.81E-17	1.33E-24	1.33E-24
TE127M	4.43E-10	3.43E-04	6.27E-04	1.22E-03	1.68E-03	1.86E-03	1.79E-03	1.59E-03	1.16E-03	6.11E-04	3.23E-04	3.23E-04
TE127	3.09E-02	1.61E-01	1.58E-01	9.62E-02	4.06E-02	8.34E-03	2.85E-03	1.60E-03	1.14E-03	6.04E-04	3.19E-04	3.19E-04
SB128	1.23E+00	2.10E-01	3.32E-02	1.30E-04	1.26E-08	1.18E-16	1.11E-24	9.77E-41	0.	0.	0.	0.
SB129	6.32E+00	3.24E-01	6.76E-03	6.15E-08	2.45E-16	3.86E-33	6.10E-50	0.	0.	0.	0.	0.
TE129M	1.20E-07	1.26E-02	1.26E-02	1.19E-02	1.07E-02	8.75E-03	7.11E-03	4.74E-03	1.71E-03	2.23E-04	2.90E-05	2.90E-05
TE129	4.55E+00	3.79E-01	1.58E-02	7.61E-03	6.87E-03	5.60E-03	4.57E-03	3.04E-03	1.10E-03	1.43E-04	1.86E-05	1.86E-05
I130	2.78E-02	7.27E-03	1.90E-03	3.40E-05	4.15E-08	6.19E-14	9.23E-20	2.05E-31	0.	0.	0.	0.
TE131M	1.03E-04	3.59E-01	2.06E-01	3.90E-02	2.44E-03	9.52E-06	3.73E-08	5.68E-13	5.17E-25	0.	0.	0.
TE131	9.45E+01	6.55E-02	3.76E-02	7.14E-03	4.45E-04	1.74E-06	6.79E-09	1.04E-13	9.45E-26	0.	0.	0.
I131	1.37E-02	7.41E-01	7.00E-01	5.63E-01	3.70E-01	1.56E-01	6.62E-02	1.18E-02	1.60E-04	2.91E-08	5.30E-12	5.30E-12
XE131M	3.73E-11	3.43E-04	5.52E-04	1.36E-03	1.94E-03	1.92E-03	1.43E-03	5.89E-04	3.93E-05	1.18E-07	3.32E-10	3.32E-10
TE132	1.04E+00	2.06E+00	1.66E+00	8.77E-01	3.02E-01	3.58E-02	4.24E-03	5.96E-05	1.39E-09	7.63E-19	4.16E-28	4.16E-28
I132	2.55E+00	2.13E+00	1.72E+00	9.02E-01	3.12E-01	3.69E-02	4.37E-03	6.14E-05	1.44E-09	7.82E-19	4.29E-28	4.29E-28
I133	1.09E+00	6.06E+00	2.73E+00	2.54E-01	4.84E-03	1.75E-06	6.36E-10	8.38E-17	5.27E-34	0.	0.	0.
XE133M	4.63E-08	5.72E-02	6.78E-02	3.98E-02	9.33E-03	4.38E-04	2.04E-05	4.42E-08	9.69E-15	4.63E-28	2.22E-41	2.22E-41
XE133	8.08E-07	1.10E+00	1.47E+00	1.32E+00	7.19E-01	1.94E-01	5.22E-02	3.76E-03	5.24E-06	1.02E-11	1.97E-17	1.97E-17
I135	1.83E+01	2.99E+00	2.50E-01	1.45E-04	5.90E-10	9.74E-21	1.60E-31	4.35E-53	0.	0.	0.	0.
XE135M	2.03E-03	9.32E-01	7.79E-02	4.53E-05	1.84E-10	3.03E-21	5.00E-32	1.36E-53	0.	0.	0.	0.
XE135	2.11E+00	8.06E+00	1.97E+00	1.13E-02	1.38E-06	1.94E-14	2.72E-22	5.37E-38	0.	0.	0.	0.
CS136	1.28E-02	1.22E-02	1.15E-02	9.83E-03	7.53E-03	4.42E-03	2.60E-03	8.93E-04	6.20E-05	2.99E-07	1.45E-09	1.45E-09
CS137	9.11E-05	9.82E-04	9.82E-04	9.82E-04	9.82E-04	9.82E-04	9.82E-04	9.82E-04	9.76E-04	9.71E-04	9.66E-04	9.66E-04
BA137M	1.92E-07	9.16E-04	9.16E-04	9.16E-04	9.16E-04	9.16E-04	9.16E-04	9.16E-04	9.11E-04	9.06E-04	9.00E-04	9.00E-04
BA139	1.22E+01	1.30E-03	7.67E-09	1.58E-24	0.	0.	0.	0.	0.	0.	0.	0.
BA140	1.07E-01	6.30E-01	5.99E-01	5.08E-01	3.87E-01	2.25E-01	1.31E-01	4.44E-02	2.96E-03	1.32E-05	5.84E-08	5.84E-08
LA140	2.53E-07	2.19E-01	3.53E-01	4.68E-01	4.34E-01	2.59E-01	1.51E-01	5.13E-02	3.41E-03	1.52E-05	6.75E-08	6.75E-08
LA141	1.48E+00	5.88E-01	8.25E-03	2.28E-08	1.25E-17	3.73E-36	1.11E-54	0.	0.	0.	0.	0.
CE141	1.83E-07	2.03E-01	2.02E-01	1.89E-01	1.70E-01	1.38E-01	1.11E-01	7.22E-02	2.48E-02	2.92E-03	3.44E-04	3.44E-04
LA142	7.32E+00	1.60E-03	3.11E-08	2.29E-22	0.	0.	0.	0.	0.	0.	0.	0.
CE143	4.77E-02	1.96E+00	1.18E+00	2.61E-01	2.10E-02	1.36E-04	8.78E-07	3.68E-11	4.15E-22	0.	0.	0.
PR143	1.39E-08	1.25E-01	1.95E-01	2.52E-01	2.16E-01	1.32E-01	7.95E-02	2.87E-02	2.30E-03	1.46E-05	9.26E-08	9.26E-08
CE144	1.91E-03	1.36E-02	1.36E-02	1.35E-02	1.33E-02	1.30E-02	1.27E-02	1.21E-02	1.07E-02	8.38E-03	6.58E-03	6.58E-03
PR144	5.23E-07	1.36E-02	1.36E-02	1.35E-02	1.33E-02	1.30E-02	1.27E-02	1.21E-02	1.07E-02	8.38E-03	6.58E-03	6.58E-03
PR145	7.71E-02	7.88E-01	4.88E-02	1.16E-05	1.05E-11	8.73E-24	7.24E-36	0.	0.	0.	0.	0.
ND147	9.45E-06	1.59E-01	1.49E-01	1.24E-01	9.06E-02	4.86E-02	2.60E-02	7.46E-03	3.27E-04	6.37E-07	1.24E-09	1.24E-09
PM147	2.62E-14	1.19E-04	2.30E-04	5.26E-04	9.08E-04	1.39E-03	1.64E-03	1.83E-03	1.84E-03	1.72E-03	1.60E-03	1.60E-03
ND149	1.36E+01	1.31E-03	1.27E-07	1.16E-19	9.90E-40	0.	0.	0.	0.	0.	0.	0.
PM149	1.89E-03	3.49E-01	2.55E-01	9.97E-02	2.08E-02	9.08E-04	3.95E-05	7.51E-08	1.18E-14	2.92E-28	7.28E-42	7.28E-42
PM150	1.59E-01	3.36E-04	7.08E-07	6.65E-15	2.78E-28	0.	0.	0.	0.	0.	0.	0.

NANCY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.409E-13

## DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
PM151	3.47E-02	2.36E-01	1.30E-01	2.20E-02	1.13E-03	2.95E-06	7.79E-09	5.37E-14	6.74E-27	0.	0.
SM153	1.22E-01	8.56E-02	6.01E-02	2.08E-02	3.53E-03	1.03E-04	2.98E-06	2.50E-09	5.17E-17	2.20E-32	9.36E-48
SM156	1.27E-01	2.17E-02	3.70E-03	1.82E-05	2.63E-09	5.40E-17	1.11E-24	4.74E-40	0.	0.	0.
EU155	6.95E-06	2.35E-04	2.35E-04	2.35E-04	2.34E-04	2.33E-04	2.33E-04	2.31E-04	2.26E-04	2.17E-04	2.09E-04
EU156	3.72E-04	3.03E-03	3.35E-03	3.01E-03	2.39E-03	1.50E-03	9.46E-04	3.76E-04	3.72E-05	3.66E-07	3.61E-09
EU157	1.96E-02	2.27E-02	7.63E-03	2.86E-04	1.20E-06	2.12E-11	3.75E-16	1.17E-25	0.	0.	0.
GD159	3.96E-03	7.79E-03	3.10E-03	1.93E-04	1.90E-06	1.84E-10	1.79E-14	1.68E-22	1.43E-42	0.	0.
TB161	6.75E-05	4.41E-04	3.98E-04	2.95E-04	1.78E-04	6.53E-05	2.39E-05	3.20E-06	2.12E-08	9.15E-13	3.98E-17
TOTAL	3.10E+02	6.79E+01	3.22E+01	1.21E+01	5.09E+00	1.98E+00	1.20E+00	6.58E-01	2.82E-01	9.95E-02	4.93E-02



NANCY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.409E-13

DEBRIS DECAY FROM 1 TO 50 YEARS

	ZERO	TIME	1.00E+00	1.50E+00	2.00E+00	3.50E+00	5.00E+00	7.00E+00	1.00E+01	2.00E+01	3.50E+01	5.00E+01
BE 7	3.68E-05	3.18E-07	2.96E-08	2.74E-09	2.21E-12	1.77E-15	1.32E-19	8.48E-26	0.	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 59	5.77E-04	2.08E-06	1.25E-07	7.51E-09	1.63E-12	3.52E-16	4.59E-21	2.15E-28	0.	0.	0.	0.
CO 57	5.07E-05	2.00E-05	1.25E-05	7.85E-06	1.94E-06	4.77E-07	7.37E-09	4.47E-09	3.91E-13	3.21E-19	0.	0.
CO 56	2.45E-04	7.02E-06	1.19E-06	2.02E-07	9.83E-10	4.79E-12	3.95E-15	9.37E-20	3.58E-35	0.	0.	0.
CO 60	3.44E-05	3.02E-05	2.81E-05	2.63E-05	2.16E-05	1.77E-05	1.36E-05	9.19E-06	2.47E-06	3.42E-07	4.73E-08	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W186	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U234	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	2.27E-01	5.65E-10	5.50E-10	5.36E-10	5.01E-10	4.65E-10	4.23E-10	3.67E-10	2.28E-10	1.12E-10	5.50E-11	0.
*AM241	7.97E-09	7.97E-09	7.97E-09	7.97E-09	8.00E-09	8.04E-09	8.04E-09	8.08E-09	8.12E-09	8.04E-09	7.93E-09	0.
*CM242	3.07E-07	6.50E-08	2.99E-08	1.38E-08	1.34E-09	1.31E-10	5.85E-12	5.53E-14	1.59E-18	1.48E-18	1.38E-18	0.
KR 85	4.59E-06	1.14E-04	1.11E-04	1.07E-04	9.76E-05	8.81E-05	7.75E-05	6.39E-05	3.38E-05	1.29E-05	4.93E-06	0.
SR 89	3.82E-06	8.93E-04	7.81E-05	6.86E-06	4.62E-09	3.12E-12	1.84E-16	8.37E-23	6.08E-44	0.	0.	0.
SR 90	7.53E-06	7.53E-04	7.46E-04	7.39E-04	7.12E-04	6.84E-04	6.51E-04	6.05E-04	4.73E-04	3.26E-04	2.26E-04	0.
Y 90	1.12E-11	7.53E-04	7.46E-04	7.39E-04	7.12E-04	6.84E-04	6.51E-04	6.05E-04	4.73E-04	3.26E-04	2.26E-04	0.
Y 91	2.46E-08	1.66E-03	1.93E-04	2.24E-05	3.52E-08	5.52E-11	1.01E-14	2.48E-20	5.01E-39	0.	0.	0.
ZR 95	6.26E-04	1.61E-03	2.29E-04	3.27E-05	9.52E-08	2.77E-10	1.15E-13	9.69E-19	1.19E-35	0.	0.	0.
NB 95M	1.33E-11	3.40E-05	4.86E-06	6.94E-07	2.02E-09	5.87E-12	2.43E-15	2.05E-20	2.52E-37	0.	0.	0.
RU 95	6.97E-11	3.46E-03	4.97E-04	7.08E-05	2.05E-07	5.96E-10	2.49E-13	2.10E-18	2.57E-35	0.	0.	0.
RU103	8.22E-05	3.19E-04	1.31E-05	5.37E-07	3.67E-11	2.51E-15	7.06E-21	3.32E-29	0.	0.	0.	0.
RH103M	5.48E-09	3.20E-04	1.31E-05	5.37E-07	3.67E-11	2.52E-15	7.06E-21	3.32E-29	0.	0.	0.	0.
RU106	5.28E-04	5.02E-03	3.55E-03	2.52E-03	8.95E-04	3.18E-04	8.00E-05	1.01E-05	1.02E-08	3.28E-13	1.06E-17	0.
RH106	5.71E-06	5.02E-03	3.55E-03	2.52E-03	8.95E-04	3.18E-04	8.00E-05	1.01E-05	1.02E-08	3.28E-13	1.06E-17	0.
SN123	1.39E-05	1.92E-04	6.98E-05	2.53E-05	1.22E-06	5.83E-08	1.02E-09	2.34E-12	3.76E-21	2.42E-34	1.55E-47	0.
SB125	1.98E-04	3.98E-04	3.50E-04	3.08E-04	2.10E-04	1.43E-04	8.52E-05	3.94E-05	3.03E-06	6.45E-08	1.37E-09	0.
TE125M	5.32E-12	1.62E-04	1.44E-04	1.27E-04	8.68E-05	5.90E-05	3.53E-05	1.63E-05	1.25E-06	2.67E-08	5.69E-10	0.
TE127M	4.43E-10	2.12E-04	6.63E-05	2.07E-05	6.38E-07	1.96E-08	1.89E-10	1.77E-13	1.46E-23	1.09E-38	8.11E-54	0.
TE127	3.09E-02	2.10E-04	6.55E-05	2.05E-05	6.30E-07	1.94E-08	1.86E-10	1.76E-13	1.44E-23	1.07E-38	8.04E-54	0.
CS137	9.11E-05	9.60E-04	9.49E-04	9.38E-04	9.06E-04	8.73E-04	8.35E-04	7.80E-04	7.31E-04	6.16E-04	4.38E-04	3.09E-04
BA137M	1.92E-07	9.00E-04	8.89E-04	8.78E-04	8.46E-04	8.18E-04	7.80E-04	7.31E-04	5.78E-04	4.09E-04	2.90E-04	0.
CE141	1.83E-07	7.91E-05	1.59E-06	3.19E-08	2.60E-13	2.12E-18	3.47E-25	2.30E-35	0.	0.	0.	0.
CE144	1.91E-03	5.61E-03	3.60E-03	2.30E-03	6.04E-04	1.59E-04	2.67E-05	1.84E-06	2.48E-10	3.89E-16	6.06E-22	0.
PR144	5.23E-07	5.61E-03	3.60E-03	2.30E-03	6.04E-04	1.59E-04	2.67E-05	1.84E-06	2.48E-10	3.89E-16	6.06E-22	0.
PM147	2.62E-14	1.52E-03	1.33E-03	1.17E-03	7.85E-04	5.28E-04	3.10E-04	1.41E-04	1.00E-05	1.89E-07	3.58E-09	0.
EU155	6.95E-06	2.03E-04	1.89E-04	1.76E-04	1.41E-04	1.14E-04	8.48E-05	5.48E-05	1.28E-05	1.44E-06	1.62E-07	0.
TOTAL	2.62E-01	3.61E-02	2.10E-02	1.50E-02	7.52E-03	4.96E-03	3.74E-03	3.07E-03	2.20E-03	1.51E-03	1.06E-03	0.

B-12

**APPENDIX C**  
**DETAILED RESULTS FOR EVENT RUTH**

RUTH  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.735E-11

TIME		MR/HR	MICROCURIES/SQ METER
ZERO TIME	HOURS	1.01E+02	1.36E+04
1.00E+00		3.29E+01	2.82E+03
2.00E+00		1.31E+01	9.79E+02
3.00E+00		6.98E+00	5.54E+02
4.00E+00		4.34E+00	3.98E+02
6.00E+00		2.28E+00	2.69E+02
9.00E+00		1.36E+00	1.89E+02
1.20E+01		1.00E+00	1.48E+02
1.50E+01		7.93E-01	1.22E+02
1.80E+01		6.54E-01	1.04E+02
2.10E+01		5.53E-01	9.04E+01
1.00E+00	DAYS	4.71E-01	7.92E+01
2.00E+00		2.22E-01	4.14E+01
5.00E+00		8.77E-02	1.59E+01
1.00E+01		3.81E-02	5.84E+00
2.00E+01		1.43E-02	1.93E+00
3.00E+01		8.07E-03	1.15E+00
5.00E+01		3.62E-03	6.28E-01
1.00E+02		1.19E-03	2.69E-01
2.00E+02		4.05E-04	9.34E-02
3.00E+02		1.56E-04	4.43E-02
1.00E+00	YEARS	8.92E-05	3.15E-02
1.50E+00		2.72E-05	1.76E-02
2.00E+00		1.62E-05	1.25E-02
3.50E+00		1.04E-05	6.51E-03
5.00E+00		8.67E-06	4.56E-03
7.00E+00		7.73E-06	3.63E-03
1.00E+01		7.03E-06	3.09E-03
2.00E+01		5.48E-06	2.28E-03
3.50E+01		3.89E-06	1.58E-03
5.00E+01		2.75E-06	1.10E-03

RUTH MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.735E-11

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
* BE 7	1.30E-06	1.30E-06	1.30E-06	1.30E-06	1.30E-06	1.30E-06	1.29E-06	1.29E-06	1.29E-06	1.29E-06	1.28E-06
NA 24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 55	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 67	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	4.41E-02	4.39E-02	4.37E-02	4.36E-02	4.34E-02	4.30E-02	4.24E-02	4.19E-02	4.13E-02	4.08E-02	4.03E-02
U239	4.88E+03	8.33E+02	1.42E+02	2.42E+01	4.11E+00	1.20E-01	5.94E-04	2.93E-06	1.45E-08	7.17E-11	3.55E-13
U240	3.04E-01	2.89E-01	2.76E-01	2.62E-01	2.50E-01	2.26E-01	1.95E-01	1.68E-01	1.45E-01	1.25E-01	1.08E-01
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP239	1.67E-02	2.80E+01	3.24E+01	3.29E+01	3.26E+01	3.19E+01	3.06E+01	2.96E+01	2.85E+01	2.75E+01	2.65E+01
NP240M	4.81E-04	2.91E-01	2.78E-01	2.65E-01	2.52E-01	2.28E-01	1.97E-01	1.70E-01	1.46E-01	1.26E-01	1.09E-01
NP240	1.22E-11	6.26E-12	3.25E-12	1.68E-12	8.67E-13	2.32E-13	3.20E-14	4.42E-15	6.09E-16	8.38E-17	1.16E-17
AM241	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CM242	1.27E-06	1.27E-06	1.27E-06	1.27E-06	1.27E-06	1.27E-06	1.26E-06	1.26E-06	1.26E-06	1.26E-06	1.26E-06
GE 75	7.15E-06	3.47E-02	2.09E-02	1.26E-02	7.57E-03	2.74E-03	5.99E-04	1.31E-04	2.86E-05	6.24E-06	1.37E-06
GE 77	4.28E-03	1.10E-02	1.04E-02	9.75E-03	9.18E-03	8.12E-03	6.76E-03	5.61E-03	4.68E-03	3.89E-03	3.24E-03
AS 77	4.42E-05	6.99E-03	7.07E-03	7.12E-03	7.17E-03	7.22E-03	7.22E-03	7.17E-03	7.06E-03	6.91E-03	6.74E-03
SE 77M	1.74E-09	2.09E-05	2.13E-05	2.14E-05	2.14E-05	2.16E-05	2.17E-05	2.16E-05	2.13E-05	2.08E-05	2.01E-05
GE 78	6.39E-01	3.99E-01	2.49E-01	1.55E-01	9.70E-02	3.77E-02	9.16E-03	2.22E-03	5.41E-04	1.32E-04	3.20E-05
AS 78	1.15E-02	1.91E-01	2.35E-01	2.20E-01	1.84E-01	1.09E-01	4.04E-02	1.34E-02	4.15E-03	1.24E-03	3.59E-04
AS 79	1.33E+01	1.31E-01	1.30E-03	1.28E-05	1.26E-07	1.22E-11	1.16E-17	1.11E-23	1.06E-29	1.01E-35	9.63E-42
SE 79M	1.98E-02	2.32E-01	2.29E-03	2.25E-05	2.22E-07	2.15E-11	2.05E-17	1.95E-23	1.86E-29	1.78E-35	1.70E-41
BR 80	8.81E-02	8.31E-03	7.81E-04	7.35E-05	6.92E-06	6.14E-08	5.14E-11	4.28E-14	3.57E-17	2.98E-20	2.49E-23
SE 81M	7.46E-02	3.48E+00	1.68E+00	8.08E-01	3.89E-01	9.08E-02	1.02E-02	1.14E-03	1.28E-04	1.43E-05	1.60E-06
SE 81	9.12E-01	4.12E+00	2.38E+00	1.19E+00	5.77E-01	1.35E-01	1.51E-02	1.69E-03	1.89E-04	2.12E-05	2.38E-06
BR 82	4.78E-04	4.69E-04	4.59E-04	4.51E-04	4.42E-04	4.25E-04	4.00E-04	3.77E-04	3.56E-04	3.35E-04	3.17E-04
SE 83	4.47E+01	8.47E+00	1.61E+00	3.04E-01	5.75E-02	2.07E-03	1.41E-05	9.57E-08	6.54E-10	4.43E-12	2.81E-14
BR 83	3.71E-01	5.54E+00	5.13E+00	4.04E+00	3.06E+00	1.73E+00	7.32E-01	3.08E-01	1.30E-01	5.49E-02	2.32E-02
KR 83M	1.92E-05	1.25E+00	2.56E+00	3.18E+00	3.28E+00	2.74E+00	1.62E+00	8.31E-01	4.01E-01	1.85E-01	8.31E-02

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RUTH MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.735E-11

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BR 84	9.61E-02	1.66E+01	4.48E+00	1.21E+00	3.28E-01	2.40E-02	4.74E-04	9.35E-06	1.85E-07	3.66E-09	7.23E-11	
KR 85M	4.81E-03	1.03E+01	8.78E+00	7.49E+00	6.41E+00	4.68E+00	2.91E+00	1.82E+00	1.13E+00	7.05E-01	4.40E-01	
KR 87	8.09E+01	4.67E+01	2.70E+01	1.56E+01	9.01E+00	3.02E+00	5.86E-01	1.13E-01	2.20E-02	4.26E-03	8.23E-04	
KR 88	4.67E+01	3.65E+01	2.85E+01	2.22E+01	1.74E+01	1.05E+01	5.03E+00	2.40E+00	1.14E+00	5.42E-01	2.58E-01	
RB 88	1.19E+01	3.69E+01	3.15E+01	2.48E+01	1.94E+01	1.18E+01	5.63E+00	2.68E+00	1.28E+00	6.08E-01	2.89E-01	
RB 89	5.59E+01	5.25E+01	3.53E+00	2.37E-01	1.59E-02	7.20E-05	2.18E-08	6.57E-12	2.00E-15	6.07E-19	1.84E-22	
SR 89	4.28E-06	1.50E-01	1.60E-01	1.60E-01	1.60E-01	1.60E-01	1.60E-01	1.60E-01	1.60E-01	1.59E-01	1.59E-01	
SR 90	8.65E-06	8.89E-04	8.89E-04	8.89E-04	8.89E-04	8.89E-04	8.89E-04	8.89E-04	8.89E-04	8.89E-04	8.89E-04	
SR 91	1.00E+00	1.87E+01	1.74E+01	1.62E+01	1.51E+01	1.31E+01	1.06E+01	8.53E+00	6.89E+00	5.53E+00	4.46E+00	
Y 91M	6.76E-05	6.44E+00	8.78E+00	9.41E+00	9.29E+00	8.34E+00	6.82E+00	5.49E+00	4.43E+00	3.57E+00	2.88E+00	
Y 91	2.77E-08	5.73E-03	1.32E-02	2.11E-02	2.88E-02	4.32E-02	6.13E-02	7.58E-02	8.78E-02	9.73E-02	1.05E-01	
SR 92	7.24E+00	3.23E+01	2.51E+01	1.94E+01	1.50E+01	8.99E+00	4.18E+00	1.94E+00	8.99E-01	4.18E-01	1.94E-01	
Y 92	3.34E-01	6.80E+00	1.07E+01	1.27E+01	1.35E+01	1.28E+01	9.84E+00	6.70E+00	4.31E+00	2.65E+00	1.60E+00	
SR 93	2.84E+02	4.90E+00	2.70E-02	1.49E-04	8.23E-07	2.52E-11	4.25E-18	7.16E-25	1.21E-31	2.04E-38	3.44E-45	
Y 93	3.47E-01	1.12E+01	1.05E+01	9.86E+00	9.21E+00	8.04E+00	6.55E+00	5.35E+00	4.34E+00	3.57E+00	2.90E+00	
Y 94	4.11E+01	5.62E+01	7.23E+00	9.32E-01	1.20E-01	2.00E-03	4.28E-06	9.18E-09	1.96E-11	4.57E-14	2.37E-15	
Y 95	1.75E+02	1.65E+01	3.64E-01	8.02E-03	1.77E-04	8.57E-08	9.17E-13	9.81E-18	1.05E-22	1.12E-27	1.20E-32	
ZR 95	6.58E-04	8.60E-02	8.77E-02	8.77E-02	8.77E-02	8.77E-02	8.77E-02	8.74E-02	8.74E-02	8.71E-02	8.71E-02	
NB 95	7.33E-11	5.31E-05	1.24E-04	1.94E-04	2.65E-04	4.07E-04	6.17E-04	8.31E-04	1.04E-03	1.25E-03	1.46E-03	
ZR 97	1.54E+00	6.73E+00	6.43E+00	6.19E+00	5.93E+00	5.48E+00	4.84E+00	4.28E+00	3.80E+00	3.35E+00	2.98E+00	
NB 97M	7.95E-03	6.46E+00	6.19E+00	5.96E+00	5.72E+00	5.26E+00	4.65E+00	4.12E+00	3.64E+00	3.22E+00	2.84E+00	
NB 97	7.74E-01	3.38E+00	4.76E+00	5.42E+00	5.69E+00	5.66E+00	5.16E+00	4.60E+00	4.07E+00	3.59E+00	3.19E+00	
NB 98	8.64E+00	3.82E+00	1.69E+00	7.48E-01	3.31E-01	6.48E-02	5.61E-03	4.84E-04	4.22E-05	3.65E-06	3.14E-07	
MO 99	4.48E-03	1.85E+00	1.83E+00	1.81E+00	1.79E+00	1.76E+00	1.71E+00	1.65E+00	1.60E+00	1.55E+00	1.51E+00	
TC 99M	4.17E-08	1.77E-01	3.31E-01	4.68E-01	5.88E-01	7.85E-01	9.97E-01	1.13E+00	1.21E+00	1.26E+00	1.28E+00	
MO101	1.21E+02	5.48E+01	3.18E+00	1.84E-01	1.07E-02	3.58E-05	6.96E-09	1.36E-12	2.64E-16	5.12E-20	9.98E-24	
TC101	5.12E+00	1.54E+02	1.68E+01	1.38E+00	1.00E-01	4.53E-04	1.13E-07	2.53E-11	5.38E-15	1.11E-18	2.24E-22	
MO102	9.50E+02	2.17E+01	4.93E-01	1.13E-02	2.57E-04	1.33E-07	1.59E-12	1.88E-17	2.23E-22	2.65E-27	3.14E-32	
TC102M	6.10E-01	1.83E+01	4.20E-01	9.59E-03	2.18E-04	1.13E-07	1.34E-12	1.59E-17	1.89E-22	2.24E-27	2.66E-32	
TC102	2.86E+03	1.09E+01	2.49E-01	5.65E-03	1.29E-04	6.74E-08	8.00E-13	9.50E-18	1.13E-22	1.33E-27	1.58E-32	
RU103	6.27E-05	1.45E-01	1.45E-01	1.45E-01	1.45E-01	1.45E-01	1.44E-01	1.44E-01	1.44E-01	1.43E-01	1.43E-01	
RH103M	4.18E-09	7.51E-02	1.11E-01	1.29E-01	1.37E-01	1.43E-01	1.44E-01	1.44E-01	1.44E-01	1.43E-01	1.43E-01	
TC104	4.99E+01	3.59E+01	3.59E+00	3.55E-01	3.51E-02	3.46E-04	3.38E-07	3.30E-10	3.22E-13	3.15E-16	3.08E-19	
RU105	3.40E-01	1.18E+01	1.00E+01	8.60E+00	7.36E+00	5.38E+00	3.37E+00	2.11E+00	1.32E+00	8.26E-01	5.18E-01	
RH105M	2.23E-03	1.18E+01	1.01E+01	8.63E+00	7.36E+00	5.41E+00	3.37E+00	2.12E+00	1.32E+00	8.28E-01	5.18E-01	
RH105	3.67E-09	2.39E-01	4.44E-01	6.12E-01	7.54E-01	9.65E-01	1.15E+00	1.24E+00	1.26E+00	1.25E+00	1.22E+00	
RU106	2.62E-04	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	
RH106	2.83E-06	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	4.96E-03	
RH107	3.45E-02	4.68E+00	7.10E-01	1.07E-01	1.61E-02	3.68E-04	1.27E-06	4.37E-09	1.50E-11	5.14E-14	5.12E-18	
PD107M	7.17E-05	9.53E-01	1.44E-01	2.18E-02	3.28E-03	7.49E-05	2.58E-07	8.89E-10	3.06E-12	1.06E-14	3.60E-17	

C-4

RUTH MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.735E-11

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
PD109	2.16E-03	1.79E-01	1.70E-01	1.62E-01	1.53E-01	1.38E-01	1.19E-01	1.02E-01	8.75E-02	7.49E-02	6.44E-02	5.55E-02
AG109M	1.25E-05	1.79E-01	1.70E-01	1.62E-01	1.54E-01	1.39E-01	1.19E-01	1.02E-01	8.75E-02	7.49E-02	6.44E-02	5.55E-02
PD111M	3.00E-01	2.64E-01	2.33E-01	2.06E-01	1.82E-01	1.41E-01	9.66E-02	6.62E-02	4.54E-02	3.10E-02	2.13E-02	1.41E-02
PD111	1.07E-01	1.93E-01	1.85E-01	1.65E-01	1.46E-01	1.13E-01	7.77E-02	5.32E-02	3.64E-02	2.50E-02	1.71E-02	1.11E-02
AG111M	8.49E-04	2.60E-01	2.44E-01	2.19E-01	1.93E-01	1.49E-01	1.02E-01	6.98E-02	4.78E-02	3.28E-02	2.24E-02	1.41E-02
AG111	3.03E-10	8.96E-04	1.88E-03	2.77E-03	3.55E-03	4.84E-03	6.22E-03	7.13E-03	7.72E-03	8.09E-03	8.31E-03	8.37E-03
PD112	6.74E-02	6.53E-02	6.31E-02	6.10E-02	5.92E-02	5.52E-02	5.01E-02	4.54E-02	4.11E-02	3.72E-02	3.37E-02	3.06E-02
AG112	2.03E-06	1.29E-02	2.28E-02	3.06E-02	3.64E-02	4.35E-02	4.79E-02	4.77E-02	4.54E-02	4.23E-02	3.90E-02	3.57E-02
AG113	8.74E-04	1.87E-01	1.64E-01	1.44E-01	1.26E-01	9.71E-02	6.57E-02	4.44E-02	3.00E-02	2.02E-02	1.37E-02	9.17E-03
AG115	3.83E-01	4.10E-01	5.10E-02	6.38E-03	7.99E-04	1.25E-05	2.44E-08	4.77E-11	9.23E-14	9.17E-16	8.50E-17	7.85E-18
CD115M	3.13E-09	8.32E-05	9.35E-05	9.47E-05	9.47E-05	9.47E-05	9.44E-05	9.44E-05	9.41E-05	9.38E-05	9.38E-05	9.38E-05
CD115	1.21E-06	2.28E-02	2.45E-02	2.44E-02	2.41E-02	2.35E-02	2.27E-02	2.18E-02	2.10E-02	2.02E-02	1.94E-02	1.86E-02
IN115M	1.51E-11	2.51E-03	5.59E-03	8.29E-03	1.06E-02	1.41E-02	1.74E-02	1.92E-02	2.00E-02	2.02E-02	2.00E-02	1.94E-02
CD117	2.72E-02	4.53E-01	3.41E-01	2.55E-01	1.91E-01	1.07E-01	4.49E-02	1.89E-02	7.97E-03	3.35E-03	1.41E-03	5.55E-04
IN117M	1.31E-06	1.57E-01	2.28E-01	2.47E-01	2.39E-01	1.88E-01	1.08E-01	5.51E-02	2.65E-02	1.23E-02	5.55E-03	2.27E-03
IN117	5.26E-11	2.87E-02	6.95E-02	9.66E-02	1.08E-01	9.91E-02	6.31E-02	3.38E-02	1.68E-02	7.91E-03	3.63E-03	1.57E-03
CD118	1.82E+00	7.80E-01	3.35E-01	1.43E-01	6.11E-02	1.12E-02	8.78E-04	6.86E-05	5.40E-06	4.23E-07	3.32E-08	2.53E-09
IN118	1.21E-01	7.80E-01	3.35E-01	1.43E-01	6.11E-02	1.12E-02	8.78E-04	6.89E-05	5.40E-06	4.23E-07	3.32E-08	2.53E-09
CD119	4.52E+00	7.05E-02	1.10E-03	1.72E-05	2.69E-07	6.57E-11	2.50E-16	9.57E-22	3.64E-27	1.39E-32	5.33E-38	2.00E-43
IN119M	6.81E-03	7.62E-01	8.29E-02	8.36E-03	8.33E-04	8.19E-06	7.99E-09	7.82E-12	7.62E-15	7.45E-18	7.28E-21	7.11E-24
IN119	3.36E-01	4.01E-02	4.65E-03	4.72E-04	4.72E-05	4.62E-07	4.52E-10	4.42E-13	4.32E-16	4.21E-19	4.11E-22	4.00E-25
SN121	5.49E-04	5.65E-02	5.49E-02	5.36E-02	5.23E-02	4.97E-02	4.59E-02	4.26E-02	3.94E-02	3.65E-02	3.39E-02	3.13E-02
SN123M	3.01E-01	5.63E-01	2.00E-01	7.06E-02	2.49E-02	3.11E-03	1.38E-04	6.10E-06	2.70E-07	1.19E-08	5.27E-10	2.27E-11
SN123	2.83E-06	2.96E-04	2.96E-04	2.96E-04	2.96E-04	2.96E-04	2.96E-04	2.96E-04	2.96E-04	2.96E-04	2.96E-04	2.96E-04
SN125	7.88E-03	7.86E-03	7.84E-03	7.82E-03	7.78E-03	7.74E-03	7.68E-03	7.59E-03	7.53E-03	7.45E-03	7.39E-03	7.33E-03
SB125	4.73E-05	4.75E-05	4.77E-05	4.79E-05	4.82E-05	4.86E-05	4.94E-05	5.00E-05	5.06E-05	5.12E-05	5.19E-05	5.26E-05
SB126	1.54E-03	1.54E-03	1.53E-03	1.53E-03	1.53E-03	1.52E-03	1.51E-03	1.50E-03	1.49E-03	1.48E-03	1.47E-03	1.46E-03
SN127	2.76E+00	1.98E+00	1.42E+00	1.03E+00	7.38E-01	3.81E-01	1.41E-01	5.26E-02	1.95E-02	7.25E-03	2.69E-03	9.69E-04
SB127	3.22E-02	1.11E-01	1.23E-01	1.31E-01	1.37E-01	1.42E-01	1.45E-01	1.43E-01	1.41E-01	1.38E-01	1.35E-01	1.32E-01
TE127	1.82E-02	2.26E-02	2.75E-02	3.26E-02	3.77E-02	4.73E-02	6.06E-02	7.07E-02	7.87E-02	8.49E-02	8.89E-02	9.29E-02
SN128	1.84E+01	9.08E+00	4.50E+00	2.22E+00	1.10E+00	2.68E-01	3.24E-02	3.91E-03	4.71E-04	5.71E-05	6.88E-06	8.22E-07
SB128M	9.37E-03	1.04E+01	5.37E+00	2.65E+00	1.31E+00	3.20E-01	3.86E-02	4.66E-03	5.61E-04	6.79E-05	8.20E-06	9.99E-07
SB128	7.76E-01	7.47E-01	7.03E-01	6.59E-01	6.15E-01	5.27E-01	4.21E-01	3.34E-01	2.65E-01	2.10E-01	1.67E-01	1.32E-01
SN129M	1.22E+01	6.07E+00	3.04E+00	1.52E+00	7.61E-01	1.90E-01	2.38E-02	2.98E-03	3.72E-04	4.65E-05	5.81E-06	7.30E-07
SN129	8.13E+01	7.97E-01	7.87E-03	7.77E-05	7.61E-07	7.41E-11	7.05E-17	6.74E-23	6.43E-29	6.12E-35	5.86E-41	5.61E-47
SB129	4.57E+00	7.66E+00	7.20E+00	6.43E+00	5.66E+00	4.20E+00	2.62E+00	1.62E+00	9.98E-01	6.17E-01	3.80E-01	2.27E-01
TE129M	8.64E-08	9.57E-04	1.97E-03	2.90E-03	3.72E-03	5.04E-03	6.38E-03	7.20E-03	7.71E-03	8.02E-03	8.23E-03	8.37E-03
TE129	3.29E+00	4.53E+00	5.30E+00	5.50E+00	5.30E+00	4.39E+00	2.92E+00	1.84E+00	1.15E+00	7.10E-01	4.40E-01	2.50E-01
SB130M	4.54E-01	8.57E-01	2.25E-03	5.91E-06	1.56E-08	1.07E-13	1.96E-21	3.56E-29	6.45E-37	1.17E-44	2.13E-52	3.60E-60
SB130	7.78E+01	2.35E+01	6.70E+00	1.90E+00	5.37E-01	4.32E-02	9.85E-04	2.25E-05	5.12E-07	1.17E-08	2.67E-10	6.00E-12

RUTH MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.735E-11

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
I130	2.17E-02	2.05E-02	1.94E-02	1.83E-02	1.73E-02	1.55E-02	1.31E-02	1.11E-02	9.36E-03	7.93E-03	6.70E-03	
SB131	1.85E+02	4.82E+01	7.88E+00	1.29E+00	2.12E-01	5.71E-03	2.52E-05	1.11E-07	4.89E-10	2.16E-12	1.08E-14	
TE131M	8.88E-05	4.64E-01	5.30E-01	5.30E-01	5.20E-01	4.97E-01	4.64E-01	4.33E-01	4.04E-01	3.77E-01	3.52E-01	
TE131	8.17E+01	8.88E+01	2.89E+01	7.52E+00	1.83E+00	1.72E-01	8.52E-02	7.88E-02	7.35E-02	6.88E-02	6.41E-02	
I131	1.19E-02	4.11E-01	6.05E-01	6.64E-01	6.76E-01	6.82E-01	6.82E-01	6.76E-01	6.76E-01	6.70E-01	6.70E-01	
TE132	9.97E-01	2.42E+00	2.40E+00	2.38E+00	2.36E+00	2.31E+00	2.25E+00	2.19E+00	2.14E+00	2.08E+00	2.02E+00	
I132	2.45E+00	2.44E+00	2.44E+00	2.42E+00	2.41E+00	2.38E+00	2.32E+00	2.26E+00	2.20E+00	2.15E+00	2.09E+00	
TE133M	1.22E-01	4.24E+01	1.85E+01	8.04E+00	3.50E+00	6.64E-01	5.47E-02	4.51E-03	3.72E-04	3.07E-05	2.53E-06	
TE133	6.88E+02	3.90E+01	4.34E+00	1.43E+00	6.06E-01	1.15E-01	9.50E-03	7.81E-04	6.47E-05	5.32E-06	4.39E-07	
I133	1.07E+00	1.15E+01	1.24E+01	1.24E+01	1.22E+01	1.15E+01	1.05E+01	9.50E+00	8.57E+00	7.81E+00	7.05E+00	
XE133M	4.54E-08	2.58E-03	6.24E-03	9.96E-03	1.36E-02	2.04E-02	2.95E-02	3.75E-02	4.42E-02	4.99E-02	5.47E-02	
XE133	7.93E-07	4.51E-02	1.10E-01	1.75E-01	2.40E-01	3.64E-01	5.33E-01	6.82E-01	8.16E-01	9.32E-01	1.04E+00	
TE134	2.14E+02	9.91E+01	3.69E+01	1.37E+01	5.09E+00	7.06E-01	3.61E-02	1.85E-03	9.47E-05	4.86E-06	2.49E-07	
I134	9.80E+01	1.31E+02	9.19E+01	5.38E+01	2.89E+01	7.34E+00	8.06E-01	8.23E-02	8.06E-03	7.73E-04	7.34E-05	
I135	1.81E+01	3.18E+01	2.87E+01	2.59E+01	2.34E+01	1.92E+01	1.39E+01	1.02E+01	7.48E+00	5.51E+00	4.02E+00	
XE135M	2.00E-03	9.19E+00	8.93E+00	8.10E+00	7.27E+00	5.92E+00	4.35E+00	3.18E+00	2.34E+00	1.71E+00	1.26E+00	
XE135	2.08E+00	4.12E+00	6.03E+00	7.58E+00	8.83E+00	1.06E+01	1.17E+01	1.18E+01	1.12E+01	1.02E+01	9.14E+00	
CS136	1.57E-03	1.57E-03	1.56E-03	1.56E-03	1.56E-03	1.55E-03	1.54E-03	1.53E-03	1.52E-03	1.51E-03	1.50E-03	
CS137	8.71E-05	9.39E-04	9.39E-04	9.39E-04	9.39E-04	9.39E-04	9.39E-04	9.39E-04	9.39E-04	9.39E-04	9.39E-04	
BA137M	1.84E-07	8.77E-04	8.77E-04	8.77E-04	8.77E-04	8.77E-04	8.77E-04	8.77E-04	8.77E-04	8.77E-04	8.77E-04	
XE138	7.21E+02	6.20E+01	5.39E+00	4.67E-01	4.05E-02	3.03E-04	1.97E-07	1.28E-10	8.33E-14	5.41E-17	3.52E-20	
CS138	1.07E+02	1.81E+02	6.26E+01	1.84E+01	5.15E+00	3.92E-01	8.16E-03	1.69E-04	3.52E-06	7.32E-08	1.51E-09	
CS139	6.31E+02	2.01E+01	2.52E-01	3.17E-03	3.98E-05	6.25E-09	1.24E-14	2.46E-20	4.87E-26	9.65E-32	1.91E-37	
BA139	1.17E+01	1.30E+02	8.01E+01	4.87E+01	2.94E+01	1.08E+01	2.40E+00	5.32E-01	1.18E-01	2.62E-02	5.83E-03	
BA140	1.10E-01	6.84E-01	6.84E-01	6.79E-01	6.79E-01	6.73E-01	6.73E-01	6.68E-01	6.63E-01	6.58E-01	6.52E-01	
LA140	2.60E-07	1.17E-02	2.32E-02	3.44E-02	4.54E-02	6.68E-02	9.76E-02	1.26E-01	1.53E-01	1.79E-01	2.03E-01	
BA141	1.63E+02	4.94E+01	4.90E+00	4.86E-01	4.83E-02	4.79E-04	4.67E-07	4.55E-10	4.44E-13	4.36E-16	4.24E-19	
LA141	1.51E+00	3.20E+01	2.98E+01	2.53E+01	2.12E+01	1.49E+01	8.72E+00	5.10E+00	3.00E+00	1.76E+00	1.03E+00	
CE141	1.87E-07	2.08E-02	4.86E-02	7.32E-02	9.38E-02	1.26E-01	1.56E-01	1.74E-01	1.84E-01	1.90E-01	1.93E-01	
BA142	3.24E+02	1.29E+01	2.94E-01	6.71E-03	1.53E-04	7.94E-08	9.43E-13	1.12E-17	1.33E-22	1.58E-27	1.87E-32	
LA142	7.45E+00	5.17E+01	3.41E+01	2.17E+01	1.38E+01	5.58E+00	1.44E+00	3.71E-01	9.57E-02	2.46E-02	6.35E-03	
LA143	1.26E+02	2.47E+01	1.26E+00	6.50E-02	3.34E-03	8.75E-06	1.18E-09	1.59E-13	2.14E-17	2.89E-21	3.90E-25	
CE143	5.05E-02	3.22E+00	3.34E+00	3.25E+00	3.19E+00	3.07E+00	2.88E+00	2.70E+00	2.54E+00	2.38E+00	2.24E+00	
PR143	1.48E-08	4.93E-03	1.19E-02	1.88E-02	2.56E-02	3.87E-02	5.70E-02	7.45E-02	9.04E-02	1.05E-01	1.19E-01	
CE144	2.05E-03	1.47E-02	1.47E-02	1.47E-02	1.47E-02	1.47E-02	1.47E-02	1.47E-02	1.47E-02	1.47E-02	1.47E-02	
PR144	5.63E-07	1.34E-02	1.46E-02	1.47E-02	1.47E-02	1.47E-02	1.47E-02	1.47E-02	1.47E-02	1.47E-02	1.47E-02	
PR145	8.00E-02	1.18E+01	1.05E+01	9.31E+00	8.31E+00	6.58E+00	4.64E+00	3.27E+00	2.32E+00	1.64E+00	1.16E+00	
CE146	2.26E+02	1.16E+01	5.95E-01	3.04E-02	1.56E-03	4.12E-06	5.55E-10	7.48E-14	1.01E-17	1.36E-21	1.83E-25	
PR146	4.68E+00	4.07E+01	9.23E+00	1.73E+00	3.12E-01	9.81E-03	5.42E-05	2.99E-07	1.65E-09	9.15E-12	5.00E-14	
PR147	2.64E+01	7.64E+00	2.38E-01	7.45E-03	2.33E-04	2.28E-07	6.94E-12	2.12E-16	6.47E-21	1.98E-25	6.02E-30	

RUTH MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ METER = 2.735E-11

## DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
ND147	9.43E-06	1.77E-01	1.82E-01	1.82E-01	1.82E-01	1.81E-01	1.79E-01	1.78E-01	1.77E-01	1.75E-01	1.74E-01	1.74E-01
ND149	1.25E+01	8.50E+00	5.79E+00	3.94E+00	2.67E+00	1.24E+00	3.90E-01	1.23E-01	3.87E-02	1.22E-02	3.85E-03	3.85E-03
PM149	1.74E-03	1.36E-01	2.26E-01	2.86E-01	3.24E-01	3.64E-01	3.78E-01	3.71E-01	3.61E-01	3.47E-01	3.35E-01	3.35E-01
PM150	1.38E-01	1.07E-01	8.27E-02	6.39E-02	4.94E-02	2.96E-02	1.37E-02	6.34E-03	2.94E-03	1.36E-03	6.30E-04	6.30E-04
ND151	4.25E+01	1.33E+00	4.16E-02	1.30E-03	4.06E-05	3.97E-08	1.21E-12	3.70E-17	1.13E-21	3.44E-26	1.05E-30	1.05E-30
PM151	2.70E-02	3.15E-01	3.17E-01	3.09E-01	3.02E-01	2.87E-01	2.66E-01	2.47E-01	2.30E-01	2.13E-01	1.97E-01	1.97E-01
PM152	6.63E+01	6.49E-02	6.32E-05	6.18E-08	6.03E-11	5.76E-17	5.37E-26	5.00E-35	4.66E-44	4.35E-53	4.05E-62	4.05E-62
SM153	8.49E-02	8.36E-02	8.25E-02	8.12E-02	8.01E-02	7.77E-02	7.44E-02	7.11E-02	6.80E-02	6.52E-02	6.23E-02	6.23E-02
SM155	3.61E+00	5.92E-01	9.71E-02	1.59E-02	2.60E-03	7.01E-05	3.09E-07	1.36E-09	6.00E-12	2.67E-14	6.57E-17	6.57E-17
EU155	2.65E-06	7.56E-05	8.75E-05	8.94E-05	8.98E-05	8.98E-05	8.98E-05	8.98E-05	8.98E-05	8.98E-05	8.98E-05	8.98E-05
SM156	4.49E-02	4.17E-02	3.87E-02	3.59E-02	3.34E-02	2.88E-02	2.31E-02	1.85E-02	1.49E-02	1.19E-02	9.52E-03	9.52E-03
EU156	1.31E-04	2.14E-04	2.91E-04	3.62E-04	4.28E-04	5.46E-04	6.95E-04	8.04E-04	9.00E-04	9.71E-04	1.02E-03	1.02E-03
EU157	7.81E-03	2.59E-02	2.47E-02	2.36E-02	2.25E-02	2.06E-02	1.80E-02	1.57E-02	1.37E-02	1.19E-02	1.04E-02	1.04E-02
EU158	1.48E-01	5.98E-02	2.42E-02	9.80E-03	3.97E-03	6.49E-04	4.33E-05	2.87E-06	1.90E-07	1.26E-08	8.40E-10	8.40E-10
EU159	1.90E-01	1.89E-02	1.87E-03	1.86E-04	1.84E-05	1.82E-07	1.78E-10	1.73E-13	1.69E-16	1.65E-19	1.62E-22	1.62E-22
GD159	8.15E-04	3.57E-03	3.71E-03	3.60E-03	3.46E-03	3.21E-03	2.86E-03	2.55E-03	2.27E-03	2.02E-03	1.80E-03	1.80E-03
TB161	5.66E-06	4.07E-05	4.05E-05	4.03E-05	4.02E-05	3.98E-05	3.94E-05	3.89E-05	3.83E-05	3.79E-05	3.74E-05	3.74E-05
TOTAL	1.36E+04	2.82E+03	9.79E+02	5.54E+02	3.98E+02	2.69E+02	1.89E+02	1.48E+02	1.22E+02	1.04E+02	9.04E+01	9.04E+01



RUTH MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.735E-11

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
*BE 7	1.30E-06	1.28E-06	1.27E-06	1.22E-06	1.14E-06	1.00E-06	8.80E-07	6.78E-07	3.54E-07	9.63E-08	2.63E-08
NA 24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 55	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 67	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	4.41E-02	3.98E-02	3.59E-02	2.64E-02	1.58E-02	5.66E-03	2.03E-03	2.59E-04	1.53E-06	1.65E-10	1.11E-10
U240	3.04E-01	9.36E-02	2.87E-02	8.33E-04	2.29E-06	1.72E-11	1.29E-16	7.29E-27	0.	0.	0.
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP239	1.67E-02	2.55E+01	1.90E+01	7.84E+00	1.79E+00	9.38E-02	4.91E-03	1.35E-05	5.30E-12	1.26E-21	1.26E-21
NP240M	4.81E-04	9.42E-02	2.89E-02	8.38E-04	2.30E-06	1.73E-11	1.30E-16	7.35E-27	0.	0.	0.
AM241	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CM242	1.27E-06	1.26E-06	1.26E-06	1.24E-06	1.22E-06	1.16E-06	1.12E-06	1.02E-06	8.31E-07	5.42E-07	3.54E-07
GE 77	4.28E-03	2.70E-03	6.17E-04	7.45E-06	4.74E-09	1.92E-15	7.74E-22	1.26E-34	0.	0.	0.
AS 77	4.42E-05	6.53E-03	4.73E-03	1.37E-03	1.60E-04	2.17E-06	2.95E-08	5.44E-12	2.52E-21	5.41E-40	1.16E-58
SE 77M	1.74E-09	1.97E-05	1.42E-05	4.11E-06	4.79E-07	6.52E-09	8.85E-11	1.63E-14	7.56E-24	1.62E-42	3.49E-61
AS 78	1.15E-02	1.02E-04	3.00E-09	2.53E-23	0.	0.	0.	0.	0.	0.	0.
BR 82	4.78E-04	2.98E-04	1.86E-04	4.53E-05	4.29E-06	3.86E-08	3.46E-10	2.79E-14	1.63E-24	5.60E-45	1.91E-65
BR 83	3.71E-01	9.78E-03	9.83E-06	9.99E-15	1.02E-29	0.	0.	0.	0.	0.	0.
KR 83M	1.92E-05	4.28E-02	4.86E-05	4.37E-14	4.48E-29	0.	0.	0.	0.	0.	0.
KR 85M	4.81E-03	2.75E-01	6.26E-03	7.43E-08	4.58E-16	1.74E-32	6.60E-49	0.	0.	0.	0.
KR 85	4.98E-06	1.31E-04	1.33E-04	1.33E-04	1.33E-04	1.33E-04	1.33E-04	1.33E-04	1.31E-04	1.29E-04	1.27E-04
KR 87	8.09E+01	1.60E-04	3.16E-10	2.45E-27	0.	0.	0.	0.	0.	0.	0.
KR 88	4.67E+01	1.23E-01	3.22E-04	5.86E-12	7.38E-25	0.	0.	0.	0.	0.	0.
RB 88	1.19E+01	1.37E-01	3.61E-04	6.55E-12	8.22E-25	0.	0.	0.	0.	0.	0.
SR 89	4.28E-06	1.28E-01	1.26E-01	1.21E-01	1.14E-01	9.95E-02	8.70E-02	6.70E-02	3.42E-02	9.02E-03	2.38E-03
SR 90	8.65E-06	8.89E-04	8.89E-04	8.89E-04	8.89E-04	8.89E-04	8.89E-04	8.89E-04	8.81E-04	8.81E-04	8.73E-04
Y 90	1.28E-11	2.04E-04	3.60E-04	6.47E-04	8.26E-04	8.81E-04	8.89E-04	8.89E-04	8.81E-04	8.81E-04	8.73E-04
SR 91	1.00E+00	3.60E+00	6.44E-01	3.70E-03	6.76E-07	2.29E-14	7.77E-22	8.85E-37	0.	0.	0.
Y 91M	6.76E-05	2.33E+00	4.16E-01	2.39E-03	4.38E-07	1.48E-14	5.00E-22	5.71E-37	0.	0.	0.

RUTH MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.735E-11

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
Y 91	2.77E-08	1.11E-01	1.31E-01	1.31E-01	1.23E-01	1.09E-01	9.73E-02	7.71E-02	4.26E-02	1.31E-02	4.04E-03	
SR 92	7.24E+00	9.03E-02	1.95E-04	1.96E-12	9.16E-26	0.	0.	0.	0.	0.	0.	0.
Y 92	3.34E-01	9.46E-01	1.05E-02	8.08E-09	4.72E-19	1.61E-39	5.52E-60	0.	0.	0.	0.	0.
Y 93	3.47E-01	2.34E+00	4.57E-01	3.44E-03	9.89E-07	8.17E-14	6.74E-21	4.60E-35	0.	0.	0.	0.
ZR 95	6.58E-04	8.22E-02	8.14E-02	7.88E-02	7.47E-02	6.69E-02	6.03E-02	4.88E-02	2.86E-02	9.84E-03	3.38E-03	
NB 95M	1.40E-11	2.78E-04	5.08E-04	9.69E-04	1.31E-03	1.38E-03	1.27E-03	1.03E-03	6.06E-04	2.09E-04	7.18E-05	
NB 95	7.33E-11	1.59E-03	3.14E-03	7.53E-03	1.40E-02	2.41E-02	3.12E-02	3.87E-02	3.72E-02	1.79E-02	6.87E-03	
ZR 97	1.54E+00	2.63E+00	9.89E-01	5.24E-02	3.93E-04	2.21E-08	1.24E-12	3.93E-21	2.22E-42	0.	0.	0.
NB 97M	7.95E-03	2.53E+00	9.49E-01	5.05E-02	3.78E-04	2.13E-08	1.20E-12	3.78E-21	2.13E-42	0.	0.	0.
NB 97	7.74E-01	2.64E+00	9.92E-01	5.26E-02	3.96E-04	2.38E-08	1.34E-12	4.25E-21	2.39E-42	0.	0.	0.
MO 99	4.48E-03	1.46E+00	1.14E+00	5.40E-01	1.56E-01	1.31E-02	1.09E-03	7.60E-06	3.08E-11	5.08E-22	8.37E-33	
TC 99M	4.17E-08	1.28E+00	1.08E+00	5.17E-01	1.49E-01	1.25E-02	1.04E-03	7.25E-06	2.94E-11	4.86E-22	8.00E-33	
RU103	6.27E-05	1.43E-01	1.40E-01	1.33E-01	1.22E-01	1.02E-01	8.60E-02	6.07E-02	2.52E-02	4.38E-03	7.63E-04	
RH103M	4.18E-09	1.43E-01	1.41E-01	1.33E-01	1.22E-01	1.02E-01	8.60E-02	6.07E-02	2.53E-02	4.38E-03	7.63E-04	
RU105	3.40E-01	3.25E-01	7.64E-03	1.00E-07	7.34E-16	3.92E-32	2.10E-48	0.	0.	0.	0.	0.
RH105M	2.23E-03	3.25E-01	7.66E-03	1.01E-07	7.36E-16	3.94E-32	2.11E-48	0.	0.	0.	0.	0.
RH105	3.67E-09	1.17E+00	7.66E-01	1.91E-01	1.88E-02	1.83E-04	1.78E-06	1.68E-10	1.46E-20	1.09E-40	8.21E-61	
RU106	2.62E-04	4.96E-03	4.94E-03	4.91E-03	4.87E-03	4.79E-03	4.68E-03	4.51E-03	4.10E-03	3.39E-03	2.81E-03	
RH106	2.83E-06	4.96E-03	4.94E-03	4.91E-03	4.87E-03	4.79E-03	4.68E-03	4.51E-03	4.10E-03	3.39E-03	2.81E-03	
PD109	2.16E-03	5.51E-02	1.60E-02	3.98E-04	8.38E-07	3.74E-12	1.66E-17	3.29E-28	0.	0.	0.	0.
AG109M	1.25E-05	5.51E-02	1.61E-02	3.98E-04	8.42E-07	3.74E-12	1.66E-17	3.30E-28	0.	0.	0.	0.
PD111M	3.00E-01	1.46E-02	7.08E-04	8.12E-08	2.20E-14	1.60E-27	1.18E-40	0.	0.	0.	0.	0.
PD111	1.07E-01	1.18E-02	5.69E-04	6.53E-08	1.77E-14	1.29E-27	9.45E-41	0.	0.	0.	0.	0.
AG111M	8.49E-04	1.54E-02	7.47E-04	8.59E-08	2.32E-14	1.70E-27	1.24E-40	0.	0.	0.	0.	0.
AG111	3.03E-10	8.35E-03	8.02E-03	6.11E-03	3.84E-03	1.52E-03	6.05E-04	9.54E-05	9.38E-07	9.09E-11	8.81E-15	
PD112	6.74E-02	3.06E-02	1.38E-02	1.29E-03	2.44E-05	8.87E-09	3.22E-12	4.23E-19	2.67E-36	0.	0.	0.
AG112	2.03E-06	3.55E-02	1.63E-02	1.52E-03	2.90E-05	1.05E-08	3.80E-12	5.01E-19	3.14E-36	0.	0.	0.
AG113	8.74E-04	9.24E-03	3.99E-04	3.25E-08	4.97E-15	1.16E-28	2.72E-42	0.	0.	0.	0.	0.
CD115M	3.13E-09	9.05E-05	8.90E-05	8.47E-05	7.83E-05	6.65E-05	5.68E-05	4.10E-05	1.83E-05	3.64E-06	7.29E-07	
CD115	1.21E-06	1.82E-02	1.33E-02	5.25E-03	1.11E-03	4.95E-05	2.21E-06	4.40E-09	7.77E-16	2.44E-29	7.62E-43	
IN115M	1.51E-11	1.92E-02	1.45E-02	5.74E-03	1.21E-03	5.41E-05	2.41E-06	4.80E-09	8.50E-16	2.66E-29	8.32E-43	
CD117	2.72E-02	5.93E-04	5.77E-07	5.39E-16	4.78E-31	0.	0.	0.	0.	0.	0.	0.
IN117M	1.31E-06	2.46E-03	2.85E-06	2.75E-15	2.44E-30	0.	0.	0.	0.	0.	0.	0.
IN117	5.26E-11	1.62E-03	1.92E-06	1.86E-15	1.65E-30	0.	0.	0.	0.	0.	0.	0.
SN121	5.49E-04	3.13E-02	1.69E-02	2.66E-03	1.22E-04	2.58E-07	5.43E-10	2.42E-15	1.01E-28	0.	0.	0.
SN123	2.83E-06	2.96E-04	2.93E-04	8.8E-04	2.80E-04	2.65E-04	2.51E-04	2.25E-04	1.70E-04	9.78E-05	5.63E-05	
SN125	7.88E-03	7.33E-03	6.81E-03	5.45E-03	3.77E-03	1.80E-03	8.62E-04	1.97E-04	4.94E-06	3.11E-09	1.95E-12	
SB125	4.73E-05	5.25E-05	5.74E-05	7.02E-05	8.60E-05	1.04E-04	1.12E-04	1.17E-04	1.15E-04	1.07E-04	9.98E-05	
SB126	1.54E-03	1.46E-03	1.38E-03	1.17E-03	8.85E-04	5.07E-04	2.92E-04	9.63E-05	6.02E-06	2.92E-08	5.87E-09	
SN127	2.76E+00	9.99E-04	3.63E-07	1.73E-17	1.09E-34	0.	0.	0.	0.	0.	0.	0.

C-9

RUTH MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.735E-11

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SB127	3.22E-02	1.32E-01	1.11E-01	6.45E-02	2.64E-02	4.42E-03	7.38E-04	2.06E-05	2.69E-09	4.60E-17	7.82E-25
TE127M	2.60E-10	2.02E-04	3.69E-04	7.16E-04	9.90E-04	1.09E-03	1.05E-03	9.33E-04	6.81E-04	3.59E-04	1.90E-04
TE127	1.82E-02	9.46E-02	9.28E-02	5.66E-02	2.39E-02	4.91E-03	1.68E-03	9.42E-04	6.72E-04	3.55E-04	1.88E-04
SB128	7.76E-01	1.32E-01	2.09E-02	8.15E-05	7.91E-09	7.42E-17	6.98E-25	6.15E-41	0.	0.	0.
SB129	4.57E+00	2.34E-01	4.89E-03	4.45E-08	1.77E-16	2.79E-33	4.41E-50	0.	0.	0.	0.
TE129M	8.64E-08	9.10E-03	9.10E-03	8.59E-03	7.77E-03	6.33E-03	5.14E-03	3.43E-03	1.23E-03	1.61E-04	2.09E-05
TE129	3.29E+00	2.74E-01	1.14E-02	5.50E-03	4.96E-03	4.05E-03	3.30E-03	2.20E-03	7.92E-04	1.03E-04	1.34E-05
I130	2.17E-02	5.67E-03	1.48E-03	2.65E-05	3.24E-08	4.82E-14	7.19E-20	1.60E-31	0.	0.	0.
TE131M	8.88E-05	3.10E-01	1.78E-01	3.37E-02	2.11E-03	8.23E-06	3.22E-08	4.91E-13	4.47E-25	0.	0.
TE131	8.17E+01	5.66E-02	3.25E-02	6.17E-03	3.85E-04	1.50E-06	5.87E-09	8.99E-14	8.17E-26	0.	0.
I131	1.19E-02	6.41E-01	6.05E-01	4.87E-01	3.20E-01	1.35E-01	5.73E-02	1.02E-02	1.38E-04	2.52E-08	4.59E-12
XE131M	3.22E-11	2.97E-04	5.64E-04	1.18E-03	1.68E-03	1.66E-03	1.23E-03	5.10E-04	3.40E-05	1.02E-07	2.87E-10
TE132	9.97E-01	1.98E+00	1.60E+00	8.40E-01	2.89E-01	3.43E-02	4.07E-03	5.71E-05	1.34E-09	7.31E-19	3.99E-28
I132	2.45E+00	2.04E+00	1.64E+00	8.64E-01	2.99E-01	3.54E-02	4.19E-03	5.89E-05	1.38E-09	7.49E-19	4.11E-28
I133	1.07E+00	5.94E+00	2.68E+00	2.49E-01	4.74E-03	1.72E-06	6.24E-10	8.22E-17	5.16E-34	0.	0.
XE133M	4.54E-08	5.61E-02	6.64E-02	3.90E-02	9.15E-03	4.29E-04	2.00E-05	4.34E-08	9.50E-15	4.54E-28	2.17E-41
XE133	7.93E-07	1.08E+00	1.45E+00	1.29E+00	7.05E-01	1.91E-01	5.12E-02	3.69E-03	5.14E-06	9.96E-12	1.93E-17
I135	1.81E+01	2.95E+00	2.46E-01	1.43E-04	5.82E-10	9.61E-21	1.58E-31	4.29E-53	0.	0.	0.
XE135M	2.00E-03	9.19E-01	7.69E-02	4.47E-05	1.82E-10	2.99E-21	4.93E-32	1.34E-53	0.	0.	0.
XE135	2.08E+00	7.95E+00	1.94E+00	1.11E-02	1.36E-06	1.91E-14	2.68E-22	5.30E-38	0.	0.	0.
CS136	1.57E-03	1.49E-03	1.41E-03	1.20E-03	9.23E-04	5.42E-04	3.18E-04	1.09E-04	7.60E-06	3.66E-08	1.78E-10
CS137	8.71E-05	9.39E-04	9.39E-04	9.39E-04	9.39E-04	9.39E-04	9.39E-04	9.39E-04	9.34E-04	9.29E-04	9.24E-04
BA137M	1.84E-07	8.77E-04	8.77E-04	8.77E-04	8.77E-04	8.77E-04	8.77E-04	8.77E-04	8.71E-04	8.66E-04	8.61E-04
BA139	1.17E+01	1.24E-03	7.34E-09	1.51E-24	0.	0.	0.	0.	0.	0.	0.
BA140	1.10E-01	6.47E-01	6.16E-01	5.22E-01	3.98E-01	2.32E-01	1.35E-01	4.57E-02	3.05E-03	1.36E-05	6.00E-08
LA140	2.60E-07	2.25E-01	3.63E-01	5.02E-01	4.46E-01	2.67E-01	1.55E-01	5.27E-02	3.50E-03	1.56E-05	6.94E-08
LA141	1.51E+00	5.99E-01	8.41E-03	2.33E-08	1.27E-17	3.80E-36	1.13E-54	0.	0.	0.	0.
CE141	1.87E-07	2.07E-01	2.05E-01	1.93E-01	1.73E-01	1.40E-01	1.13E-01	7.36E-02	2.53E-02	2.97E-03	3.50E-04
LA142	7.45E+00	1.63E-03	3.16E-08	2.33E-22	0.	0.	0.	0.	0.	0.	0.
CE143	5.05E-02	2.08E+00	1.26E+00	2.77E-01	2.23E-02	1.44E-04	9.31E-07	3.90E-11	4.40E-22	0.	0.
PR143	1.48E-08	1.33E-01	2.07E-01	2.67E-01	2.29E-01	1.39E-01	8.42E-02	3.04E-02	2.43E-03	1.55E-05	9.81E-08
CE144	2.05E-03	1.47E-02	1.46E-02	1.45E-02	1.43E-02	1.40E-02	1.37E-02	1.30E-02	1.15E-02	9.02E-03	7.08E-03
PR144	5.63E-07	1.47E-02	1.46E-02	1.45E-02	1.43E-02	1.40E-02	1.37E-02	1.30E-02	1.15E-02	9.02E-03	7.08E-03
PR145	8.00E-02	8.19E-01	5.06E-02	1.20E-05	1.09E-11	9.06E-24	7.52E-36	0.	0.	0.	0.
ND147	9.43E-06	1.58E-01	1.49E-01	1.24E-01	9.04E-02	4.85E-02	2.59E-02	7.45E-03	3.26E-04	6.36E-07	1.23E-09
PM147	2.62E-14	1.19E-04	2.30E-04	5.24E-04	9.06E-04	1.38E-03	1.63E-03	1.82E-03	1.84E-03	1.71E-03	1.59E-03
ND149	1.25E+01	1.21E-03	1.17E-07	1.07E-19	9.12E-40	0.	0.	0.	0.	0.	0.
PM149	1.74E-03	3.21E-01	2.35E-01	9.19E-02	1.92E-02	8.36E-04	3.64E-05	6.92E-08	1.09E-14	2.69E-28	6.71E-42
PM150	1.38E-01	2.92E-04	6.14E-07	5.77E-15	2.41E-28	0.	0.	0.	0.	0.	0.
PM151	2.70E-02	1.84E-01	1.01E-01	1.71E-02	8.75E-04	2.30E-06	6.06E-09	4.18E-14	5.24E-27	0.	0.

RUTH MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.735E-11

## DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SM153	8.49E-02	5.96E-02	4.19E-02	1.45E-02	2.46E-03	7.15E-05	2.08E-06	1.74E-09	3.60E-17	1.53E-32	6.52E-48
SM156	4.49E-02	7.65E-03	1.31E-03	6.43E-06	9.26E-10	1.90E-17	3.93E-25	1.67E-40	0.	0.	0.
EU155	2.65E-06	8.98E-05	8.96E-05	8.96E-05	8.94E-05	8.91E-05	8.87E-05	8.80E-05	8.63E-05	8.28E-05	7.96E-05
EU156	1.31E-04	1.07E-03	1.18E-03	1.06E-03	8.42E-04	5.29E-04	3.34E-04	1.32E-04	1.31E-05	1.29E-07	1.27E-09
EU157	7.81E-03	9.02E-03	3.04E-03	1.14E-04	4.78E-07	8.43E-12	1.49E-16	4.65E-26	0.	0.	0.
GD159	8.15E-04	1.60E-03	6.38E-04	3.98E-05	3.92E-07	3.80E-11	3.68E-15	3.45E-23	2.95E-43	0.	0.
TB161	5.66E-06	3.70E-05	3.34E-05	2.47E-05	1.50E-05	5.48E-06	2.00E-06	2.69E-07	1.78E-09	7.68E-14	3.34E-18
TOTAL	3.04E+02	7.92E+01	4.14E+01	1.59E+01	5.84E+00	1.93E+00	1.15E+00	6.28E-01	2.69E-01	9.34E-02	4.43E-02

RUTH MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.735E-11

DEBRIS DECAY FROM 1 TO 50 YEARS

	ZERO	TIME	1.00E+00	1.50E+00	2.00E+00	3.50E+00	5.00E+00	7.00E+00	1.00E+01	2.00E+01	3.50E+01	5.00E+01
*BE 7	1.30E-06	1.12E-08	1.04E-09	9.69E-11	7.79E-14	6.24E-17	4.66E-21	3.00E-27	0.	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U234	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	4.41E-02	1.10E-10	1.07E-10	1.04E-10	9.76E-11	9.06E-11	8.24E-11	7.15E-11	4.45E-11	2.18E-11	1.07E-11	0.
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AM241	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CM242	1.27E-06	2.68E-07	1.24E-07	5.68E-08	5.53E-09	5.38E-10	2.41E-11	2.29E-13	6.59E-18	6.11E-18	5.71E-18	5.71E-18
KR 85	4.98E-06	1.24E-04	1.20E-04	1.16E-04	1.06E-04	9.54E-05	8.39E-05	6.92E-05	3.66E-05	1.40E-05	5.34E-06	0.
SR 89	4.28E-06	1.00E-03	8.77E-05	7.70E-06	5.18E-09	3.50E-12	2.07E-16	9.39E-23	6.82E-44	0.	0.	0.
SR 90	8.65E-06	8.65E-04	8.57E-04	8.49E-04	8.18E-04	7.86E-04	7.49E-04	6.95E-04	5.43E-04	3.75E-04	2.59E-04	2.59E-04
Y 90	1.28E-11	8.65E-04	8.57E-04	8.49E-04	8.18E-04	7.86E-04	7.49E-04	6.95E-04	5.43E-04	3.75E-04	2.59E-04	2.59E-04
Y 91	2.77E-08	1.87E-03	2.17E-04	2.53E-05	3.96E-08	6.22E-11	1.14E-14	2.79E-20	5.64E-39	0.	0.	0.
ZR 95	6.58E-04	1.69E-03	2.41E-04	3.43E-05	1.00E-07	2.91E-10	1.21E-13	1.02E-18	1.25E-35	0.	0.	0.
NB 95M	1.40E-11	3.58E-05	5.11E-06	7.30E-07	2.12E-09	6.17E-12	2.56E-15	2.16E-20	2.65E-37	0.	0.	0.
NB 95	7.33E-11	3.64E-03	5.22E-04	7.44E-05	2.16E-07	6.26E-10	2.61E-13	2.21E-18	2.70E-35	0.	0.	0.
RU103	6.27E-05	2.43E-04	9.96E-06	4.10E-07	2.80E-11	1.92E-15	5.38E-21	2.53E-29	0.	0.	0.	0.
RH103M	4.18E-09	2.44E-04	9.96E-06	4.10E-07	2.80E-11	1.92E-15	5.38E-21	2.54E-29	0.	0.	0.	0.
RU106	2.62E-04	2.49E-03	1.76E-03	1.25E-03	4.44E-04	1.58E-04	3.97E-05	5.02E-06	5.07E-09	1.63E-13	5.24E-18	5.24E-18
RH106	2.83E-06	2.49E-03	1.76E-03	1.25E-03	4.44E-04	1.58E-04	3.97E-05	5.02E-06	5.07E-09	1.63E-13	5.24E-18	5.24E-18
SN123	2.83E-06	3.92E-05	1.42E-05	5.16E-06	2.48E-07	1.19E-08	2.07E-10	4.78E-13	7.66E-22	4.93E-35	3.17E-48	3.17E-48
SB125	4.73E-05	9.53E-05	8.38E-05	7.37E-05	5.02E-05	3.42E-05	2.04E-05	9.45E-06	7.26E-07	1.55E-08	3.29E-10	3.29E-10
TE125M	1.27E-12	3.89E-05	3.46E-05	3.05E-05	2.08E-05	1.41E-05	8.46E-06	3.91E-06	3.00E-07	6.40E-09	1.36E-10	1.36E-10
TE127M	2.60E-10	1.25E-04	3.90E-05	1.22E-05	3.75E-07	1.15E-08	1.11E-10	1.04E-13	8.58E-24	6.41E-39	4.77E-54	4.77E-54
TE127	1.82E-02	1.23E-04	3.85E-05	1.21E-05	3.71E-07	1.14E-08	1.10E-10	1.03E-13	8.49E-24	6.32E-39	4.73E-54	4.73E-54
CS137	8.71E-05	9.18E-04	9.08E-04	8.98E-04	8.66E-04	8.35E-04	7.98E-04	7.46E-04	5.90E-04	4.19E-04	2.96E-04	2.96E-04
BA137M	1.84E-07	8.61E-04	8.51E-04	8.40E-04	8.09E-04	7.83E-04	7.46E-04	6.99E-04	5.53E-04	3.91E-04	2.77E-04	2.77E-04
CE141	1.87E-07	8.06E-05	1.62E-06	3.25E-08	2.65E-13	2.16E-18	3.54E-25	2.35E-35	0.	0.	0.	0.
CE144	2.05E-03	6.03E-03	3.88E-03	2.47E-03	6.49E-04	1.71E-04	2.87E-05	1.98E-06	2.67E-10	4.19E-16	6.52E-22	6.52E-22
PR144	5.63E-07	6.03E-03	3.88E-03	2.47E-03	6.49E-04	1.71E-04	2.87E-05	1.98E-06	2.67E-10	4.19E-16	6.52E-22	6.52E-22
PM147	2.62E-14	1.52E-03	1.33E-03	1.17E-03	7.84E-04	5.27E-04	3.10E-04	1.41E-04	9.98E-06	1.89E-07	3.57E-09	3.57E-09
EU155	2.65E-06	7.76E-05	7.21E-05	6.71E-05	5.40E-05	4.33E-05	3.24E-05	2.09E-05	4.88E-06	5.49E-07	6.18E-08	6.18E-08
TOTAL	6.55E-02	3.15E-02	1.76E-02	1.25E-02	6.51E-03	4.56E-03	3.63E-03	3.09E-03	2.28E-03	1.58E-03	1.10E-03	1.10E-03

C-12

**APPENDIX D**  
**DETAILED RESULTS FOR EVENT DIXIE**

DIXIE  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 4.196E-13

TIME	MR/HR	MICROCURIES/SQ METER
ZERO TIME HOURS	1.04E+02	1.13E+04
1.00E+00	3.14E+01	2.39E+03
2.00E+00	1.26E+01	8.92E+02
3.00E+00	6.90E+00	5.41E+02
4.00E+00	4.42E+00	4.02E+02
6.00E+00	2.38E+00	2.77E+02
9.00E+00	1.39E+00	1.93E+02
1.20E+01	1.00E+00	1.49E+02
1.50E+01	7.81E-01	1.20E+02
1.80E+01	6.37E-01	1.00E+02
2.10E+01	5.35E-01	8.60E+01
1.00E+00 DAYS	4.53E-01	7.41E+01
2.00E+00	2.04E-01	3.57E+01
5.00E+00	7.59E-02	1.30E+01
1.00E+01	3.53E-02	5.25E+00
2.00E+01	1.52E-02	2.05E+00
3.00E+01	9.36E-03	1.30E+00
5.00E+01	4.94E-03	7.46E-01
1.00E+02	2.15E-03	3.45E-01
2.00E+02	7.91E-04	1.30E-01
3.00E+02	3.05E-04	6.43E-02
1.00E+00 YEARS	1.71E-04	4.59E-02
1.50E+00	4.45E-05	2.48E-02
2.00E+00	2.20E-05	1.69E-02
3.50E+00	1.16E-05	7.71E-03
5.00E+00	6.75E-06	4.72E-03
7.00E+00	7.25E-06	3.33E-03
1.00E+01	6.25E-06	2.60E-03
2.00E+01	4.64E-06	1.77E-03
3.50E+01	3.25E-06	1.21E-03
5.00E+01	2.29E-06	8.41E-04

DIXIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 4.196E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BE 7	6.09E-07	6.08E-07	6.08E-07	6.08E-07	6.08E-07	6.08E-07	6.07E-07	6.07E-07	6.05E-07	6.04E-07	6.03E-07	6.02E-07
*NA 24	4.59E-02	4.39E-02	4.19E-02	4.00E-02	3.81E-02	3.62E-02	3.48E-02	3.03E-02	2.64E-02	2.30E-02	2.00E-02	1.74E-02
**MN 54	2.09E-05	2.09E-05	2.09E-05	2.09E-05	2.09E-05	2.09E-05	2.09E-05	2.09E-05	2.07E-05	2.07E-05	2.07E-05	2.07E-05
**FF 55	3.69E-05	3.69E-05	3.69E-05	3.69E-05	3.69E-05	3.69E-05	3.69E-05	3.69E-05	3.69E-05	3.69E-05	3.69E-05	3.69E-05
**FF 59	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.06E-05	3.06E-05	3.05E-05	3.04E-05	3.04E-05	3.03E-05
**CC 57	3.74E-05	3.74E-05	3.74E-05	3.74E-05	3.74E-05	3.74E-05	3.74E-05	3.74E-05	3.74E-05	3.74E-05	3.74E-05	3.74E-05
**CC 58	8.68E-02	8.68E-02	8.68E-02	8.68E-02	8.68E-02	8.66E-02	8.66E-02	8.64E-02	8.64E-02	8.62E-02	8.62E-02	8.60E-02
**CC 60	1.56E-05	1.56E-05	1.56E-05	1.56E-05	1.56E-05	1.56E-05	1.56E-05	1.56E-05	1.56E-05	1.56E-05	1.56E-05	1.56E-05
**CU 64	2.40E+00	2.27E+00	2.15E+00	2.04E+00	1.93E+00	1.83E+00	1.73E+00	1.47E+00	1.25E+00	1.06E+00	9.05E-01	7.69E-01
*CU 67	1.08E-04	1.07E-04	1.05E-04	1.04E-04	1.03E-04	1.01E-04	9.99E-05	9.69E-05	9.42E-05	9.12E-05	8.77E-05	8.52E-05
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.40E-01	1.40E-01	1.39E-01	1.39E-01	1.38E-01	1.37E-01	1.37E-01	1.35E-01	1.33E-01	1.32E-01	1.30E-01	1.28E-01
U239	2.46E+03	4.19E+02	7.15E+01	1.22E+01	2.07E+00	6.02E-02	2.99E-04	1.47E-06	7.29E-09	3.61E-11	1.78E-13	
U240	3.44E-01	3.28E-01	3.12E-01	2.97E-01	2.83E-01	2.56E-01	2.21E-01	1.91E-01	1.65E-01	1.42E-01	1.22E-01	
NP239	8.40E-03	1.41E+01	1.63E+01	1.65E+01	1.64E+01	1.60E+01	1.54E+01	1.49E+01	1.43E+01	1.38E+01	1.33E+01	
NP240M	5.45E-04	3.29E-01	3.15E-01	3.00E-01	2.86E-01	2.58E-01	2.23E-01	1.93E-01	1.66E-01	1.43E-01	1.24E-01	
NP240	1.38E-11	7.09E-12	3.68E-12	1.90E-12	9.83E-13	2.63E-13	3.63E-14	5.01E-15	6.90E-16	9.50E-17	1.31E-17	
*AM241	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08
*CM242	4.90E-07	4.90E-07	4.90E-07	4.90E-07	4.90E-07	4.90E-07	4.87E-07	4.87E-07	4.87E-07	4.87E-07	4.87E-07	4.87E-07
GE 75	1.20E-05	5.82E-02	3.51E-02	2.11E-02	1.27E-02	4.61E-03	1.01E-03	2.20E-04	4.81E-05	1.05E-05	2.30E-06	
GE 77	5.84E-03	1.50E-02	1.41E-02	1.33E-02	1.25E-02	1.11E-02	9.22E-03	7.66E-03	6.38E-03	5.30E-03	4.41E-03	
AS 77	6.04E-05	9.54E-03	9.65E-03	9.71E-03	9.78E-03	9.84E-03	9.84E-03	9.78E-03	9.63E-03	9.43E-03	9.19E-03	
SE 77M	2.38E-09	2.86E-05	2.90E-05	2.92E-05	2.92E-05	2.94E-05	2.96E-05	2.96E-05	2.94E-05	2.90E-05	2.83E-05	2.75E-05
GE 78	7.87E-01	4.92E-01	3.06E-01	1.91E-01	1.19E-01	4.65E-02	1.13E-02	2.73E-03	6.67E-04	1.62E-04	3.94E-05	
AS 78	1.42E-02	2.35E-01	2.90E-01	2.71E-01	2.27E-01	1.34E-01	4.97E-02	1.65E-02	5.11E-03	1.53E-03	4.43E-04	
AS 79	1.44E+01	1.41E-01	1.39E-03	1.37E-05	1.35E-07	1.31E-11	1.25E-17	1.19E-23	1.14E-29	1.08E-35	1.04E-41	
SE 79M	2.13E-02	2.50E-01	2.46E-03	2.43E-05	2.39E-07	2.31E-11	2.20E-17	2.10E-23	2.01E-29	1.91E-35	1.83E-41	
BR 80	8.50E-02	8.01E-03	7.53E-04	7.09E-05	6.67E-06	5.92E-08	4.95E-11	4.13E-14	3.44E-17	2.87E-20	2.40E-23	
SE 81M	6.76E-02	3.15E+00	1.52E+00	7.32E-01	3.52E-01	8.22E-02	9.20E-03	1.03E-03	1.16E-04	1.30E-05	1.45E-06	
SE 81	8.26E-01	3.73E+00	2.16E+00	1.08E+00	5.23E-01	1.22E-01	1.37E-02	1.53E-03	1.71E-04	1.92E-05	2.15E-06	
BR 82	3.94E-04	3.87E-04	3.79E-04	3.72E-04	3.64E-04	3.50E-04	3.30E-04	3.11E-04	2.94E-04	2.77E-04	2.61E-04	
SE 83	3.61E+01	6.85E+00	1.30E+00	2.46E-01	4.65E-02	1.67E-03	1.14E-05	7.73E-08	5.28E-10	3.58E-12	2.27E-14	
BR 83	3.00E-01	4.48E+00	4.15E+00	3.26E+00	2.48E+00	1.40E+00	5.92E-01	2.49E-01	1.05E-01	4.44E-02	1.87E-02	
KR 83M	1.55E-05	1.01E+00	2.07E+00	2.57E+00	2.65E+00	2.21E+00	1.31E+00	6.72E-01	3.24E-01	1.50E-01	6.72E-02	

D-3



DIXIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 4.196E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BR 84	7.51E-02	1.30E+01	3.50E+00	9.49E-01	2.56E-01	1.87E-02	3.70E-04	7.31E-06	1.45E-07	2.86E-09	5.65E-11
KR 85M	3.54E-03	7.58E+00	6.45E+00	5.51E+00	4.71E+00	3.44E+00	2.14E+00	1.34E+00	8.34E-01	5.18E-01	3.24E-01
KR 87	5.70E+01	3.29E+01	1.90E+01	1.10E+01	6.35E+00	2.13E+00	4.13E-01	8.00E-02	1.55E-02	3.00E-03	5.80E-04
KR 88	3.27E+01	2.55E+01	1.99E+01	1.55E+01	1.21E+01	7.37E+00	3.52E+00	1.68E+00	7.96E-01	3.79E-01	1.80E-01
RBB 88	8.31E+00	2.58E+01	2.20E+01	1.74E+01	1.36E+01	8.26E+00	3.94E+00	1.88E+00	8.95E-01	4.25E-01	2.02E-01
RBB 89	3.96E+01	3.72E+01	2.50E+00	1.68E-01	1.13E-02	5.10E-05	1.54E-08	4.66E-12	1.42E-15	4.30E-19	1.30E-22
SR 89	3.04E-06	1.06E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.14E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01
SR 90	5.99E-06	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.15E-04
SR 91	8.11E-01	1.51E+01	1.41E+01	1.31E+01	1.22E+01	1.06E+01	8.52E+00	6.89E+00	5.56E+00	4.46E+00	3.60E+00
Y 91M	5.46E-05	5.20E+00	7.09E+00	7.60E+00	7.50E+00	6.73E+00	5.51E+00	4.43E+00	3.58E+00	2.88E+00	2.33E+00
Y 91	2.23E-08	4.63E-03	1.07E-02	1.70E-02	2.33E-02	3.48E-02	4.95E-02	6.12E-02	7.09E-02	7.86E-02	8.47E-02
SR 92	1.04E+01	4.65E+01	3.60E+01	2.79E+01	2.16E+01	1.29E+01	6.01E+00	2.79E+00	1.29E+00	6.01E-01	2.80E-01
Y 92	4.80E-01	9.79E+00	1.54E+01	1.83E+01	1.94E+01	1.85E+01	1.41E+01	9.64E+00	6.20E+00	3.82E+00	2.30E+00
SR 93	4.21E+02	7.25E+00	4.01E-02	2.21E-04	1.22E-06	3.73E-11	6.29E-18	1.06E-24	1.79E-31	3.02E-38	5.09E-45
Y 93	5.14E-01	1.66E+01	1.56E+01	1.46E+01	1.36E+01	1.19E+01	9.70E+00	7.93E+00	6.44E+00	5.28E+00	4.29E+00
Y 94	6.14E+01	8.39E+01	1.08E+01	1.39E+00	1.80E-01	2.98E-03	6.40E-06	1.37E-08	2.93E-11	6.40E-14	3.55E-15
Y 95	2.66E+02	2.50E+01	5.51E-01	1.22E-02	2.68E-04	1.30E-07	1.39E-12	1.49E-17	1.59E-22	1.70E-27	1.82E-32
ZR 95	9.98E-04	1.30E-01	1.33E-01	1.33E-01	1.33E-01	1.33E-01	1.33E-01	1.33E-01	1.33E-01	1.32E-01	1.32E-01
NB 95	1.11E-10	8.05E-05	1.88E-04	2.95E-04	4.03E-04	6.17E-04	9.37E-04	1.26E-03	1.58E-03	1.90E-03	2.21E-03
ZR 97	2.44E+00	1.06E+01	1.02E+01	9.78E+00	9.36E+00	8.64E+00	7.64E+00	6.76E+00	6.00E+00	5.29E+00	4.70E+00
NB 97M	1.25E-02	1.02E+01	9.78E+00	9.40E+00	9.02E+00	8.31E+00	7.34E+00	6.50E+00	5.75E+00	5.08E+00	4.49E+00
NB 97	1.22E+00	5.33E+00	7.51E+00	8.56E+00	8.98E+00	8.94E+00	8.14E+00	7.26E+00	6.42E+00	5.67E+00	5.04E+00
NB 98	1.39E+01	6.14E+00	2.72E+00	1.20E+00	5.32E-01	1.04E-01	9.01E-03	7.78E-04	6.78E-05	5.87E-06	5.05E-07
MC 99	7.37E-03	3.04E+00	3.01E+00	2.98E+00	2.95E+00	2.89E+00	2.80E+00	2.71E+00	2.63E+00	2.55E+00	2.47E+00
TC 99M	6.85E-08	2.90E-01	5.45E-01	7.70E-01	9.67E-01	1.29E+00	1.64E+00	1.86E+00	2.00E+00	2.07E+00	2.10E+00
MC101	1.07E+02	4.84E+01	2.81E+00	1.63E-01	9.46E-03	3.17E-05	6.16E-09	1.20E-12	2.33E-16	4.53E-20	8.83E-24
TC101	4.53E+00	1.36E+02	1.48E+01	1.22E+00	8.87E-02	4.00E-04	1.00E-07	2.24E-11	4.75E-15	9.78E-19	1.98E-22
MC102	9.05E+02	2.06E+01	4.70E-01	1.07E-02	2.45E-04	1.27E-07	1.51E-12	1.79E-17	2.13E-22	2.52E-27	3.00E-32
TC102M	5.82E-01	1.75E+01	4.00E-01	9.14E-03	2.08E-04	1.08E-07	1.28E-12	1.52E-17	1.80E-22	2.13E-27	2.53E-32
TC102	2.72E+03	1.04E+01	2.37E-01	5.39E-03	1.23E-04	6.42E-08	7.63E-13	9.05E-18	1.07E-22	1.27E-27	1.51E-32
RU103	6.60E-05	1.53E-01	1.53E-01	1.53E-01	1.53E-01	1.52E-01	1.52E-01	1.52E-01	1.52E-01	1.51E-01	1.51E-01
RH103M	4.40E-09	7.92E-02	1.17E-01	1.36E-01	1.45E-01	1.51E-01	1.52E-01	1.52E-01	1.52E-01	1.52E-01	1.51E-01
TC104	5.78E+01	4.15E+01	4.15E+00	4.11E-01	4.06E-02	4.00E-04	3.91E-07	3.82E-10	3.73E-13	3.65E-16	3.56E-19
RU105	4.84E-01	1.67E+01	1.43E+01	1.22E+01	1.05E+01	7.66E+00	4.80E+00	3.00E+00	1.88E+00	1.18E+00	7.38E-01
RH105M	3.18E-03	1.68E+01	1.43E+01	1.23E+01	1.05E+01	7.69E+00	4.80E+00	3.01E+00	1.88E+00	1.18E+00	7.38E-01
RH105	5.22E-09	3.40E-01	6.32E-01	8.72E-01	1.07E+00	1.37E+00	1.64E+00	1.76E+00	1.80E+00	1.78E+00	1.74E+00
RU106	4.25E-04	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03
RH106	4.60E-06	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03	8.04E-03
RH107	1.23E-01	1.67E+01	2.53E+00	3.80E-01	5.74E-02	1.31E-03	4.51E-06	1.56E-08	5.35E-11	1.83E-14	1.82E-17
PD107M	2.55E-04	3.39E+00	5.12E-01	7.74E-02	1.17E-02	2.66E-04	9.18E-07	3.17E-09	1.09E-11	3.76E-14	1.28E-16

DIXIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 4.196E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
PD109	1.08E-02	9.00E-01	8.55E-01	8.11E-01	7.70E-01	6.95E-01	5.97E-01	5.12E-01	4.39E-01	3.76E-01	3.23E-01	3.23E-01
AG109M	6.26E-05	9.00E-01	8.55E-01	8.13E-01	7.72E-01	6.97E-01	5.97E-01	5.12E-01	4.39E-01	3.76E-01	3.23E-01	3.23E-01
PD111M	1.47E+00	1.29E+00	1.14E+00	1.01E+00	8.87E-01	6.90E-01	4.72E-01	3.24E-01	2.22E-01	1.52E-01	1.04E-01	1.04E-01
PD111	5.22E-01	9.42E-01	9.03E-01	8.05E-01	7.12E-01	5.53E-01	3.79E-01	2.60E-01	1.78E-01	1.22E-01	8.38E-02	8.38E-02
AG111M	4.15E-03	1.27E+00	1.19E+00	1.07E+00	9.42E-01	7.28E-01	4.98E-01	3.41E-01	2.34E-01	1.60E-01	1.10E-01	1.10E-01
AG111	1.48E-09	4.38E-03	9.20E-03	1.35E-02	1.74E-02	2.37E-02	3.04E-02	3.48E-02	3.77E-02	3.95E-02	4.06E-02	4.06E-02
PD112	3.71E-01	3.60E-01	3.47E-01	3.36E-01	3.26E-01	3.04E-01	2.76E-01	2.50E-01	2.26E-01	2.05E-01	1.85E-01	1.85E-01
AG112	1.12E-05	7.11E-02	1.25E-01	1.68E-01	2.00E-01	2.40E-01	2.63E-01	2.62E-01	2.50E-01	2.33E-01	2.15E-01	2.15E-01
AG113	4.28E-03	9.15E-01	8.03E-01	7.05E-01	6.18E-01	4.75E-01	3.22E-01	2.17E-01	1.47E-01	9.90E-02	6.70E-02	6.70E-02
AG115	1.59E+00	1.70E+00	2.12E-01	2.65E-02	3.32E-03	5.19E-05	1.01E-07	1.98E-10	3.84E-13	3.81E-16	3.53E-16	3.53E-16
CD115M	1.30E-08	3.46E-04	3.89E-04	3.94E-04	3.94E-04	3.94E-04	3.93E-04	3.93E-04	3.91E-04	3.90E-04	3.90E-04	3.90E-04
CD115	5.02E-06	9.47E-02	1.02E-01	1.02E-01	1.00E-01	9.78E-02	9.42E-02	9.05E-02	8.71E-02	8.38E-02	8.05E-02	8.05E-02
IN115M	6.26E-11	1.05E-02	2.32E-02	3.45E-02	4.39E-02	5.86E-02	7.23E-02	7.97E-02	8.31E-02	8.38E-02	8.32E-02	8.32E-02
CD117	1.11E-01	1.85E+00	1.39E+00	1.04E+00	7.80E-01	4.38E-01	1.84E-01	7.74E-02	3.26E-02	1.37E-02	5.76E-03	5.76E-03
IN117M	5.34E-06	6.43E-01	9.31E-01	1.01E+00	9.77E-01	7.70E-01	4.40E-01	2.25E-01	1.08E-01	5.01E-02	2.27E-02	2.27E-02
IN117	2.15E-10	1.17E-01	2.84E-01	3.95E-01	4.40E-01	4.05E-01	2.59E-01	1.38E-01	6.86E-02	3.23E-02	1.48E-02	1.48E-02
CD118	7.32E+00	3.14E+00	1.35E+00	5.74E-01	2.46E-01	4.50E-02	3.53E-03	2.76E-04	2.17E-05	1.70E-06	1.33E-07	1.33E-07
IN118	4.85E-01	3.14E+00	1.35E+00	5.75E-01	2.46E-01	4.51E-02	3.53E-03	2.77E-04	2.17E-05	1.70E-06	1.33E-07	1.33E-07
CD119	1.85E+01	2.88E-01	4.49E-03	7.03E-05	1.10E-06	2.69E-10	1.02E-15	3.91E-21	1.49E-26	5.69E-32	2.18E-37	2.18E-37
IN119M	2.78E-02	3.11E+00	3.39E-01	3.42E-02	3.40E-03	3.35E-05	3.27E-08	3.20E-11	3.11E-14	3.05E-17	2.98E-20	2.98E-20
IN119	1.37E+00	1.64E-01	1.90E-02	1.93E-03	1.93E-04	1.89E-06	1.85E-09	1.81E-12	1.76E-15	1.72E-18	1.68E-21	1.68E-21
SN121	2.33E-03	2.39E-01	2.33E-01	2.27E-01	2.22E-01	2.11E-01	1.94E-01	1.81E-01	1.67E-01	1.55E-01	1.44E-01	1.44E-01
SN123M	1.18E+00	2.21E+00	7.84E-01	2.77E-01	9.79E-02	1.22E-02	5.41E-04	2.40E-05	1.06E-06	4.68E-08	2.07E-09	2.07E-09
SN123	1.11E-05	1.16E-03	1.16E-03	1.16E-03	1.16E-03	1.16E-03	1.16E-03	1.16E-03	1.16E-03	1.16E-03	1.16E-03	1.16E-03
SN125	2.63E-02	2.63E-02	2.62E-02	2.61E-02	2.60E-02	2.59E-02	2.56E-02	2.54E-02	2.52E-02	2.49E-02	2.47E-02	2.47E-02
SB125	1.58E-04	1.59E-04	1.60E-04	1.60E-04	1.61E-04	1.62E-04	1.65E-04	1.67E-04	1.69E-04	1.71E-04	1.73E-04	1.73E-04
SB126	3.58E-03	3.56E-03	3.56E-03	3.55E-03	3.54E-03	3.52E-03	3.50E-03	3.48E-03	3.45E-03	3.43E-03	3.41E-03	3.41E-03
SN127	3.74E+00	2.68E+00	1.93E+00	1.39E+00	1.00E+00	5.15E-01	1.92E-01	7.12E-02	2.64E-02	9.82E-03	3.65E-03	3.65E-03
SB127	4.36E-02	1.50E-01	1.66E-01	1.77E-01	1.85E-01	1.93E-01	1.96E-01	1.94E-01	1.91E-01	1.87E-01	1.83E-01	1.83E-01
TE127	2.46E-02	3.06E-02	3.72E-02	4.42E-02	5.11E-02	6.41E-02	8.20E-02	9.58E-02	1.07E-01	1.15E-01	1.20E-01	1.20E-01
SN128	2.33E+01	1.15E+01	5.69E+00	2.81E+00	1.39E+00	3.39E-01	4.09E-02	4.94E-03	5.96E-04	7.22E-05	8.70E-06	8.70E-06
SB128M	1.19E-02	1.31E+01	5.79E+00	3.35E+00	1.65E+00	4.05E-01	4.88E-02	5.89E-03	7.10E-04	8.58E-05	1.04E-05	1.04E-05
SB128	9.82E-01	9.45E-01	8.89E-01	8.33E-01	7.78E-01	6.67E-01	5.32E-01	4.22E-01	3.35E-01	2.66E-01	2.11E-01	2.11E-01
SN129M	1.34E+01	6.68E+00	3.35E+00	1.68E+00	8.38E-01	2.09E-01	2.62E-02	3.28E-03	4.09E-04	5.12E-05	6.40E-06	6.40E-06
SN129	8.94E+01	8.77E-01	8.66E-03	8.55E-05	8.38E-07	8.15E-11	7.75E-17	7.41E-23	7.07E-29	6.74E-35	6.45E-41	6.45E-41
SB129	5.03E+00	8.43E+00	7.92E+00	7.07E+00	6.23E+00	4.62E+00	2.88E+00	1.78E+00	1.10E+00	6.79E-01	4.18E-01	4.18E-01
TE129M	9.51E-08	1.05E-03	2.17E-03	3.19E-03	4.09E-03	5.55E-03	7.02E-03	7.92E-03	8.49E-03	8.83E-03	9.06E-03	9.06E-03
TE129	3.62E+00	4.98E+00	5.83E+00	6.06E+00	5.83E+00	4.83E+00	3.21E+00	2.03E+00	1.26E+00	7.81E-01	4.84E-01	4.84E-01
SB130M	4.64E-01	8.76E-01	2.30E-03	6.04E-06	1.59E-08	1.10E-13	2.00E-21	3.64E-29	6.60E-37	1.20E-44	2.18E-52	2.18E-52
SB130	7.96E+01	2.41E+01	6.85E+00	1.94E+00	5.49E-01	4.42E-02	1.01E-03	2.30E-05	5.24E-07	1.19E-08	2.73E-10	2.73E-10

DIXIE  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 4.196E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
I130	2.22E-02	2.10E-02	1.98E-02	1.87E-02	1.77E-02	1.59E-02	1.34E-02	1.13E-02	9.57E-03	8.11E-03	6.85E-03	5.85E-03
SB131	1.70E+02	4.45E+01	7.27E+00	1.19E+00	1.96E-01	5.27E-03	2.32E-05	1.03E-07	4.51E-10	1.99E-12	9.93E-15	4.93E-17
TE131M	8.19E-05	4.29E-01	4.89E-01	4.89E-01	4.80E-01	4.59E-01	4.28E-01	3.99E-01	3.73E-01	3.48E-01	3.24E-01	3.01E-01
TE131	7.54E+01	8.19E+01	2.67E+01	6.95E+00	1.69E+00	1.58E-01	7.87E-02	7.27E-02	6.78E-02	6.35E-02	5.91E-02	5.49E-02
I131	1.10E-02	3.80E-01	5.59E-01	6.13E-01	6.24E-01	6.29E-01	6.29E-01	6.24E-01	6.24E-01	6.19E-01	6.19E-01	6.19E-01
TE132	8.31E-01	2.02E+00	2.00E+00	1.98E+00	1.96E+00	1.93E+00	1.88E+00	1.83E+00	1.78E+00	1.73E+00	1.69E+00	1.65E+00
I132	2.04E+00	2.03E+00	2.03E+00	2.02E+00	2.00E+00	1.98E+00	1.93E+00	1.88E+00	1.83E+00	1.79E+00	1.74E+00	1.70E+00
TE133M	9.96E-02	3.45E+01	1.50E+01	6.55E+00	2.85E+00	5.41E-01	4.45E-02	3.67E-03	3.03E-04	2.49E-05	2.06E-06	1.70E-07
TE133	5.60E+02	3.17E+01	3.53E+00	1.17E+00	4.93E-01	9.34E-02	7.73E-03	6.36E-04	5.26E-05	4.33E-06	3.57E-07	2.91E-08
I133	8.68E-01	9.34E+00	1.01E+01	1.01E+01	9.91E+00	9.39E+00	8.54E+00	7.73E+00	6.97E+00	6.36E+00	5.74E+00	5.19E+00
XE133M	3.69E-08	2.10E-03	5.07E-03	8.11E-03	1.11E-02	1.66E-02	2.40E-02	3.05E-02	3.60E-02	4.06E-02	4.45E-02	4.84E-02
XE133	6.45E-07	3.67E-02	8.92E-02	1.42E-01	1.95E-01	2.96E-01	4.34E-01	5.55E-01	6.64E-01	7.59E-01	8.44E-01	9.29E-01
TE134	1.74E+02	8.05E+01	3.00E+01	1.11E+01	4.13E+00	5.73E-01	2.93E-02	1.50E-03	7.69E-05	3.95E-06	2.02E-07	1.02E-08
I134	7.96E+01	1.06E+02	7.46E+01	4.37E+01	2.35E+01	5.96E+00	6.55E-01	6.69E-02	6.55E-03	6.28E-04	5.96E-05	5.64E-06
I135	1.46E+01	2.58E+01	2.32E+01	2.09E+01	1.89E+01	1.53E+01	1.13E+01	8.24E+00	6.05E+00	4.46E+00	3.25E+00	2.32E+00
XE135M	1.62E-03	7.44E+00	7.23E+00	6.56E+00	5.88E+00	4.79E+00	3.52E+00	2.58E+00	1.89E+00	1.39E+00	1.02E+00	7.40E+00
XE135	1.69E+00	3.33E+00	4.88E+00	6.14E+00	7.14E+00	8.57E+00	9.50E+00	9.54E+00	9.08E+00	8.28E+00	7.40E+00	6.54E+00
CS136	1.02E-02	1.02E-02	1.02E-02	1.01E-02	1.01E-02	1.01E-02	1.00E-02	9.94E-03	9.87E-03	9.81E-03	9.74E-03	9.67E-03
CS137	7.27E-05	7.83E-04	7.83E-04	7.83E-04	7.83E-04	7.83E-04	7.83E-04	7.83E-04	7.83E-04	7.83E-04	7.83E-04	7.83E-04
BA137M	1.53E-07	7.31E-04	7.31E-04	7.31E-04	7.31E-04	7.31E-04	7.31E-04	7.31E-04	7.31E-04	7.31E-04	7.31E-04	7.31E-04
XE138	5.52E+02	4.75E+01	4.13E+00	3.58E-01	3.10E-02	2.32E-04	1.51E-07	9.81E-11	6.38E-14	4.14E-17	2.69E-20	1.66E-23
CS138	8.22E+01	1.38E+02	4.80E+01	1.41E+01	3.95E+00	3.01E-01	6.25E-03	1.30E-04	2.69E-06	5.61E-08	1.16E-09	2.16E-11
CS139	5.26E+02	1.68E+01	2.10E-01	2.64E-03	3.32E-05	5.21E-09	1.04E-14	2.05E-20	4.05E-26	8.04E-32	1.59E-37	2.84E-43
BA139	9.71E+00	1.08E+02	6.67E+01	4.05E+01	2.45E+01	9.00E+00	2.00E+00	4.43E-01	9.86E-02	2.18E-02	4.85E-03	8.55E-04
BA140	1.00E-01	6.25E-01	6.25E-01	6.20E-01	6.20E-01	6.15E-01	6.15E-01	6.11E-01	6.06E-01	6.01E-01	5.96E-01	5.91E-01
LA140	2.38E-07	1.07E-02	2.12E-02	3.14E-02	4.15E-02	6.11E-02	8.92E-02	1.15E-01	1.40E-01	1.64E-01	1.86E-01	2.08E-01
BA141	1.92E+02	5.82E+01	5.77E+00	5.73E-01	5.68E-02	5.64E-04	5.50E-07	5.36E-10	5.22E-13	5.13E-16	4.99E-19	4.85E-22
LA141	1.78E+00	3.77E+01	3.51E+01	2.98E+01	2.50E+01	1.75E+01	1.03E+01	6.00E+00	3.53E+00	2.07E+00	1.21E+00	6.84E+00
CE141	2.20E-07	2.45E-02	5.73E-02	8.61E-02	1.10E-01	1.48E-01	1.84E-01	2.04E-01	2.16E-01	2.23E-01	2.27E-01	2.27E-01
BA142	5.08E+02	2.02E+01	4.61E-01	1.05E-02	2.40E-04	1.25E-07	1.48E-12	1.75E-17	2.08E-22	2.47E-27	2.93E-32	3.49E-37
LA142	1.17E+01	8.10E+01	5.34E+01	3.40E+01	2.16E+01	8.75E+00	2.28E+00	5.82E-01	1.50E-01	3.86E-02	9.95E-03	2.32E-03
LA143	1.90E+02	3.71E+01	1.90E+00	9.78E-02	5.02E-03	1.32E-05	1.77E-09	2.39E-13	3.22E-17	4.35E-21	5.87E-25	7.64E-29
CE143	7.60E-02	4.85E+00	5.02E+00	4.89E+00	4.80E+00	4.62E+00	4.33E+00	4.07E+00	3.82E+00	3.58E+00	3.37E+00	3.16E+00
PR143	2.22E-08	7.42E-03	1.79E-02	2.83E-02	3.85E-02	5.82E-02	8.58E-02	1.12E-01	1.36E-01	1.59E-01	1.80E-01	2.01E-01
CE144	3.05E-03	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02
PR144	8.36E-07	1.99E-02	2.16E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02
PR145	1.23E-01	1.81E+01	1.61E+01	1.43E+01	1.28E+01	1.01E+01	7.13E+00	5.04E+00	3.57E+00	2.52E+00	1.78E+00	1.02E+00
CE146	3.63E+02	1.86E+01	9.54E-01	4.88E-02	2.51E-03	6.62E-06	8.91E-10	1.20E-13	1.62E-17	2.18E-21	2.94E-25	3.94E-29
PR146	7.51E+00	6.53E+01	1.48E+01	2.78E+00	5.00E-01	1.57E-02	8.69E-05	4.79E-07	2.65E-09	1.47E-11	8.02E-14	4.54E-17
PR147	4.24E+01	1.23E+01	3.82E-01	1.19E-02	3.74E-04	3.65E-07	1.11E-11	3.40E-16	1.04E-20	3.17E-25	9.66E-30	2.71E-34

DIXIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 4.196E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
ND147	1.51E-05	2.84E-01	2.92E-01	2.92E-01	2.91E-01	2.90E-01	2.88E-01	2.85E-01	2.83E-01	2.81E-01	2.79E-01	2.79E-01
ND149	2.18E+01	1.48E+01	1.01E+01	6.88E+00	4.65E+00	2.16E+00	6.80E-01	2.15E-01	6.76E-02	2.13E-02	6.71E-03	6.71E-03
PM149	3.04E-03	2.37E-01	3.94E-01	4.98E-01	5.64E-01	6.34E-01	6.59E-01	6.47E-01	6.30E-01	6.06E-01	5.85E-01	5.85E-01
PM150	2.56E-01	1.98E-01	1.53E-01	1.18E-01	9.13E-02	5.48E-02	2.54E-02	1.17E-02	5.44E-03	2.52E-03	1.17E-03	1.17E-03
ND151	8.81E+01	2.75E+00	8.61E-02	2.69E-03	8.41E-05	8.22E-08	2.51E-12	7.67E-17	2.34E-21	7.12E-26	2.18E-30	2.18E-30
PM151	5.58E-02	6.53E-01	6.57E-01	6.41E-01	6.25E-01	5.94E-01	5.50E-01	5.11E-01	4.76E-01	4.40E-01	4.09E-01	4.09E-01
PM152	1.43E+02	1.39E-01	1.36E-04	1.33E-07	1.30E-10	1.24E-16	1.15E-25	1.08E-34	1.00E-43	9.36E-53	8.70E-62	8.70E-62
SM153	1.96E-01	1.93E-01	1.91E-01	1.88E-01	1.85E-01	1.80E-01	1.72E-01	1.64E-01	1.57E-01	1.51E-01	1.44E-01	1.44E-01
SM153	1.51E+01	2.48E+00	4.06E-01	6.65E-02	1.09E-02	2.93E-04	1.29E-06	5.70E-09	2.51E-11	1.12E-13	2.75E-16	2.75E-16
EU155	1.11E-05	3.16E-04	3.66E-04	3.74E-04	3.76E-04	3.76E-04	3.76E-04	3.76E-04	3.76E-04	3.76E-04	3.76E-04	3.76E-04
SM156	2.05E-01	1.90E-01	1.77E-01	1.64E-01	1.52E-01	1.32E-01	1.05E-01	8.46E-02	6.78E-02	5.43E-02	4.35E-02	4.35E-02
EU156	5.99E-04	9.78E-04	1.33E-03	1.65E-03	1.96E-03	2.49E-03	3.17E-03	3.67E-03	4.11E-03	4.43E-03	4.67E-03	4.67E-03
EU157	3.15E-02	1.04E-01	9.97E-02	9.52E-02	9.08E-02	8.30E-02	7.24E-02	6.33E-02	5.51E-02	4.80E-02	4.18E-02	4.18E-02
EU158	1.22E+00	4.95E-01	2.00E-01	8.11E-02	3.28E-02	5.37E-03	3.58E-04	2.37E-05	1.58E-06	1.05E-07	6.95E-09	6.95E-09
EU159	1.48E+00	1.47E-01	1.46E-02	1.45E-03	1.44E-04	1.42E-06	1.38E-09	1.35E-12	1.32E-15	1.29E-18	1.26E-21	1.26E-21
GD159	6.35E-03	2.78E-02	2.89E-02	2.80E-02	2.70E-02	2.50E-02	2.23E-02	1.99E-02	1.77E-02	1.57E-02	1.40E-02	1.40E-02
TB161	1.08E-04	7.79E-04	7.74E-04	7.71E-04	7.69E-04	7.61E-04	7.53E-04	7.43E-04	7.33E-04	7.25E-04	7.15E-04	7.15E-04
TOTAL	1.13E+04	2.39E+03	8.92E+02	5.41E+02	4.02E+02	2.77E+02	1.93E+02	1.49E+02	1.20E+02	1.00E+02	8.60E+01	8.60E+01

DIXIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 4.196E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
BE 7	6.09E-07	6.02E-07	5.94E-07	5.71E-07	5.35E-07	4.70E-07	4.13E-07	3.18E-07	1.66E-07	4.51E-08	1.23E-08
* NA 24	4.59E-02	1.51E-02	4.99E-03	1.79E-04	7.01E-07	1.07E-11	1.63E-16	3.80E-26	0.	0.	0.
* MN 54	2.09E-05	2.07E-05	2.07E-05	2.03E-05	2.01E-05	1.98E-05	1.94E-05	1.85E-05	1.65E-05	1.31E-05	1.05E-05
* FE 55	3.69E-05	3.69E-05	3.69E-05	3.67E-05	3.67E-05	3.65E-05	3.61E-05	3.56E-05	3.43E-05	3.19E-05	2.96E-05
* FE 59	3.07E-05	3.02E-05	2.98E-05	2.84E-05	2.63E-05	2.26E-05	1.93E-05	1.42E-05	6.60E-06	1.41E-06	3.02E-07
* CO 57	3.74E-05	3.74E-05	3.71E-05	3.71E-05	3.66E-05	3.55E-05	3.46E-05	3.30E-05	2.91E-05	2.25E-05	1.74E-05
* CO 58	8.68E-02	8.60E-02	8.51E-02	8.25E-02	7.88E-02	7.15E-02	6.48E-02	5.34E-02	3.29E-02	1.24E-02	4.69E-03
* CO 60	1.56E-05	1.56E-05	1.56E-05	1.56E-05	1.55E-05	1.55E-05	1.54E-05	1.53E-05	1.50E-05	1.45E-05	1.39E-05
* CU 64	2.40E+00	6.53E-01	1.78E-01	3.62E-03	5.43E-06	1.23E-11	2.80E-17	1.44E-28	0.	0.	0.
* CU 67	1.08E-04	8.24E-05	6.29E-05	2.80E-05	7.28E-06	4.91E-07	3.31E-08	1.50E-10	2.10E-16	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.40E-01	1.27E-01	1.14E-01	8.41E-02	5.03E-02	1.80E-02	6.46E-03	8.26E-04	4.87E-06	5.24E-10	3.53E-10
U240	3.44E-01	1.06E-01	3.25E-02	9.44E-04	2.59E-06	1.95E-11	1.46E-16	8.27E-27	0.	0.	0.
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP239	8.40E-03	1.28E+01	9.55E+00	3.94E+00	9.02E-01	4.72E-02	2.47E-03	6.77E-06	2.66E-12	6.36E-22	6.36E-22
NP240M	5.45E-04	1.07E-01	3.28E-02	9.50E-04	2.61E-06	1.97E-11	1.48E-16	8.33E-27	0.	0.	0.
* AM241	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08
* CM242	4.90E-07	4.87E-07	4.85E-07	4.80E-07	4.70E-07	4.49E-07	4.32E-07	3.96E-07	3.22E-07	2.10E-07	1.37E-07
GE 77	5.84E-03	3.68E-03	8.42E-04	1.02E-05	6.47E-09	2.62E-15	1.06E-21	1.72E-34	0.	0.	0.
AS 77	6.04E-05	8.91E-03	6.45E-03	1.86E-03	2.19E-04	2.96E-06	4.02E-08	7.42E-12	3.44E-21	7.38E-40	1.58E-58
SE 77M	2.38E-09	2.68E-05	1.93E-05	5.60E-06	6.53E-07	8.89E-09	1.21E-10	2.23E-14	1.03E-23	2.21E-42	4.76E-61
AS 78	1.42E-02	1.26E-04	3.69E-09	3.12E-23	0.	0.	0.	0.	0.	0.	0.
BR 82	3.94E-04	2.46E-04	1.54E-04	3.73E-05	3.54E-06	3.18E-08	2.85E-10	2.30E-14	1.35E-24	4.62E-45	1.57E-65
BR 83	3.00E-01	7.90E-03	7.94E-06	8.07E-15	8.24E-30	0.	0.	0.	0.	0.	0.
KR 83M	1.55E-05	3.46E-02	3.93E-05	3.53E-14	3.62E-29	0.	0.	0.	0.	0.	0.
KR 85M	3.54E-03	2.02E-01	4.60E-03	5.46E-08	3.37E-16	1.28E-32	4.85E-49	0.	0.	0.	0.
KR 85	3.66E-06	9.61E-05	9.80E-05	9.80E-05	9.80E-05	9.80E-05	9.80E-05	9.75E-05	9.66E-05	9.47E-05	9.33E-05
KR 87	5.70E+01	1.12E-04	2.22E-10	1.72E-27	0.	0.	0.	0.	0.	0.	0.
KR 88	3.27E+01	8.60E-02	2.26E-04	4.10E-12	5.16E-25	0.	0.	0.	0.	0.	0.
RB 88	8.31E+00	9.59E-02	2.53E-04	4.59E-12	5.75E-25	0.	0.	0.	0.	0.	0.
SR 89	3.04E-06	9.10E-02	8.96E-02	8.61E-02	8.08E-02	7.06E-02	6.17E-02	4.75E-02	2.43E-02	6.39E-03	1.69E-03
SR 90	5.99E-06	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.15E-04	6.09E-04	6.09E-04	6.04E-04
Y 90	8.87E-12	1.41E-04	2.49E-04	4.48E-04	5.71E-04	6.09E-04	6.15E-04	6.15E-04	6.09E-04	6.09E-04	6.04E-04
SR 91	8.11E-01	2.90E+00	5.20E-01	2.98E-03	5.46E-07	1.85E-14	6.27E-22	7.14E-37	0.	0.	0.

D-8

DIXIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 4.196E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
Y 91M	5.46E-05	1.88E+00	3.36E-01	1.93E-03	3.54E-07	1.19E-14	4.04E-22	4.61E-37	0.	0.	0.
Y 91	2.23E-08	8.93E-02	1.06E-01	1.06E-01	9.95E-02	8.83E-02	7.86E-02	6.22E-02	3.44E-02	1.06E-02	3.26E-03
SR 92	1.04E+01	1.30E-01	2.80E-04	2.81E-12	1.32E-25	0.	0.	0.	0.	0.	0.
Y 92	4.80E-01	1.36E+00	1.51E-02	1.16E-08	6.78E-19	2.32E-39	7.95E-60	0.	0.	0.	0.
Y 93	5.14E-01	3.47E+00	6.77E-01	5.09E-03	1.47E-06	1.21E-13	9.99E-21	6.82E-35	0.	0.	0.
ZR 95	9.98E-04	1.25E-01	1.23E-01	1.19E-01	1.13E-01	1.02E-01	9.15E-02	7.40E-02	4.33E-02	1.49E-02	5.12E-03
NB 95M	2.12E-11	4.22E-04	7.70E-04	1.47E-03	1.98E-03	2.09E-03	1.93E-03	1.57E-03	9.19E-04	3.16E-04	1.09E-04
NB 95	1.11E-10	2.41E-03	4.77E-03	1.14E-02	2.12E-02	3.66E-02	4.73E-02	5.87E-02	5.65E-02	2.71E-02	1.04E-02
ZR 97	2.44E+00	4.15E+00	1.56E+00	8.27E-02	6.21E-04	3.50E-08	1.96E-12	6.21E-21	3.50E-42	0.	0.
NB 97M	1.25E-02	3.99E+00	1.50E+00	7.97E-02	5.96E-04	3.36E-08	1.89E-12	5.96E-21	3.37E-42	0.	0.
NB 97	1.22E+00	4.17E+00	1.57E+00	8.31E-02	6.25E-04	3.76E-08	2.11E-12	6.71E-21	3.78E-42	0.	0.
MO 99	7.37E-03	2.40E+00	1.87E+00	8.87E-01	2.57E-01	2.15E-02	1.79E-03	1.25E-05	5.07E-11	8.36E-22	1.38E-32
TC 99M	6.85E-08	2.11E+00	1.77E+00	8.50E-01	2.45E-01	2.05E-02	1.71E-03	1.19E-05	4.84E-11	7.98E-22	1.31E-32
RH103	6.60E-05	1.51E-01	1.48E-01	1.40E-01	1.29E-01	1.08E-01	9.06E-02	6.39E-02	2.66E-02	4.61E-03	8.04E-04
RH103M	4.40E-09	1.51E-01	1.48E-01	1.41E-01	1.29E-01	1.08E-01	9.06E-02	6.39E-02	2.66E-02	4.61E-03	8.04E-04
RH105	4.84E-01	4.62E-01	1.09E-02	1.43E-07	1.04E-15	5.58E-32	2.99E-48	0.	0.	0.	0.
RH105M	3.18E-03	4.62E-01	1.09E-02	1.43E-07	1.05E-15	5.61E-32	3.00E-48	0.	0.	0.	0.
RH105	5.22E-09	1.67E+00	1.09E+00	2.72E-01	2.68E-02	2.60E-04	2.53E-06	2.39E-10	2.07E-20	1.56E-40	1.17E-60
RU106	4.25E-04	8.04E-03	8.01E-03	7.97E-03	7.90E-03	7.77E-03	7.59E-03	7.31E-03	6.65E-03	5.50E-03	4.56E-03
RH106	4.60E-06	8.04E-03	8.01E-03	7.97E-03	7.90E-03	7.77E-03	7.59E-03	7.31E-03	6.65E-03	5.50E-03	4.56E-03
PD109	1.08E-02	2.76E-01	8.04E-02	2.00E-03	4.21E-06	1.88E-11	8.35E-17	1.65E-27	0.	0.	0.
AG109M	6.26E-05	2.76E-01	8.07E-02	2.00E-03	4.23E-06	1.88E-11	8.35E-17	1.65E-27	0.	0.	0.
PD111M	1.47E+00	7.12E-02	3.46E-03	3.97E-07	1.07E-13	7.83E-27	5.75E-40	0.	0.	0.	0.
PD111	5.22E-01	5.75E-02	2.78E-03	3.19E-07	8.65E-14	6.30E-27	4.62E-40	0.	0.	0.	0.
AG111M	4.15E-03	7.50E-02	3.65E-03	4.20E-07	1.13E-13	8.32E-27	6.08E-40	0.	0.	0.	0.
AG111	1.48E-09	4.08E-02	3.92E-02	2.98E-02	1.88E-02	7.45E-03	2.96E-03	4.66E-04	4.58E-06	4.44E-10	4.30E-14
PD112	3.71E-01	1.68E-01	7.62E-02	7.08E-03	1.35E-04	4.88E-08	1.78E-11	2.33E-18	1.47E-35	0.	0.
AG112	1.12E-05	1.96E-01	8.99E-02	8.34E-03	1.59E-04	5.77E-08	2.09E-11	2.76E-18	1.73E-35	0.	0.
AG113	4.28E-03	4.52E-02	1.96E-03	1.59E-07	2.43E-14	5.69E-28	1.33E-41	0.	0.	0.	0.
CD115M	1.30E-08	3.76E-04	3.70E-04	3.52E-04	3.26E-04	2.76E-04	2.36E-04	1.70E-04	7.62E-05	1.51E-05	3.03E-06
CD115	5.02E-06	7.56E-02	5.54E-02	2.18E-02	4.61E-03	2.06E-04	9.18E-06	1.83E-08	3.23E-15	1.01E-28	3.17E-42
IN115M	6.26E-11	7.98E-02	6.05E-02	2.39E-02	5.02E-03	2.25E-04	1.00E-05	1.99E-08	3.53E-15	1.11E-28	3.46E-42
CD117	1.11E-01	2.42E-03	2.36E-06	2.20E-15	1.95E-30	0.	0.	0.	0.	0.	0.
IN117M	5.34E-06	1.01E-02	1.16E-05	1.12E-14	9.98E-30	0.	0.	0.	0.	0.	0.
IN117	2.15E-10	6.63E-03	7.85E-06	7.61E-15	6.75E-30	0.	0.	0.	0.	0.	0.
SN121	2.33E-03	1.33E-01	7.15E-02	1.13E-02	5.17E-04	1.09E-06	2.30E-09	1.02E-14	4.28E-28	0.	0.
SN123	1.11E-05	1.16E-03	1.15E-03	1.13E-03	1.10E-03	1.04E-03	9.87E-04	8.83E-04	6.69E-04	3.84E-04	2.21E-04
SN125	2.63E-02	2.45E-02	2.28E-02	1.82E-02	1.26E-02	6.03E-03	2.88E-03	6.59E-04	1.65E-05	1.04E-08	6.50E-12
SB125	1.58E-04	1.75E-04	1.92E-04	2.34E-04	2.87E-04	3.48E-04	3.75E-04	3.91E-04	3.83E-04	3.58E-04	3.33E-04
SB126	3.58E-03	3.38E-03	3.20E-03	2.71E-03	2.05E-03	1.18E-03	6.79E-04	2.23E-04	1.40E-05	6.79E-08	1.36E-08

D-9

DIXIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 4.196E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SN127	3.74E+00	1.35E-03	4.91E-07	2.35E-17	1.47E-34	0.	0.	0.	0.	0.	0.
SB127	4.36E-02	1.79E-01	1.50E-01	8.74E-02	3.58E-02	5.98E-03	1.00E-03	2.80E-05	3.65E-09	6.23E-17	1.06E-24
TE127M	3.53E-10	2.73E-04	5.00E-04	9.70E-04	1.34E-03	1.48E-03	1.42E-03	1.26E-03	9.22E-04	4.87E-04	2.57E-04
TE127	2.46E-02	1.28E-01	1.26E-01	7.66E-02	3.24E-02	6.64E-03	2.27E-03	1.28E-03	9.10E-04	4.81E-04	2.54E-04
SB128	9.82E-01	1.67E-01	2.64E-02	1.03E-04	1.00E-08	9.38E-17	8.83E-25	7.78E-41	0.	0.	0.
SB129	5.03E+00	2.58E-01	5.38E-03	4.90E-08	1.95E-16	3.07E-33	4.85E-50	0.	0.	0.	0.
TE129M	9.51E-08	1.00E-02	1.00E-02	9.45E-03	8.55E-03	6.96E-03	5.66E-03	3.77E-03	1.36E-03	1.77E-04	2.30E-05
TE129	3.62E+00	3.02E-01	1.26E-02	6.06E-03	5.46E-03	4.45E-03	3.63E-03	2.42E-03	8.72E-04	1.14E-04	1.48E-05
I130	2.22E-02	5.79E-03	1.52E-03	2.71E-05	3.31E-08	4.93E-14	7.35E-20	1.64E-31	0.	0.	0.
TE131M	8.19E-05	2.87E-01	1.64E-01	3.11E-02	1.95E-03	7.60E-06	2.97E-08	4.54E-13	4.12E-25	0.	0.
TE131	7.54E+01	5.23E-02	3.00E-02	5.70E-03	3.55E-04	1.39E-06	5.42E-09	8.30E-14	7.54E-26	0.	0.
I131	1.10E-02	5.91E-01	5.59E-01	4.49E-01	2.96E-01	1.25E-01	5.29E-02	9.44E-03	1.28E-04	2.32E-08	4.23E-12
XE131M	2.97E-11	2.74E-04	5.20E-04	1.09E-03	1.55E-03	1.54E-03	1.14E-03	4.70E-04	3.14E-05	9.39E-08	2.65E-10
TE132	8.31E-01	1.65E+00	1.33E+00	7.00E-01	2.41E-01	2.86E-02	3.39E-03	4.76E-05	1.11E-09	6.09E-19	3.32E-28
I132	2.04E+00	1.70E+00	1.37E+00	7.20E-01	2.49E-01	2.95E-02	3.49E-03	4.91E-05	1.15E-09	6.25E-19	3.42E-28
I133	8.68E-01	4.84E+00	2.18E+00	2.03E-01	3.86E-03	1.40E-06	5.07E-10	6.69E-17	4.20E-34	0.	0.
XE133M	3.69E-08	4.57E-02	5.41E-02	3.17E-02	7.45E-03	3.50E-04	1.63E-05	3.53E-08	7.73E-15	3.69E-28	1.77E-41
XE133	6.45E-07	8.77E-01	1.18E+00	1.05E+00	5.74E-01	1.55E-01	4.17E-02	3.00E-03	4.18E-06	8.11E-12	1.57E-17
I135	1.46E+01	2.39E+00	1.99E-01	1.16E-04	4.71E-10	7.78E-21	1.28E-31	3.47E-53	0.	0.	0.
XE135M	1.62E-03	7.44E-01	6.22E-02	3.62E-05	1.47E-10	2.42E-21	3.99E-32	1.08E-53	0.	0.	0.
XE135	1.69E+00	6.43E+00	1.57E+00	8.99E-03	1.10E-06	1.55E-14	2.17E-22	4.29E-38	0.	0.	0.
CS136	1.02E-02	9.68E-03	9.17E-03	7.82E-03	6.00E-03	3.52E-03	2.07E-03	7.10E-04	4.94E-05	2.38E-07	1.15E-09
CS137	7.27E-05	7.83E-04	7.83E-04	7.83E-04	7.83E-04	7.83E-04	7.83E-04	7.83E-04	7.79E-04	7.75E-04	7.70E-04
BA137M	1.53E-07	7.31E-04	7.31E-04	7.31E-04	7.31E-04	7.31E-04	7.31E-04	7.31E-04	7.27E-04	7.22E-04	7.18E-04
BA139	9.71E+00	1.04E-03	6.12E-09	1.26E-24	0.	0.	0.	0.	0.	0.	0.
BA140	1.00E-01	5.91E-01	5.63E-01	4.77E-01	3.64E-01	2.12E-01	1.23E-01	4.17E-02	2.79E-03	1.24E-05	5.49E-08
LA140	2.38E-07	2.06E-01	3.31E-01	4.58E-01	4.07E-01	2.44E-01	1.42E-01	4.82E-02	3.20E-03	1.43E-05	6.34E-08
LA141	1.78E+00	7.06E-01	9.90E-03	2.74E-08	1.50E-17	4.47E-36	1.33E-54	0.	0.	0.	0.
CE141	2.20E-07	2.44E-01	2.42E-01	2.27E-01	2.04E-01	1.65E-01	1.33E-01	8.66E-02	2.97E-02	3.50E-03	4.12E-04
LA142	1.17E+01	2.56E-03	4.95E-08	3.64E-22	0.	0.	0.	0.	0.	0.	0.
CE143	7.60E-02	3.13E+00	1.89E+00	4.16E-01	3.35E-02	2.16E-04	1.40E-06	5.87E-11	6.62E-22	0.	0.
PR143	2.22E-08	2.00E-01	3.11E-01	4.02E-01	3.45E-01	2.10E-01	1.27E-01	4.58E-02	3.66E-03	2.32E-05	1.48E-07
CE144	3.05E-03	2.18E-02	2.17E-02	2.16E-02	2.13E-02	2.08E-02	2.03E-02	1.93E-02	1.71E-02	1.34E-02	1.05E-02
PR144	8.36E-07	2.18E-02	2.17E-02	2.16E-02	2.13E-02	2.08E-02	2.03E-02	1.93E-02	1.71E-02	1.34E-02	1.05E-02
PR145	1.23E-01	1.26E+00	7.79E-02	1.85E-05	1.68E-11	1.39E-23	1.16E-35	0.	0.	0.	0.
ND147	1.51E-05	2.54E-01	2.39E-01	1.98E-01	1.45E-01	7.78E-02	4.15E-02	1.19E-02	5.23E-04	1.02E-06	1.98E-09
PM147	4.20E-14	1.90E-04	3.68E-04	8.41E-04	1.45E-03	2.22E-03	2.62E-03	2.92E-03	2.95E-03	2.75E-03	2.55E-03
ND149	2.18E+01	2.11E-03	2.04E-07	1.86E-19	1.59E-39	0.	0.	0.	0.	0.	0.
PM149	3.04E-03	5.60E-01	4.10E-01	1.60E-01	3.34E-02	1.46E-03	6.34E-05	1.21E-07	1.90E-14	4.70E-28	1.17E-41
PM150	2.56E-01	5.40E-04	1.14E-06	1.07E-14	4.47E-28	0.	0.	0.	0.	0.	0.

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DIXIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 4.196E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
PM151	5.58E-02	3.81E-01	2.10E-01	3.53E-02	1.81E-03	4.76E-06	1.25E-08	8.65E-14	1.09E-26	0.	0.
SM153	1.96E-01	1.38E-01	9.68E-02	3.35E-02	5.69E-03	1.65E-04	4.81E-06	4.04E-09	8.33E-17	3.55E-32	1.51E-47
SM156	2.05E-01	3.49E-02	5.96E-03	2.94E-05	4.23E-09	8.69E-17	1.79E-24	7.63E-40	0.	0.	0.
EU155	1.11E-05	3.76E-04	3.75E-04	3.75E-04	3.74E-04	3.73E-04	3.71E-04	3.68E-04	3.61E-04	3.47E-04	3.33E-04
EU156	5.99E-04	4.87E-03	5.40E-03	4.85E-03	3.85E-03	2.42E-03	1.52E-03	6.05E-04	5.99E-05	5.90E-07	5.81E-09
EU157	3.15E-02	3.64E-02	1.22E-02	4.59E-04	1.93E-06	3.40E-11	6.02E-16	1.87E-25	0.	0.	0.
GD159	6.35E-03	1.25E-02	4.97E-03	3.10E-04	3.05E-06	2.96E-10	2.87E-14	2.69E-22	2.30E-42	0.	0.
TB161	1.08E-04	7.07E-04	6.38E-04	4.72E-04	2.86E-04	1.05E-04	3.83E-05	5.13E-06	3.40E-08	1.47E-12	6.38E-17
TOTAL	2.75E+02	7.41E+01	3.57E+01	1.30E+01	5.25E+00	2.05E+00	1.30E+00	7.46E-01	3.45E-01	1.30E-01	6.43E-02



DIXIE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 4.196E-13

DEBRIS DECAY FROM 1 TO 50 YEARS

	ZERO	TIME	1.00E+00	1.50E+00	2.00E+00	3.50E+00	5.00E+00	7.00E+00	1.00E+01	2.00E+01	3.50E+01	5.00E+01
BE 7	6.09E-07	5.26E-09	4.89E-10	4.54E-11	3.66E-14	2.93E-17	2.19E-21	1.40E-27	0.	0.	0.	0.
* MN 54	2.09E-05	8.99E-06	5.93E-06	3.90E-06	1.11E-06	3.18E-07	5.98E-08	4.89E-09	1.15E-12	4.15E-18	1.50E-23	0.
** FE 59	3.07E-05	1.11E-07	6.65E-09	4.00E-10	8.68E-14	1.87E-17	2.44E-22	1.14E-29	0.	0.	0.	0.
** CO 57	3.74E-05	1.47E-05	9.22E-06	5.79E-06	1.43E-06	3.52E-07	5.43E-09	3.30E-09	2.88E-13	2.37E-19	0.	0.
** CO 58	8.68E-02	2.49E-03	4.23E-04	7.16E-05	3.49E-07	1.70E-09	1.40E-12	3.32E-17	1.27E-32	0.	0.	0.
* CO 60	1.56E-05	1.37E-05	1.27E-05	1.19E-05	9.79E-06	8.04E-06	6.18E-06	4.16E-06	1.12E-06	1.55E-07	2.14E-08	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U234	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.40E-01	3.50E-10	3.41E-10	3.32E-10	3.11E-10	2.89E-10	2.62E-10	2.28E-10	1.42E-10	6.95E-11	3.41E-11	0.
* AM241	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.67E-08	1.68E-08	1.68E-08	1.69E-08	1.70E-08	1.68E-08	1.66E-08	1.66E-08
* ICM242	4.90E-07	1.04E-07	4.77E-08	2.20E-08	2.14E-09	2.08E-10	9.34E-12	8.84E-14	2.54E-18	2.37E-18	2.21E-18	0.
KR 85	3.66E-06	9.09E-05	8.81E-05	8.53E-05	7.77E-05	7.02E-05	6.17E-05	5.09E-05	2.69E-05	1.03E-05	3.92E-06	0.
SR 89	3.04E-06	7.10E-04	6.21E-05	5.46E-05	3.67E-09	2.48E-12	1.46E-16	6.66E-23	4.84E-44	0.	0.	0.
SR 90	5.99E-06	5.99E-04	5.93E-04	5.88E-04	5.66E-04	5.44E-04	5.18E-04	4.81E-04	3.76E-04	2.60E-04	1.80E-04	0.
Y 90	8.87E-12	5.99E-04	5.93E-04	5.88E-04	5.66E-04	5.44E-04	5.18E-04	4.81E-04	3.76E-04	2.60E-04	1.80E-04	0.
Y 91	2.23E-08	1.51E-03	1.75E-04	2.04E-05	3.20E-08	5.02E-11	9.18E-15	2.25E-20	4.56E-39	0.	0.	0.
ZR 95	9.98E-04	2.56E-03	3.66E-04	5.21E-05	1.52E-07	4.42E-10	1.83E-13	1.55E-18	1.89E-35	0.	0.	0.
NB 95M	2.12E-11	5.43E-05	7.75E-06	1.11E-05	3.22E-09	9.37E-12	3.89E-15	3.27E-20	4.01E-37	0.	0.	0.
NB 95	1.11E-10	5.51E-03	7.92E-04	1.13E-04	3.27E-07	9.50E-10	3.97E-13	3.35E-18	4.10E-35	0.	0.	0.
RU103	6.60E-05	2.57E-04	1.05E-05	4.32E-07	2.95E-11	2.02E-15	5.67E-21	2.67E-29	0.	0.	0.	0.
RH103M	4.40E-09	2.57E-04	1.05E-05	4.32E-07	2.95E-11	2.02E-15	5.67E-21	2.67E-29	0.	0.	0.	0.
RU106	4.25E-04	4.04E-03	2.86E-03	2.03E-03	7.21E-04	2.56E-04	6.44E-05	8.15E-06	8.22E-09	2.64E-13	8.50E-18	0.
RH106	4.60E-06	4.04E-03	2.86E-03	2.03E-03	7.21E-04	2.56E-04	6.44E-05	8.15E-06	8.22E-09	2.64E-13	8.50E-18	0.
SN123	1.11E-05	1.54E-04	5.59E-05	2.03E-05	9.73E-07	4.67E-08	8.13E-10	1.88E-12	3.01E-21	1.94E-34	1.24E-47	0.
SB125	1.58E-04	3.18E-04	2.80E-04	2.46E-04	1.68E-04	1.14E-04	6.82E-05	3.16E-05	2.43E-06	5.16E-08	1.10E-09	0.
TE125M	4.26E-12	1.30E-04	1.16E-04	1.02E-04	6.94E-05	4.72E-05	2.83E-05	1.31E-05	1.00E-06	2.14E-08	4.55E-10	0.
TE127M	3.53E-10	1.69E-04	5.28E-05	1.65E-05	5.08E-07	1.56E-08	1.50E-10	1.41E-13	1.16E-23	8.68E-39	6.46E-54	0.
TE127	2.46E-02	1.67E-04	5.22E-05	1.63E-05	5.02E-07	1.54E-08	1.48E-10	1.40E-13	1.15E-23	8.56E-39	6.41E-54	0.
CS137	7.27E-05	7.66E-04	7.57E-04	7.48E-04	7.22E-04	6.96E-04	6.66E-04	6.22E-04	4.92E-04	3.49E-04	2.47E-04	0.
BA137M	1.53E-07	7.18E-04	7.09E-04	7.01E-04	6.74E-04	6.53E-04	6.22E-04	5.83E-04	4.61E-04	3.26E-04	2.31E-04	0.
CE141	2.20E-07	9.48E-05	1.91E-06	3.83E-08	3.12E-13	2.54E-18	4.16E-25	2.76E-35	0.	0.	0.	0.
CE144	3.05E-03	8.95E-03	5.75E-03	3.67E-03	9.64E-04	2.53E-04	4.26E-05	2.94E-06	3.96E-10	6.21E-16	9.68E-22	0.
PR144	8.36E-07	8.95E-03	5.75E-03	3.67E-03	9.64E-04	2.53E-04	4.26E-05	2.94E-06	3.96E-10	6.21E-16	9.68E-22	0.
PM147	4.20E-14	2.44E-03	2.13E-03	1.87E-03	1.26E-03	8.45E-04	4.96E-04	2.25E-04	1.60E-05	3.03E-07	5.72E-09	0.
EU155	1.11E-05	3.25E-04	3.02E-04	2.81E-04	2.26E-04	1.81E-04	1.35E-04	8.75E-05	2.04E-05	2.30E-06	2.59E-07	0.
TOTAL	2.57E-01	4.59E-02	2.48E-02	1.69E-02	7.71E-03	4.72E-03	3.33E-03	2.60E-03	1.77E-03	1.21E-03	8.41E-04	0.

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**APPENDIX E**  
**DETAILED RESULTS FOR EVENT RAY**

RAY  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.750E-11

TIME		MR/HR	MICROCURIES/SQ METER
ZERO TIME	HOURS	1.02E+02	1.33E+04
1.00E+00		3.30E+01	2.77E+03
2.00E+00		1.32E+01	9.72E+02
3.00E+00		7.01E+00	5.53E+02
4.00E+00		4.36E+00	3.98E+02
6.00E+00		2.29E+00	2.68E+02
9.00E+00		1.36E+00	1.88E+02
1.20E+01		1.00E+00	1.47E+02
1.50E+01		7.92E-01	1.21E+02
1.80E+01		6.53E-01	1.02E+02
2.10E+01		5.51E-01	8.89E+01
1.00E+00	DAYS	4.69E-01	7.78E+01
2.00E+00		2.20E-01	4.02E+01
5.00E+00		8.67E-02	1.54E+01
1.00E+01		3.80E-02	5.74E+00
2.00E+01		1.44E-02	1.93E+00
3.00E+01		8.12E-03	1.15E+00
5.00E+01		3.64E-03	6.31E-01
1.00E+02		1.20E-03	2.71E-01
2.00E+02		4.08E-04	9.39E-02
3.00E+02		1.57E-04	4.45E-02
1.00E+00	YEARS	8.98E-05	3.17E-02
1.50E+00		2.73E-05	1.77E-02
2.00E+00		1.63E-05	1.26E-02
3.50E+00		1.04E-05	6.55E-03
5.00E+00		8.72E-06	4.59E-03
7.00E+00		7.78E-06	3.65E-03
1.00E+01		7.07E-06	3.11E-03
2.00E+01		5.51E-06	2.29E-03
3.50E+01		3.91E-06	1.58E-03
5.00E+01		2.76E-06	1.10E-03

RAY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.750E-11

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
*BE 7	1.45E-06	1.45E-06	1.45E-06	1.45E-06	1.45E-06	1.45E-06	1.45E-06	1.44E-06	1.44E-06	1.44E-06	1.43E-06
NA 24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 55	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 67	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	4.50E-02	4.48E-02	4.46E-02	4.44E-02	4.42E-02	4.38E-02	4.33E-02	4.28E-02	4.22E-02	4.16E-02	4.11E-02
U239	4.55E+03	7.75E+02	1.32E+02	2.25E+01	3.83E+00	1.12E-01	5.53E-04	2.73E-06	1.35E-08	6.68E-11	3.30E-13
U240	3.06E-01	2.91E-01	2.77E-01	2.64E-01	2.51E-01	2.28E-01	1.96E-01	1.69E-01	1.46E-01	1.26E-01	1.09E-01
NP239	1.56E-02	2.61E+01	3.01E+01	3.06E+01	3.04E+01	2.97E+01	2.85E+01	2.75E+01	2.66E+01	2.56E+01	2.46E+01
NP240M	4.83E-04	2.92E-01	2.80E-01	2.66E-01	2.54E-01	2.29E-01	1.98E-01	1.71E-01	1.47E-01	1.27E-01	1.10E-01
NP240	1.22E-11	6.30E-12	3.27E-12	1.69E-12	8.72E-13	2.33E-13	3.22E-14	4.44E-15	6.12E-16	8.43E-17	1.17E-17
AM241	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CM242	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06
GE 75	7.19E-06	3.49E-02	2.10E-02	1.26E-02	7.61E-03	2.76E-03	6.03E-04	1.32E-04	2.88E-05	6.28E-06	1.37E-06
GE 77	4.31E-03	1.11E-02	1.04E-02	9.81E-03	9.23E-03	8.17E-03	6.79E-03	5.65E-03	4.70E-03	3.91E-03	3.25E-03
AS 77	4.45E-05	7.03E-03	7.11E-03	7.16E-03	7.21E-03	7.26E-03	7.26E-03	7.21E-03	7.10E-03	6.95E-03	6.78E-03
SE 77M	1.75E-09	2.11E-05	2.14E-05	2.15E-05	2.15E-05	2.17E-05	2.18E-05	2.17E-05	2.14E-05	2.09E-05	2.03E-05
GE 78	6.43E-01	4.02E-01	2.50E-01	1.56E-01	9.75E-02	3.79E-02	9.22E-03	2.23E-03	5.45E-04	1.32E-04	3.21E-05
AS 78	1.16E-02	1.92E-01	2.37E-01	2.22E-01	1.85E-01	1.09E-01	4.06E-02	1.35E-02	4.17E-03	1.25E-03	3.62E-04
AS 79	1.34E+01	1.32E-01	1.30E-03	1.28E-05	1.26E-07	1.22E-11	1.17E-17	1.11E-23	1.06E-29	1.01E-35	9.68E-42
SE 79M	1.99E-02	2.33E-01	2.30E-03	2.27E-05	2.23E-07	2.16E-11	2.06E-17	1.96E-23	1.87E-29	1.79E-35	1.71E-41
BR 80	8.86E-02	8.36E-03	7.86E-04	7.39E-05	6.96E-06	6.17E-08	5.17E-11	4.31E-14	3.59E-17	3.00E-20	2.50E-23
SE 81M	7.51E-02	3.50E+00	1.69E+00	8.13E-01	3.91E-01	9.13E-02	1.02E-02	1.15E-03	1.28E-04	1.44E-05	1.61E-06
SE 81	9.17E-01	4.14E+00	2.40E+00	1.20E+00	5.80E-01	1.35E-01	1.52E-02	1.70E-03	1.90E-04	2.14E-05	2.39E-06
BR 82	4.80E-04	4.71E-04	4.62E-04	4.53E-04	4.44E-04	4.27E-04	4.03E-04	3.79E-04	3.58E-04	3.37E-04	3.18E-04
SE 83	4.50E+01	8.52E+00	1.61E+00	3.06E-01	5.78E-02	2.08E-03	1.41E-05	9.62E-08	6.57E-10	4.45E-12	2.83E-14
BR 83	3.73E-01	5.57E+00	5.16E+00	4.06E+00	3.08E+00	1.74E+00	7.36E-01	3.10E-01	1.31E-01	5.52E-02	2.33E-02
KR 83M	1.93E-05	1.26E+00	2.58E+00	3.20E+00	3.30E+00	2.76E+00	1.62E+00	8.36E-01	4.03E-01	1.86E-01	8.36E-02

RAY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.750E-11

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BR 84	9.66E-02	1.67E+01	4.50E+00	1.22E+00	3.29E-01	2.41E-02	4.76E-04	9.41E-06	1.86E-07	3.68E-09	7.27E-11	
KR 85M	4.84E-03	1.04E+01	8.83E+00	7.54E+00	5.44E+00	4.70E+00	2.93E+00	1.83E+00	1.14E+00	7.09E-01	4.43E-01	
KR 87	8.13E+01	4.69E+01	2.72E+01	1.57E+01	9.06E+00	3.04E+00	5.89E-01	1.14E-01	2.21E-02	4.28E-03	8.28E-04	
KR 88	4.70E+01	3.67E+01	2.86E+01	2.23E+01	1.75E+01	1.06E+01	5.06E+00	2.41E+00	1.14E+00	5.45E-01	2.59E-01	
RB 88	1.19E+01	3.71E+01	3.17E+01	2.49E+01	1.95E+01	1.19E+01	5.67E+00	2.70E+00	1.29E+00	6.11E-01	2.90E-01	
RB 89	5.62E+01	5.28E+01	3.55E+00	2.39E-01	1.60E-02	7.24E-05	2.19E-08	6.61E-12	2.01E-15	6.10E-19	1.85E-22	
SR 89	4.31E-06	1.51E-01	1.61E-01	1.61E-01	1.61E-01	1.61E-01	1.61E-01	1.61E-01	1.61E-01	1.61E-01	1.61E-01	
SR 90	8.70E-06	8.94E-04	8.94E-04	8.94E-04	8.94E-04	8.94E-04	8.94E-04	8.94E-04	8.94E-04	8.94E-04	8.94E-04	
SR 91	1.01E+00	1.88E+01	1.75E+01	1.63E+01	1.52E+01	1.32E+01	1.06E+01	8.58E+00	6.93E+00	5.56E+00	4.49E+00	
Y 91M	6.80E-05	6.48E+00	8.83E+00	9.47E+00	9.34E+00	8.39E+00	6.86E+00	5.52E+00	4.45E+00	3.59E+00	2.90E+00	
Y 91	2.78E-08	5.76E-03	1.33E-02	2.12E-02	2.90E-02	4.34E-02	6.16E-02	7.62E-02	8.83E-02	9.79E-02	1.05E-01	
SR 92	7.28E+00	3.25E+01	2.52E+01	1.95E+01	1.51E+01	9.04E+00	4.20E+00	1.95E+00	9.04E-01	4.20E-01	1.95E-01	
Y 92	3.36E-01	6.84E+00	1.07E+01	1.28E+01	1.35E+01	1.29E+01	9.69E+00	6.74E+00	4.34E+00	2.67E+00	1.61E+00	
SR 93	2.86E+02	4.92E+00	2.72E-02	1.50E-04	8.29E-07	2.53E-11	4.27E-18	7.21E-25	1.22E-31	2.05E-38	3.46E-45	
Y 93	3.49E-01	1.13E+01	1.06E+01	9.91E+00	9.26E+00	8.09E+00	6.59E+00	5.38E+00	4.37E+00	3.59E+00	2.91E+00	
Y 94	4.14E+01	5.65E+01	7.27E+00	9.37E-01	1.21E-01	2.01E-03	4.31E-06	9.24E-09	1.97E-11	4.31E-14	2.39E-15	
Y 95	1.76E+02	1.66E+01	3.66E-01	8.07E-03	1.78E-04	8.62E-08	9.23E-13	9.86E-18	1.05E-22	1.13E-27	1.20E-32	
ZR 95	6.61E-04	8.65E-02	8.82E-02	8.82E-02	8.82E-02	8.82E-02	8.82E-02	8.79E-02	8.79E-02	8.76E-02	8.76E-02	
NB 95	7.37E-11	5.34E-05	1.24E-04	1.96E-04	2.67E-04	4.09E-04	6.21E-04	8.36E-04	1.04E-03	1.26E-03	1.47E-03	
ZR 97	1.55E+00	6.76E+00	6.47E+00	6.23E+00	5.96E+00	5.51E+00	4.87E+00	4.30E+00	3.82E+00	3.37E+00	2.99E+00	
NB 97M	7.99E-03	6.50E+00	6.23E+00	5.99E+00	5.75E+00	5.29E+00	4.68E+00	4.14E+00	3.66E+00	3.24E+00	2.86E+00	
NB 97	7.78E-01	3.40E+00	4.79E+00	5.45E+00	5.72E+00	5.69E+00	5.19E+00	4.63E+00	4.09E+00	3.61E+00	3.21E+00	
NB 98	8.68E+00	3.84E+00	1.70E+00	7.52E-01	3.33E-01	6.52E-02	5.64E-03	4.87E-04	4.24E-05	3.67E-06	3.16E-07	
MO 99	4.51E-03	1.86E+00	1.84E+00	1.82E+00	1.80E+00	1.77E+00	1.71E+00	1.66E+00	1.61E+00	1.56E+00	1.51E+00	
TC 99M	4.19E-08	1.78E-01	3.33E-01	4.71E-01	5.92E-01	7.90E-01	1.00E+00	1.14E+00	1.22E+00	1.27E+00	1.29E+00	
MO101	1.22E+02	5.51E+01	3.20E+00	1.85E-01	1.08E-02	3.60E-05	7.00E-09	1.36E-12	2.65E-16	5.15E-20	1.00E-23	
TC101	5.15E+00	1.54E+02	1.69E+01	1.38E+00	1.01E-01	4.55E-04	1.14E-07	2.55E-11	5.41E-15	1.11E-18	2.25E-22	
MO102	9.55E+02	2.18E+01	4.96E-01	1.13E-02	2.58E-04	1.34E-07	1.60E-12	1.89E-17	2.24E-22	2.66E-27	3.16E-32	
TC102M	6.14E-01	1.84E+01	4.22E-01	9.64E-03	2.20E-04	1.14E-07	1.35E-12	1.60E-17	1.90E-22	2.25E-27	2.67E-32	
TC102	2.87E+03	1.10E+01	2.50E-01	5.68E-03	1.30E-04	6.78E-08	8.05E-13	9.55E-18	1.13E-22	1.34E-27	1.59E-32	
RU103	6.30E-05	1.46E-01	1.46E-01	1.46E-01	1.46E-01	1.45E-01	1.45E-01	1.45E-01	1.45E-01	1.44E-01	1.44E-01	
RH103M	4.20E-09	7.56E-02	1.12E-01	1.30E-01	1.38E-01	1.44E-01	1.45E-01	1.45E-01	1.45E-01	1.44E-01	1.44E-01	
TC104	5.02E+01	3.61E+01	3.61E+00	3.57E-01	3.53E-02	3.48E-04	3.40E-07	3.32E-10	3.24E-13	3.17E-16	3.09E-19	
RU105	3.42E-01	1.18E+01	1.01E+01	8.65E+00	7.41E+00	5.41E+00	3.39E+00	2.12E+00	1.33E+00	8.30E-01	5.21E-01	
RH105M	2.25E-03	1.18E+01	1.01E+01	8.68E+00	7.41E+00	5.44E+00	3.39E+00	2.13E+00	1.33E+00	8.33E-01	5.21E-01	
RH105	3.69E-09	2.40E-01	4.46E-01	6.16E-01	7.58E-01	9.70E-01	1.16E+00	1.25E+00	1.27E+00	1.26E+00	1.23E+00	
RU106	2.63E-04	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	
RH106	2.85E-06	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	4.99E-03	
RH107	3.47E-02	4.71E+00	7.14E-01	1.07E-01	1.62E-02	3.70E-04	1.27E-06	4.39E-09	1.51E-11	5.17E-14	5.15E-18	
PD107M	7.21E-05	9.59E-01	1.45E-01	2.19E-02	3.30E-03	7.53E-05	2.59E-07	8.94E-10	3.08E-12	1.06E-14	3.62E-17	

RAY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.750E-11

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1 20E+01	1.50E+01	1.80E+01	2.10E+01
PD109	2.17E-03	1.80E-01	1.71E-01	1.62E-01	1.54E-01	1.39E-01	1.20E-01	1.03E-01	8.80E-02	7.53E-02	6.47E-02
AG109M	1.25E-05	1.80E-01	1.71E-01	1.63E-01	1.55E-01	1.40E-01	1.20E-01	1.03E-01	8.80E-02	7.53E-02	6.47E-02
PD111M	3.02E-01	2.66E-01	2.34E-01	2.07E-01	1.83E-01	1.42E-01	9.71E-02	6.66E-02	4.56E-02	3.12E-02	2.14E-02
PD111	1.08E-01	1.94E-01	1.86E-01	1.66E-01	1.47E-01	1.14E-01	7.81E-02	5.35E-02	3.66E-02	2.51E-02	1.72E-02
AG111M	8.54E-04	2.61E-01	2.46E-01	2.20E-01	1.94E-01	1.50E-01	1.02E-01	7.02E-02	4.81E-02	3.30E-02	2.25E-02
AG111	3.04E-10	9.02E-04	1.89E-03	2.78E-03	3.57E-03	4.87E-03	6.25E-03	7.17E-03	7.76E-03	8.14E-03	8.36E-03
PD112	6.77E-02	6.57E-02	6.34E-02	6.13E-02	5.95E-02	5.56E-02	5.04E-02	4.56E-02	4.13E-02	3.74E-02	3.39E-02
AG112	2.04E-06	1.30E-02	2.29E-02	3.08E-02	3.66E-02	4.38E-02	4.81E-02	4.79E-02	4.56E-02	4.26E-02	3.92E-02
AG113	8.79E-04	1.88E-01	1.65E-01	1.45E-01	1.27E-01	9.76E-02	6.61E-02	4.46E-02	3.01E-02	2.03E-02	1.38E-02
AG115	3.85E-01	4.12E-01	5.13E-02	6.41E-03	8.03E-04	1.26E-05	2.45E-08	4.79E-11	9.28E-14	9.22E-16	8.55E-17
CD115M	3.15E-09	8.37E-05	9.41E-05	9.53E-05	9.53E-05	9.53E-05	9.50E-05	9.50E-05	9.47E-05	9.44E-05	9.44E-05
CD115M	1.22E-06	2.29E-02	2.46E-02	2.46E-02	2.43E-02	2.37E-02	2.28E-02	2.19E-02	2.11E-02	2.03E-02	1.95E-02
IN115M	1.51E-11	2.53E-03	5.62E-03	8.34E-03	1.06E-02	1.42E-02	1.75E-02	1.93E-02	2.01E-02	2.03E-02	2.01E-02
CD117	2.73E-02	4.55E-01	3.43E-01	2.56E-01	1.92E-01	1.08E-01	4.52E-02	1.90E-02	8.01E-03	3.37E-03	1.42E-03
IN117M	1.31E-06	1.58E-01	2.29E-01	2.49E-01	2.40E-01	1.89E-01	1.08E-01	5.55E-02	2.66E-02	1.23E-02	5.58E-03
IN117	5.29E-11	2.89E-02	6.99E-02	9.71E-02	1.08E-01	9.97E-02	6.35E-02	3.40E-02	1.69E-02	7.95E-03	3.65E-03
CD118	1.83E+00	7.84E-01	3.37E-01	1.43E-01	6.14E-02	1.12E-02	8.82E-04	6.90E-05	5.43E-06	4.25E-07	3.33E-08
IN118	1.21E-01	7.84E-01	3.37E-01	1.44E-01	6.14E-02	1.13E-02	8.82E-04	6.93E-05	5.43E-06	4.25E-07	3.33E-08
CD119	4.54E+00	7.09E-02	1.11E-03	1.73E-05	2.70E-07	6.61E-11	2.52E-16	9.63E-22	3.66E-27	1.40E-32	5.36E-38
IN119M	6.85E-03	7.66E-01	8.34E-02	8.41E-03	8.37E-04	8.24E-06	8.04E-09	7.87E-12	7.66E-15	7.49E-18	7.32E-21
IN119	3.38E-01	4.03E-02	4.68E-03	4.75E-04	4.75E-05	4.64E-07	4.54E-10	4.44E-13	4.34E-16	4.24E-19	4.14E-22
SN121	5.52E-04	5.68E-02	5.52E-02	5.39E-02	5.26E-02	5.00E-02	4.61E-02	4.29E-02	3.96E-02	3.67E-02	3.41E-02
SN123M	3.03E-01	5.66E-01	2.01E-01	7.10E-02	2.51E-02	3.13E-03	1.39E-04	6.13E-06	2.71E-07	1.20E-08	5.30E-10
SN123	2.84E-06	2.98E-04	2.98E-04	2.98E-04	2.98E-04	2.98E-04	2.98E-04	2.98E-04	2.98E-04	2.98E-04	2.98E-04
SN125	7.93E-03	7.91E-03	7.89E-03	7.86E-03	7.82E-03	7.78E-03	7.72E-03	7.64E-03	7.57E-03	7.49E-03	7.43E-03
SB125	4.76E-05	4.78E-05	4.80E-05	4.82E-05	4.84E-05	4.88E-05	4.97E-05	5.03E-05	5.09E-05	5.15E-05	5.22E-05
SB126	1.55E-03	1.54E-03	1.54E-03	1.54E-03	1.53E-03	1.53E-03	1.52E-03	1.51E-03	1.50E-03	1.49E-03	1.48E-03
SN127	2.77E+00	1.99E+00	1.43E+00	1.03E+00	7.42E-01	3.83E-01	1.42E-01	5.29E-02	1.96E-02	7.29E-03	2.71E-03
SB127	3.24E-02	1.12E-01	1.24E-01	1.32E-01	1.37E-01	1.43E-01	1.45E-01	1.44E-01	1.42E-01	1.39E-01	1.36E-01
TE127	1.83E-02	2.26E-02	2.77E-02	3.28E-02	3.79E-02	4.76E-02	6.09E-02	7.11E-02	7.91E-02	8.54E-02	8.94E-02
SN128	1.85E+01	9.13E+00	4.52E+00	2.23E+00	1.10E+00	2.70E-01	3.26E-02	3.93E-03	4.74E-04	5.74E-05	6.92E-06
SB128M	9.43E-03	1.04E+01	5.40E+00	2.67E+00	1.32E+00	3.22E-01	3.88E-02	4.68E-03	5.65E-04	6.82E-05	8.25E-06
SB128	7.81E-01	7.51E-01	7.07E-01	6.63E-01	6.19E-01	5.30E-01	4.23E-01	3.36E-01	2.67E-01	2.12E-01	1.68E-01
SN129M	1.23E+01	6.10E+00	3.06E+00	1.53E+00	7.66E-01	1.91E-01	2.39E-02	2.99E-03	3.74E-04	4.68E-05	5.84E-06
SN129	8.17E+01	8.02E-01	7.91E-03	7.81E-05	7.66E-07	7.45E-11	7.09E-17	6.78E-23	6.47E-29	6.16E-35	5.90E-41
SB129	4.60E+00	7.71E+00	7.24E+00	6.47E+00	5.69E+00	4.23E+00	2.63E+00	1.63E+00	1.00E+00	6.21E-01	3.82E-01
TE129M	8.69E-08	9.62E-04	1.98E-03	2.91E-03	3.74E-03	5.07E-03	6.41E-03	7.24E-03	7.76E-03	8.07E-03	8.28E-03
TE129	3.31E+00	4.55E+00	5.33E+00	5.53E+00	5.33E+00	4.41E+00	2.94E+00	1.85E+00	1.15E+00	7.14E-01	4.43E-01
SB130M	4.57E-01	8.62E-01	2.26E-03	5.95E-06	1.57E-08	1.08E-13	1.97E-21	3.58E-29	6.49E-37	1.18E-44	2.15E-52
SB130	7.83E+01	2.37E+01	6.74E+00	1.91E+00	5.40E-01	4.34E-02	9.91E-04	2.26E-05	5.15E-07	1.17E-08	2.68E-10

RAY  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.750E-11

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
I130	2.18E-02	2.06E-02	1.95E-02	1.84E-02	1.74E-02	1.56E-02	1.32E-02	1.11E-02	9.41E-03	7.98E-03	6.74E-03
SB131	1.86E+02	4.85E+01	7.92E+00	1.30E+00	2.13E-01	5.75E-03	2.53E-05	1.12E-07	4.92E-10	2.17E-12	1.08E-14
TE131M	8.93E-05	4.67E-01	5.33E-01	5.33E-01	5.23E-01	5.00E-01	4.66E-01	4.35E-01	4.06E-01	3.79E-01	3.54E-01
TE131	8.22E+01	8.93E+01	2.91E+01	7.57E+00	1.84E+00	1.73E+00	8.57E-02	7.92E-02	7.39E-02	6.92E-02	6.44E-02
I131	1.19E-02	4.14E-01	6.09E-01	6.68E-01	6.80E-01	6.86E-01	6.86E-01	6.80E-01	6.80E-01	6.74E-01	6.74E-01
TE132	1.00E+00	2.44E+00	2.41E+00	2.39E+00	2.37E+00	2.33E+00	2.27E+00	2.21E+00	2.15E+00	2.09E+00	2.04E+00
I132	2.46E+00	2.46E+00	2.45E+00	2.44E+00	2.42E+00	2.39E+00	2.33E+00	2.27E+00	2.21E+00	2.16E+00	2.10E+00
TE133M	1.23E-01	4.27E+01	1.86E+01	8.09E+00	3.52E+00	6.68E-01	5.50E-02	4.54E-03	3.74E-04	3.08E-05	2.54E-06
TE133	6.92E+02	3.92E+01	4.36E+00	1.44E+00	6.09E-01	1.15E-01	9.55E-03	7.85E-04	6.51E-05	5.35E-06	4.41E-07
I133	1.07E+00	1.15E+01	1.25E+01	1.25E+01	1.22E+01	1.16E+01	1.05E+01	9.55E+00	8.61E+00	7.85E+00	7.09E+00
XE133M	4.57E-08	2.60E-03	6.27E-03	1.00E-02	1.37E-02	2.05E-02	2.97E-02	3.77E-02	4.44E-02	5.02E-02	5.50E-02
XE133	7.97E-07	4.54E-02	1.10E-01	1.76E-01	2.41E-01	3.66E-01	5.36E-01	6.86E-01	8.20E-01	9.38E-01	1.04E+00
TE134	2.15E+02	9.97E+01	3.71E+01	1.38E+01	5.12E+00	7.10E+00	3.63E-02	1.86E-03	9.52E-05	4.89E-06	2.51E-07
I134	9.86E+01	1.32E+02	9.24E+01	5.41E+01	2.91E+01	7.38E+00	8.11E-01	8.28E-02	8.11E-03	7.77E-04	7.38E-05
I135	1.82E+01	3.20E+01	2.89E+01	2.60E+01	2.35E+01	1.91E+01	1.40E+01	1.02E+01	7.52E+00	5.54E+00	4.04E+00
XE135M	2.01E-03	9.25E+00	8.99E+00	8.15E+00	7.31E+00	5.96E+00	4.37E+00	3.20E+00	2.35E+00	1.72E+00	1.26E+00
XE135	2.09E+00	4.14E+00	6.06E+00	7.63E+00	8.88E+00	1.07E+01	1.18E+01	1.19E+01	1.13E+01	1.03E+01	9.19E+00
CS136	1.58E-03	1.58E-03	1.57E-03	1.57E-03	1.57E-03	1.56E-03	1.55E-03	1.54E-03	1.53E-03	1.52E-03	1.51E-03
CS137	8.76E-05	9.45E-04	9.45E-04	9.45E-04	9.45E-04	9.45E-04	9.45E-04	9.45E-04	9.45E-04	9.45E-04	9.45E-04
BA137M	1.85E-07	8.82E-04	8.82E-04	8.82E-04	8.82E-04	8.82E-04	8.82E-04	8.82E-04	8.82E-04	8.82E-04	8.82E-04
XE138	7.25E+02	6.24E+01	5.42E+00	4.70E-01	4.07E-02	3.05E-04	1.98E-07	1.29E-10	8.38E-14	5.44E-17	3.54E-20
CS138	1.08E+02	1.82E+02	6.30E+01	1.85E+01	5.18E+00	3.95E-01	8.21E-03	1.70E-04	3.54E-06	7.36E-08	1.52E-09
CS139	6.35E+02	2.03E+01	2.54E-01	3.19E-03	4.00E-05	6.29E-09	1.25E-14	2.47E-20	4.89E-26	9.70E-32	1.92E-37
BA139	1.17E+01	1.31E+02	8.06E+01	4.89E+01	2.96E+01	1.09E+01	2.41E+00	5.35E-01	1.19E-01	2.64E-02	5.86E-03
BA140	1.10E-01	6.88E-01	6.88E-01	6.82E-01	6.82E-01	6.77E-01	6.77E-01	6.72E-01	6.67E-01	6.61E-01	6.56E-01
LA140	2.62E-07	1.18E-02	2.33E-02	3.46E-02	4.57E-02	6.72E-02	9.82E-02	1.27E-01	1.54E-01	1.80E-01	2.04E-01
BA141	1.64E+02	4.97E+01	4.93E+00	4.89E-01	4.85E-02	4.81E-04	4.70E-07	4.58E-10	4.46E-13	4.38E-16	4.27E-19
LA141	1.52E+00	3.22E+01	3.00E+01	2.54E+01	2.13E+01	1.50E+01	8.77E+00	5.13E+00	3.02E+00	1.77E+00	1.04E+00
CE141	1.88E-07	2.09E-02	4.89E-02	7.36E-02	9.43E-02	1.26E-01	1.57E-01	1.75E-01	1.85E-01	1.91E-01	1.94E-01
BA142	3.26E+02	1.30E+01	2.96E-01	6.75E-03	1.54E-04	7.99E-08	9.48E-13	1.13E-17	1.34E-22	1.58E-27	1.88E-32
LA142	7.49E+00	5.20E+01	3.43E+01	2.18E+01	1.39E+01	5.61E+00	1.45E+00	3.73E-01	9.62E-02	2.48E-02	6.39E-03
LA143	1.27E+02	2.48E+01	1.27E+00	6.54E-02	3.36E-03	8.80E-06	1.19E-09	1.60E-13	2.15E-17	2.91E-21	3.92E-25
CE143	5.08E-02	3.24E+00	3.36E+00	3.27E+00	3.21E+00	3.09E+00	2.89E+00	2.72E+00	2.55E+00	2.40E+00	2.25E+00
PR143	1.49E-08	4.96E-03	1.20E-02	1.89E-02	2.57E-02	3.89E-02	5.74E-02	7.49E-02	9.09E-02	1.06E-01	1.20E-01
CE144	2.06E-03	1.48E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02
PR144	5.66E-07	1.35E-02	1.47E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02
PR145	8.05E-02	1.18E+01	1.05E+01	9.36E+00	8.35E+00	6.62E+00	4.66E+00	3.29E+00	2.33E+00	1.65E+00	1.16E+00
CE146	2.28E+02	1.17E+01	5.98E-01	3.06E-02	1.57E-03	4.15E-06	5.58E-10	7.52E-14	1.01E-17	1.37E-21	1.84E-25
PR146	4.71E+00	4.09E+01	9.28E+00	1.74E+00	3.14E-01	9.86E-03	5.45E-05	3.00E-07	1.66E-09	9.20E-12	5.02E-14
PR147	2.66E+01	7.68E+00	2.40E-01	7.49E-03	2.34E-04	2.29E-07	6.98E-12	2.13E-16	6.51E-21	1.99E-25	6.06E-30

RAY  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.750E-11

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	5.00E+00	6.00E+00	9.00E+00	1 20E+01	1.50E+01	1.80E+01	2.10E+01
ND147	9.48E-06	1.78E-01	1.83E-01	1.83E-01	1.83E-01	1.82E-01	1.80E-01	1.79E-01	1.78E-01	1.76E-01	1.75E-01	1.75E-01
ND149	1.26E+01	8.53E+00	5.82E+00	3.97E+00	2.68E+00	1.25E+00	3.92E-01	1.24E-01	3.90E-02	1.23E-02	3.87E-03	3.87E-03
PM149	1.75E-03	1.37E-01	2.27E-01	2.87E-01	3.25E-01	3.66E-01	3.80E-01	3.73E-01	3.63E-01	3.49E-01	3.37E-01	3.37E-01
PM150	1.39E-01	1.07E-01	8.32E-02	6.42E-02	4.97E-02	2.98E-02	1.38E-02	6.38E-03	2.96E-03	1.37E-03	6.33E-04	6.33E-04
ND151	4.28E+01	1.34E+00	4.18E-02	1.31E-03	4.09E-05	3.99E-08	1.22E-12	3.72E-17	1.13E-21	3.46E-26	1.06E-30	1.06E-30
PM151	2.71E-02	3.17E-01	3.19E-01	3.11E-01	3.04E-01	2.88E-01	2.67E-01	2.48E-01	2.31E-01	2.14E-01	1.99E-01	1.99E-01
PM152	6.67E+01	6.52E-02	6.36E-05	6.21E-08	6.07E-11	5.80E-17	5.40E-26	5.03E-35	4.69E-44	4.38E-53	4.07E-62	4.07E-62
SM153	8.53E-02	8.41E-02	8.29E-02	8.17E-02	8.06E-02	7.82E-02	7.48E-02	7.15E-02	6.84E-02	6.56E-02	6.27E-02	6.27E-02
SM155	3.63E+00	5.95E-01	9.76E-02	1.60E-02	2.62E-03	7.05E-05	3.11E-07	1.37E-09	6.04E-12	2.69E-14	6.60E-17	6.60E-17
EU155	2.67E-06	7.60E-05	8.80E-05	8.99E-05	9.03E-05	9.03E-05	9.03E-05	9.03E-05	9.03E-05	9.03E-05	9.03E-05	9.03E-05
SM156	4.51E-02	4.19E-02	3.89E-02	3.62E-02	3.36E-02	2.90E-02	2.32E-02	1.86E-02	1.49E-02	1.20E-02	9.57E-03	9.57E-03
EU156	1.32E-04	2.15E-04	2.92E-04	3.64E-04	4.31E-04	5.49E-04	6.98E-04	8.08E-04	9.05E-04	9.77E-04	1.03E-03	1.03E-03
EU157	7.85E-03	2.60E-02	2.48E-02	2.37E-02	2.26E-02	2.07E-02	1.81E-02	1.58E-02	1.37E-02	1.20E-02	1.04E-02	1.04E-02
EU158	1.48E-01	6.01E-02	2.43E-02	9.85E-03	3.99E-03	6.53E-04	4.35E-05	2.88E-06	1.92E-07	1.27E-08	8.45E-10	8.45E-10
EU159	1.91E-01	1.90E-02	1.88E-03	1.87E-04	1.85E-05	1.83E-07	1.79E-10	1.74E-13	1.70E-16	1.66E-19	1.63E-22	1.63E-22
GD159	8.19E-04	3.59E-03	3.73E-03	3.62E-03	3.48E-03	3.23E-03	2.88E-03	2.56E-03	2.28E-03	2.03E-03	1.81E-03	1.81E-03
TB161	5.70E-06	4.10E-05	4.07E-05	4.06E-05	4.04E-05	4.00E-05	3.96E-05	3.91E-05	3.86E-05	3.82E-05	3.76E-05	3.76E-05
TOTAL	1.33E+04	2.77E+03	9.72E+02	5.53E+02	3.98E+02	2.68E+02	1.88E+02	1.47E+02	1.21E+02	1.02E+02	8.89E+01	8.89E+01



RAY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.750E-11

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
* BE 7	1.45E-06	1.43E-06	1.41E-06	1.36E-06	1.28E-06	1.12E-06	9.84E-07	7.57E-07	3.96E-07	1.08E-07	2.93E-08	
NA 24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 55	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 67	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	4.50E-02	4.06E-02	3.66E-02	2.69E-02	1.61E-02	5.77E-03	2.07E-03	2.65E-04	1.56E-06	1.68E-10	1.13E-10	
U240	3.06E-01	9.41E-02	2.89E-02	8.37E-04	2.30E-06	1.73E-11	1.30E-16	7.34E-27	0.	0.	0.	0.
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP239	1.56E-02	2.37E+01	1.77E+01	7.30E+00	1.67E+00	8.73E-02	4.57E-03	1.25E-05	4.93E-12	1.18E-21	1.18E-21	
NP240M	4.83E-04	9.47E-02	2.91E-02	8.43E-04	2.32E-06	1.74E-11	1.31E-16	7.39E-27	0.	0.	0.	0.
AM241	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CM242	1.20E-06	1.20E-06	1.19E-06	1.18E-06	1.15E-06	1.11E-06	1.06E-06	9.74E-07	7.93E-07	5.16E-07	3.37E-07	
GE 77	4.31E-03	2.71E-03	6.20E-04	7.50E-06	4.77E-09	1.93E-15	7.78E-22	1.27E-34	0.	0.	0.	0.
AS 77	4.45E-05	6.57E-03	4.75E-03	1.37E-03	1.61E-04	2.18E-06	2.97E-08	5.47E-12	2.54E-21	5.44E-40	1.17E-58	
SE 77M	1.75E-09	1.98E-05	1.42E-05	4.13E-06	4.82E-07	6.55E-09	8.90E-11	1.64E-14	7.61E-24	1.63E-42	3.51E-61	
AS 78	1.16E-02	1.03E-04	3.01E-09	2.54E-23	0.	0.	0.	0.	0.	0.	0.	0.
BR 82	4.80E-04	3.00E-04	1.87E-04	4.55E-05	4.31E-06	3.88E-08	3.48E-10	2.81E-14	1.64E-24	5.63E-45	1.92E-65	
BR 83	3.73E-01	9.83E-03	9.89E-06	1.00E-14	1.03E-29	0.	0.	0.	0.	0.	0.	0.
KR 83M	1.93E-05	4.30E-02	4.89E-05	4.39E-14	4.51E-29	0.	0.	0.	0.	0.	0.	0.
KR 85M	4.84E-03	2.76E-01	6.29E-03	7.47E-08	4.61E-16	1.75E-32	6.63E-49	0.	0.	0.	0.	0.
KR 85	5.01E-06	1.31E-04	1.34E-04	1.34E-04	1.34E-04	1.34E-04	1.34E-04	1.33E-04	1.32E-04	1.29E-04	1.28E-04	
KR 87	8.13E+01	1.61E-04	3.17E-10	2.46E-27	0.	0.	0.	0.	0.	0.	0.	0.
KR 88	4.70E+01	1.24E-01	3.24E-04	5.89E-12	7.42E-25	0.	0.	0.	0.	0.	0.	0.
RB 88	1.19E+01	1.38E-01	3.63E-04	6.59E-12	8.27E-25	0.	0.	0.	0.	0.	0.	0.
SR 89	4.31E-06	1.29E-01	1.27E-01	1.22E-01	1.15E-01	1.00E-01	8.75E-02	6.74E-02	3.44E-02	9.07E-03	2.39E-03	
SR 90	8.70E-06	8.94E-04	8.94E-04	8.94E-04	8.94E-04	8.94E-04	8.94E-04	8.94E-04	8.86E-04	8.86E-04	8.78E-04	
Y 90	1.29E-11	2.05E-04	3.62E-04	6.51E-04	8.30E-04	8.86E-04	8.94E-04	8.94E-04	8.86E-04	8.86E-04	8.78E-04	
SR 91	1.01E+00	3.62E+00	6.48E-01	3.72E-03	6.80E-07	2.31E-14	7.82E-22	8.90E-37	0.	0.	0.	0.

E-8

RAY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.750E-11

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
Y 91M	6.80E-05	2.34E+00	4.18E-01	2.40E-03	4.41E-07	1.49E-14	5.03E-22	5.74E-37	0.	0.	0.
Y 91	2.78E-08	1.11E-01	1.32E-01	1.32E-01	1.24E-01	1.10E-01	9.79E-02	7.75E-02	4.29E-02	1.32E-02	4.06E-03
SR 92	7.28E+00	9.08E-02	1.96E-04	1.97E-12	9.21E-26	0.	0.	0.	0.	0.	0.
Y 92	3.36E-01	9.52E-01	1.06E-02	8.13E-09	4.74E-19	1.62E-39	5.56E-60	0.	0.	0.	0.
Y 93	3.49E-01	2.36E+00	4.60E-01	3.46E-03	9.94E-07	8.22E-14	6.78E-21	4.63E-35	0.	0.	0.
ZR 95	6.61E-04	8.27E-02	8.18E-02	7.92E-02	7.51E-02	6.73E-02	6.06E-02	4.90E-02	2.87E-02	9.89E-03	3.39E-03
NB 95M	1.41E-11	2.80E-04	5.11E-04	9.75E-04	1.31E-03	1.39E-03	1.28E-03	1.04E-03	6.09E-04	2.10E-04	7.22E-05
NB 95	7.37E-11	1.60E-03	3.16E-03	7.57E-03	1.41E-02	2.43E-02	3.13E-02	3.89E-02	3.74E-02	1.80E-02	6.91E-03
ZR 97	1.55E+00	2.64E+00	9.95E-01	5.27E-02	3.96E-04	2.23E-08	1.25E-12	3.96E-21	2.23E-42	0.	0.
NB 97M	7.99E-03	2.54E+00	9.54E-01	5.08E-02	3.80E-04	2.14E-08	1.20E-12	3.80E-21	2.15E-42	0.	0.
NB 97	7.78E-01	2.65E+00	9.97E-01	5.29E-02	3.98E-04	2.40E-08	1.35E-12	4.28E-21	2.41E-42	0.	0.
MO 99	4.51E-03	1.47E+00	1.15E+00	5.43E-01	1.57E-01	1.31E-02	1.09E-03	7.64E-06	3.10E-11	5.11E-22	8.42E-33
TC 99M	4.19E-08	1.29E+00	1.09E+00	5.20E-01	1.50E-01	1.25E-02	1.05E-03	7.30E-06	2.96E-11	4.88E-22	8.04E-33
RU103	6.30E-05	1.44E-01	1.41E-01	1.34E-01	1.23E-01	1.03E-01	8.65E-02	6.10E-02	2.54E-02	4.40E-03	7.68E-04
RH103M	4.20E-09	1.44E-01	1.41E-01	1.34E-01	1.23E-01	1.03E-01	8.65E-02	6.10E-02	2.54E-02	4.40E-03	7.68E-04
RU105	3.42E-01	3.27E-01	7.68E-03	1.01E-07	7.38E-16	3.94E-32	2.11E-48	0.	0.	0.	0.
RH105M	2.25E-03	3.27E-01	7.71E-03	1.01E-07	7.41E-16	3.96E-32	2.12E-48	0.	0.	0.	0.
RH105	3.69E-09	1.18E+00	7.71E-01	1.92E-01	1.89E-02	1.84E-04	1.79E-06	1.69E-10	1.46E-20	1.10E-40	8.25E-61
RU106	2.63E-04	4.99E-03	4.96E-03	4.94E-03	4.90E-03	4.81E-03	4.71E-03	4.53E-03	4.12E-03	3.41E-03	2.83E-03
RH106	2.85E-06	4.99E-03	4.96E-03	4.94E-03	4.90E-03	4.81E-03	4.71E-03	4.53E-03	4.12E-03	3.41E-03	2.83E-03
PD109	2.17E-03	5.54E-02	1.61E-02	4.00E-04	8.43E-07	3.76E-12	1.67E-17	3.31E-28	0.	0.	0.
AG109M	1.25E-05	5.54E-02	1.62E-02	4.01E-04	8.47E-07	3.76E-12	1.67E-17	3.31E-28	0.	0.	0.
PD111M	3.02E-01	1.47E-02	7.12E-04	8.17E-08	2.21E-14	1.61E-27	1.18E-40	0.	0.	0.	0.
PD111	1.08E-01	1.18E-02	5.72E-04	6.57E-08	1.78E-14	1.30E-27	9.50E-41	0.	0.	0.	0.
AG111M	8.54E-04	1.54E-02	7.52E-04	8.64E-08	2.33E-14	1.71E-27	1.25E-40	0.	0.	0.	0.
AG111	3.04E-10	8.40E-03	8.07E-03	6.14E-03	3.87E-03	1.53E-03	6.09E-04	9.59E-05	9.43E-07	9.14E-11	8.86E-15
PD112	6.77E-02	3.08E-02	1.39E-02	1.29E-03	2.46E-05	8.92E-09	3.24E-12	4.26E-19	2.69E-36	0.	0.
AG112	2.04E-06	3.57E-02	1.64E-02	1.52E-03	2.91E-05	1.05E-08	3.82E-12	5.04E-19	3.16E-36	0.	0.
AG113	8.79E-04	9.29E-03	4.02E-04	3.26E-08	4.99E-15	1.17E-28	2.73E-42	0.	0.	0.	0.
CD115M	3.15E-09	9.10E-05	8.95E-05	8.52E-05	7.88E-05	6.69E-05	5.71E-05	4.12E-05	1.84E-05	3.66E-06	7.33E-07
CD115	1.22E-06	1.83E-02	1.34E-02	5.28E-03	1.11E-03	4.98E-05	2.22E-06	4.43E-09	7.82E-16	2.45E-29	7.67E-43
IN115M	1.51E-11	1.93E-02	1.46E-02	5.77E-03	1.22E-03	5.44E-05	2.42E-06	4.83E-09	8.55E-16	2.68E-29	8.37E-43
CD117	2.73E-02	5.96E-04	5.80E-07	5.42E-16	4.81E-31	0.	0.	0.	0.	0.	0.
IN117M	1.31E-06	2.47E-03	2.87E-06	2.76E-15	2.46E-30	0.	0.	0.	0.	0.	0.
IN117	5.29E-11	1.63E-03	1.93E-06	1.87E-15	1.66E-30	0.	0.	0.	0.	0.	0.
SN121	5.52E-04	3.15E-02	1.70E-02	2.68E-03	1.23E-04	2.59E-07	5.46E-10	2.43E-15	1.02E-28	0.	0.
SN123	2.84E-06	2.98E-04	2.95E-04	2.90E-04	2.82E-04	2.66E-04	2.53E-04	2.26E-04	1.71E-04	9.84E-05	5.66E-05
SN125	7.93E-03	7.37E-03	6.85E-03	5.48E-03	3.79E-03	1.82E-03	8.67E-04	1.98E-04	4.97E-06	3.13E-09	1.96E-12
SB125	4.76E-05	5.28E-05	5.77E-05	7.06E-05	8.65E-05	1.05E-04	1.13E-04	1.18E-04	1.15E-04	1.08E-04	1.00E-04
SB126	1.55E-03	1.47E-03	1.39E-03	1.17E-03	8.90E-04	5.10E-04	2.94E-04	9.68E-05	6.05E-06	2.94E-08	5.91E-09

RAY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.750E-11

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SN127	2.77E+00	1.00E-03	3.65E-07	1.74E-17	1.09E-34	0.	0.	0.	0.	0.	0.	0.
SB127	3.24E-02	1.33E-01	1.11E-01	6.49E-02	2.66E-02	4.44E-03	7.42E-04	2.08E-05	2.71E-09	4.62E-17	7.87E-25	
TE127M	2.62E-10	2.03E-04	3.71E-04	7.20E-04	9.96E-04	1.10E-03	1.06E-03	9.38E-04	6.85E-04	3.61E-04	1.91E-04	
TE127	1.83E-02	9.51E-02	9.34E-02	5.69E-02	2.41E-02	4.93E-03	1.69E-03	9.47E-04	6.76E-04	3.57E-04	1.89E-04	
SB128	7.81E-01	1.33E-01	2.10E-02	8.20E-05	7.95E-09	7.46E-17	7.02E-25	6.19E-41	0.	0.	0.	
SB129	4.60E+00	2.35E-01	4.91E-03	4.47E-08	1.78E-16	2.81E-33	4.43E-50	0.	0.	0.	0.	
TE129M	8.69E-08	9.15E-03	9.15E-03	8.64E-03	7.81E-03	6.36E-03	5.17E-03	3.44E-03	1.24E-03	1.62E-04	2.11E-05	
TE129	3.31E+00	2.76E-01	1.15E-02	5.53E-03	4.99E-03	4.07E-03	3.32E-03	2.21E-03	7.97E-04	1.04E-04	1.35E-05	
I130	2.18E-02	5.70E-03	1.49E-03	2.67E-05	3.25E-08	4.85E-14	7.23E-20	1.61E-31	0.	0.	0.	
TE131M	8.93E-05	3.12E-01	1.79E-01	3.39E-02	2.12E-03	8.28E-06	3.24E-08	4.94E-13	4.49E-25	0.	0.	
TE131	8.22E+01	5.69E-02	3.27E-02	6.21E-03	3.87E-04	1.51E-06	5.91E-09	9.05E-14	8.22E-26	0.	0.	
I131	1.19E-02	6.44E-01	6.09E-01	4.89E-01	3.22E-01	1.36E-01	5.76E-02	1.03E-02	1.39E-04	2.53E-08	4.61E-12	
XE131M	3.24E-11	2.99E-04	5.67E-04	1.18E-03	1.69E-03	1.67E-03	1.24E-03	5.13E-04	3.42E-05	1.02E-07	2.88E-10	
TE132	1.00E+00	1.99E+00	1.60E+00	8.45E-01	2.91E-01	3.45E-02	4.09E-03	5.74E-05	1.34E-09	7.35E-19	4.01E-28	
I132	2.46E+00	2.05E+00	1.65E+00	8.69E-01	3.00E-01	3.56E-02	4.21E-03	5.92E-05	1.39E-09	7.54E-19	4.13E-28	
I133	1.07E+00	5.98E+00	2.70E+00	2.50E-01	4.77E-03	1.73E-06	6.27E-10	8.26E-17	5.19E-34	0.	0.	
XE133M	4.57E-08	5.64E-02	6.68E-02	3.92E-02	9.20E-03	4.32E-04	2.01E-05	4.36E-08	9.55E-15	4.57E-28	2.19E-41	
XE133	7.97E-07	1.08E+00	1.45E+00	1.30E+00	7.09E-01	1.92E-01	5.15E-02	3.71E-03	5.17E-06	1.00E-11	1.95E-17	
I135	1.82E+01	2.97E+00	2.48E-01	1.44E-04	5.85E-10	9.66E-21	1.59E-31	4.31E-53	0.	0.	0.	
XE135M	2.01E-03	9.25E-01	7.73E-02	4.50E-05	1.83E-10	3.01E-21	4.96E-32	1.35E-53	0.	0.	0.	
XE135	2.09E+00	7.99E+00	1.95E+00	1.12E-02	1.37E-06	1.92E-14	2.70E-22	5.33E-38	0.	0.	0.	
CS136	1.58E-03	1.50E-03	1.42E-03	1.21E-03	9.28E-04	5.45E-04	3.20E-04	1.10E-04	7.64E-06	3.68E-08	1.79E-10	
CS137	8.76E-05	9.45E-04	9.45E-04	9.45E-04	9.45E-04	9.45E-04	9.45E-04	9.45E-04	9.39E-04	9.34E-04	9.29E-04	
BA137M	1.85E-07	8.82E-04	8.82E-04	8.82E-04	8.82E-04	8.82E-04	8.82E-04	8.82E-04	8.76E-04	8.71E-04	8.66E-04	
BA139	1.17E+01	1.25E-03	7.38E-09	1.52E-24	0.	0.	0.	0.	0.	0.	0.	
BA140	1.10E-01	6.51E-01	6.19E-01	5.25E-01	4.01E-01	2.33E-01	1.35E-01	4.59E-02	3.07E-03	1.36E-05	6.04E-08	
LA140	2.62E-07	2.27E-01	3.65E-01	5.04E-01	4.48E-01	2.68E-01	1.56E-01	5.30E-02	3.52E-03	1.57E-05	6.98E-08	
LA141	1.52E+00	6.03E-01	8.45E-03	2.34E-08	1.28E-17	3.82E-36	1.14E-54	0.	0.	0.	0.	
CE141	1.88E-07	2.08E-01	2.07E-01	1.94E-01	1.74E-01	1.41E-01	1.13E-01	7.40E-02	2.54E-02	2.99E-03	3.52E-04	
LA142	7.49E+00	1.64E-03	3.18E-08	2.34E-22	0.	0.	0.	0.	0.	0.	0.	
CE143	5.08E-02	2.09E+00	1.26E+00	2.78E-01	2.24E-02	1.45E-04	9.36E-07	3.92E-11	4.43E-22	0.	0.	
PR143	1.49E-08	1.34E-01	2.08E-01	2.69E-01	2.30E-01	1.40E-01	8.47E-02	3.06E-02	2.45E-03	1.55E-05	9.87E-08	
CE144	2.06E-03	1.48E-02	1.47E-02	1.46E-02	1.44E-02	1.41E-02	1.37E-02	1.31E-02	1.16E-02	9.07E-03	7.12E-03	
PR144	5.66E-07	1.48E-02	1.47E-02	1.46E-02	1.44E-02	1.41E-02	1.37E-02	1.31E-02	1.16E-02	9.07E-03	7.12E-03	
PR145	8.05E-02	8.23E-01	5.09E-02	1.21E-05	1.10E-11	9.12E-24	7.56E-36	0.	0.	0.	0.	
ND147	9.48E-06	1.59E-01	1.50E-01	1.24E-01	9.09E-02	4.88E-02	2.61E-02	7.49E-03	3.28E-04	6.39E-07	1.24E-09	
PM147	2.63E-14	1.19E-04	2.31E-04	5.27E-04	9.11E-04	1.39E-03	1.64E-03	1.83E-03	1.85E-03	1.72E-03	1.60E-03	
ND149	1.26E+01	1.22E-03	1.18E-07	1.07E-19	9.17E-40	0.	0.	0.	0.	0.	0.	
PM149	1.75E-03	3.23E-01	2.37E-01	9.24E-02	1.93E-02	8.41E-04	3.66E-05	6.96E-08	1.10E-14	2.71E-28	6.75E-42	
PM150	1.39E-01	2.94E-04	6.18E-07	5.80E-15	2.43E-28	0.	0.	0.	0.	0.	0.	

E-10

RAY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.750E-11

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
PM151	2.71E-02	1.85E-01	1.02E-01	1.72E-02	8.80E-04	2.31E-06	6.09E-09	4.20E-14	5.27E-27	0.	0.
SM153	8.53E-02	6.00E-02	4.21E-02	1.45E-02	2.47E-03	7.19E-05	2.09E-06	1.75E-09	3.62E-17	1.54E-32	6.56E-48
SM156	4.51E-02	7.70E-03	1.31E-03	6.47E-06	9.31E-10	1.91E-17	3.95E-25	1.68E-40	0.	0.	0.
EU155	2.67E-06	9.03E-05	9.02E-05	9.02E-05	8.99E-05	8.96E-05	8.92E-05	8.85E-05	8.68E-05	8.33E-05	8.01E-05
EU156	1.32E-04	1.07E-03	1.19E-03	1.07E-03	8.47E-04	5.32E-04	3.36E-04	1.33E-04	1.32E-05	1.30E-07	1.28E-09
EU157	7.85E-03	9.07E-03	3.05E-03	1.14E-04	4.81E-07	8.48E-12	1.50E-16	4.67E-26	0.	0.	0.
GD159	8.19E-04	1.61E-03	6.42E-04	4.00E-05	3.94E-07	3.82E-11	3.70E-15	3.47E-23	2.96E-43	0.	0.
TB161	5.70E-06	3.72E-05	3.36E-05	2.49E-05	1.50E-05	5.51E-06	2.02E-06	2.70E-07	1.79E-09	7.73E-14	3.36E-18
TOTAL	3.06E+02	7.78E+01	4.02E+01	1.54E+01	5.74E+00	1.93E+00	1.15E+00	6.31E-01	2.71E-01	9.39E-02	4.45E-02

RAY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.750E-11

DEBRIS DECAY FROM 1 TO 50 YEARS

	ZERO TIME	1.00E+00	1.50E+00	2.00E+00	3.50E+00	5.00E+00	7.00E+00	1.00E+01	2.00E+01	3.50E+01	5.00E+01
* BE 7	1.45E-06	1.25E-08	1.17E-09	1.08E-10	8.71E-14	6.97E-17	5.21E-21	3.34E-27	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U234	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	4.50E-02	1.12E-10	1.09E-10	1.06E-10	9.96E-11	9.25E-11	8.41E-11	7.29E-11	4.54E-11	2.23E-11	1.09E-11
AM241	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CM242	1.20E-06	2.55E-07	1.17E-07	5.40E-08	5.26E-09	5.13E-10	2.30E-11	2.17E-13	6.24E-18	5.82E-18	5.43E-18
KR 85	5.01E-06	1.24E-04	1.20E-04	1.17E-04	1.06E-04	9.60E-05	8.44E-05	6.96E-05	3.68E-05	1.40E-05	5.37E-06
SR 89	4.31E-06	1.01E-03	8.81E-05	7.74E-06	5.21E-09	3.52E-12	2.08E-16	9.44E-23	6.86E-24	0.	0.
SR 90	8.70E-06	8.70E-04	8.62E-04	8.54E-04	8.22E-04	7.91E-04	7.53E-04	6.99E-04	5.46E-04	3.77E-04	2.61E-04
Y 90	1.29E-11	8.70E-04	8.62E-04	8.54E-04	8.22E-04	7.91E-04	7.53E-04	6.99E-04	5.46E-04	3.77E-04	2.61E-04
Y 91	2.78E-08	1.88E-03	2.19E-04	2.54E-05	3.98E-08	6.25E-11	1.14E-14	2.81E-20	5.67E-39	0.	0.
ZR 95	6.61E-04	1.70E-03	2.43E-04	3.45E-05	1.01E-07	2.93E-10	1.21E-13	1.02E-18	1.25E-35	0.	0.
NB 95M	1.41E-11	3.60E-05	5.14E-06	7.34E-07	2.13E-09	6.21E-12	2.57E-15	2.17E-20	2.66E-37	0.	0.
NB 95	7.37E-11	3.66E-03	5.29E-04	7.49E-05	2.17E-07	6.30E-10	2.63E-13	2.22E-18	2.72E-35	0.	0.
RU103	6.30E-05	2.45E-04	1.00E-05	4.12E-07	2.81E-11	1.93E-15	5.41E-21	2.55E-29	0.	0.	0.
RH103M	4.20E-09	2.45E-04	1.00E-05	4.12E-07	2.82E-11	1.93E-15	5.41E-21	2.55E-29	0.	0.	0.
RU106	2.63E-04	2.50E-03	1.77E-03	1.26E-03	4.47E-04	1.59E-04	3.99E-05	5.05E-06	5.09E-09	1.64E-13	5.27E-18
RH106	2.85E-06	2.50E-03	1.77E-03	1.26E-03	4.47E-04	1.59E-04	3.99E-05	5.05E-06	5.09E-09	1.64E-13	5.27E-18
SN123	2.84E-06	3.94E-05	1.43E-05	5.19E-06	2.49E-07	1.20E-09	2.08E-10	4.80E-13	7.70E-22	4.96E-35	3.18E-48
SB125	4.76E-05	9.58E-05	8.42E-05	7.41E-05	5.05E-05	3.44E-05	2.05E-05	9.50E-06	7.31E-07	1.55E-08	3.31E-10
TE125M	1.28E-12	3.91E-05	3.48E-05	3.06E-05	2.09E-05	1.42E-05	8.51E-06	3.93E-06	3.02E-07	6.44E-09	1.37E-10
TE127M	2.62E-10	1.25E-04	3.92E-05	1.23E-05	3.77E-07	1.16E-08	1.12E-10	1.05E-13	8.62E-24	6.45E-39	4.80E-54
TE127	1.83E-02	1.24E-04	3.88E-05	1.21E-05	3.73E-07	1.15E-08	1.10E-10	1.04E-13	8.54E-24	6.36E-39	4.76E-54
CS137	8.76E-05	9.24E-04	9.13E-04	9.03E-04	8.71E-04	8.40E-04	8.03E-04	7.50E-04	5.93E-04	4.21E-04	2.98E-04
BA137M	1.85E-07	8.66E-04	8.55E-04	8.45E-04	8.13E-04	7.87E-04	7.50E-04	7.03E-04	5.56E-04	3.94E-04	2.79E-04
CE141	1.88E-07	8.10E-05	1.63E-06	3.27E-08	2.67E-13	2.17E-18	3.56E-25	2.36E-35	0.	0.	0.
CE144	2.06E-03	6.07E-03	3.90E-03	2.49E-03	6.53E-04	1.72E-04	2.89E-05	1.99E-06	2.68E-10	4.21E-16	6.56E-22
FR144	5.66E-07	6.07E-03	3.90E-03	2.49E-03	6.53E-04	1.72E-04	2.89E-05	1.99E-06	2.68E-10	4.21E-16	6.56E-22
PM147	2.63E-14	1.53E-03	1.34E-03	1.17E-03	7.88E-04	5.30E-04	3.11E-04	1.41E-04	1.00E-05	1.90E-07	3.59E-09
EU155	2.67E-06	7.80E-05	7.25E-05	6.75E-05	5.43E-05	4.36E-05	3.25E-05	2.10E-05	4.91E-06	5.52E-07	6.22E-08
TOTAL	6.65E-02	3.17E-02	1.77E-02	1.26E-02	6.55E-03	4.59E-03	3.65E-03	3.11E-03	2.29E-03	1.58E-03	1.10E-03

E-12

**APPENDIX F**  
**DETAILED RESULTS FOR EVENT BADGER**

BADGER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.430E-13

TIME	MR/HR	MICROCURIES/SQ METER
ZERO TIME HOURS	1.07E+02	1.33E+04
1.00E+00	3.32E+01	2.70E+03
2.00E+00	1.31E+01	9.59E+02
3.00E+00	6.96E+00	5.53E+02
4.00E+00	4.34E+00	4.00E+02
6.00E+00	2.29E+00	2.71E+02
9.00E+00	1.37E+00	1.90E+02
1.20E+01	1.00E+00	1.48E+02
1.50E+01	7.88E-01	1.21E+02
1.80E+01	6.47E-01	1.03E+02
2.10E+01	5.45E-01	8.90E+01
1.00E+00 DAYS	4.62E-01	7.76E+01
2.00E+00	2.16E-01	3.96E+01
5.00E+00	8.57E-02	1.52E+01
1.00E+01	3.80E-02	5.92E+00
2.00E+01	1.44E-02	2.06E+00
3.00E+01	8.08E-03	1.20E+00
5.00E+01	3.62E-03	6.41E-01
1.00E+02	1.19E-03	2.73E-01
2.00E+02	4.01E-04	9.64E-02
3.00E+02	1.60E-04	4.82E-02
1.00E+00 YEARS	9.71E-05	3.56E-02
1.50E+00	3.68E-05	2.10E-02
2.00E+00	2.42E-05	1.50E-02
3.50E+00	1.46E-05	7.41E-03
5.00E+00	1.12E-05	4.81E-03
7.00E+00	9.21E-06	3.57E-03
1.00E+01	7.85E-06	2.91E-03
2.00E+01	5.69E-06	2.08E-03
3.50E+01	3.94E-06	1.43E-03
5.00E+01	2.77E-06	9.96E-04

BADGER MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.430E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
* BE 7		1.48E-06	1.47E-06	1.47E-06	1.47E-06	1.47E-06	1.47E-06	1.46E-06	1.46E-06	1.46E-06	1.46E-06
* NA 24		2.78E-03	2.65E-03	2.54E-03	2.42E-03	2.31E-03	2.11E-03	1.83E-03	1.60E-03	1.39E-03	1.21E-03
MN 54		4.10E-05	4.10E-05	4.10E-05	4.10E-05	4.10E-05	4.10E-05	4.07E-05	4.07E-05	4.07E-05	4.07E-05
FE 55		7.82E-05	7.82E-05	7.82E-05	7.82E-05	7.82E-05	7.82E-05	7.82E-05	7.82E-05	7.82E-05	7.82E-05
TE 59		2.42E-04	2.41E-04	2.41E-04	2.41E-04	2.41E-04	2.41E-04	2.40E-04	2.40E-04	2.39E-04	2.39E-04
CO 57		4.15E-05	4.15E-05	4.15E-05	4.15E-05	4.15E-05	4.15E-05	4.15E-05	4.15E-05	4.15E-05	4.15E-05
CO 58		2.23E-04	2.23E-04	2.23E-04	2.23E-04	2.23E-04	2.22E-04	2.22E-04	2.22E-04	2.22E-04	2.21E-04
CO 60		5.01E-05	5.01E-05	5.01E-05	5.01E-05	5.01E-05	5.01E-05	5.01E-05	5.01E-05	5.01E-05	5.01E-05
CU 64		3.90E-01	3.69E-01	3.49E-01	3.31E-01	3.14E-01	2.82E-01	2.39E-01	2.03E-01	1.73E-01	1.47E-01
CU 67		7.09E-04	7.03E-04	6.91E-04	6.85E-04	6.79E-04	6.61E-04	6.37E-04	6.18E-04	5.99E-04	5.76E-04
W181		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237		1.12E+00	1.12E+00	1.11E+00	1.11E+00	1.10E+00	1.09E+00	1.08E+00	1.06E+00	1.05E+00	1.04E+00
U239		3.82E+03	6.52E+02	1.11E+02	1.90E+01	3.22E+00	9.38E-02	4.65E-04	2.29E-06	1.13E-08	5.61E-11
U240		2.96E+00	2.82E+00	2.68E+00	2.55E+00	2.43E+00	2.20E+00	1.90E+00	1.64E+00	1.41E+00	1.22E+00
NP239		1.31E-02	2.19E+01	2.53E+01	2.58E+01	2.56E+01	2.49E+01	2.39E+01	2.31E+01	2.23E+01	2.15E+01
NP240M		4.68E-03	2.83E+00	2.70E+00	2.58E+00	2.45E+00	2.22E+00	1.92E+00	1.65E+00	1.43E+00	1.23E+00
NP240		1.18E-10	6.09E-11	3.16E-11	1.63E-11	8.44E-12	2.26E-12	3.11E-13	4.30E-14	5.92E-15	8.16E-16
* AM241		4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09
* CM242		3.67E-07	3.67E-07	3.67E-07	3.67E-07	3.67E-07	3.67E-07	3.65E-07	3.65E-07	3.65E-07	3.65E-07
GE 75		1.50E-05	7.28E-02	4.38E-02	2.64E-02	1.59E-02	5.76E-03	1.26E-03	2.75E-04	6.01E-05	1.31E-05
GE 77		7.41E-03	1.91E-02	1.80E-02	1.69E-02	1.59E-02	1.41E-02	1.17E-02	9.72E-03	8.10E-03	6.73E-03
AS 77		7.66E-05	1.21E-02	1.22E-02	1.23E-02	1.24E-02	1.25E-02	1.25E-02	1.24E-02	1.22E-02	1.20E-02
SE 77M		3.02E-09	3.62E-05	3.68E-05	3.71E-05	3.71E-05	3.73E-05	3.76E-05	3.73E-05	3.68E-05	3.60E-05
GE 78		9.98E-01	6.24E-01	3.88E-01	2.43E-01	1.51E-01	5.89E-02	1.43E-02	3.47E-03	8.46E-04	2.06E-04
AS 78		1.80E-02	2.98E-01	3.67E-01	3.44E-01	2.88E-01	1.70E-01	6.31E-02	2.09E-02	6.48E-03	1.94E-03
AS 79		1.80E+01	1.77E-01	1.74E-03	1.72E-05	1.69E-07	1.64E-11	1.56E-17	1.49E-23	1.42E-29	1.36E-35
SE 79M		2.66E-02	3.12E-01	3.08E-03	3.04E-05	2.99E-07	2.89E-11	2.76E-17	2.63E-23	2.51E-29	2.40E-35
BR 80		1.05E-01	9.87E-03	9.28E-04	8.73E-05	8.22E-06	7.29E-08	6.10E-11	5.08E-14	4.24E-17	3.54E-20
SE 81M		8.25E-02	3.85E+00	1.86E+00	8.93E-01	4.29E-01	1.00E-01	1.12E-02	1.26E-03	1.41E-04	1.58E-05
SE 81		1.01E+00	4.55E+00	2.63E+00	1.31E+00	6.38E-01	1.49E-01	1.67E-02	1.87E-03	2.09E-04	2.35E-05
BR 82		4.74E-04	4.64E-04	4.55E-04	4.47E-04	4.38E-04	4.21E-04	3.97E-04	3.74E-04	3.53E-04	3.32E-04
SE 83		4.30E+01	8.15E+00	1.54E+00	2.93E-01	5.54E-02	1.99E-03	1.35E-05	9.21E-08	6.29E-10	4.26E-12
BR 83		3.57E-01	5.33E+00	4.94E+00	3.88E+00	2.95E+00	1.67E+00	7.04E-01	2.96E-01	1.25E-01	5.28E-02
KR 83M		1.85E-05	1.21E+00	2.47E+00	3.06E+00	3.16E+00	2.64E+00	1.55E+00	8.00E-01	3.85E-01	1.78E-01



BADGER MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.430E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BR 84	8.86E-02	1.53E+01	4.13E+00	1.12E+00	3.02E-01	2.21E-02	4.37E-04	8.63E-06	1.71E-07	3.38E-09	6.67E-11	
KR 85M	4.09E-03	8.77E+00	7.47E+00	6.38E+00	5.45E+00	3.98E+00	2.48E+00	1.55E+00	9.65E-01	5.99E-01	3.74E-01	
KR 87	6.56E+01	3.78E+01	2.19E+01	1.27E+01	7.30E+00	2.45E+00	4.75E-01	9.20E-02	1.78E-02	3.45E-03	6.67E-04	
KR 88	3.75E+01	2.93E+01	2.28E+01	1.78E+01	1.39E+01	8.46E+00	4.04E+00	1.92E+00	9.13E-01	4.35E-01	2.07E-01	
RB 88	9.53E+00	2.96E+01	2.53E+01	1.99E+01	1.56E+01	9.47E+00	4.52E+00	2.15E+00	1.03E+00	4.88E-01	2.32E-01	
RB 89	4.57E+01	4.30E+01	2.89E+00	1.94E-01	1.30E-02	5.89E-05	1.78E-08	5.38E-12	1.64E-15	4.96E-19	1.51E-22	
SR 89	3.50E-06	1.23E-01	1.31E-01	1.31E-01	1.31E-01	1.31E-01	1.31E-01	1.31E-01	1.31E-01	1.31E-01	1.31E-01	
SR 90	6.89E-06	7.08E-04	7.08E-04	7.08E-04	7.08E-04	7.08E-04	7.08E-04	7.08E-04	7.08E-04	7.08E-04	7.08E-04	
SR 91	8.22E-01	1.53E+01	1.43E+01	1.33E+01	1.24E+01	1.07E+01	8.63E+00	6.98E+00	5.64E+00	4.52E+00	3.65E+00	
Y 91M	5.53E-05	5.27E+00	7.19E+00	7.70E+00	7.60E+00	6.82E+00	5.58E+00	4.49E+00	3.62E+00	2.92E+00	2.36E+00	
Y 91	2.26E-08	4.69E-03	1.08E-02	1.73E-02	2.36E-02	3.53E-02	5.02E-02	6.20E-02	7.19E-02	7.96E-02	8.58E-02	
SR 92	6.06E+00	2.71E+01	2.10E+01	1.62E+01	1.26E+01	7.52E+00	3.49E+00	1.62E+00	7.52E-01	3.49E-01	1.63E-01	
Y 92	2.79E-01	5.69E+00	8.93E+00	1.06E+01	1.13E+01	1.07E+01	8.23E+00	5.61E+00	3.61E+00	2.22E+00	1.34E+00	
SR 93	2.47E+02	4.26E+00	2.35E-02	1.30E-04	7.16E-07	2.19E-11	3.69E-18	6.23E-25	1.05E-31	1.77E-38	2.99E-45	
Y 93	3.02E-01	9.76E+00	9.17E+00	8.57E+00	8.01E+00	6.99E+00	5.70E+00	4.65E+00	3.78E+00	3.10E+00	2.52E+00	
Y 94	3.61E+01	4.94E+01	6.35E+00	8.19E-01	1.06E-01	1.76E-03	3.76E-06	8.07E-09	1.73E-11	3.76E-14	2.09E-15	
Y 95	1.57E+02	1.48E+01	3.26E-01	7.20E-03	1.58E-04	7.69E-08	8.24E-13	8.81E-18	9.40E-23	1.00E-27	1.07E-32	
ZR 95	5.90E-04	7.72E-02	7.87E-02	7.87E-02	7.87E-02	7.87E-02	7.87E-02	7.87E-02	7.87E-02	7.87E-02	7.87E-02	
NB 95	6.58E-11	4.77E-05	1.11E-04	1.75E-04	2.38E-04	3.65E-04	5.54E-04	7.46E-04	9.32E-04	1.12E-03	1.31E-03	
ZR 97	1.46E+00	6.34E+00	6.07E+00	5.84E+00	5.59E+00	5.16E+00	4.56E+00	4.04E+00	3.58E+00	3.16E+00	2.81E+00	
NB 97M	7.49E-03	6.09E+00	5.84E+00	5.61E+00	5.39E+00	4.96E+00	4.39E+00	3.88E+00	3.43E+00	3.03E+00	2.68E+00	
NB 97	7.29E-01	3.18E+00	4.49E+00	5.11E+00	5.36E+00	5.34E+00	4.86E+00	4.34E+00	3.83E+00	3.38E+00	3.01E+00	
NB 98	8.33E+00	3.69E+00	1.63E+00	7.21E-01	3.19E-01	6.25E-02	5.41E-03	4.67E-04	4.07E-05	3.52E-06	3.03E-07	
MO 99	4.45E-03	1.84E+00	1.82E+00	1.80E+00	1.78E+00	1.74E+00	1.69E+00	1.64E+00	1.59E+00	1.54E+00	1.49E+00	
TC 99M	4.14E-08	1.75E-01	3.29E-01	4.65E-01	5.84E-01	7.80E-01	9.90E-01	1.12E+00	1.20E+00	1.25E+00	1.27E+00	
MO 101	1.32E+02	5.95E+01	3.45E+00	2.00E-01	1.16E-02	3.89E-05	7.56E-09	1.47E-12	2.86E-16	5.56E-20	1.08E-23	
TC 101	5.56E+00	1.67E+02	1.82E+01	1.50E+00	1.09E-01	4.91E-04	1.23E-07	2.75E-11	5.84E-15	1.20E-18	2.43E-22	
MO 102	1.13E+03	2.58E+01	5.86E-01	1.34E-02	3.05E-04	1.59E-07	1.89E-12	2.24E-17	2.65E-22	3.15E-27	3.74E-32	
TC 102M	7.26E-01	2.18E+01	4.99E-01	1.14E-02	2.60E-04	1.34E-07	1.60E-12	1.89E-17	2.24E-22	2.66E-27	3.16E-32	
TC 102	3.40E+03	1.30E+01	2.96E-01	6.72E-03	1.54E-04	8.01E-08	9.52E-13	1.13E-17	1.34E-22	1.59E-27	1.88E-32	
RU 103	8.41E-05	1.95E-01	1.95E-01	1.95E-01	1.95E-01	1.94E-01	1.94E-01	1.94E-01	1.93E-01	1.92E-01	1.92E-01	
RH 103M	5.61E-09	1.01E-01	1.49E-01	1.73E-01	1.84E-01	1.92E-01	1.94E-01	1.94E-01	1.93E-01	1.92E-01	1.92E-01	
TC 104	7.49E+01	5.38E+01	5.38E+00	5.33E-01	5.27E-02	5.19E-04	5.07E-07	4.95E-10	4.84E-13	4.73E-16	4.61E-19	
RU 105	6.44E-01	2.23E+01	1.90E+01	1.63E+01	1.40E+01	1.02E+01	6.39E+00	3.99E+00	2.50E+00	1.56E+00	9.82E-01	
RH 105M	4.23E-03	2.23E+01	1.91E+01	1.64E+01	1.40E+01	1.02E+01	6.39E+00	4.01E+00	2.51E+00	1.57E+00	9.82E-01	
RH 105	6.95E-09	4.53E-01	8.41E-01	1.16E+00	1.43E+00	1.83E+00	2.19E+00	2.35E+00	2.40E+00	2.37E+00	2.31E+00	
RU 106	5.73E-04	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	
RH 106	6.20E-06	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	
RH 107	1.72E-01	2.34E+01	3.55E+00	5.34E-01	8.06E-02	1.84E-03	6.33E-06	2.18E-08	7.51E-11	2.57E-146	2.56E-17	
PD 107M	3.58E-04	4.76E+00	7.19E-01	1.09E-01	1.64E-02	3.74E-04	1.29E-06	4.44E-09	1.53E-11	5.28E-14	1.80E-16	

BADGER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.430E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
PD109	1.48E-02	1.23E+00	1.17E+00	1.11E+00	1.05E+00	9.49E-01	8.16E-01	7.00E-01	6.00E-01	5.14E-01	4.41E-01
AG109M	8.55E-05	1.23E+00	1.17E+00	1.11E+00	1.05E+00	9.52E-01	8.16E-01	7.00E-01	6.00E-01	5.14E-01	4.41E-01
PD111M	1.98E+00	1.74E+00	1.53E+00	1.36E+00	1.20E+00	9.30E-01	6.36E-01	4.36E-01	2.99E-01	2.04E-01	1.40E-01
PD111	7.04E-01	1.27E+00	1.22E+00	1.08E+00	9.59E-01	7.45E-01	5.11E-01	3.50E-01	2.40E-01	1.65E-01	1.13E-01
AG111M	5.59E-03	1.71E+00	1.61E+00	1.44E+00	1.27E+00	9.81E-01	6.71E-01	4.60E-01	3.15E-01	2.16E-01	1.48E-01
AG111	1.99E-09	5.90E-03	1.24E-02	1.82E-02	2.34E-02	3.19E-02	4.09E-02	4.69E-02	5.08E-02	5.33E-02	5.47E-02
PD112	4.91E-01	4.76E-01	4.60E-01	4.45E-01	4.31E-01	4.03E-01	3.65E-01	3.31E-01	2.99E-01	2.71E-01	2.46E-01
AG112	1.48E-05	9.42E-02	1.66E-01	2.23E-01	2.65E-01	3.17E-01	3.49E-01	3.47E-01	3.31E-01	3.08E-01	2.84E-01
AG113	5.56E-03	1.19E+00	1.04E+00	9.16E-01	8.03E-01	6.17E-01	4.18E-01	2.82E-01	1.91E-01	1.29E-01	8.70E-02
AG115	2.03E+00	2.17E+00	2.70E-01	3.38E-02	4.23E-03	6.62E-05	1.29E-07	2.53E-10	4.89E-13	4.86E-16	4.51E-16
CD115M	1.66E-06	4.41E-04	4.96E-04	5.02E-04	5.02E-04	5.02E-04	5.01E-04	5.01E-04	4.99E-04	4.97E-04	4.97E-04
CD115	6.41E-06	1.21E-01	1.30E-01	1.30E-01	1.28E-01	1.25E-01	1.20E-01	1.15E-01	1.11E-01	1.07E-01	1.03E-01
IN115M	7.98E-11	1.33E-02	2.96E-02	4.39E-02	5.60E-02	7.47E-02	9.22E-02	1.02E-01	1.06E-01	1.07E-01	1.06E-01
CD117	1.41E-01	2.35E+00	1.77E+00	1.32E+00	9.93E-01	5.57E-01	2.34E-01	9.85E-02	4.15E-02	1.74E-02	7.33E-03
IN117M	6.80E-06	8.19E-01	1.19E+00	1.29E+00	1.24E+00	9.80E-01	5.60E-01	2.87E-01	1.38E-01	6.38E-02	2.89E-02
IN117	2.74E-10	1.49E-01	3.61E-01	5.02E-01	5.60E-01	5.16E-01	3.28E-01	1.76E-01	8.74E-02	4.11E-02	1.89E-02
CD118	9.30E+00	3.99E+00	1.71E+00	7.29E-01	3.12E-01	5.71E-02	4.48E-03	3.50E-04	2.76E-05	2.16E-06	1.69E-07
IN118	6.16E-01	3.99E+00	1.71E+00	7.31E-01	3.12E-01	5.73E-02	4.48E-03	3.52E-04	2.76E-05	2.16E-06	1.69E-07
CD119	2.35E+01	3.67E-01	5.72E-03	8.94E-05	1.40E-06	3.42E-10	1.30E-15	4.98E-21	1.89E-26	7.24E-32	2.77E-37
IN119M	3.54E-02	3.96E+00	4.31E-01	4.35E-02	4.33E-03	4.26E-05	4.16E-08	4.07E-11	3.96E-14	3.88E-17	3.79E-20
IN119	1.75E+00	2.09E-01	2.42E-02	2.46E-03	2.46E-04	2.40E-06	2.35E-09	2.30E-12	2.24E-15	2.19E-18	2.14E-21
SN121	2.97E-03	3.05E-01	2.97E-01	2.90E-01	2.83E-01	2.69E-01	2.48E-01	2.30E-01	2.13E-01	1.97E-01	1.83E-01
SN123M	1.51E+00	2.83E+00	1.00E+00	3.55E-01	1.25E-01	1.57E-02	6.93E-04	3.07E-05	1.36E-06	5.99E-08	2.65E-09
SN123	1.42E-05	1.49E-03	1.49E-03	1.49E-03	1.49E-03	1.49E-03	1.49E-03	1.49E-03	1.49E-03	1.49E-03	1.49E-03
SN125	3.39E-02	3.38E-02	3.37E-02	3.36E-02	3.34E-02	3.32E-02	3.30E-02	3.26E-02	3.24E-02	3.20E-02	3.17E-02
SB125	2.03E-04	2.04E-04	2.05E-04	2.06E-04	2.07E-04	2.09E-04	2.12E-04	2.15E-04	2.17E-04	2.20E-04	2.23E-04
SB126	4.57E-03	4.55E-03	4.55E-03	4.54E-03	4.52E-03	4.50E-03	4.47E-03	4.45E-03	4.41E-03	4.38E-03	4.35E-03
SN127	4.64E+00	3.33E+00	2.40E+00	1.73E+00	1.24E+00	6.41E-01	2.38E-01	8.85E-02	3.28E-02	1.22E-02	4.53E-03
SB127	5.42E-02	1.87E-01	2.07E-01	2.20E-01	2.30E-01	2.40E-01	2.43E-01	2.41E-01	2.37E-01	2.32E-01	2.28E-01
TE127	3.06E-02	3.81E-02	4.63E-02	5.49E-02	6.35E-02	7.96E-02	1.02E-01	1.19E-01	1.32E-01	1.43E-01	1.50E-01
SN128	2.87E+01	1.42E+01	7.01E+00	3.47E+00	1.71E+00	4.18E-01	5.05E-02	6.09E-03	7.35E-04	8.91E-05	1.07E-05
SB128M	1.46E-02	1.61E+01	8.38E+00	4.14E+00	2.04E+00	5.00E-01	6.02E-02	7.27E-03	8.76E-04	1.06E-04	1.28E-05
SB128	1.21E+00	1.17E+00	1.10E+00	1.03E+00	9.60E-01	8.22E-01	6.56E-01	5.21E-01	4.14E-01	3.28E-01	2.60E-01
SN129M	1.64E+01	8.18E+00	4.10E+00	2.05E+00	1.03E+00	2.56E-01	3.21E-02	4.01E-03	5.01E-04	6.26E-05	7.83E-06
SN129	1.09E+02	1.07E+00	1.06E-02	1.05E-04	1.03E-06	9.98E-11	9.49E-17	9.08E-23	8.66E-29	8.25E-35	7.90E-41
SB129	6.16E+00	1.03E+01	9.70E+00	8.66E+00	7.62E+00	5.66E+00	3.53E+00	2.18E+00	1.34E+00	8.32E-01	5.11E-01
TE129M	1.16E-07	1.29E-03	2.65E-03	3.90E-03	5.01E-03	6.79E-03	8.59E-03	9.70E-03	1.04E-02	1.08E-02	1.11E-02
TE129	4.43E+00	6.10E+00	7.14E+00	7.41E+00	7.14E+00	5.91E+00	3.94E+00	2.48E+00	1.55E+00	9.56E-01	5.93E-01
SB130M	5.71E-01	1.08E+00	2.83E-03	7.44E-06	1.98E-08	1.35E-13	2.46E-21	2.47E-29	8.12E-37	1.48E-44	2.68E-52
SB130	9.79E+01	2.96E+01	8.43E+00	2.39E+00	6.76E-01	5.44E-02	1.24E-03	2.83E-05	6.45E-07	1.47E-08	3.35E-10

BADGER MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.430E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME 1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
I130	2.73E-02	2.58E-02	2.44E-02	2.31E-02	2.18E-02	1.95E-02	1.65E-02	1.39E-02	1.18E-02	9.98E-03	8.43E-03
SB131	2.09E+02	5.46E+01	8.92E+00	1.46E+00	2.40E-01	6.47E-03	2.85E-05	1.26E-07	5.54E-10	2.44E-12	1.22E-14
TE131M	1.01E-04	5.26E-01	6.00E-01	6.01E-01	5.89E-01	5.63E-01	5.25E-01	4.90E-01	4.57E-01	4.27E-01	3.98E-01
TE131	9.26E+01	1.01E+02	3.28E+01	8.52E+00	2.07E+00	1.94E-01	9.65E-02	8.92E-02	8.32E-02	7.79E-02	7.26E-02
I131	1.34E-02	4.66E-01	6.86E-01	7.52E-01	7.66E-01	7.72E-01	7.72E-01	7.66E-01	7.66E-01	7.59E-01	7.59E-01
TE132	1.01E+00	2.45E+00	2.42E+00	2.41E+00	2.38E+00	2.34E+00	2.28E+00	2.22E+00	2.16E+00	2.10E+00	2.04E+00
I132	2.47E+00	2.47E+00	2.46E+00	2.45E+00	2.43E+00	2.40E+00	2.34E+00	2.28E+00	2.22E+00	2.17E+00	2.11E+00
TE133M	1.20E-01	4.16E+01	1.81E+01	7.89E+00	3.43E+00	6.51E-01	5.36E-02	4.42E-03	3.65E-04	3.01E-05	2.48E-06
TE133	6.74E+02	3.82E+01	4.25E+00	1.41E+00	5.94E-01	1.13E-01	9.31E-03	7.66E-04	6.34E-05	5.22E-06	4.30E-07
I133	1.05E+00	1.13E+01	1.22E+01	1.22E+01	1.19E+01	1.13E+01	1.03E+01	9.31E+00	8.40E+00	7.66E+00	6.91E+00
XE133M	4.45E-08	2.53E-03	6.11E-03	9.77E-03	1.33E-02	2.00E-02	2.90E-02	3.67E-02	4.33E-02	4.90E-02	5.37E-02
XE133	7.77E-07	4.42E-02	1.07E-01	1.71E-01	2.35E-01	3.57E-01	5.23E-01	6.69E-01	8.00E-01	9.14E-01	1.02E+00
TE134	2.10E+02	9.72E+01	3.62E+01	1.35E+01	4.99E+00	6.92E-01	3.54E-02	1.81E-03	9.29E-05	4.77E-06	2.44E-07
I134	9.62E+01	1.29E+02	9.01E+01	5.28E+01	2.84E+01	7.20E+00	7.91E-01	8.08E-02	7.91E-03	7.58E-04	7.20E-05
I135	1.77E+01	3.11E+01	2.80E+01	2.53E+01	2.28E+01	1.85E+01	1.36E+01	9.94E+00	7.30E+00	5.38E+00	3.93E+00
XE135M	1.95E-03	8.98E+00	8.72E+00	7.91E+00	7.10E+00	5.78E+00	4.25E+00	3.11E+00	2.28E+00	1.67E+00	1.23E+00
XE135	2.03E+00	4.02E+00	5.88E+00	7.41E+00	8.62E+00	1.03E+01	1.15E+01	1.15E+01	1.10E+01	9.99E+00	8.99E+00
CS136	1.43E-02	1.42E-02	1.42E-02	1.42E-02	1.41E-02	1.41E-02	1.40E-02	1.39E-02	1.38E-02	1.37E-02	1.36E-02
CS137	8.79E-05	9.47E-04	9.47E-04	9.47E-04	9.47E-04	9.47E-04	9.47E-04	9.47E-04	9.47E-04	9.47E-04	9.47E-04
BA137M	1.85E-07	8.84E-04	8.84E-04	8.84E-04	8.84E-04	8.84E-04	8.84E-04	8.84E-04	8.84E-04	8.84E-04	8.84E-04
XE138	6.56E+02	5.65E+01	4.91E+00	4.25E-01	3.68E-02	2.76E-04	1.80E-07	1.16E-10	7.58E-14	4.92E-17	3.20E-20
CS138	9.77E+01	1.64E+02	5.70E+01	1.67E+01	4.69E+00	3.57E-01	7.43E-03	1.54E-04	3.20E-06	6.66E-08	1.38E-09
CS139	6.38E+02	2.04E+01	2.55E-01	3.21E-03	4.03E-05	6.32E-09	1.26E-14	2.49E-20	4.92E-26	9.76E-32	1.93E-37
BA139	1.18E+01	1.31E+02	8.10E+01	4.92E+01	2.98E+01	1.09E+01	2.42E+00	3.38E-01	1.20E-01	2.65E-02	5.89E-03
BA140	1.02E-01	6.34E-01	6.34E-01	6.29E-01	6.29E-01	6.24E-01	6.24E-01	6.19E-01	6.14E-01	6.09E-01	6.05E-01
LA140	2.41E-07	1.08E-02	2.15E-02	3.19E-02	4.21E-02	6.19E-02	9.05E-02	1.17E-01	1.42E-01	1.66E-01	1.88E-01
BA141	1.53E+02	4.62E+01	4.58E+00	4.55E-01	4.51E-02	4.48E-04	4.37E-07	4.26E-10	4.15E-13	4.07E-16	3.97E-19
LA141	1.41E+00	2.99E+01	2.79E+01	2.36E+01	1.96E+01	1.39E+01	8.15E+00	4.77E+00	2.81E+00	1.64E+00	9.64E-01
CE141	1.75E-07	1.94E-02	4.55E-02	6.84E-02	8.77E-02	1.18E-01	1.46E-01	1.62E-01	1.72E-01	1.77E-01	1.80E-01
BA142	3.04E+02	1.21E+01	2.76E-01	6.29E-03	1.43E-04	7.45E-08	8.84E-13	1.05E-17	1.24E-22	1.48E-27	1.75E-32
LA142	6.98E+00	4.85E+01	3.20E+01	2.03E+01	1.29E+01	5.23E+00	1.35E+00	3.48E-01	8.97E-02	2.31E-02	5.95E-03
LA143	1.13E+02	2.20E+01	1.13E+00	5.80E-02	2.98E-03	7.80E-06	1.05E-09	1.42E-13	1.91E-17	2.58E-21	3.48E-25
CE143	4.50E-02	2.87E+00	2.98E+00	2.90E+00	2.85E+00	2.74E+00	2.57E+00	2.41E+00	2.26E+00	2.12E+00	1.99E+00
FR143	1.32E-08	4.40E-03	1.06E-02	1.68E-02	2.28E-02	3.45E-02	5.08E-02	6.64E-02	8.06E-02	9.41E-02	1.06E-01
CE144	1.80E-03	1.29E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02
FR144	4.94E-07	1.17E-02	1.28E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02
FR145	7.33E-02	1.08E+01	9.58E+00	8.52E+00	7.61E+00	6.03E+00	4.25E+00	3.00E+00	2.12E+00	1.50E+00	1.06E+00
CE146	2.19E+02	1.12E+01	5.74E-01	2.94E-02	1.51E-03	3.98E-06	5.36E-10	7.22E-14	9.73E-18	1.31E-21	1.77E-25
FR146	4.52E+00	3.93E+01	8.91E+00	1.67E+00	3.01E-01	9.47E-03	5.23E-05	2.88E-07	1.60E-09	8.83E-12	4.82E-14
FR147	2.55E+01	7.37E+00	2.30E-01	7.18E-03	2.25E-04	2.19E-07	6.69E-12	2.05E-16	6.24E-21	1.91E-25	5.81E-30

BADGER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.430E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
ND147	9.09E-06	1.71E-01	1.76E-01	1.76E-01	1.76E-01	1.75E-01	1.74E-01	1.73E-01	1.72E-01	1.70E-01	1.69E-01	1.67E-01
ND149	1.34E+01	9.13E+00	6.21E+00	4.24E+00	2.87E+00	1.33E+00	4.18E-01	1.32E-01	4.16E-02	1.31E-02	4.13E-03	
PM149	1.87E-03	1.46E-01	2.42E-01	3.07E-01	3.47E-01	3.91E-01	4.06E-01	3.98E-01	3.88E-01	3.73E-01	3.60E-01	3.60E-01
PM150	1.59E-01	1.23E-01	9.51E-02	7.34E-02	5.67E-02	3.40E-02	1.58E-02	7.29E-03	3.38E-03	1.56E-03	7.24E-04	
ND151	5.59E+01	1.75E+00	5.47E-02	1.71E-03	5.34E-05	5.22E-08	1.59E-12	4.87E-17	1.48E-21	4.52E-26	1.38E-30	
PM151	3.55E-02	4.14E-01	4.17E-01	4.07E-01	3.97E-01	3.77E-01	3.50E-01	3.25E-01	3.02E-01	2.80E-01	2.60E-01	
PM152	9.11E+01	8.91E-02	8.69E-05	8.49E-08	8.29E-11	7.92E-17	7.37E-26	6.87E-35	6.40E-44	5.98E-53	5.56E-62	
SM153	1.26E-01	1.25E-01	1.23E-01	1.21E-01	1.19E-01	1.16E-01	1.11E-01	1.06E-01	1.01E-01	9.71E-02	9.29E-02	
SM155	9.57E+00	1.57E+00	2.58E-01	4.21E-02	6.91E-03	1.86E-04	8.20E-07	3.61E-09	1.59E-11	7.10E-14	1.74E-16	
EU155	7.03E-06	2.01E-04	2.32E-04	2.37E-04	2.38E-04	2.38E-04	2.38E-04	2.38E-04	2.38E-04	2.38E-04	2.38E-04	2.38E-04
SM156	1.42E-01	1.32E-01	1.22E-01	1.14E-01	1.05E-01	9.10E-02	7.29E-02	5.85E-02	4.69E-02	3.76E-02	3.01E-02	3.01E-02
EU156	4.14E-04	6.76E-04	9.18E-04	1.14E-03	1.35E-03	1.72E-03	2.19E-03	2.54E-03	2.84E-03	3.07E-03	3.23E-03	3.23E-03
EU157	2.17E-02	7.19E-02	6.86E-02	6.55E-02	6.25E-02	5.71E-02	4.99E-02	4.35E-02	3.79E-02	3.30E-02	2.88E-02	2.88E-02
EU158	8.77E-01	3.53E-01	1.44E-01	5.82E-02	2.36E-02	3.85E-03	2.57E-04	1.70E-05	1.13E-06	7.51E-08	4.99E-09	
EU159	1.06E+00	1.05E-01	1.04E-02	1.03E-03	1.03E-04	1.01E-06	9.88E-10	9.65E-13	9.42E-16	9.20E-19	8.99E-22	
GD159	4.53E-03	1.99E-02	2.07E-02	2.00E-02	1.93E-02	1.78E-02	1.59E-02	1.42E-02	1.26E-02	1.12E-02	1.00E-02	1.00E-02
TB161	7.80E-05	5.61E-04	5.57E-04	5.56E-04	5.54E-04	5.48E-04	5.43E-04	5.35E-04	5.28E-04	5.22E-04	5.15E-04	
TOTAL	1.33E+04	2.70E+03	9.59E+02	5.53E+02	4.00E+02	2.71E+02	1.90E+02	1.48E+02	1.21E+02	1.03E+02	8.90E+01	

BADGER MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.430E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
* BE 7	1.48E-06	1.46E-06	1.44E-06	1.38E-06	1.30E-06	1.14E-06	9.99E-07	7.69E-07	4.02E-07	1.09E-07	2.97E-08
* NA 24	2.78E-03	9.17E-04	3.02E-04	1.08E-05	4.24E-08	6.48E-13	9.89E-18	2.30E-27	0.	0.	0.
MN 54	4.10E-05	4.07E-05	4.07E-05	4.00E-05	3.96E-05	3.89E-05	3.81E-05	3.63E-05	3.24E-05	2.58E-05	2.06E-05
FE 55	7.82E-05	7.82E-05	7.82E-05	7.78E-05	7.77E-05	7.73E-05	7.65E-05	7.55E-05	7.26E-05	6.77E-05	6.28E-05
FE 59	2.42E-04	2.38E-04	2.34E-04	2.24E-04	2.07E-04	1.78E-04	1.52E-04	1.12E-04	5.19E-05	1.11E-05	2.38E-06
CO 57	4.15E-05	4.15E-05	4.12E-05	4.12E-05	4.06E-05	3.93E-05	3.84E-05	3.66E-05	3.23E-05	2.49E-05	1.93E-05
CO 58	2.23E-04	2.21E-04	2.19E-04	2.12E-04	2.03E-04	1.84E-04	1.67E-04	1.37E-04	8.46E-05	3.20E-05	1.21E-05
CO 60	5.01E-05	5.01E-05	5.01E-05	5.01E-05	4.98E-05	4.98E-05	4.95E-05	4.92E-05	4.80E-05	4.65E-05	4.47E-05
CU 64	3.90E-01	1.06E-01	2.89E-02	5.88E-04	8.83E-07	2.01E-12	4.54E-18	2.34E-29	0.	0.	0.
CU 67	7.09E-04	5.41E-04	4.13E-04	1.84E-04	4.78E-05	3.23E-06	2.18E-07	9.88E-10	1.38E-15	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.12E+00	1.01E+00	9.12E-01	6.71E-01	4.01E-01	1.44E-01	5.15E-02	6.59E-03	3.89E-05	4.18E-09	2.82E-09
U240	2.96E+00	9.11E-01	2.79E-01	8.10E-03	2.22E-05	1.67E-10	1.26E-15	7.10E-26	0.	0.	0.
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP239	1.31E-02	2.00E+01	1.49E+01	6.14E+00	1.40E+00	7.34E-02	3.84E-03	1.05E-05	4.14E-12	9.90E-22	9.90E-22
NP240M	4.68E-03	9.17E-01	2.82E-01	8.16E-03	2.24E-05	1.69E-10	1.27E-15	7.15E-26	0.	0.	0.
* AM241	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.21E-09
* CM242	3.67E-07	3.65E-07	3.63E-07	3.59E-07	3.52E-07	3.36E-07	3.23E-07	2.96E-07	2.41E-07	1.57E-07	1.03E-07
GE 77	7.41E-03	4.67E-03	1.07E-03	1.29E-05	8.21E-09	3.32E-15	1.34E-21	2.19E-34	0.	0.	0.
AS 77	7.66E-05	1.13E-02	8.18E-03	2.37E-03	2.77E-04	3.76E-06	5.11E-08	9.42E-12	4.37E-21	9.36E-40	2.01E-58
SE 77M	3.02E-09	3.40E-05	2.45E-05	7.11E-06	8.29E-07	1.13E-08	1.53E-10	2.83E-14	1.31E-23	2.80E-42	6.04E-61
AS 78	1.80E-02	1.60E-04	4.68E-09	3.95E-23	0.	0.	0.	0.	0.	0.	0.
BR 82	4.74E-04	2.96E-04	1.85E-04	4.49E-05	4.25E-06	3.82E-08	3.43E-10	2.77E-14	1.62E-24	5.55E-45	1.89E-65
BR 83	3.57E-01	9.41E-03	9.46E-06	9.61E-15	9.81E-30	0.	0.	0.	0.	0.	0.
KR 83M	1.85E-05	4.12E-02	4.67E-05	4.20E-14	4.31E-29	0.	0.	0.	0.	0.	0.
KR 85M	4.09E-03	2.34E-01	5.32E-03	6.32E-08	3.90E-16	1.48E-32	5.61E-49	0.	0.	0.	0.
KR 85	4.23E-06	1.11E-04	1.13E-04	1.13E-04	1.13E-04	1.13E-04	1.13E-04	1.13E-04	1.12E-04	1.10E-04	1.08E-04
KR 87	6.56E+01	1.29E-04	2.56E-10	1.98E-27	0.	0.	0.	0.	0.	0.	0.
KR 88	3.75E+01	9.86E-02	2.59E-04	4.70E-12	5.92E-25	0.	0.	0.	0.	0.	0.
RB 88	9.53E+00	1.10E-01	2.90E-04	5.26E-12	6.59E-25	0.	0.	0.	0.	0.	0.
SR 89	3.50E-06	1.05E-01	1.03E-01	9.93E-02	9.32E-02	8.14E-02	7.12E-02	5.48E-02	2.80E-02	7.37E-03	1.95E-03
SR 90	6.89E-06	7.08E-04	7.08E-04	7.08E-04	7.08E-04	7.08E-04	7.08E-04	7.08E-04	7.02E-04	7.02E-04	6.96E-04
Y 90	1.02E-11	1.62E-04	2.87E-04	5.16E-04	6.58E-04	7.02E-04	7.08E-04	7.08E-04	7.02E-04	7.02E-04	6.96E-04
SR 91	8.22E-01	2.94E+00	5.27E-01	3.02E-03	5.53E-07	1.88E-14	6.36E-22	7.24E-37	0.	0.	0.

BADGER MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.430E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
Y 91M	5.53E-05	1.90E+00	3.40E-01	1.95E-03	3.59E-07	1.21E-14	4.09E-22	4.67E-37	0.	0.	0.
Y 91	2.26E-08	9.05E-02	1.07E-01	1.07E-01	1.01E-01	8.94E-02	7.96E-02	6.31E-02	3.49E-02	1.08E-02	3.30E-03
SR 92	6.06E+00	7.55E-02	1.63E-04	1.64E-12	7.67E-26	0.	0.	0.	0.	0.	0.
Y 92	2.79E-01	7.92E-01	8.79E-03	6.76E-09	3.95E-19	1.35E-39	4.62E-60	0.	0.	0.	0.
Y 93	3.02E-01	2.04E+00	3.98E-01	2.99E-02	8.60E-07	7.11E-14	5.87E-21	4.00E-35	0.	0.	0.
ZR 95	5.90E-04	7.38E-02	7.30E-02	7.07E-02	6.71E-02	6.01E-02	5.41E-02	4.38E-02	2.56E-02	8.83E-03	3.03E-03
NB 95M	1.26E-11	2.50E-04	4.56E-04	8.70E-04	1.17E-03	1.24E-03	1.14E-03	9.27E-04	5.44E-04	1.87E-04	6.45E-05
NB 95	6.58E-11	1.43E-03	2.82E-03	6.76E-03	1.26E-02	2.17E-02	2.80E-02	3.47E-02	3.34E-02	1.61E-02	6.16E-03
ZR 97	1.46E+00	2.48E+00	9.32E-01	4.94E-02	3.71E-04	2.09E-08	1.17E-12	3.71E-21	2.09E-42	0.	0.
NB 97M	7.49E-03	2.38E+00	8.95E-01	4.76E-02	3.56E-04	2.01E-08	1.13E-12	3.56E-21	2.01E-42	0.	0.
NB 97	7.29E-01	2.49E+00	9.35E-01	4.96E-02	3.73E-04	2.25E-08	1.26E-12	4.01E-21	2.26E-42	0.	0.
MO 99	4.45E-03	1.45E+00	1.13E+00	5.36E-01	1.55E-01	1.30E-02	1.08E-03	7.54E-06	3.06E-11	5.05E-22	8.31E-33
TC 99M	4.14E-08	1.27E+00	1.07E+00	5.13E-01	1.48E-01	1.24E-02	1.03E-03	7.20E-06	2.92E-11	4.82E-22	7.94E-33
RU103	8.41E-05	1.92E-01	1.88E-01	1.78E-01	1.64E-01	1.37E-01	1.15E-01	8.14E-02	3.39E-02	5.88E-03	1.02E-03
RH103M	5.61E-09	1.92E-01	1.89E-01	1.79E-01	1.64E-01	1.37E-01	1.15E-01	8.14E-02	3.39E-02	5.88E-03	1.02E-03
RU105	6.44E-01	6.16E-01	1.45E-02	1.90E-07	1.39E-15	7.42E-32	3.98E-48	0.	0.	0.	0.
RH105M	4.23E-03	6.16E-01	1.45E-02	1.91E-07	1.40E-15	7.47E-32	3.99E-48	0.	0.	0.	0.
RH105	6.95E-09	2.22E+00	1.45E+00	3.62E-01	3.57E-02	3.47E-04	3.37E-06	3.18E-10	2.76E-20	2.07E-40	1.56E-60
RU106	5.73E-04	1.09E-02	1.08E-02	1.08E-02	1.07E-02	1.05E-02	1.02E-02	9.87E-03	8.97E-03	7.42E-03	6.16E-03
RH106	6.20E-06	1.09E-02	1.08E-02	1.08E-02	1.07E-02	1.05E-02	1.02E-02	9.87E-03	8.97E-03	7.42E-03	6.16E-03
PD109	1.48E-02	3.78E-01	1.10E-01	2.73E-03	5.75E-06	2.56E-11	1.14E-16	2.26E-27	0.	0.	0.
AG109M	8.55E-05	3.78E-01	1.10E-01	2.73E-03	5.77E-06	2.56E-11	1.14E-16	2.26E-27	0.	0.	0.
PD111M	1.98E+00	9.59E-02	4.66E-03	5.35E-07	1.45E-13	1.06E-26	7.75E-40	0.	0.	0.	0.
PD111	7.04E-01	7.75E-02	3.75E-03	4.30E-07	1.17E-13	8.48E-27	6.22E-40	0.	0.	0.	0.
AG111M	5.59E-03	1.01E-01	4.92E-03	5.66E-07	1.53E-13	1.12E-26	8.19E-40	0.	0.	0.	0.
AG111	1.99E-09	5.50E-02	5.28E-02	4.02E-02	2.53E-02	1.00E-02	3.98E-03	6.28E-04	6.18E-06	5.98E-10	5.80E-14
PD112	4.91E-01	2.23E-01	1.01E-01	9.37E-03	1.78E-04	6.47E-08	2.35E-11	3.08E-18	1.95E-35	0.	0.
AG112	1.48E-05	2.59E-01	1.19E-01	1.10E-02	2.11E-04	7.64E-08	2.77E-11	3.65E-18	2.29E-35	0.	0.
AG113	5.56E-03	5.87E-02	2.54E-03	2.06E-07	3.16E-14	7.39E-28	1.73E-41	0.	0.	0.	0.
CD115M	1.66E-08	4.80E-04	4.72E-04	4.49E-04	4.15E-04	3.53E-04	3.01E-04	2.17E-04	9.72E-05	1.93E-05	3.86E-06
CD115	6.41E-06	9.64E-02	7.07E-02	2.79E-02	5.88E-03	2.62E-04	1.17E-05	2.33E-08	4.12E-15	1.29E-28	4.04E-42
IN115M	7.98E-11	1.02E-01	7.71E-02	3.04E-02	6.41E-03	2.87E-04	1.28E-05	2.54E-08	4.51E-15	1.41E-28	4.41E-42
CD117	1.41E-01	3.08E-03	3.00E-06	2.80E-15	2.49E-30	0.	0.	0.	0.	0.	0.
IN117M	6.80E-06	1.28E-02	1.48E-05	1.43E-14	1.27E-29	0.	0.	0.	0.	0.	0.
IN117	2.74E-10	8.44E-03	1.00E-05	9.68E-15	8.59E-30	0.	0.	0.	0.	0.	0.
SN121	2.97E-03	1.69E-01	9.13E-02	1.44E-02	6.60E-04	1.39E-06	2.93E-09	1.31E-14	5.46E-28	0.	0.
SN123	1.42E-05	1.49E-03	1.48E-03	1.45E-03	1.41E-03	1.33E-03	1.26E-03	1.13E-03	8.57E-04	4.92E-04	2.83E-04
SN125	3.39E-02	3.15E-02	2.93E-02	2.34E-02	1.62E-02	7.75E-03	3.70E-03	8.48E-04	2.12E-05	1.33E-08	8.36E-12
SB125	2.03E-04	2.25E-04	2.47E-04	3.01E-04	3.70E-04	4.47E-04	4.82E-04	5.02E-04	4.92E-04	4.60E-04	4.29E-04
SB126	4.57E-03	4.32E-03	4.09E-03	3.46E-03	2.62E-03	1.50E-03	8.67E-04	2.86E-04	1.79E-05	8.67E-08	1.74E-08

BADGER MICROCURIES/SQ METER  
MR/HR AT H+12 HOURS = 1.000  
FRACTION OF REFRACTORIES PRESENT = 0.500  
RELAXATION LENGTH = 0.16 GM/SQCM  
BOMB FRACTION PER SQ. METER = 2.430E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SN127	4.64E+00	1.68E-03	6.11E-07	2.92E-17	1.83E-34	0.	0.	0.	0.	0.	0.
SB127	5.42E-02	2.22E-01	1.86E-01	1.09E-01	4.45E-02	7.43E-03	1.24E-03	3.47E-05	4.53E-09	7.74E-17	1.32E-24
TE127M	4.38E-10	3.39E-04	6.21E-04	1.21E-03	1.67E-03	1.84E-03	1.77E-03	1.57E-03	1.15E-03	6.05E-04	3.20E-04
TE127	3.06E-02	1.59E-01	1.56E-01	9.52E-02	4.03E-02	8.26E-03	2.83E-03	1.58E-03	1.13E-03	5.98E-04	3.16E-04
SB128	1.21E+00	2.06E-01	3.26E-02	1.27E-04	1.23E-08	1.16E-16	1.09E-24	9.60E-41	0.	0.	0.
SB129	6.16E+00	3.15E-01	6.58E-03	5.99E-08	2.38E-16	3.76E-33	5.94E-50	0.	0.	0.	0.
TE129M	1.16E-07	1.23E-02	1.23E-02	1.16E-02	1.05E-02	8.52E-03	6.93E-03	4.62E-03	1.66E-03	2.17E-04	2.82E-05
TE129	4.43E+00	3.69E-01	1.54E-02	7.41E-03	6.69E-03	5.45E-03	4.45E-03	2.96E-03	1.07E-03	1.39E-04	1.81E-05
I130	2.73E-02	7.13E-03	1.87E-03	3.33E-05	4.07E-08	6.07E-14	9.05E-20	2.01E-31	0.	0.	0.
TE131M	1.01E-04	3.52E-01	2.02E-01	3.82E-02	2.39E-03	9.32E-06	3.65E-08	5.57E-13	5.06E-25	0.	0.
TE131	9.26E+01	6.41E-02	3.68E-02	6.99E-03	4.36E-04	1.70E-06	6.65E-09	1.02E-13	9.26E-26	0.	0.
I131	1.34E-02	7.26E-01	6.86E-01	5.51E-01	3.63E-01	1.53E-01	6.49E-02	1.16E-02	1.56E-04	2.85E-08	5.19E-12
XE131M	3.65E-11	3.36E-04	6.39E-04	1.33E-03	1.90E-03	1.88E-03	1.40E-03	5.77E-04	3.85E-05	1.15E-07	3.25E-10
TE132	1.01E+00	2.00E+00	1.61E+00	8.48E-01	2.92E-01	3.47E-02	4.11E-03	5.77E-05	1.35E-09	7.39E-19	4.03E-28
I132	2.47E+00	2.06E+00	1.66E+00	8.73E-01	3.02E-01	3.57E-02	4.23E-03	5.95E-05	1.39E-09	7.57E-19	4.15E-28
I133	1.05E+00	5.83E+00	2.63E+00	2.44E-01	4.65E-02	1.69E-06	6.11E-10	8.06E-17	5.06E-34	0.	0.
XE133M	4.45E-08	5.50E-02	6.51E-02	3.82E-02	8.97E-03	4.21E-04	1.96E-05	4.25E-08	9.31E-15	4.45E-28	2.13E-41
XE133	7.77E-07	1.06E+00	1.42E+00	1.27E+00	6.91E-01	1.87E-01	5.02E-02	3.62E-03	5.04E-06	9.77E-12	1.90E-17
I135	1.77E+01	2.88E+00	2.40E-01	1.40E-04	5.68E-10	9.38E-21	1.54E-31	4.19E-53	0.	0.	0.
XE135M	1.95E-03	8.98E-01	7.51E-02	4.37E-05	1.78E-10	2.92E-21	4.81E-32	1.31E-53	0.	0.	0.
XE135	2.03E+00	7.76E+00	1.90E+00	1.09E-02	1.33E-06	1.87E-14	2.62E-22	5.17E-38	0.	0.	0.
CS136	1.43E-02	1.35E-02	1.28E-02	1.09E-02	8.38E-03	4.92E-03	2.89E-03	9.92E-04	6.90E-05	3.32E-07	1.61E-09
CS137	8.79E-05	9.47E-04	9.47E-04	9.47E-04	9.47E-04	9.47E-04	9.47E-04	9.47E-04	9.42E-04	9.37E-04	9.32E-04
BA137M	1.85E-07	8.84E-04	8.84E-04	8.84E-04	8.84E-04	8.84E-04	8.84E-04	8.84E-04	8.79E-04	8.74E-04	8.68E-04
BA139	1.18E+01	1.26E-03	7.42E-09	1.53E-24	0.	0.	0.	0.	0.	0.	0.
BA140	1.02E-01	6.00E-01	5.71E-01	4.84E-01	3.69E-01	2.15E-01	1.25E-01	4.23E-02	2.82E-03	1.26E-05	5.56E-08
LA140	2.41E-07	2.09E-01	3.36E-01	4.65E-01	4.13E-01	2.47E-01	1.44E-01	4.89E-02	3.25E-03	1.45E-05	6.43E-08
LA141	1.41E+00	5.60E-01	7.86E-03	2.18E-08	1.19E-17	3.55E-36	1.06E-54	0.	0.	0.	0.
CE141	1.75E-07	1.94E-01	1.92E-01	1.80E-01	1.62E-01	1.31E-01	1.06E-01	6.88E-02	2.36E-02	2.78E-03	3.27E-04
LA142	6.98E+00	1.53E-03	2.96E-08	2.18E-22	0.	0.	0.	0.	0.	0.	0.
CE143	4.50E-02	1.85E+00	1.12E+00	2.47E-01	1.98E-02	1.28E-04	8.30E-07	3.48E-11	3.93E-22	0.	0.
PR143	1.32E-08	1.19E-01	1.84E-01	2.38E-01	2.04E-01	1.24E-01	7.51E-02	2.71E-02	2.17E-03	1.38E-05	8.75E-08
CE144	1.80E-03	1.29E-02	1.28E-02	1.27E-02	1.26E-02	1.23E-02	1.20E-02	1.14E-02	1.01E-02	7.90E-03	6.20E-03
PR144	4.94E-07	1.29E-02	1.28E-02	1.27E-02	1.26E-02	1.23E-02	1.20E-02	1.14E-02	1.01E-02	7.90E-03	6.20E-03
PR145	7.33E-02	7.50E-01	4.64E-02	1.10E-05	1.00E-11	8.30E-24	6.89E-36	0.	0.	0.	0.
ND147	9.09E-06	1.53E-01	1.44E-01	1.19E-01	8.71E-02	4.68E-02	2.50E-02	7.18E-03	3.15E-04	6.13E-07	1.19E-09
PM147	2.52E-14	1.14E-04	2.21E-04	5.05E-04	8.74E-04	1.33E-03	1.58E-03	1.76E-03	1.77E-03	1.65E-03	1.54E-03
ND149	1.34E+01	1.30E-03	1.26E-07	1.15E-19	9.79E-40	0.	0.	0.	0.	0.	0.
PM149	1.87E-03	3.45E-01	2.53E-01	9.87E-02	2.06E-02	8.98E-04	3.91E-05	7.43E-08	1.17E-14	2.89E-28	7.20E-42
PM150	1.59E-01	3.35E-04	7.06E-07	6.63E-15	2.77E-28	0.	0.	0.	0.	0.	0.

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BADGER MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.430E-13

## DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
PM151	3.55E-02	2.42E-01	1.33E-01	2.24E-02	1.15E-03	3.02E-06	7.96E-09	5.49E-14	6.89E-27	0.	0.
SM153	1.26E-01	8.89E-02	6.24E-02	2.16E-02	3.66E-03	1.07E-04	3.10E-06	2.60E-09	5.37E-17	2.29E-32	9.71E-48
SM156	1.42E-01	2.42E-02	4.12E-03	2.03E-05	2.92E-09	6.01E-17	1.24E-24	5.28E-40	0.	0.	0.
EU155	7.03E-06	2.38E-04	2.38E-04	2.38E-04	2.37E-04	2.36E-04	2.35E-04	2.33E-04	2.29E-04	2.20E-04	2.11E-04
EU156	4.14E-04	3.37E-03	3.74E-03	3.35E-03	2.66E-03	1.67E-03	1.05E-03	4.18E-04	4.14E-05	4.08E-07	4.02E-09
EU157	2.17E-02	2.50E-02	8.43E-03	3.16E-04	1.33E-06	2.34E-11	4.14E-16	1.29E-25	0.	0.	0.
GD159	4.53E-03	8.92E-03	3.55E-03	2.21E-04	2.18E-06	2.11E-10	2.05E-14	1.92E-22	1.64E-42	0.	0.
TB161	7.80E-05	5.10E-04	4.60E-04	3.40E-04	2.06E-04	7.54E-05	2.76E-05	3.70E-06	2.45E-08	1.06E-12	4.60E-17
TOTAL	2.99E+02	7.76E+01	3.96E+01	1.52E+01	5.92E+00	2.06E+00	1.20E+00	6.41E-01	2.73E-01	9.64E-02	4.82E-02



BADGER MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.430E-13

DEBRIS DECAY FROM 1 TO 50 YEARS

	ZERO	TIME	1.00E+00	1.50E+00	2.00E+00	3.50E+00	5.00E+00	7.00E+00	1.00E+01	2.00E+01	3.50E+01	5.00E+01
* BE 7	1.48E-06	1.27E-08	1.18E-09	1.10E-10	8.85E-14	7.09E-17	5.30E-21	3.40E-27	0.	0.	0.	0.
MN 54	4.10E-05	1.77E-05	1.17E-05	7.66E-06	2.19E-06	6.25E-07	1.18E-07	9.63E-09	2.26E-12	8.17E-18	2.96E-23	0.
FE 59	2.42E-04	8.72E-07	5.23E-08	3.15E-09	6.83E-13	1.47E-16	1.92E-21	9.01E-29	0.	0.	0.	0.
CO 57	4.15E-05	1.64E-05	1.02E-05	6.42E-06	1.58E-06	3.90E-07	6.02E-09	3.66E-09	3.20E-13	2.62E-19	0.	0.
CO 58	2.23E-04	6.41E-06	1.09E-06	1.84E-07	8.98E-10	4.37E-12	3.61E-15	8.55E-20	3.27E-35	0.	0.	0.
CO 60	5.01E-05	4.38E-05	4.09E-05	3.82E-05	3.14E-05	2.58E-05	1.98E-05	1.34E-05	3.58E-06	4.98E-07	6.87E-08	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U234	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.12E+00	2.80E-09	2.72E-09	2.65E-09	2.48E-09	2.30E-09	2.09E-09	1.82E-09	1.13E-09	5.54E-10	2.72E-10	0.
* AM241	4.21E-09	4.21E-09	4.21E-09	4.21E-09	4.23E-09	4.25E-09	4.25E-09	4.27E-09	4.29E-09	4.25E-09	4.19E-09	0.
* CM242	3.67E-07	7.77E-08	3.57E-08	1.64E-08	1.60E-09	1.56E-10	6.99E-12	6.61E-14	1.90E-18	1.77E-18	1.65E-18	0.
KR 85	4.23E-06	1.05E-04	1.02E-04	9.86E-05	8.99E-05	8.12E-05	7.14E-05	5.89E-05	3.11E-05	1.19E-05	4.54E-06	0.
SR 89	3.50E-06	8.19E-04	7.17E-05	6.30E-06	4.24E-09	2.86E-12	1.69E-16	7.68E-23	5.58E-44	0.	0.	0.
SR 90	6.89E-06	6.89E-04	6.83E-04	6.77E-04	6.52E-04	6.27E-04	5.97E-04	5.54E-04	4.33E-04	2.99E-04	2.07E-04	0.
Y 90	1.02E-11	6.89E-04	6.83E-04	6.77E-04	6.52E-04	6.27E-04	5.97E-04	5.54E-04	4.33E-04	2.99E-04	2.07E-04	0.
ZR 95	2.26E-08	1.53E-03	1.78E-04	2.07E-05	3.24E-08	5.09E-11	9.31E-15	2.29E-20	4.62E-39	0.	0.	0.
NB 95M	5.90E-04	1.52E-03	2.17E-04	3.08E-05	8.99E-08	2.62E-10	1.08E-13	9.14E-19	1.12E-35	0.	0.	0.
NB 95	1.26E-11	3.21E-05	4.58E-06	6.55E-07	1.90E-09	5.54E-12	2.29E-15	1.94E-20	2.37E-37	0.	0.	0.
RU103	6.58E-11	3.26E-03	4.69E-04	6.68E-05	1.94E-07	5.62E-10	2.35E-13	1.98E-18	2.43E-35	0.	0.	0.
RH103M	8.41E-05	3.27E-04	1.34E-05	5.50E-07	3.75E-11	2.57E-15	7.22E-21	3.40E-29	0.	0.	0.	0.
RU106	5.61E-09	3.27E-04	1.34E-05	5.50E-07	3.76E-11	2.58E-15	7.22E-21	3.40E-29	0.	0.	0.	0.
RH106	5.73E-04	5.45E-03	3.86E-03	2.73E-03	9.73E-04	3.45E-04	8.69E-05	1.10E-05	1.11E-08	3.57E-13	1.15E-17	0.
SN123	6.20E-06	5.45E-03	3.86E-03	2.73E-03	9.73E-04	3.45E-04	8.69E-05	1.10E-05	1.11E-08	3.57E-13	1.15E-17	0.
SB125	1.42E-05	1.97E-04	7.16E-05	2.60E-05	1.25E-06	5.98E-08	1.04E-09	2.40E-12	3.85E-21	2.48E-34	1.59E-47	0.
TE125M	2.03E-04	4.09E-04	3.60E-04	3.16E-04	2.16E-04	1.47E-04	8.77E-05	4.06E-05	3.12E-06	6.64E-08	1.41E-09	0.
TE127M	5.47E-12	1.67E-04	1.49E-04	1.31E-04	8.93E-05	6.07E-05	3.63E-05	1.68E-05	1.29E-06	2.75E-08	5.85E-10	0.
TE127	4.38E-10	2.10E-04	6.56E-05	2.05E-05	6.32E-07	1.94E-08	1.87E-10	1.76E-13	1.44E-23	1.08E-38	8.04E-54	0.
CS137	3.06E-02	2.08E-04	6.49E-05	2.03E-05	6.24E-07	1.92E-08	1.85E-10	1.74E-13	1.43E-23	1.06E-38	7.96E-54	0.
BA137M	8.79E-05	9.26E-04	9.16E-04	9.05E-04	8.74E-04	8.42E-04	8.05E-04	7.53E-04	5.95E-04	4.23E-04	2.98E-04	0.
CE141	1.85E-07	8.68E-04	8.58E-04	8.47E-04	8.16E-04	7.89E-04	7.53E-04	7.05E-04	5.58E-04	3.95E-04	2.79E-04	0.
CE144	1.75E-07	7.53E-05	1.51E-06	3.04E-08	2.48E-13	2.02E-18	3.31E-25	2.19E-35	0.	0.	0.	0.
PR144	1.80E-03	5.29E-03	3.40E-03	2.17E-03	5.69E-04	1.50E-04	2.52E-05	1.74E-06	2.34E-10	3.67E-16	5.72E-22	0.
PM147	4.94E-07	5.29E-03	3.40E-03	2.17E-03	5.69E-04	1.50E-04	2.52E-05	1.74E-06	2.34E-10	3.67E-16	5.72E-22	0.
EUI55	2.52E-14	1.47E-03	1.28E-03	1.12E-03	7.55E-04	5.08E-04	2.98E-04	1.36E-04	9.63E-06	1.82E-07	3.44E-09	0.
	7.03E-06	2.06E-04	1.91E-04	1.78E-04	1.43E-04	1.15E-04	8.58E-05	5.54E-05	1.30E-05	1.46E-06	1.64E-07	0.
TOTAL	1.16E+00	3.56E-02	2.10E-02	1.50E-02	7.41E-03	4.81E-03	3.57E-03	2.91E-03	2.08E-03	1.43E-03	9.96E-04	0.

**APPENDIX G**  
**DETAILED RESULTS FOR EVENT SIMON**

SIMON  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.332E-13

TIME	MR/HR	MICROCURIES/SQ METER
ZERO TIME HOURS	1.04E+02	1.10E+04
1.00E+00	3.39E+01	2.37E+03
2.00E+00	1.35E+01	9.10E+02
3.00E+00	7.20E+00	5.45E+02
4.00E+00	4.48E+00	3.95E+02
6.00E+00	2.34E+00	2.63E+02
9.00E+00	1.38E+00	1.80E+02
1.20E+01	1.00E+00	1.37E+02
1.50E+01	7.82E-01	1.10E+02
1.80E+01	6.37E-01	9.09E+01
2.10E+01	5.32E-01	7.74E+01
1.00E+00 DAYS	4.48E-01	6.62E+01
2.00E+00	1.99E-01	3.07E+01
5.00E+00	7.79E-02	1.15E+01
1.00E+01	3.66E-02	4.98E+00
2.00E+01	1.47E-02	1.98E+00
3.00E+01	8.32E-03	1.20E+00
5.00E+01	3.73E-03	6.54E-01
1.00E+02	1.23E-03	2.80E-01
2.00E+02	4.17E-04	9.78E-02
3.00E+02	1.62E-04	4.71E-02
1.00E+00 YEARS	9.45E-05	3.38E-02
1.50E+00	3.09E-05	1.92E-02
2.00E+00	1.91E-05	1.37E-02
3.50E+00	1.20E-05	7.08E-03
5.00E+00	9.72E-06	4.87E-03
7.00E+00	8.41E-06	3.80E-03
1.00E+01	7.47E-06	3.19E-03
2.00E+01	5.71E-06	2.32E-03
3.50E+01	4.04E-06	1.59E-03
5.00E+01	2.85E-06	1.11E-03

SIMON  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.332E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BE 7	3.91E-04	3.91E-04	3.91E-04	3.91E-04	3.91E-04	3.90E-04	3.89E-04	3.88E-04	3.88E-04	3.87E-04	3.86E-04
NA 24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 55	1.83E-04	1.83E-04	1.83E-04	1.83E-04	1.83E-04	1.83E-04	1.83E-04	1.83E-04	1.83E-04	1.83E-04	1.83E-04
FE 59	5.01E-04	5.00E-04	5.00E-04	5.00E-04	5.00E-04	4.99E-04	4.99E-04	4.98E-04	4.96E-04	4.95E-04	4.95E-04
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
*CU 64	1.06E+00	1.01E+00	9.52E-01	9.03E-01	8.55E-01	7.67E-01	6.51E-01	5.54E-01	4.71E-01	4.01E-01	3.41E-01
*CU 67	3.35E-05	3.32E-05	3.26E-05	3.24E-05	3.21E-05	3.12E-05	3.01E-05	2.92E-05	2.83E-05	2.72E-05	2.64E-05
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	3.56E-01	3.55E-01	3.53E-01	3.52E-01	3.50E-01	3.47E-01	3.42E-01	3.39E-01	3.34E-01	3.29E-01	3.25E-01
U239	1.74E+03	2.97E+02	5.07E+01	8.63E+00	1.47E+00	4.27E-02	2.12E-04	1.04E-06	5.17E-09	2.56E-11	1.26E-13
U240	8.03E-01	7.65E-01	7.28E-01	6.94E-01	6.60E-01	5.98E-01	5.16E-01	4.45E-01	3.84E-01	3.31E-01	2.85E-01
NP239	5.96E-03	9.99E+00	1.15E+01	1.17E+01	1.16E+01	1.14E+01	1.09E+01	1.05E+01	1.02E+01	9.80E+00	9.44E+00
NP240M	1.27E-03	7.68E-01	7.34E-01	7.00E-01	6.66E-01	6.02E-01	5.21E-01	4.49E-01	3.87E-01	3.34E-01	2.88E-01
NP240	3.22E-11	1.65E-11	8.59E-12	4.43E-12	2.29E-12	6.13E-13	8.45E-14	1.17E-14	1.61E-15	2.22E-16	3.07E-17
*AM241	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09
*CM242	8.84E-08	8.84E-08	8.84E-08	8.84E-08	8.84E-08	8.84E-08	8.80E-08	8.80E-08	8.80E-08	8.80E-08	8.80E-08
GE 75	1.21E-05	5.85E-02	3.53E-02	2.12E-02	1.28E-02	4.64E-03	1.01E-03	2.22E-04	4.84E-05	1.05E-05	2.31E-06
GE 77	5.81E-03	1.50E-02	1.41E-02	1.32E-02	1.25E-02	1.10E-02	9.17E-03	7.62E-03	6.35E-03	5.27E-03	4.39E-03
GE 77	6.01E-05	9.49E-03	9.60E-03	9.66E-03	9.73E-03	9.79E-03	9.79E-03	9.73E-03	9.58E-03	9.38E-03	9.15E-03
SE 77M	2.37E-09	2.84E-05	2.88E-05	2.91E-05	2.91E-05	2.93E-05	2.95E-05	2.93E-05	2.88E-05	2.82E-05	2.73E-05
GE 78	8.03E-01	5.02E-01	3.12E-01	1.95E-01	1.22E-01	4.74E-02	1.15E-02	2.79E-03	6.80E-04	1.65E-04	4.01E-05
AS 78	1.44E-02	2.40E-01	2.95E-01	2.77E-01	2.31E-01	1.37E-01	5.07E-02	1.68E-02	5.21E-03	1.56E-03	4.51E-04
AS 79	1.56E+01	1.53E-01	1.51E-03	1.49E-05	1.46E-07	1.42E-11	1.35E-17	1.29E-23	1.23E-29	1.18E-35	1.12E-41
SE 79M	2.31E-02	2.71E-01	2.67E-03	2.63E-05	2.59E-07	2.50E-11	2.39E-17	2.28E-23	2.17E-29	2.08E-35	1.98E-41
BR 80	9.78E-02	9.23E-03	8.67E-04	8.16E-05	7.68E-06	6.81E-08	5.70E-11	4.75E-14	3.96E-17	3.31E-20	2.76E-23
SE 81M	8.05E-02	3.76E+00	1.81E+00	8.72E-01	4.19E-01	9.80E-02	1.10E-02	1.23E-03	1.38E-04	1.54E-05	1.73E-06
SE 81	9.84E-01	4.44E+00	2.57E+00	1.28E+00	6.23E-01	1.45E-01	1.63E-02	1.82E-03	2.04E-04	2.29E-05	2.57E-06
BR 82	4.94E-04	4.85E-04	4.75E-04	4.66E-04	4.57E-04	4.39E-04	4.14E-04	3.90E-04	3.68E-04	3.47E-04	3.27E-04
SE 83	4.66E+01	8.83E+00	1.67E+00	3.17E-01	5.99E-02	2.16E-03	1.47E-05	9.97E-08	6.81E-10	4.62E-12	2.93E-14
BR 83	3.87E-01	5.78E+00	5.35E+00	4.21E+00	3.19E+00	1.80E+00	7.63E-01	3.21E-01	1.36E-01	5.72E-02	2.41E-02
KR 83M	2.00E-05	1.31E+00	2.67E+00	3.32E+00	3.42E+00	2.86E+00	1.68E+00	8.66E-01	4.17E-01	1.93E-01	8.66E-02

G-3

SIMON MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.332E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BR 84	9.96E-02	1.72E+01	4.64E+00	1.26E+00	3.40E-01	2.48E-02	4.91E-04	9.70E-06	1.92E-07	3.79E-09	7.49E-11
KR 85M	4.95E-03	1.06E+01	9.02E+00	7.70E+00	6.59E+00	4.81E+00	3.00E+00	1.87E+00	1.17E+00	7.24E-01	4.52E-01
KR 87	8.10E+01	4.67E+01	2.71E+01	1.56E+01	9.02E+00	3.03E+00	5.87E-01	1.14E-01	2.20E-02	4.26E-03	8.24E-04
KR 88	4.68E+01	3.65E+01	2.85E+01	2.22E+01	1.74E+01	1.06E+01	5.04E+00	2.40E+00	1.14E+00	5.44E-01	2.58E-01
RB 88	1.19E+01	3.70E+01	3.15E+01	2.49E+01	1.94E+01	1.18E+01	5.65E+00	2.69E+00	1.28E+00	6.09E-01	2.89E-01
RB 89	5.59E+01	5.25E+01	3.53E+00	2.37E-01	1.59E-02	7.20E-05	2.18E-08	6.58E-12	2.00E-15	6.07E-19	1.84E-22
SR 89	4.28E-06	1.50E-01	1.60E-01	1.60E-01	1.60E-01	1.60E-01	1.60E-01	1.60E-01	1.60E-01	1.59E-01	1.59E-01
SR 90	8.49E-06	8.72E-04	8.72E-04	8.72E-04	8.72E-04	8.72E-04	8.72E-04	8.72E-04	8.72E-04	8.72E-04	8.72E-04
SR 91	9.93E-01	1.85E+01	1.72E+01	1.60E+01	1.49E+01	1.29E+01	1.04E+01	8.43E+00	6.81E+00	5.46E+00	4.41E+00
Y 91M	6.68E-05	6.37E+00	8.68E+00	9.30E+00	9.18E+00	8.24E+00	6.74E+00	5.43E+00	4.38E+00	3.53E+00	2.85E+00
Y 91	2.73E-08	5.66E-03	1.31E-02	2.09E-02	2.85E-02	4.26E-02	6.06E-02	7.49E-02	8.68E-02	9.62E-02	1.04E-01
SR 92	7.20E+00	3.22E+01	2.49E+01	1.93E+01	1.49E+01	8.95E+00	4.16E+00	1.93E+00	8.95E-01	4.16E-01	1.93E-01
Y 92	3.32E-01	6.77E+00	1.06E+01	1.26E+01	1.34E+01	1.28E+01	9.78E+00	6.67E+00	4.29E+00	2.64E+00	1.59E+00
SR 93	2.85E+02	4.90E+00	2.71E-02	1.50E-04	8.25E-07	2.52E-11	4.25E-18	7.18E-25	1.21E-31	2.04E-38	3.44E-45
Y 93	3.47E-01	1.12E+01	1.06E+01	9.87E+00	9.22E+00	8.05E+00	6.56E+00	5.36E+00	4.35E+00	3.57E+00	2.90E+00
Y 94	4.12E+01	5.63E+01	7.24E+00	9.34E-01	1.20E-01	2.00E-03	4.29E-06	9.20E-09	1.97E-11	4.29E-14	2.38E-15
Y 95	1.76E+02	1.66E+01	3.65E-01	8.05E-03	1.77E-04	8.60E-08	9.21E-13	9.85E-18	1.05E-22	1.12E-27	1.20E-32
ZR 95	6.61E-04	8.63E-02	8.81E-02	8.81E-02	8.81E-02	8.81E-02	8.81E-02	8.78E-02	8.78E-02	8.75E-02	8.75E-02
NB 95	7.36E-11	5.33E-05	1.24E-04	1.95E-04	2.67E-04	4.09E-04	6.20E-04	8.34E-04	1.04E-03	1.25E-03	1.46E-03
ZR 97	1.57E+00	6.85E+00	6.55E+00	6.31E+00	6.03E+00	5.57E+00	4.92E+00	4.36E+00	3.87E+00	3.41E+00	3.03E+00
NB 97M	8.09E-03	6.58E+00	6.31E+00	6.06E+00	5.82E+00	5.36E+00	4.74E+00	4.19E+00	3.71E+00	3.27E+00	2.90E+00
NB 97	7.87E-01	3.44E+00	4.84E+00	5.52E+00	5.79E+00	5.76E+00	5.25E+00	4.68E+00	4.14E+00	3.65E+00	3.25E+00
NB 98	8.82E+00	3.91E+00	1.73E+00	7.64E-01	3.38E-01	6.62E-02	5.73E-03	4.95E-04	4.31E-05	3.73E-06	3.21E-07
MO 99	4.61E-03	1.90E+00	1.88E+00	1.86E+00	1.84E+00	1.80E+00	1.75E+00	1.70E+00	1.65E+00	1.60E+00	1.55E+00
TC 99M	4.28E-08	1.81E-01	3.40E-01	4.81E-01	6.05E-01	8.07E-01	1.02E+00	1.16E+00	1.25E+00	1.29E+00	1.31E+00
MO101	1.27E+02	5.75E+01	3.34E+00	1.94E-01	1.12E-02	3.76E-05	7.31E-09	1.43E-12	2.77E-16	5.38E-20	1.05E-23
TC101	5.38E+00	1.61E+02	1.76E+01	1.45E+00	1.05E-01	4.75E-04	1.19E-07	2.66E-11	5.65E-15	1.16E-18	2.35E-22
MO102	1.02E+03	2.34E+01	5.32E-01	1.21E-02	2.77E-04	1.44E-07	1.71E-12	2.03E-17	2.40E-22	2.85E-27	3.39E-32
TC102M	6.58E-01	1.97E+01	4.53E-01	1.03E-02	2.36E-04	1.22E-07	1.45E-12	1.72E-17	2.03E-22	2.41E-27	2.87E-32
TC102	3.08E+03	1.18E+01	2.68E-01	6.10E-03	1.39E-04	7.27E-08	8.63E-13	1.02E-17	1.21E-22	1.44E-27	1.71E-32
RU103	6.96E-05	1.61E-01	1.61E-01	1.61E-01	1.61E-01	1.61E-01	1.60E-01	1.60E-01	1.60E-01	1.59E-01	1.59E-01
RH103M	4.64E-09	8.34E-02	1.24E-01	1.43E-01	1.53E-01	1.59E-01	1.60E-01	1.60E-01	1.60E-01	1.59E-01	1.59E-01
TC104	5.70E+01	4.10E+01	4.10E+00	4.06E-01	4.01E-02	3.95E-04	3.86E-07	3.77E-10	3.68E-13	3.60E-16	3.52E-19
RU105	4.27E-01	1.48E+01	1.26E+01	1.08E+01	9.25E+00	6.76E+00	4.23E+00	2.65E+00	1.66E+00	1.04E+00	6.51E-01
RH105M	2.81E-03	1.48E+01	1.26E+01	1.08E+01	9.25E+00	6.79E+00	4.23E+00	2.66E+00	1.66E+00	1.04E+00	6.51E-01
RH105	4.61E-09	3.00E-01	5.57E-01	7.69E-01	9.47E-01	1.21E+00	1.45E+00	1.56E+00	1.59E+00	1.57E+00	1.53E+00
RU106	3.52E-04	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03
RH106	3.81E-06	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03	6.66E-03
RH107	8.02E-02	1.09E+01	1.65E+00	2.48E-01	3.75E-02	8.55E-04	2.95E-06	1.02E-08	3.50E-11	1.20E-14	1.19E-17
PD107M	1.67E-04	2.22E+00	3.35E-01	5.06E-02	7.63E-03	1.74E-04	5.99E-07	2.07E-09	7.11E-12	2.45E-14	8.37E-17

G-4

SIMON MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.332E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
PD109	7.90E-03	6.55E-01	6.23E-01	5.90E-01	5.60E-01	5.06E-01	4.35E-01	3.73E-01	3.19E-01	2.74E-01	2.35E-01
AG109M	4.55E-05	6.55E-01	6.23E-01	5.91E-01	5.62E-01	5.07E-01	4.35E-01	3.73E-01	3.19E-01	2.74E-01	2.35E-01
PD111M	1.15E+00	1.01E+00	8.90E-01	7.87E-01	6.93E-01	5.39E-01	3.69E-01	2.53E-01	1.73E-01	1.18E-01	8.13E-02
PD111	4.08E-01	7.36E-01	7.06E-01	6.29E-01	5.56E-01	4.32E-01	2.96E-01	2.03E-01	1.39E-01	9.54E-02	6.54E-02
AG111M	3.24E-03	9.92E-01	9.32E-01	8.34E-01	7.36E-01	5.69E-01	3.89E-01	2.66E-01	1.83E-01	1.25E-01	8.55E-02
AG111	1.15E-09	3.42E-03	7.19E-03	1.06E-02	1.36E-02	1.85E-02	2.37E-02	2.72E-02	2.95E-02	3.09E-02	3.17E-02
PD112	3.10E-01	3.00E-01	2.90E-01	2.80E-01	2.72E-01	2.54E-01	2.30E-01	2.09E-01	1.89E-01	1.71E-01	1.55E-01
AG112	9.32E-06	5.94E-02	1.05E-01	1.41E-01	1.67E-01	2.00E-01	2.20E-01	2.19E-01	2.09E-01	1.94E-01	1.79E-01
AG113	3.85E-03	8.24E-01	7.23E-01	6.35E-01	5.56E-01	4.28E-01	2.90E-01	1.96E-01	1.32E-01	8.91E-02	6.03E-02
AG115	1.54E+00	1.66E+00	2.06E-01	2.57E-02	3.22E-03	5.04E-05	9.85E-08	1.93E-10	3.73E-13	3.70-162	3.43E-16
CD115M	1.26E-08	3.36E-04	3.78E-04	3.83E-04	3.83E-04	3.83E-04	3.81E-04	3.81E-04	3.80E-04	3.79E-04	3.79E-04
CD115M	4.88E-06	9.20E-02	9.90E-02	9.87E-02	9.75E-02	9.50E-02	9.15E-02	8.79E-02	8.46E-02	8.14E-02	7.82E-02
IN115M	6.08E-11	1.02E-02	2.26E-02	3.35E-02	4.27E-02	5.69E-02	7.03E-02	7.74E-02	8.07E-02	8.14E-02	8.08E-02
CD117	1.08E-01	1.81E+00	1.36E+00	1.02E+00	7.62E-01	4.27E-01	1.79E-01	7.55E-02	3.18E-02	1.34E-02	5.62E-03
IN117M	5.21E-06	6.28E-01	9.09E-01	9.87E-01	9.54E-01	7.52E-01	4.30E-01	2.20E-01	1.06E-01	4.90E-02	2.21E-02
IN117	2.10E-10	1.15E-01	2.77E-01	3.85E-01	4.30E-01	3.96E-01	2.52E-01	1.35E-01	6.70E-02	3.15E-02	1.45E-02
CD118	7.21E+00	3.09E+00	1.33E+00	5.65E-01	2.42E-01	4.43E-02	3.48E-03	2.72E-04	2.14E-05	1.67E-06	1.31E-07
IN118	4.78E-01	3.09E+00	1.33E+00	5.67E-01	2.42E-01	4.44E-02	3.48E-03	2.73E-04	2.14E-05	1.67E-06	1.31E-07
CD119	1.81E+01	2.82E-01	4.40E-03	6.88E-05	1.07E-06	2.63E-10	1.00E-15	3.83E-21	1.46E-26	5.57E-32	2.13E-37
IN119M	2.72E-02	3.05E+00	3.32E-01	3.34E-02	3.33E-03	3.28E-05	3.20E-08	3.13E-11	3.05E-14	2.98E-17	2.91E-20
IN119	1.34E+00	1.61E-01	1.86E-02	1.89E-03	1.89E-04	1.85E-06	1.81E-09	1.77E-12	1.73E-15	1.69E-18	1.65E-21
SN121	2.25E-03	2.32E-01	2.25E-01	2.20E-01	2.15E-01	2.04E-01	1.88E-01	1.75E-01	1.62E-01	1.50E-01	1.39E-01
SN123M	1.13E+00	2.12E+00	7.50E-01	2.65E-01	9.38E-02	1.17E-02	5.18E-04	2.29E-05	1.01E-06	4.48E-08	1.98E-09
SN123	1.06E-05	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03
SN125	2.50E-02	2.49E-02	2.49E-02	2.48E-02	2.47E-02	2.45E-02	2.43E-02	2.41E-02	2.39E-02	2.36E-02	2.34E-02
SB125	1.50E-04	1.51E-04	1.51E-04	1.52E-04	1.53E-04	1.54E-04	1.57E-04	1.58E-04	1.60E-04	1.62E-04	1.64E-04
SB126	3.53E-03	3.52E-03	3.52E-03	3.51E-03	3.50E-03	3.48E-03	3.46E-03	3.44E-03	3.41E-03	3.39E-03	3.36E-03
SN127	4.14E+00	2.98E+00	2.14E+00	1.54E+00	1.11E+00	5.72E-01	2.13E-01	7.90E-02	2.93E-02	1.09E-02	4.04E-03
SB127	4.83E-02	1.67E-01	1.85E-01	1.97E-01	2.05E-01	2.14E-01	2.17E-01	2.15E-01	2.12E-01	2.07E-01	2.03E-01
TE127	2.73E-02	3.40E-02	4.13E-02	4.90E-02	5.67E-02	7.11E-02	9.10E-02	1.06E-01	1.18E-01	1.28E-01	1.33E-01
SN128	2.68E+01	1.32E+01	6.54E+00	3.23E+00	1.60E+00	3.90E-01	4.71E-02	5.68E-03	6.85E-04	8.31E-05	1.00E-05
SB128M	1.36E-02	1.51E+01	7.81E+00	3.86E+00	1.90E+00	4.66E-01	5.61E-02	6.77E-03	8.16E-04	9.87E-05	1.19E-05
SB128	1.13E+00	1.09E+00	1.02E+00	9.58E-01	8.95E-01	7.67E-01	6.12E-01	4.86E-01	3.86E-01	3.06E-01	2.43E-01
SN129M	1.59E+01	7.93E+00	3.98E+00	1.99E+00	9.95E-01	2.49E-01	3.11E-02	3.89E-03	4.86E-04	6.08E-05	7.59E-06
SN129	1.06E+02	1.04E+00	1.03E-02	1.01E-04	9.95E-07	9.68E-11	9.21E-17	8.80E-23	8.40E-29	8.00E-35	7.66E-41
SB129	5.97E+00	1.00E+01	9.41E+00	8.40E+00	7.39E+00	5.49E+00	3.42E+00	2.12E+00	1.30E+00	8.06E-01	4.96E-01
TE129M	1.13E-07	1.25E-03	2.57E-03	3.78E-03	4.86E-03	6.59E-03	8.33E-03	9.41E-03	1.01E-02	1.05E-02	1.08E-02
TE129	4.30E+00	5.91E+00	6.92E+00	7.19E+00	6.92E+00	5.73E+00	3.82E+00	2.41E+00	1.50E+00	9.27E-01	5.75E-01
SB130M	5.46E-01	1.03E+00	2.71E-03	7.10E-06	1.87E-08	1.29E-13	2.35E-21	4.27E-29	7.76E-37	1.41E-44	2.56E-52
SB130	9.35E+01	2.83E+01	8.05E+00	2.28E+00	6.45E-01	5.19E-02	1.18E-03	2.70E-05	6.16E-07	1.40E-08	3.20E-10

G-5

SIMON MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.332E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
I130	2.60E-02	2.46E-02	2.33E-02	2.20E-02	2.08E-02	1.86E-02	1.57E-02	1.33E-02	1.12E-02	9.53E-03	8.05E-03
SB131	2.03E+02	5.30E+01	8.66E+00	1.42E+00	2.33E-01	6.28E-03	2.77E-05	1.22E-07	5.38E-10	2.37E-12	1.18E-14
TE131M	9.76E-05	5.10E-01	5.82E-01	5.83E-01	5.72E-01	5.47E-01	5.10E-01	4.76E-01	4.44E-01	4.14E-01	3.86E-01
TE131	8.98E+01	9.76E+01	3.18E+01	8.27E+00	2.01E+00	1.89E-01	9.37E-02	8.66E-02	8.08E-02	7.56E-02	7.04E-02
I131	1.31E-02	4.52E-01	6.66E-01	7.30E-01	7.43E-01	7.50E-01	7.50E-01	7.43E-01	7.43E-01	7.37E-01	7.37E-01
TE132	1.03E+00	2.50E+00	2.47E+00	2.46E+00	2.43E+00	2.39E+00	2.32E+00	2.26E+00	2.21E+00	2.14E+00	2.09E+00
I132	2.52E+00	2.52E+00	2.51E+00	2.50E+00	2.48E+00	2.45E+00	2.39E+00	2.33E+00	2.27E+00	2.21E+00	2.16E+00
TE133M	1.25E-01	4.35E+01	1.89E+01	8.24E+00	3.58E+00	6.80E-01	5.60E-02	4.62E-03	3.81E-04	3.14E-05	2.59E-06
TE133	7.04E+02	3.99E+01	4.44E+00	1.47E+00	6.21E-01	1.18E-01	9.73E-03	8.00E-04	6.63E-05	5.43E-06	4.49E-07
I133	1.09E+00	1.18E+01	1.27E+01	1.27E+01	1.25E+01	1.18E+01	1.07E+01	9.73E+00	8.77E+00	8.00E+00	7.22E+00
XE133M	4.65E-08	2.64E-03	6.39E-03	1.02E-02	1.39E-02	2.09E-02	3.03E-02	3.84E-02	4.52E-02	5.12E-02	5.60E-02
XE133	8.12E-07	4.62E-02	1.12E-01	1.79E-01	2.46E-01	3.72E-01	5.46E-01	6.98E-01	8.36E-01	9.55E-01	1.06E+00
TE134	2.17E+02	1.01E+02	3.75E+01	1.39E+01	5.17E+00	7.17E-01	3.66E-02	1.88E-03	9.62E-05	4.94E-06	2.53E-07
I134	9.96E+01	1.33E+02	9.33E+01	5.47E+01	2.94E+01	7.45E+00	8.19E-01	8.36E-02	8.19E-03	7.85E-04	7.45E-05
I135	1.83E+01	3.23E+01	2.91E+01	2.62E+01	2.37E+01	1.92E+01	1.41E+01	1.03E+01	7.59E+00	5.58E+00	4.08E+00
XE135M	2.03E-03	9.33E+00	9.06E+00	8.22E+00	7.38E+00	6.01E+00	4.41E+00	3.23E+00	2.37E+00	1.74E+00	1.28E+00
XE135	2.11E+00	4.18E+00	6.11E+00	7.69E+00	8.96E+00	1.07E+01	1.19E+01	1.20E+01	1.14E+01	1.04E+01	9.27E+00
CS136	6.77E-03	6.75E-03	6.74E-03	6.73E-03	6.71E-03	6.67E-03	6.63E-03	6.59E-03	6.54E-03	6.50E-03	6.46E-03
CS137	9.06E-05	9.77E-04	9.74E-04	9.77E-04	9.77E-04	9.77E-04	9.77E-04	9.77E-04	9.77E-04	9.77E-04	9.77E-04
BA137M	1.91E-07	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04
XE138	7.23E+02	6.23E+01	5.41E+00	4.69E-01	4.06E-02	3.05E-04	1.98E-07	1.28E-10	8.36E-14	5.43E-17	3.53E-20
CS138	1.08E+02	1.81E+02	6.28E+01	1.85E+01	5.17E+00	3.94E-01	8.19E-03	1.70E-04	3.53E-06	7.35E-08	1.52E-09
CS139	6.50E+02	2.08E+01	2.60E-01	3.27E-03	4.10E-05	6.44E-09	1.28E-14	2.53E-20	5.01E-26	9.94E-32	1.96E-37
BA139	1.20E+01	1.34E+02	8.25E+01	5.01E+01	3.03E+01	1.11E+01	2.47E+00	5.48E-01	1.22E-01	2.70E-02	6.00E-03
BA140	1.10E-01	6.88E-01	6.88E-01	6.83E-01	6.83E-01	6.78E-01	6.78E-01	6.73E-01	6.67E-01	6.62E-01	6.57E-01
LA140	2.62E-07	1.18E-02	2.33E-02	3.46E-02	4.57E-02	6.73E-02	9.83E-02	1.27E-01	1.54E-01	1.80E-01	2.04E-01
BA141	1.65E+02	5.00E+01	4.96E+00	4.92E-01	4.88E-02	4.84E-04	4.73E-07	4.61E-10	4.49E-13	4.41E-16	4.29E-19
LA141	1.53E+00	3.24E+01	3.02E+01	2.56E+01	2.15E+01	1.50E+01	8.82E+00	5.16E+00	3.04E+00	1.78E+00	1.04E+00
CE141	1.89E-07	2.10E-02	4.92E-02	7.41E-02	9.49E-02	1.27E-01	1.58E-01	1.76E-01	1.86E-01	1.92E-01	1.95E-01
BA142	3.27E+02	1.30E+01	2.97E-01	6.76E-03	1.54E-04	8.01E-08	9.51E-13	1.13E-17	1.34E-22	1.59E-27	1.89E-32
LA142	7.51E+00	5.21E+01	3.44E+01	2.19E+01	1.39E+01	5.63E+00	1.45E+00	3.74E-01	9.65E-02	2.48E-02	6.40E-03
LA143	1.26E+02	2.45E+01	1.26E+00	6.46E-02	3.32E-03	8.69E-06	1.17E-09	1.58E-13	2.13E-17	2.87E-21	3.87E-25
CE143	5.02E-02	3.20E+00	3.32E+00	3.23E+00	3.17E+00	3.05E+00	2.86E+00	2.69E+00	2.52E+00	2.37E+00	2.22E+00
PR143	1.47E-08	4.90E-03	1.18E-02	1.87E-02	2.54E-02	3.84E-02	5.66E-02	7.39E-02	8.98E-02	1.05E-01	1.19E-01
CE144	2.03E-03	1.45E-02	1.45E-02	1.45E-02	1.45E-02	1.45E-02	1.45E-02	1.45E-02	1.45E-02	1.45E-02	1.45E-02
PR144	5.56E-07	1.32E-02	1.44E-02	1.45E-02	1.45E-02	1.45E-02	1.45E-02	1.45E-02	1.45E-02	1.45E-02	1.45E-02
PR145	8.01E-02	1.18E+01	1.05E+01	9.32E+00	8.32E+00	6.59E+00	4.64E+00	3.28E+00	2.32E+00	1.64E+00	1.16E+00
CE146	2.29E+02	1.17E+01	6.02E-01	3.08E-02	1.58E-03	4.17E-06	5.62E-10	7.57E-14	1.02E-17	1.38E-21	1.85E-25
PR146	4.74E+00	4.12E+01	9.34E+00	1.76E+00	3.16E-01	9.93E-03	5.49E-05	3.02E-07	1.68E-09	9.26E-12	5.06E-14
PR147	2.68E+01	7.76E+00	2.42E-01	7.56E-03	2.37E-04	2.31E-07	7.05E-12	2.15E-16	6.57E-21	2.01E-25	6.12E-30

SIMON MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.332E-13

## DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
ND147	9.57E-06	1.80E-01	1.85E-01	1.85E-01	1.84E-01	1.83E-01	1.82E-01	1.81E-01	1.79E-01	1.78E-01	1.76E-01
ND149	1.28E+01	8.72E+00	5.94E+00	4.05E+00	2.74E+00	1.27E+00	4.00E-01	1.26E-01	3.97E-02	1.25E-02	3.95E-03
PM149	1.79E-03	1.40E-01	2.32E-01	2.93E-01	3.32E-01	3.73E-01	3.88E-01	3.80E-01	3.71E-01	3.56E-01	3.44E-01
PM150	1.46E-01	1.13E-01	8.75E-02	6.75E-02	5.22E-02	3.13E-02	1.45E-02	6.71E-03	3.11E-03	1.44E-03	6.66E-04
ND151	4.66E+01	1.46E+00	4.55E-02	1.42E-03	4.45E-05	4.35E-08	1.33E-12	4.05E-17	1.23E-21	3.76E-26	1.15E-30
PM151	2.95E-02	3.45E-01	3.47E-01	3.39E-01	3.31E-01	3.14E-01	2.91E-01	2.70E-01	2.52E-01	2.33E-01	2.16E-01
PM152	7.37E+01	7.21E-02	7.03E-05	6.87E-08	6.71E-11	6.41E-17	5.97E-26	5.56E-35	5.18E-44	4.84E-53	4.50E-62
SM153	9.82E-02	9.67E-02	9.54E-02	9.39E-02	9.27E-02	8.99E-02	8.61E-02	8.22E-02	7.87E-02	7.54E-02	7.21E-02
SM155	8.10E+00	1.33E+00	2.18E-01	3.57E-02	5.85E-03	1.57E-04	6.95E-07	3.06E-09	1.35E-11	6.01E-14	1.47E-16
EU155	5.95E-06	1.70E-04	1.97E-04	2.01E-04	2.02E-04	2.02E-04	2.02E-04	2.02E-04	2.02E-04	2.02E-04	2.02E-04
SM156	7.32E-02	6.80E-02	6.32E-02	5.86E-02	5.44E-02	4.70E-02	3.77E-02	3.02E-02	2.42E-02	1.94E-02	1.55E-02
EU156	2.14E-04	3.49E-04	4.74E-04	5.91E-04	6.99E-04	8.91E-04	1.13E-03	1.31E-03	1.47E-03	1.58E-03	1.67E-03
EU157	1.17E-02	3.88E-02	3.70E-02	3.54E-02	3.37E-02	3.08E-02	2.69E-02	2.35E-02	2.05E-02	1.78E-02	1.55E-02
EU158	3.46E-01	1.40E-01	5.67E-02	2.30E-02	9.30E-03	1.52E-03	1.01E-04	6.73E-06	4.47E-07	2.97E-08	1.97E-09
EU159	4.33E-01	4.30E-02	4.27E-03	4.24E-04	4.20E-05	4.14E-07	4.05E-10	3.95E-13	3.85E-16	3.77E-19	3.68E-22
GD159	1.86E-03	8.13E-03	8.45E-03	8.20E-03	7.89E-03	7.31E-03	6.51E-03	5.81E-03	5.16E-03	4.60E-03	4.10E-03
TB161	2.81E-05	2.02E-04	2.01E-04	2.00E-04	1.99E-04	1.97E-04	1.95E-04	1.93E-04	1.90E-04	1.88E-04	1.85E-04
TOTAL	1.10E+04	2.37E+03	9.10E+02	5.45E+02	3.95E+02	2.63E+02	1.80E+02	1.37E+02	1.10E+02	9.09E+01	7.74E+01



SIMON MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.332E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
BE 7	3.91E-04	3.86E-04	3.81E-04	3.67E-04	3.44E-04	3.02E-04	2.65E-04	2.04E-04	1.07E-04	2.90E-05	7.88E-06
NA 24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 55	1.83E-04	1.83E-04	1.83E-04	1.82E-04	1.82E-04	1.81E-04	1.79E-04	1.77E-04	1.70E-04	1.59E-04	1.47E-04
FE 59	5.01E-04	4.93E-04	4.86E-04	4.64E-04	4.29E-04	3.68E-04	3.16E-04	2.32E-04	1.08E-04	2.30E-05	4.93E-06
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
* CU 64	1.06E+00	2.89E-01	7.89E-02	1.60E-03	2.41E-06	5.47E-12	1.24E-17	6.37E-29	0.	0.	0.
* CU 67	3.35E-05	2.55E-05	1.95E-05	8.68E-06	2.26E-06	1.52E-07	1.03E-08	4.67E-11	6.53E-17	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	3.56E-01	3.22E-01	2.90E-01	2.13E-01	1.28E-01	4.57E-02	1.64E-02	2.10E-03	1.24E-05	1.33E-09	8.97E-10
U240	8.03E-01	2.47E-01	7.59E-02	2.20E-03	6.04E-06	4.54E-11	3.41E-16	1.93E-26	0.	0.	0.
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP239	5.96E-03	9.09E+00	6.77E+00	2.79E+00	6.40E-01	3.34E-02	1.75E-03	4.80E-06	1.89E-12	4.51E-22	4.51E-22
NP240M	1.27E-03	2.49E-01	7.65E-02	2.22E-03	6.09E-06	4.58E-11	3.44E-16	1.94E-26	0.	0.	0.
* AM241	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.13E-09
* CM242	8.84E-08	8.80E-08	8.75E-08	8.66E-08	8.48E-08	8.11E-08	7.79E-08	7.15E-08	5.82E-08	3.78E-08	2.47E-08
GE 77	5.81E-03	3.66E-03	8.37E-04	1.01E-05	6.44E-09	2.60E-15	1.05E-21	1.72E-34	0.	0.	0.
AS 77	6.01E-05	8.87E-03	6.41E-03	1.86E-03	2.17E-04	2.95E-06	4.00E-08	7.38E-12	3.42E-21	7.34E-40	1.58E-58
SE 77M	2.37E-09	2.67E-05	1.92E-05	5.57E-06	6.50E-07	8.85E-09	1.20E-10	2.22E-14	1.03E-23	2.20E-42	4.74E-61
AS 78	1.44E-02	1.28E-04	3.76E-09	3.18E-23	0.	0.	0.	0.	0.	0.	0.
BR 82	4.94E-04	3.09E-04	1.93E-04	4.68E-05	4.44E-06	3.99E-08	3.58E-10	2.89E-14	1.69E-24	5.79E-45	1.97E-65
BR 83	3.87E-01	1.02E-02	1.02E-05	1.04E-14	1.06E-29	0.	0.	0.	0.	0.	0.
KR 83M	2.00E-05	4.46E-02	5.06E-05	4.55E-14	4.67E-29	0.	0.	0.	0.	0.	0.
KR 85M	4.95E-03	2.82E-01	6.43E-03	7.64E-08	4.71E-16	1.79E-32	6.78E-49	0.	0.	0.	0.
KR 85	5.12E-06	1.34E-04	1.37E-04	1.37E-04	1.37E-04	1.37E-04	1.37E-04	1.36E-04	1.35E-04	1.32E-04	1.30E-04
KR 87	8.10E+01	1.60E-04	3.16E-10	2.45E-27	0.	0.	0.	0.	0.	0.	0.
KR 88	4.68E+01	1.23E-01	3.23E-04	5.87E-12	7.39E-25	0.	0.	0.	0.	0.	0.
RB 88	1.19E+01	1.37E-01	3.62E-04	6.57E-12	8.24E-25	0.	0.	0.	0.	0.	0.
SR 89	4.28E-06	1.28E-01	1.27E-01	1.22E-01	1.14E-01	9.96E-02	8.71E-02	6.70E-02	3.43E-02	9.02E-03	2.38E-03
SR 90	8.49E-06	8.72E-04	8.72E-04	8.72E-04	8.72E-04	8.72E-04	8.72E-04	8.72E-04	8.65E-04	8.65E-04	8.57E-04
Y 90	1.26E-11	2.00E-04	3.54E-04	6.35E-04	8.11E-04	8.65E-04	8.72E-04	8.72E-04	8.65E-04	8.65E-04	8.57E-04
SR 91	9.93E-01	3.55E+00	6.37E-01	3.65E-03	6.68E-07	2.27E-14	7.68E-22	8.74E-37	0.	0.	0.

SIMON  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.332E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
Y 91M	6.68E-05	2.30E+00	4.11E-01	2.36E-03	4.33E-07	1.46E-14	4.95E-22	5.64E-37	0.	0.	0.	0.
Y 91	2.73E-08	1.09E-01	1.29E-01	1.29E-01	1.22E-01	1.08E-01	9.62E-02	7.62E-02	4.21E-02	1.30E-02	3.99E-03	0.
SR 92	7.20E+00	8.98E-02	1.94E-04	1.95E-12	9.11E-26	0.	0.	0.	0.	0.	0.	0.
Y 92	3.32E-01	9.42E-01	1.05E-02	8.04E-09	4.69E-19	1.61E-39	5.50E-60	0.	0.	0.	0.	0.
Y 93	3.47E-01	2.35E+00	4.58E-01	3.44E-03	9.90E-07	8.18E-14	6.75E-21	4.61E-35	0.	0.	0.	0.
ZR 95	6.61E-04	8.26E-02	8.17E-02	7.91E-02	7.50E-02	6.72E-02	6.06E-02	4.90E-02	2.87E-02	9.88E-03	3.39E-03	0.
NB 95M	1.41E-11	2.80E-04	5.10E-04	9.73E-04	1.31E-03	1.38E-03	1.28E-03	1.04E-03	6.08E-04	2.09E-04	7.21E-05	0.
NB 95	7.36E-11	1.60E-03	3.16E-03	7.56E-03	1.41E-02	2.42E-02	3.13E-02	3.88E-02	3.74E-02	1.80E-02	6.90E-03	0.
ZR 97	1.57E+00	2.68E+00	1.01E+00	5.33E-02	4.00E-04	2.25E-08	1.27E-12	4.00E-21	2.26E-42	0.	0.	0.
NB 97M	8.09E-03	2.57E+00	9.66E-01	5.14E-02	3.84E-04	2.16E-08	1.22E-12	3.84E-21	2.17E-42	0.	0.	0.
NB 97	7.87E-01	2.69E+00	1.01E+00	5.36E-02	4.03E-04	2.43E-08	1.36E-12	4.33E-21	2.44E-42	0.	0.	0.
MO 99	4.61E-03	1.50E+00	1.17E+00	5.55E-01	1.61E-01	1.34E-02	1.12E-03	7.81E-06	3.17E-11	5.22E-22	8.60E-33	0.
TC 99M	4.28E-08	1.32E+00	1.11E+00	5.31E-01	1.53E-01	1.28E-02	1.07E-03	7.45E-06	3.02E-11	4.99E-22	8.22E-33	0.
RU103	6.96E-05	1.59E-01	1.56E-01	1.48E-01	1.36E-01	1.14E-01	9.55E-02	6.74E-02	2.80E-02	4.86E-03	8.48E-04	0.
RH103M	4.64E-09	1.59E-01	1.56E-01	1.48E-01	1.36E-01	1.14E-01	9.55E-02	6.74E-02	2.81E-02	4.86E-03	8.48E-04	0.
RU105	4.27E-01	4.08E-01	9.59E-03	1.26E-07	9.22E-16	4.92E-32	2.64E-48	0.	0.	0.	0.	0.
RH105M	2.81E-03	4.08E-01	9.62E-03	1.26E-07	9.25E-16	4.95E-32	2.64E-48	0.	0.	0.	0.	0.
RH105	4.61E-09	1.47E+00	9.62E-01	2.40E-01	2.36E-02	2.30E-04	2.23E-06	2.11E-10	1.83E-20	1.37E-40	1.03E-60	0.
RU106	3.52E-04	6.66E-03	6.63E-03	6.60E-03	6.55E-03	6.43E-03	6.29E-03	6.06E-03	5.51E-03	4.56E-03	3.78E-03	0.
RH106	3.81E-06	6.66E-03	6.63E-03	6.60E-03	6.55E-03	6.43E-03	6.29E-03	6.06E-03	5.51E-03	4.56E-03	3.78E-03	0.
PD109	7.90E-03	2.01E-01	5.86E-02	1.45E-03	3.06E-06	1.36E-11	6.08E-17	1.20E-27	0.	0.	0.	0.
AG109M	4.55E-05	2.01E-01	5.87E-02	1.45E-03	3.08E-06	1.37E-11	6.08E-17	1.20E-27	0.	0.	0.	0.
PD111M	1.15E+00	5.56E-02	2.70E-03	3.10E-07	8.38E-14	6.12E-27	4.49E-40	0.	0.	0.	0.	0.
PD111	4.08E-01	4.49E-02	2.17E-03	2.49E-07	6.76E-14	4.92E-27	3.61E-40	0.	0.	0.	0.	0.
AG111M	3.24E-03	5.86E-02	2.85E-03	3.28E-07	8.85E-14	6.50E-27	4.75E-40	0.	0.	0.	0.	0.
AG111	1.15E-09	3.19E-02	3.06E-02	2.33E-02	1.47E-02	5.82E-03	2.31E-03	3.64E-04	3.58E-06	3.47E-10	3.36E-14	0.
PD112	3.10E-01	1.41E-01	6.36E-02	5.91E-03	1.12E-04	4.08E-08	1.48E-11	1.94E-18	1.23E-35	0.	0.	0.
AG112	9.32E-06	1.63E-01	7.50E-02	6.96E-03	1.33E-04	4.81E-08	1.75E-11	2.30E-18	1.44E-35	0.	0.	0.
AG113	3.85E-03	4.07E-02	1.76E-03	1.43E-07	2.19E-14	5.12E-28	1.20E-41	0.	0.	0.	0.	0.
CD115M	1.26E-08	3.65E-04	3.59E-04	3.42E-04	3.16E-04	2.69E-04	2.29E-04	1.66E-04	7.41E-05	1.47E-05	2.94E-06	0.
IN115M	4.88E-06	7.34E-02	5.38E-02	2.12E-02	4.48E-03	2.00E-04	8.91E-06	1.78E-08	3.14E-15	9.83E-29	3.08E-42	0.
IN117	6.08E-11	7.75E-02	5.87E-02	2.32E-02	4.88E-03	2.18E-04	9.72E-06	1.94E-08	3.43E-15	1.07E-28	3.36E-42	0.
CD117	1.08E-01	2.37E-03	2.30E-06	2.15E-15	1.91E-30	0.	0.	0.	0.	0.	0.	0.
IN117M	5.21E-06	9.82E-03	1.14E-05	1.10E-14	9.74E-30	0.	0.	0.	0.	0.	0.	0.
IN117	2.10E-10	6.47E-03	7.67E-06	7.43E-15	6.59E-30	0.	0.	0.	0.	0.	0.	0.
SN121	2.25E-03	1.28E-01	6.93E-02	1.09E-02	5.01E-04	1.06E-06	2.22E-09	9.92E-15	4.14E-28	0.	0.	0.
SN123	1.06E-05	1.11E-03	1.10E-03	1.08E-03	1.05E-03	9.95E-04	9.44E-04	8.45E-04	6.40E-04	3.68E-04	2.12E-04	0.
SN125	2.50E-02	2.32E-02	2.16E-02	1.73E-02	1.19E-02	5.72E-03	2.73E-03	6.26E-04	1.57E-05	9.85E-09	6.17E-12	0.
SB125	1.50E-04	1.66E-04	1.82E-04	2.22E-04	2.73E-04	3.30E-04	3.55E-04	3.70E-04	3.63E-04	3.39E-04	3.16E-04	0.
SB126	3.53E-03	3.34E-03	3.16E-03	2.68E-03	2.03E-03	1.16E-03	6.71E-04	2.21E-04	1.38E-05	6.71E-08	1.35E-08	0.

G-9

SIMON  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.332E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SN127	4.14E+00	1.50E-03	5.45E-07	2.60E-17	1.63E-34	0.	0.	0.	0.	0.	0.	0.
SB127	4.83E-02	1.99E-01	1.66E-01	9.70E-02	3.97E-02	6.63E-03	1.11E-03	3.10E-05	4.04E-09	6.91E-17	1.18E-24	0.
TE127M	3.91E-10	3.03E-04	5.55E-04	1.08E-03	1.49E-03	1.64E-03	1.58E-03	1.40E-03	1.02E-03	5.40E-04	2.86E-04	0.
TE127	2.73E-02	1.42E-01	1.39E-01	8.50E-02	3.59E-02	7.37E-03	2.52E-03	1.41E-03	1.01E-03	5.34E-04	2.82E-04	0.
SB128	1.13E+00	1.92E-01	3.04E-02	1.19E-04	1.15E-08	1.08E-16	1.02E-24	8.95E-41	0.	0.	0.	0.
SB129	5.97E+00	3.06E-01	6.38E-03	5.81E-08	2.31E-16	3.65E-33	5.76E-50	0.	0.	0.	0.	0.
TE129M	1.13E-07	1.19E-02	1.19E-02	1.12E-02	1.01E-02	8.27E-03	6.72E-03	4.48E-03	1.61E-03	2.10E-04	2.74E-05	0.
TE129	4.30E+00	3.58E-01	1.49E-02	7.19E-03	6.49E-03	5.29E-03	4.31E-03	2.87E-03	1.03E-03	1.35E-04	1.75E-05	0.
I130	2.60E-02	6.81E-03	1.78E-03	3.19E-05	3.89E-08	5.80E-14	8.64E-20	1.92E-31	0.	0.	0.	0.
TE131M	9.76E-05	3.41E-01	1.96E-01	3.71E-02	2.32E-03	9.05E-06	3.54E-08	5.40E-13	4.91E-25	0.	0.	0.
TE131	8.98E+01	6.22E-02	3.57E-02	6.78E-03	4.23E-04	1.65E-06	6.46E-09	9.89E-14	8.98E-26	0.	0.	0.
I131	1.31E-02	7.04E-01	6.66E-01	5.35E-01	3.52E-01	1.49E-01	6.29E-02	1.12E-02	1.52E-04	2.77E-08	5.04E-12	0.
XE131M	3.54E-11	3.26E-04	6.20E-04	1.29E-03	1.85E-03	1.83E-03	1.36E-03	5.60E-04	3.73E-05	1.12E-07	3.15E-10	0.
TE132	1.03E+00	2.04E+00	1.65E+00	8.66E-01	2.98E-01	3.54E-02	4.19E-03	5.89E-05	1.38E-09	7.54E-19	4.11E-28	0.
I132	2.52E+00	2.10E+00	1.69E+00	8.91E-01	3.08E-01	3.65E-02	4.32E-03	6.07E-05	1.42E-09	7.73E-19	4.24E-28	0.
I133	1.09E+00	6.09E+00	2.75E+00	2.55E-01	4.86E-03	1.76E-06	6.39E-10	8.42E-17	5.29E-34	0.	0.	0.
XE133M	4.65E-08	5.75E-02	6.80E-02	3.99E-02	9.37E-03	4.40E-04	2.05E-05	4.44E-08	9.73E-15	4.65E-28	2.23E-41	0.
XE133	8.12E-07	1.10E+00	1.48E+00	1.33E+00	7.22E-01	1.95E-01	5.25E-02	3.78E-03	5.26E-06	1.02E-11	1.98E-17	0.
I135	1.83E+01	2.99E+00	2.50E-01	1.45E-04	5.90E-10	9.75E-21	1.60E-31	4.35E-53	0.	0.	0.	0.
XE135M	2.03E-03	9.33E-01	7.80E-02	4.54E-05	1.84E-10	3.03E-21	5.00E-32	1.36E-53	0.	0.	0.	0.
XE135	2.11E+00	8.06E+00	1.97E+00	1.13E-02	1.38E-06	1.94E-14	2.72E-22	5.37E-38	0.	0.	0.	0.
CS136	5.77E-03	6.42E-03	6.08E-03	5.18E-03	3.97E-03	2.33E-03	1.37E-03	4.71E-04	3.27E-05	1.58E-07	7.65E-10	0.
CS137	9.06E-05	9.77E-04	9.77E-04	9.77E-04	9.77E-04	9.77E-04	9.77E-04	9.77E-04	9.71E-04	9.66E-04	9.60E-04	0.
BA137M	1.91E-07	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.11E-04	9.06E-04	9.01E-04	8.95E-04	0.
BA139	1.20E+01	1.28E-03	7.56E-09	1.56E-24	0.	0.	0.	0.	0.	0.	0.	0.
BA140	1.10E-01	6.52E-01	6.20E-01	5.25E-01	4.01E-01	2.33E-01	1.36E-01	4.60E-02	3.07E-03	1.37E-05	6.04E-08	0.
LA140	2.62E-07	2.27E-01	3.65E-01	5.05E-01	4.49E-01	2.69E-01	1.56E-01	5.31E-02	3.53E-03	1.57E-05	6.99E-08	0.
LA141	1.53E+00	6.07E-01	8.51E-03	2.36E-08	1.29E-17	3.84E-36	1.15E-54	0.	0.	0.	0.	0.
CE141	1.89E-07	2.10E-01	2.08E-01	1.95E-01	1.75E-01	1.42E-01	1.14E-01	7.44E-02	2.56E-02	3.01E-03	3.55E-04	0.
LA142	7.51E+00	1.65E-03	3.19E-08	2.35E-22	0.	0.	0.	0.	0.	0.	0.	0.
CE143	5.02E-02	2.06E+00	1.25E+00	2.75E-01	2.21E-02	1.43E-04	9.24E-07	3.87E-11	4.37E-22	0.	0.	0.
PR143	1.47E-08	1.32E-01	2.05E-01	2.65E-01	2.27E-01	1.39E-01	8.36E-02	3.02E-02	2.42E-03	1.53E-05	9.74E-08	0.
CE144	2.03E-03	1.45E-02	1.44E-02	1.43E-02	1.42E-02	1.38E-02	1.35E-02	1.29E-02	1.14E-02	8.90E-03	6.99E-03	0.
PR144	5.56E-07	1.45E-02	1.44E-02	1.43E-02	1.42E-02	1.38E-02	1.35E-02	1.29E-02	1.14E-02	8.90E-03	6.99E-03	0.
PR145	8.01E-02	8.20E-01	5.07E-02	1.20E-05	1.10E-11	9.08E-24	7.53E-36	0.	0.	0.	0.	0.
ND147	9.57E-06	1.61E-01	1.51E-01	1.25E-01	9.17E-02	4.93E-02	2.63E-02	7.56E-03	3.31E-04	6.45E-07	1.25E-09	0.
PM147	2.66E-14	1.20E-04	2.33E-04	5.32E-04	9.20E-04	1.40E-03	1.66E-03	1.85E-03	1.87E-03	1.74E-03	1.62E-03	0.
ND149	1.28E+01	1.24E-03	1.20E-07	1.09E-19	9.35E-40	0.	0.	0.	0.	0.	0.	0.
PM149	1.79E-03	3.29E-01	2.41E-01	9.42E-02	1.97E-02	8.58E-04	3.73E-05	7.10E-08	1.12E-14	2.76E-28	6.88E-42	0.
PM150	1.46E-01	3.09E-04	6.50E-07	6.10E-15	2.55E-28	0.	0.	0.	0.	0.	0.	0.

SIMON  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.332E-13

## DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
PM151	2.95E-02	2.01E-01	1.11E-01	1.87E-02	9.58E-04	2.52E-06	6.63E-09	4.57E-14	5.74E-27	0.	0.
SM153	9.82E-02	6.90E-02	4.84E-02	1.67E-02	2.84E-03	6.27E-05	2.40E-06	2.02E-09	4.16E-17	1.77E-32	7.54E-48
SM156	7.32E-02	1.25E-02	2.13E-03	1.05E-05	1.51E-09	3.11E-17	6.41E-25	2.73E-40	0.	0.	0.
EU155	5.95E-06	2.02E-04	2.01E-04	2.01E-04	2.01E-04	2.00E-04	1.99E-04	1.98E-04	1.94E-04	1.86E-04	1.79E-04
EU156	2.14E-04	1.74E-03	1.93E-03	1.73E-03	1.37E-03	8.63E-04	5.44E-04	2.16E-04	2.14E-05	2.11E-07	2.08E-09
EU157	1.17E-02	1.35E-02	4.55E-03	1.71E-04	7.17E-07	1.26E-11	2.24E-16	6.96E-26	0.	0.	0.
GD159	1.86E-03	3.65E-03	1.45E-03	9.07E-05	8.92E-07	8.65E-11	8.38E-15	7.86E-23	6.71E-43	0.	0.
TB161	2.81E-05	1.83E-04	1.66E-04	1.23E-04	7.42E-05	2.72E-05	9.93E-06	1.33E-06	8.81E-09	3.81E-13	1.66E-17
TOTAL	3.21E+02	6.62E+01	3.07E+01	1.15E+01	4.98E+00	1.98E+00	1.20E+00	6.54E-01	2.80E-01	9.78E-02	4.71E-02

SIMON MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.332E-13

DEBRIS DECAY FROM 1 TO 50 YEARS

	ZERO	TIME	1.00E+00	1.50E+00	2.00E+00	3.50E+00	5.00E+00	7.00E+00	1.00E+01	2.00E+01	3.50E+01	5.00E+01
BE 7	3.91E-04	3.38E-06	3.14E-07	2.92E-08	2.35E-11	1.88E-14	1.40E-18	9.01E-25	0.	0.	0.	0.
MN 54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FE 59	5.01E-04	1.81E-06	1.08E-07	6.52E-09	1.42E-12	3.06E-16	3.98E-21	1.87E-28	0.	0.	0.	0.
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U234	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	3.56E-01	8.89E-10	8.66E-10	8.43E-10	7.89E-10	7.32E-10	6.66E-10	5.77E-10	3.59E-10	1.76E-10	8.66E-11	
* AM241	4.13E-09	4.13E-09	4.13E-09	4.13E-09	4.15E-09	4.17E-09	4.17E-09	4.19E-09	4.21E-09	4.17E-09	4.11E-09	
* CM242	8.84E-08	1.87E-08	8.61E-09	3.96E-09	3.86E-10	3.76E-11	1.69E-12	1.59E-14	4.58E-19	4.27E-19	3.99E-19	
KR 85	5.12E-06	1.27E-04	1.23E-04	1.19E-04	1.09E-04	9.81E-05	8.63E-05	7.11E-05	3.76E-05	1.44E-05	5.49E-06	
SR 89	4.28E-06	1.00E-03	8.77E-05	7.70E-06	5.19E-09	3.50E-12	2.07E-16	9.40E-23	6.83E-44	0.	0.	
SR 90	8.49E-06	8.49E-04	8.41E-04	8.34E-04	8.03E-04	7.72E-04	7.35E-04	6.82E-04	5.33E-04	3.68E-04	2.55E-04	
Y 90	1.26E-11	8.49E-04	8.41E-04	8.34E-04	8.03E-04	7.72E-04	7.35E-04	6.82E-04	5.33E-04	3.68E-04	2.55E-04	
Y 91	2.73E-08	1.85E-03	2.15E-04	2.50E-05	3.92E-08	6.14E-11	1.12E-14	2.76E-20	5.58E-39	0.	0.	
ZR 95	6.61E-04	1.70E-03	2.42E-04	3.45E-05	1.01E-07	2.93E-10	1.21E-13	1.02E-18	1.25E-35	0.	0.	
NB 95M	1.41E-11	3.59E-05	5.13E-06	7.33E-07	2.13E-09	6.20E-12	2.57E-15	2.17E-20	2.66E-37	0.	0.	
NB 95M	7.36E-11	3.65E-03	5.24E-04	7.47E-05	2.17E-07	6.29E-10	2.62E-13	2.22E-18	2.71E-35	0.	0.	
RU103	6.96E-05	2.70E-04	1.11E-05	4.55E-07	3.11E-11	2.13E-15	5.98E-21	2.81E-29	0.	0.	0.	
RH103M	4.64E-09	2.71E-04	1.11E-05	4.55E-07	3.11E-11	2.13E-15	5.98E-21	2.81E-29	0.	0.	0.	
RU106	3.52E-04	3.34E-03	2.37E-03	1.68E-03	5.97E-04	2.12E-04	5.33E-05	6.75E-06	6.80E-09	2.19E-13	7.04E-18	
RH106	3.81E-06	3.34E-03	2.37E-03	1.68E-03	5.97E-04	2.12E-04	5.33E-05	6.75E-06	6.80E-09	2.19E-13	7.04E-18	
SN123	1.06E-05	1.47E-04	5.35E-05	1.94E-05	9.32E-07	4.47E-08	7.79E-10	1.80E-12	2.88E-21	1.85E-34	1.19E-47	
SB125	1.50E-04	3.02E-04	2.65E-04	2.34E-04	1.59E-04	1.08E-04	6.47E-05	2.99E-05	2.30E-06	4.90E-08	1.04E-09	
TE125M	4.04E-12	1.23E-04	1.10E-04	9.65E-05	6.59E-05	4.48E-05	2.68E-05	1.24E-05	9.52E-07	2.03E-08	4.32E-10	
TE127M	3.91E-10	1.87E-04	5.86E-05	1.83E-05	5.64E-07	1.73E-08	1.67E-10	1.57E-13	1.29E-23	9.63E-39	7.17E-54	
TE127	2.73E-02	1.85E-04	5.79E-05	1.81E-05	5.57E-07	1.71E-08	1.65E-10	1.55E-13	1.28E-23	9.50E-39	7.11E-54	
CS137	9.06E-05	9.55E-04	9.44E-04	9.33E-04	9.01E-04	8.68E-04	8.30E-04	7.76E-04	6.13E-04	4.36E-04	3.08E-04	
BA137M	1.91E-07	8.95E-04	8.84E-04	8.73E-04	8.41E-04	8.14E-04	7.76E-04	7.27E-04	5.75E-04	4.07E-04	2.88E-04	
CE141	1.89E-07	8.15E-05	1.64E-06	3.29E-08	2.68E-13	2.18E-18	3.58E-25	2.38E-35	0.	0.	0.	
CE144	2.03E-03	5.96E-03	3.83E-03	2.44E-03	6.41E-04	1.69E-04	2.83E-05	1.96E-06	2.63E-10	4.13E-16	6.44E-22	
PR144	5.56E-07	5.96E-03	3.83E-03	2.44E-03	6.41E-04	1.69E-04	2.83E-05	1.96E-06	2.63E-10	4.13E-16	6.44E-22	
PM147	2.66E-14	1.54E-03	1.35E-03	1.18E-03	7.96E-04	5.35E-04	3.14E-04	1.43E-04	1.01E-05	1.92E-07	3.62E-09	
EU155	5.96E-06	1.74E-04	1.62E-04	1.51E-04	1.21E-04	9.73E-05	7.27E-05	4.69E-05	1.10E-05	1.23E-06	1.39E-07	
TOTAL	3.88E-01	3.38E-02	1.92E-02	1.37E-02	7.08E-03	4.87E-03	3.80E-03	3.19E-03	2.32E-03	1.59E-03	1.11E-03	

G-12

**APPENDIX H  
DETAILED RESULTS FOR EVENT ENCORE**

ENCORE  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.631E-13

TIME	MR/HR	MICROCURIES/SQ METER
ZERO TIME HOURS	1.00E+02	1.16E+04
1.00E+00	3.05E+01	2.46E+03
2.00E+00	1.23E+01	9.03E+02
3.00E+00	6.77E+00	5.44E+02
4.00E+00	4.34E+00	4.05E+02
6.00E+00	2.34E+00	2.82E+02
9.00E+00	1.38E+00	2.01E+02
1.20E+01	1.00E+00	1.56E+02
1.50E+01	7.86E-01	1.28E+02
1.80E+01	6.45E-01	1.08E+02
2.10E+01	5.44E-01	9.26E+01
1.00E+00 DAYS	4.62E-01	8.03E+01
2.00E+00	2.09E-01	3.89E+01
5.00E+00	7.57E-02	1.38E+01
1.00E+01	3.39E-02	5.32E+00
2.00E+01	1.38E-02	1.95E+00
3.00E+01	8.20E-03	1.20E+00
5.00E+01	4.05E-03	6.77E-01
1.00E+02	1.62E-03	3.05E-01
2.00E+02	5.94E-04	1.15E-01
3.00E+02	2.28E-04	5.75E-02
1.00E+00 YEARS	1.28E-04	4.14E-02
1.50E+00	3.38E-05	2.28E-02
2.00E+00	1.75E-05	1.57E-02
3.50E+00	9.75E-06	7.13E-03
5.00E+00	7.65E-06	4.43E-03
7.00E+00	6.58E-06	3.19E-03
1.00E+01	5.85E-06	2.55E-03
2.00E+01	4.47E-06	1.78E-03
3.50E+01	3.14E-06	1.22E-03
5.00E+01	2.22E-06	8.50E-04

ENCORE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.631E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BE 7	8.72E-07	8.71E-07	8.71E-07	8.71E-07	8.71E-07	8.71E-07	8.69E-07	8.68E-07	8.65E-07	8.64E-07	8.63E-07	8.61E-07
* NA 24	6.57E-02	6.27E-02	6.00E-02	5.72E-02	5.46E-02	5.22E-02	4.98E-02	4.73E-02	4.48E-02	4.23E-02	3.98E-02	3.73E-02
MN 54	5.97E-06	5.97E-06	5.97E-06	5.97E-06	5.97E-06	5.97E-06	5.97E-06	5.97E-06	5.92E-06	5.92E-06	5.92E-06	5.92E-06
FE 55	8.98E-06	8.98E-06	8.98E-06	8.98E-06	8.98E-06	8.98E-06	8.98E-06	8.98E-06	8.98E-06	8.98E-06	8.98E-06	8.98E-06
FE 59	7.32E-06	7.31E-06	7.31E-06	7.31E-06	7.31E-06	7.31E-06	7.30E-06	7.29E-06	7.28E-06	7.25E-06	7.24E-06	7.23E-06
CO 57	7.13E-05	7.13E-05	7.13E-05	7.13E-05	7.13E-05	7.13E-05	7.13E-05	7.13E-05	7.13E-05	7.13E-05	7.13E-05	7.13E-05
CO 58	6.00E-04	6.00E-04	6.00E-04	6.00E-04	6.00E-04	6.00E-04	5.99E-04	5.99E-04	5.98E-04	5.98E-04	5.96E-04	5.95E-04
CO 60	1.38E-05	1.38E-05	1.38E-05	1.38E-05	1.38E-05	1.38E-05	1.38E-05	1.38E-05	1.38E-05	1.38E-05	1.38E-05	1.38E-05
CU 64	3.01E+00	2.84E+00	2.69E+00	2.56E+00	2.42E+00	2.29E+00	2.17E+00	2.05E+00	1.94E+00	1.83E+00	1.73E+00	1.63E+00
CU 67	3.02E-04	2.99E-04	2.94E-04	2.92E-04	2.89E-04	2.87E-04	2.81E-04	2.77E-04	2.71E-04	2.63E-04	2.55E-04	2.45E-04
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.52E-01	1.52E-01	1.51E-01	1.50E-01	1.50E-01	1.50E-01	1.48E-01	1.46E-01	1.45E-01	1.43E-01	1.41E-01	1.39E-01
U239	3.26E+03	5.56E+02	9.50E+01	1.62E+01	2.75E+00	4.50E+00	8.00E-02	3.97E-04	1.96E-06	9.69E-09	4.79E-11	2.37E-13
U240	6.99E+00	6.66E+00	6.34E+00	6.04E+00	5.75E+00	5.50E+00	5.20E+00	4.99E+00	4.77E+00	4.54E+00	4.31E+00	4.08E+00
NP239	1.12E-02	1.87E+01	2.16E+01	2.20E+01	2.18E+01	2.13E+01	2.04E+01	1.97E+01	1.91E+01	1.84E+01	1.77E+01	1.71E+01
NP240M	1.11E-02	6.68E+00	6.39E+00	6.09E+00	5.80E+00	5.54E+00	5.24E+00	4.93E+00	4.61E+00	4.29E+00	3.97E+00	3.65E+00
NP240	2.80E-10	1.44E-10	7.48E-11	3.86E-11	1.99E-11	9.34E-12	5.34E-12	2.73E-12	1.40E-12	7.40E-13	3.93E-13	2.06E-13
* AM241	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09
* CM242	2.29E-07	2.29E-07	2.29E-07	2.29E-07	2.29E-07	2.29E-07	2.29E-07	2.28E-07	2.28E-07	2.28E-07	2.28E-07	2.28E-07
GE 75	5.80E-06	2.81E-02	1.69E-02	1.02E-02	6.14E-03	3.72E-03	2.23E-03	1.36E-03	8.06E-04	4.96E-04	2.96E-04	1.79E-04
GE 77	3.69E-03	9.51E-03	8.95E-03	8.41E-03	7.92E-03	7.47E-03	7.00E-03	6.53E-03	6.06E-03	5.60E-03	5.13E-03	4.66E-03
AS 77	3.82E-05	6.03E-03	6.10E-03	6.14E-03	6.18E-03	6.22E-03	6.22E-03	6.18E-03	6.09E-03	5.96E-03	5.81E-03	5.66E-03
SE 77M	1.50E-09	1.81E-05	1.83E-05	1.85E-05	1.85E-05	1.86E-05	1.86E-05	1.87E-05	1.86E-05	1.83E-05	1.79E-05	1.74E-05
GE 78	5.64E-01	3.52E-01	2.19E-01	1.37E-01	8.55E-02	5.33E-02	3.33E-02	2.08E-02	1.29E-02	7.88E-03	4.88E-03	2.98E-03
AS 78	1.01E-02	1.68E-01	2.07E-01	1.94E-01	1.62E-01	1.29E-01	9.59E-02	6.56E-02	4.18E-02	2.66E-02	1.69E-02	1.09E-02
AS 79	1.14E+01	1.12E-01	1.10E-03	1.09E-05	1.07E-07	1.03E-09	9.87E-11	9.87E-18	9.42E-24	8.98E-30	8.58E-36	8.19E-42
SE 79M	1.68E-02	1.97E-01	1.95E-03	1.92E-05	1.89E-07	1.83E-09	1.74E-11	1.66E-13	1.59E-15	1.51E-17	1.44E-19	1.37E-21
BR 80	7.25E-02	6.84E-03	6.42E-04	6.04E-05	5.69E-06	5.35E-07	5.05E-08	4.72E-09	4.42E-10	4.12E-11	3.82E-12	3.52E-13
SE 81M	6.03E-02	2.81E+00	1.36E+00	6.53E-01	3.14E-01	1.57E-01	7.34E-02	3.71E-02	1.92E-02	1.03E-02	5.43E-03	2.84E-03
SE 81	7.37E-01	3.33E+00	1.92E+00	9.61E-01	4.66E-01	2.31E-01	1.09E-01	5.22E-02	2.73E-02	1.43E-02	7.53E-03	4.03E-03
BR 82	3.74E-04	3.67E+04	3.60E-04	3.53E-04	3.46E-04	3.39E-04	3.32E-04	3.25E-04	3.18E-04	3.11E-04	3.04E-04	2.97E-04
SE 83	3.46E+01	6.56E+00	1.24E+00	2.36E-01	4.45E-02	8.00E-03	1.46E-03	2.61E-04	4.61E-05	8.06E-06	1.43E-06	2.53E-07
BR 83	2.87E-01	4.29E+00	3.97E+00	3.13E+00	2.37E+00	1.74E+00	1.34E+00	1.03E+00	7.88E-01	6.06E-01	4.66E-01	3.52E-01
KR 83M	1.49E-05	9.72E-01	1.98E+00	2.47E+00	2.54E+00	2.61E+00	2.72E+00	2.83E+00	2.94E+00	3.05E+00	3.16E+00	3.27E+00

H-3



ENCORE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.631E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BR 84	7.34E-02	1.27E+01	3.42E+00	9.27E-01	2.50E-01	1.83E-02	3.62E-04	7.15E-06	1.41E-07	2.80E-09	5.52E-11	
KR 85M	3.57E-03	7.65E+00	6.51E+00	5.56E+00	4.75E+00	3.47E+00	2.16E+00	1.35E+00	8.42E-01	5.23E-01	3.27E-01	
KR 87	5.98E+01	3.45E+01	2.00E+01	1.15E+01	6.66E+00	2.23E+00	4.33E-01	8.39E-02	1.63E-02	3.15E-03	6.08E-04	
KR 88	3.43E+01	2.68E+01	2.09E+01	1.63E+01	1.27E+01	7.73E+00	3.69E+00	1.76E+00	8.35E-01	3.98E-01	1.89E-01	
RB 88	8.71E+00	2.71E+01	2.31E+01	1.82E+01	1.42E+01	8.66E+00	4.13E+00	1.97E+00	9.38E-01	4.46E-01	2.12E-01	
RB 89	4.14E+01	3.89E+01	2.62E+00	1.76E-01	1.18E-02	5.33E-05	1.61E-08	4.87E-12	1.48E-15	4.49E-19	1.36E-22	
SR 89	3.17E-06	1.11E-01	1.19E-01	1.19E-01	1.19E-01	1.19E-01	1.19E-01	1.18E-01	1.18E-01	1.18E-01	1.18E-01	
SR 90	6.39E-06	6.56E-04	6.56E-04	6.56E-04	6.56E-04	6.56E-04	6.56E-04	6.56E-04	6.56E-04	6.56E-04	6.56E-04	
SR 91	8.55E-01	1.59E+01	1.48E+01	1.38E+01	1.29E+01	1.11E+01	8.98E+00	7.26E+00	5.86E+00	4.71E+00	3.80E+00	
Y 91M	5.75E-05	5.49E+00	7.48E+00	8.01E+00	7.91E+00	7.10E+00	5.81E+00	4.67E+00	3.77E+00	3.04E+00	2.45E+00	
Y 91	2.36E-08	4.88E-03	1.12E-02	1.80E-02	2.45E-02	3.67E-02	5.22E-02	6.45E-02	7.48E-02	8.28E-02	8.93E-02	
SR 92	1.09E+01	4.85E+01	3.76E+01	2.91E+01	2.25E+01	1.35E+01	6.27E+00	2.91E+00	1.35E+00	6.27E-01	2.92E-01	
Y 92	5.01E-01	1.02E+01	1.60E+01	1.91E+01	2.02E+01	1.93E+01	1.48E+01	1.01E+01	6.47E+00	3.98E+00	2.40E+00	
SR 93	4.34E+02	7.46E+00	4.12E-02	2.28E-04	1.26E-06	3.84E-11	6.48E-18	1.09E-24	1.84E-31	3.11E-38	5.24E-45	
Y 93	5.29E-01	1.71E+01	1.61E+01	1.50E+01	1.40E+01	1.23E+01	9.99E+00	8.16E+00	6.62E+00	5.44E+00	4.42E+00	
Y 94	6.29E+01	8.60E+01	1.11E+01	1.43E+00	1.84E-01	3.06E-03	6.56E-06	1.41E-08	3.01E-11	6.56E-14	3.64E-15	
Y 95	2.70E+02	2.55E+01	5.61E-01	1.24E-02	2.73E-04	1.32E-07	1.42E-12	1.51E-17	1.62E-22	1.73E-27	1.85E-32	
ZR 95	1.02E-03	1.33E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	
NB 95	1.13E-10	8.20E-05	1.91E-04	3.00E-04	4.10E-04	6.28E-04	9.53E-04	1.28E-03	1.60E-03	1.93E-03	2.25E-03	
ZR 97	2.42E+00	1.06E+01	1.01E+01	9.72E+00	9.31E+00	8.60E+00	7.60E+00	6.72E+00	5.97E+00	5.26E+00	4.67E+00	
NB 97M	1.25E-02	1.01E+01	9.72E+00	9.35E+00	8.97E+00	8.26E+00	7.30E+00	6.47E+00	5.72E+00	5.05E+00	4.47E+00	
NB 97	1.21E+00	5.30E+00	7.47E+00	8.51E+00	8.93E+00	8.89E+00	8.10E+00	7.22E+00	6.38E+00	5.63E+00	5.01E+00	
NB 98	1.37E+01	6.05E+00	2.68E+00	1.18E+00	5.25E-01	1.03E-01	8.88E-03	7.67E-04	6.68E-05	5.78E-06	4.98E-07	
MO 99	7.19E-03	2.97E+00	2.94E+00	2.91E+00	2.88E+00	2.82E+00	2.73E+00	2.65E+00	2.57E+00	2.49E+00	2.41E+00	
TC 99M	6.69E-08	2.83E-01	5.31E-01	7.51E-01	9.43E-01	1.26E+00	1.60E+00	1.81E+00	1.95E+00	2.02E+00	2.05E+00	
MO101	1.01E+02	4.56E+01	2.65E+00	1.53E-01	8.91E-03	2.98E-05	5.80E-09	1.13E-12	2.19E-16	4.26E-20	8.31E-24	
TC101	4.26E+00	1.28E+02	1.40E+01	1.15E+00	8.35E-02	3.77E-04	9.42E-08	2.11E-11	4.47E-15	9.21E-19	1.86E-22	
MO102	8.21E+02	1.87E+01	4.26E-01	9.74E-03	2.22E-04	1.15E-07	1.37E-12	1.63E-17	1.93E-22	2.29E-27	2.72E-32	
TC102M	5.28E-01	1.58E+01	3.63E-01	8.29E-03	1.89E-04	9.78E-08	1.16E-12	1.38E-17	1.63E-22	1.94E-27	2.30E-32	
TC102	2.47E+03	9.42E+00	2.15E-01	4.89E-03	1.12E-04	5.83E-08	6.92E-13	8.21E-18	9.74E-23	1.15E-27	1.37E-32	
RU103	5.74E-05	1.33E-01	1.33E-01	1.33E-01	1.33E-01	1.32E-01	1.32E-01	1.32E-01	1.32E-01	1.31E-01	1.31E-01	
RH103M	3.83E-09	6.88E-02	1.02E-01	1.18E-01	1.26E-01	1.31E-01	1.32E-01	1.32E-01	1.32E-01	1.31E-01	1.31E-01	
TC104	4.82E+01	3.46E+01	3.46E+00	3.43E-01	3.39E-02	3.34E-04	3.26E-07	3.19E-10	3.11E-13	3.04E-16	2.97E-19	
RU105	3.69E-01	1.28E+01	1.09E+01	9.35E+00	8.00E+00	5.85E+00	3.67E+00	2.29E+00	1.43E+00	8.97E-01	5.63E-01	
RH105M	2.43E-03	1.28E+01	1.09E+01	9.38E+00	8.00E+00	5.88E+00	3.67E+00	2.30E+00	1.44E+00	9.00E-01	5.63E-01	
RH105	3.99E-09	2.60E-01	4.82E-01	6.66E-01	8.19E-01	1.05E+00	1.25E+00	1.35E+00	1.37E+00	1.36E+00	1.33E+00	
RU106	3.09E-04	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	
RU106	3.34E-06	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	5.85E-03	
RH107	6.59E-02	8.95E+00	1.36E+00	2.04E-01	3.08E-02	7.03E-04	2.42E-06	8.35E-09	2.87E-11	9.83E-14	9.78E-18	
PD107M	1.37E-04	1.82E+00	2.75E-01	4.16E-02	6.27E-03	1.43E-04	4.93E-07	1.70E-09	5.84E-12	2.02E-14	6.88E-17	

H-4

ENCORE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.631E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
PD109	3.89E-03	3.23E-01	3.07E-01	2.91E-01	2.76E-01	2.49E-01	2.14E-01	1.84E-01	1.57E-01	1.35E-01	1.16E-01	1.16E-01
AG109M	2.25E-05	3.23E-01	3.07E-01	2.92E-01	2.77E-01	2.50E-01	2.14E-01	1.84E-01	1.57E-01	1.35E-01	1.16E-01	1.16E-01
PD111M	4.86E-01	4.28E-01	3.77E-01	3.34E-01	2.94E-01	2.29E-01	1.56E-01	1.07E-01	7.35E-02	5.02E-02	3.45E-02	3.45E-02
PD111	1.73E-01	3.12E-01	2.99E-01	2.67E-01	2.36E-01	1.83E-01	1.26E-01	8.61E-02	5.89E-02	4.04E-02	2.77E-02	2.77E-02
AG111M	1.37E-03	4.21E-01	3.95E-01	3.54E-01	3.12E-01	2.41E-01	1.65E-01	1.13E-01	7.74E-02	5.31E-02	3.63E-02	3.63E-02
AG111	4.90E-10	1.45E-03	3.05E-03	4.48E-03	5.75E-03	7.83E-03	1.01E-02	1.15E-02	1.25E-02	1.31E-02	1.35E-02	1.35E-02
PD112	9.67E-02	9.37E-02	9.05E-02	8.75E-02	8.49E-02	7.93E-02	7.19E-02	6.51E-02	5.89E-02	5.33E-02	4.83E-02	4.83E-02
AG112	2.91E-06	1.85E-02	3.27E-02	4.39E-02	5.22E-02	6.25E-02	6.87E-02	6.84E-02	6.51E-02	6.07E-02	5.60E-02	5.60E-02
AG113	9.75E-04	2.09E-01	1.83E-01	1.61E-01	1.41E-01	1.08E-01	7.34E-02	4.95E-02	3.34E-02	2.26E-02	1.53E-02	1.53E-02
AG115	3.68E-01	3.95E-01	4.91E-02	6.14E-03	7.69E-04	1.20E-05	2.35E-08	4.59E-11	8.89E-14	8.83E-163	8.19E-17	8.19E-17
CD115M	3.01E-09	8.01E-05	9.01E-05	9.12E-05	9.12E-05	9.12E-05	9.09E-05	9.09E-05	9.06E-05	9.04E-05	9.04E-05	9.04E-05
CD115	1.16E-06	2.19E-02	2.36E-02	2.35E-02	2.32E-02	2.27E-02	2.18E-02	2.10E-02	2.02E-02	1.94E-02	1.87E-02	1.87E-02
IN115M	1.45E-11	2.42E-03	5.38E-03	7.98E-03	1.02E-02	1.36E-02	1.68E-02	1.85E-02	1.92E-02	1.94E-02	1.93E-02	1.93E-02
CD117	2.60E-02	4.33E-01	3.26E-01	2.43E-01	1.82E-01	1.02E-01	4.30E-02	1.81E-02	7.62E-03	3.20E-03	1.35E-03	1.35E-03
IN117M	1.25E-06	1.50E-01	2.18E-01	2.36E-01	2.28E-01	1.80E-01	1.03E-01	5.27E-02	2.53E-02	1.17E-02	5.30E-03	5.30E-03
IN117	5.03E-11	2.74E-02	6.64E-02	9.23E-02	1.03E-01	9.47E-02	6.03E-02	3.23E-02	1.61E-02	7.55E-03	3.47E-03	3.47E-03
CD118	1.73E+00	7.39E-01	3.17E-01	1.35E-01	5.79E-02	1.06E-02	8.32E-04	6.50E-05	5.11E-06	4.01E-07	3.14E-08	3.14E-08
IN118	1.14E-01	7.39E-01	3.17E-01	1.36E-01	5.79E-02	1.06E-02	8.32E-04	6.53E-05	5.11E-06	4.01E-07	3.14E-08	3.14E-08
CD119	4.29E+00	6.70E-02	1.04E-03	1.63E-05	2.55E-07	6.25E-11	2.38E-16	9.10E-22	3.46E-27	1.32E-32	5.06E-38	5.06E-38
IN119M	6.47E-03	7.24E-01	7.88E-02	7.95E-03	7.91E-04	7.79E-06	7.59E-09	7.43E-12	7.24E-15	7.08E-18	6.92E-21	6.92E-21
IN119	3.19E-01	3.81E-02	4.42E-03	4.49E-04	4.49E-05	4.39E-07	4.29E-10	4.20E-13	4.10E-16	4.01E-19	3.91E-22	3.91E-22
SN121	5.27E-04	5.43E-02	5.27E-02	5.15E-02	5.03E-02	4.78E-02	4.41E-02	4.10E-02	3.79E-02	3.51E-02	3.26E-02	3.26E-02
SN123M	2.97E-01	5.55E-01	1.97E-01	6.96E-02	2.46E-02	3.07E-03	1.36E-04	6.01E-06	2.66E-07	1.17E-08	5.20E-10	5.20E-10
SN123	2.79E-06	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04
SN125	7.86E-03	7.84E-03	7.82E-03	7.80E-03	7.76E-03	7.72E-03	7.66E-03	7.57E-03	7.51E-03	7.43E-03	7.37E-03	7.37E-03
SB125	4.72E-05	4.74E-05	4.76E-05	4.78E-05	4.80E-05	4.84E-05	4.93E-05	4.99E-05	5.05E-05	5.11E-05	5.17E-05	5.17E-05
SB126	1.49E-03	1.49E-03	1.49E-03	1.48E-03	1.48E-03	1.47E-03	1.46E-03	1.45E-03	1.44E-03	1.43E-03	1.42E-03	1.42E-03
SN127	2.33E+00	1.68E+00	1.20E+00	8.68E-01	6.25E-01	3.22E-01	1.20E-01	4.45E-02	1.65E-02	6.14E-03	2.28E-03	2.28E-03
SB127	2.72E-02	9.39E-02	1.04E-01	1.11E-01	1.16E-01	1.20E-01	1.22E-01	1.21E-01	1.19E-01	1.17E-01	1.14E-01	1.14E-01
TE127	1.54E-02	1.92E-02	2.33E-02	2.76E-02	3.19E-02	4.00E-02	5.13E-02	5.99E-02	6.66E-02	7.18E-02	7.52E-02	7.52E-02
SN128	1.56E+01	7.72E+00	3.82E+00	1.89E+00	9.34E-01	2.28E-01	2.75E-02	3.32E-03	4.00E-04	4.85E-05	5.85E-06	5.85E-06
SB128M	7.97E-03	8.80E+00	4.56E+00	2.25E+00	1.11E+00	2.72E-01	3.28E-02	3.96E-03	4.77E-04	5.77E-05	6.97E-06	6.97E-06
SB128	6.60E-01	6.35E-01	5.98E-01	5.60E-01	5.23E-01	4.48E-01	3.58E-01	2.84E-01	2.25E-01	1.79E-01	1.42E-01	1.42E-01
SN129M	1.02E+01	5.06E+00	2.54E+00	1.27E+00	6.35E-01	1.59E-01	1.99E-02	2.48E-03	3.10E-04	3.88E-05	4.85E-06	4.85E-06
SN129	6.78E+01	6.65E-01	6.56E-03	6.48E-05	6.35E-07	6.18E-11	5.88E-17	5.62E-23	5.36E-29	5.10E-35	4.89E-41	4.89E-41
SB129	3.81E+00	6.39E+00	6.01E+00	5.36E+00	4.72E+00	3.50E+00	2.18E+00	1.35E+00	8.32E-01	5.15E-01	3.17E-01	3.17E-01
TE129M	7.21E-08	7.98E-04	1.64E-03	2.41E-03	3.10E-03	4.20E-03	5.32E-03	6.01E-03	6.43E-03	6.69E-03	6.86E-03	6.86E-03
TE129	2.75E+00	3.77E+00	4.42E+00	4.59E+00	4.42E+00	3.66E+00	2.44E+00	1.54E+00	9.57E-01	5.92E-01	3.67E-01	3.67E-01
SB130M	3.83E-01	7.22E-01	1.90E-03	4.98E-06	1.31E-08	9.04E-14	1.65E-21	3.00E-29	5.43E-37	9.87E-45	1.80E-52	1.80E-52
SB130	6.56E+01	1.98E+01	5.64E+00	1.60E+00	4.52E-01	3.64E-02	8.30E-04	1.89E-05	4.31E-07	9.83E-09	2.24E-10	2.24E-10

H-5

ENCORE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.631E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
I130	1.83E-02	1.73E-02	1.63E-02	1.54E-02	1.46E-02	1.31E-02	1.10E-02	9.33E-03	7.88E-03	6.68E-03	5.64E-03
SB131	1.53E+02	4.00E+01	6.54E+00	1.07E+00	1.76E-01	4.75E-03	2.09E-05	9.23E-08	4.06E-10	1.79E-12	8.94E-15
TE131M	7.37E-05	3.86E-01	4.40E+01	4.41E-01	4.32E-01	4.13E-01	3.85E-01	3.59E-01	3.36E-01	3.13E-01	2.92E-01
TE131	6.79E+01	7.37E+01	2.40E+01	6.25E+00	1.52E+00	1.43E-01	7.08E-02	6.54E-02	6.11E-02	5.71E-02	5.32E-02
I131	9.87E-03	3.42E-01	5.03E-01	5.52E-01	5.62E-01	5.67E-01	5.67E-01	5.62E-01	5.62E-01	5.57E-01	5.57E-01
TE132	8.03E-01	1.95E+00	1.93E+00	1.92E+00	1.90E+00	1.86E+00	1.81E+00	1.77E+00	1.72E+00	1.67E+00	1.63E+00
I132	1.97E+00	1.97E+00	1.96E+00	1.95E+00	1.94E+00	1.91E+00	1.87E+00	1.82E+00	1.77E+00	1.73E+00	1.68E+00
TE133M	9.78E-02	3.39E+01	1.48E+01	6.43E+00	2.79E+00	5.31E-01	4.37E-02	3.60E-03	2.97E-04	2.45E-05	2.02E-06
TE133	5.50E+02	3.12E+01	3.47E+00	1.15E+00	4.84E-01	9.18E-02	7.59E-03	6.24E-04	5.17E-05	4.25E-06	3.51E-07
I133	8.52E-01	9.18E+00	9.92E+00	9.92E+00	9.73E+00	9.22E+00	8.38E+00	7.59E+00	6.85E+00	6.24E+00	5.64E+00
XE133M	3.63E-08	2.06E-03	4.98E-03	7.96E-03	1.09E-02	1.63E-02	2.36E-02	2.99E-02	3.53E-02	3.99E-02	4.37E-02
XE133	6.33E-07	3.60E-02	8.76E-02	1.40E-01	1.92E-01	2.91E-01	4.26E-01	5.45E-01	6.52E-01	7.45E-01	8.29E-01
TE134	1.72E+02	7.99E+01	2.97E+01	1.11E+01	4.10E+00	5.68E-01	2.91E-02	1.49E-03	7.62E-05	3.92E-06	2.01E-07
I134	7.89E+01	1.06E+02	7.40E+01	4.34E+01	2.33E+01	5.91E+00	6.50E-01	6.63E-02	6.50E-03	6.23E-04	5.91E-05
I135	1.44E+01	2.54E+01	2.30E+01	2.07E+01	1.87E+01	1.52E+01	1.11E+01	8.14E+00	5.98E+00	4.40E+00	3.21E+00
XE135M	1.60E-03	7.35E+00	7.14E+00	6.48E+00	5.81E+00	4.73E+00	3.47E+00	2.54E+00	1.87E+00	1.37E+00	1.00E+00
XE135	1.66E+00	3.29E+00	4.82E+00	6.06E+00	7.06E+00	8.47E+00	9.38E+00	9.42E+00	8.97E+00	8.18E+00	7.31E+00
CS136	3.26E-03	3.25E-03	3.23E-03	3.24E-03	3.23E-03	3.22E-03	3.20E-03	3.17E-03	3.15E-03	3.13E-03	3.11E-03
CS137	7.03E-05	7.58E-04	7.58E-04	7.58E-04	7.58E-04	7.58E-04	7.58E-04	7.58E-04	7.58E-04	7.58E-04	7.58E-04
BA137M	1.48E-07	7.07E-04	7.07E-04	7.07E-04	7.07E-04	7.07E-04	7.07E-04	7.07E-04	7.07E-04	7.07E-04	7.07E-04
XE138	5.60E+02	4.82E+01	4.19E+00	3.63E-01	3.14E-02	2.36E-04	1.53E-07	9.94E-11	6.47E-14	4.20E-17	2.73E-20
CS138	8.33E+01	1.40E+02	4.86E+01	1.43E+01	4.00E+00	3.05E-01	6.34E-03	1.32E-04	2.73E-06	5.69E-08	1.18E-09
CS139	5.13E+02	1.64E+01	2.05E+01	2.58E-03	3.24E-05	5.08E-09	1.01E-14	2.00E-20	3.96E-26	7.85E-32	1.55E-37
BA139	9.48E+00	1.06E+02	6.51E+01	3.96E+01	2.39E+01	8.78E+00	1.95E+00	4.33E-01	9.62E-02	2.13E-02	4.74E-03
BA140	1.01E-01	6.31E-01	6.31E-01	6.26E-01	6.26E-01	6.21E-01	6.21E-01	6.17E-01	6.12E-01	6.07E-01	6.02E-01
LA140	2.40E-07	1.08E-02	2.14E-02	3.17E-02	4.19E-02	6.17E-02	9.01E-02	1.17E-01	1.42E-01	1.65E-01	1.87E-01
BA141	1.93E+02	5.84E+01	5.79E+00	5.75E-01	5.70E-02	5.65E-04	5.52E-07	5.38E-10	5.24E-13	5.15E-16	5.01E-19
LA141	1.78E+00	3.78E+01	3.53E+01	2.99E+01	2.51E+01	1.76E+01	1.03E+01	6.02E+00	3.54E+00	2.08E+00	1.22E+00
CE141	2.21E-07	2.46E-02	5.75E-02	8.64E-02	1.11E-01	1.49E-01	1.84E-01	2.05E-01	2.17E-01	2.24E-01	2.28E-01
BA142	5.12E+02	2.04E+01	4.64E-01	1.06E-02	2.41E-04	1.25E-07	1.49E-12	1.77E-17	2.10E-22	2.49E-27	2.95E-32
LA142	1.18E+01	8.16E+01	5.38E+01	3.42E+01	2.18E+01	8.81E+00	2.27E+00	5.86E-01	1.51E-01	3.89E-02	1.00E-02
LA143	1.96E+02	3.83E+01	1.96E+00	1.01E-01	5.18E-03	1.36E-05	1.83E-09	2.46E-13	3.32E-17	4.48E-21	6.05E-25
CE143	7.83E-02	4.99E+00	5.18E+00	5.04E+00	4.95E+00	4.76E+00	4.46E+00	4.19E+00	3.94E+00	3.69E+00	3.47E+00
PR143	2.29E-08	7.65E-03	1.85E-02	2.92E-02	3.97E-02	6.00E-02	8.84E-02	1.15E-01	1.40E-01	1.64E-01	1.85E-01
CE144	3.16E-03	2.26E-02	2.26E-02	2.26E-02	2.26E-02	2.26E-02	2.26E-02	2.26E-02	2.26E-02	2.26E-02	2.26E-02
PR144	8.66E-07	2.06E-02	2.24E-02	2.26E-02	2.26E-02	2.26E-02	2.26E-02	2.26E-02	2.26E-02	2.26E-02	2.26E-02
PR145	1.25E-01	1.84E+01	1.63E+01	1.45E+01	1.30E+01	1.03E+01	7.25E+00	5.12E+00	3.62E+00	2.56E+00	1.81E+00
CE146	3.61E+02	1.85E+01	9.48E-01	4.84E-02	2.49E-03	6.57E-06	8.84E-10	1.19E-13	1.60E-17	2.16E-21	2.92E-25
PR146	7.45E+00	6.49E+01	1.47E+01	2.76E+00	4.97E-01	1.56E-02	8.63E-05	4.76E-07	2.64E-09	1.46E-11	7.96E-14
PR147	4.20E+01	1.21E+01	3.79E-01	1.18E-02	3.70E-04	3.61E-07	1.10E-11	3.37E-16	1.03E-20	3.14E-25	9.57E-30

ENCORE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.631E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
ND147	1.50E-05	2.82E-01	2.90E-01	2.89E-01	2.88E-01	2.87E-01	2.85E-01	2.83E-01	2.80E-01	2.78E-01	2.76E-01	
ND149	2.08E+01	1.41E+01	9.62E+00	6.56E+00	4.44E+00	2.06E+00	6.48E-01	2.05E-01	6.44E-02	2.03E-02	6.40E-03	
PM149	2.89E-03	2.26E-01	3.76E-01	4.75E-01	5.38E-01	6.05E-01	6.28E-01	6.17E-01	6.01E-01	5.77E-01	5.58E-01	
PM150	2.35E-01	1.82E-01	1.41E-01	1.09E-01	8.39E-02	5.04E-02	2.33E-02	1.08E-02	5.00E-03	2.31E-03	1.07E-03	
ND151	7.67E+01	2.40E+00	7.50E-02	2.34E-03	7.33E-05	7.15E-08	2.18E-12	6.67E-17	2.03E-21	6.20E-26	1.90E-30	
PM151	4.86E-02	5.68E-01	5.72E-01	5.58E-01	5.44E-01	5.17E-01	4.79E-01	4.45E-01	4.14E-01	3.83E-01	3.56E-01	
PM152	1.22E+02	1.19E-01	1.16E-04	1.14E-07	1.11E-10	1.06E-16	9.86E-26	9.20E-35	8.56E-44	8.00E-53	7.44E-62	
SM153	1.60E-01	1.58E-01	1.56E-01	1.53E-01	1.51E-01	1.47E-01	1.40E-01	1.34E-01	1.28E-01	1.23E-01	1.18E-01	
SM155	8.04E+00	1.32E+00	2.16E-01	3.54E-02	5.80E-03	1.56E-04	6.89E-07	3.03E-09	1.34E-11	5.96E-14	1.46E-16	
EU155	5.91E-06	1.68E-04	1.95E-04	1.99E-04	2.00E-04	2.00E-04	2.00E-04	2.00E-04	2.00E-04	2.00E-04	2.00E-04	
SM156	1.26E-01	1.17E-01	1.08E-01	1.01E-01	9.35E-02	8.07E-02	6.47E-02	5.19E-02	4.16E-02	3.33E-02	2.67E-02	
EU156	3.68E-04	6.00E-04	8.15E-04	1.01E-03	1.20E-03	1.53E-03	1.95E-03	2.25E-03	2.52E-03	2.72E-03	2.87E-03	
EU157	2.09E-02	6.92E-02	6.60E-02	6.31E-02	6.01E-02	5.50E-02	4.80E-02	4.19E-02	3.65E-02	3.18E-02	2.77E-02	
EU158	6.56E-01	2.66E-01	1.07E-01	4.35E-02	1.76E-02	2.88E-03	1.92E-04	1.27E-05	8.46E-07	5.62E-08	3.73E-09	
EU159	8.03E-01	7.98E-02	7.91E-03	7.86E-04	7.78E-05	7.68E-07	7.50E-10	7.32E-13	7.15E-16	6.99E-19	6.83E-22	
GD159	3.44E-03	1.51E-02	1.57E-02	1.52E-02	1.46E-02	1.35E-02	1.21E-02	1.08E-02	9.58E-03	8.53E-03	7.61E-03	
TB161	4.00E-05	2.88E-04	2.86E-04	2.85E-04	2.84E-04	2.81E-04	2.78E-04	2.74E-04	2.71E-04	2.68E-04	2.64E-04	
TOTAL	1.16E+04	2.46E+03	9.03E+02	5.44E+02	4.05E+02	2.82E+02	2.01E+02	1.56E+02	1.28E+02	1.08E+02	9.26E+01	

ENCORE  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.631E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
* BE 7	8.72E-07	8.61E-07	8.49E-07	8.18E-07	7.66E-07	6.72E-07	5.90E-07	4.54E-07	2.38E-07	6.46E-08	1.76E-08
* NA 24	6.57E-02	2.17E-02	7.15E-03	2.56E-04	1.00E-06	1.53E-11	2.34E-16	5.44E-26	0.	0.	0.
MN 54	5.97E-06	5.92E-06	5.92E-06	5.81E-06	5.76E-06	5.65E-06	5.55E-06	5.28E-06	4.72E-06	3.75E-06	2.99E-06
FE 53	8.98E-06	8.98E-06	8.98E-06	8.94E-06	8.92E-06	8.87E-06	8.78E-06	8.67E-06	8.33E-06	7.77E-06	7.21E-06
FE 59	7.32E-06	7.21E-06	7.10E-06	6.78E-06	6.27E-06	5.38E-06	4.61E-06	3.39E-06	1.57E-06	3.36E-07	7.21E-08
CO 57	7.13E-05	7.13E-05	7.08E-05	7.08E-05	6.97E-05	6.76E-05	6.60E-05	6.29E-05	5.55E-05	4.29E-05	3.32E-05
CO 58	6.00E-04	5.95E-04	5.89E-04	5.71E-04	5.45E-04	4.94E-04	4.48E-04	3.69E-04	2.27E-04	8.59E-05	3.24E-05
CO 60	1.38E-05	1.38E-05	1.38E-05	1.38E-05	1.38E-05	1.38E-05	1.37E-05	1.36E-05	1.33E-05	1.29E-05	1.24E-05
CU 64	3.01E+00	8.18E-01	2.23E-01	4.54E-03	6.81E-06	1.55E-11	3.50E-17	1.80E-28	0.	0.	0.
CU 67	3.02E-04	2.30E-04	1.76E-04	7.82E-05	2.04E-05	1.37E-06	9.26E-08	4.21E-10	5.88E-16	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.52E-01	1.37E-01	1.24E-01	9.11E-02	5.45E-02	1.95E-02	7.00E-03	8.95E-04	5.28E-06	5.68E-10	3.83E-10
U240	6.99E+00	2.15E+00	6.60E-01	1.92E-02	5.26E-05	3.95E-10	2.97E-15	1.68E-25	0.	0.	0.
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP239	1.12E-02	1.70E+01	1.27E+01	5.24E+00	1.20E+00	6.27E-02	3.28E-03	9.00E-06	3.54E-12	8.45E-22	8.45E-22
NP240M	1.11E-02	2.17E+00	6.66E-01	1.93E-02	5.30E-05	3.99E-10	3.00E-15	1.69E-25	0.	0.	0.
* AM241	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.75E-09
* CM242	2.29E-07	2.28E-07	2.27E-07	2.25E-07	2.20E-07	2.10E-07	2.02E-07	1.85E-07	1.51E-07	9.82E-08	6.42E-08
GE 77	3.69E-03	2.33E-03	5.32E-04	6.43E-06	4.09E-09	1.66E-15	6.68E-22	1.09E-34	0.	0.	0.
AS 77	3.82E-05	5.64E-03	4.08E-03	1.18E-03	1.38E-04	1.87E-06	2.54E-08	4.69E-12	2.17E-21	4.66E-40	1.00E-58
SE 77M	1.50E-09	1.70E-05	1.22E-05	3.54E-06	4.13E-07	5.62E-09	7.63E-11	1.41E-14	6.52E-24	1.40E-42	3.01E-61
AS 78	1.01E-02	9.02E-05	2.64E-09	2.23E-23	0.	0.	0.	0.	0.	0.	0.
BR 82	3.74E-04	2.33E-04	1.46E-04	3.54E-05	3.36E-06	3.02E-08	2.71E-10	2.19E-14	1.28E-24	4.38E-45	1.49E-65
BR 83	2.87E-01	7.57E-03	7.61E-06	7.73E-15	7.90E-30	0.	0.	0.	0.	0.	0.
KR 83M	1.49E-05	3.31E-02	3.76E-05	3.38E-14	3.47E-29	0.	0.	0.	0.	0.	0.
KR 85M	3.57E-03	2.04E-01	4.65E-03	5.52E-08	3.40E-16	1.29E-32	4.90E-49	0.	0.	0.	0.
KR 85	3.69E-06	9.70E-05	9.89E-05	9.89E-05	9.89E-05	9.89E-05	9.89E-05	9.84E-05	9.75E-05	9.56E-05	9.41E-05
KR 87	5.98E+01	1.18E-04	2.33E-10	1.81E-27	0.	0.	0.	0.	0.	0.	0.
KR 88	3.43E+01	9.02E-02	2.37E-04	4.30E-12	5.41E-25	0.	0.	0.	0.	0.	0.
RB 88	8.71E+00	1.01E-01	2.65E-04	4.81E-12	6.03E-25	0.	0.	0.	0.	0.	0.
SR 89	3.17E-06	9.51E-02	9.37E-02	9.00E-02	8.44E-02	7.37E-02	6.45E-02	4.96E-02	2.54E-02	6.68E-03	1.76E-03
SR 90	6.39E-06	6.56E-04	6.56E-04	6.56E-04	6.56E-04	6.56E-04	6.56E-04	6.56E-04	6.51E-04	6.51E-04	6.45E-04
Y 90	9.47E-12	1.50E-04	2.66E-04	4.78E-04	6.10E-04	6.51E-04	6.56E-04	6.56E-04	6.51E-04	6.51E-04	6.45E-04
SR 91	8.55E-01	3.06E+00	5.49E-01	3.15E-03	5.75E-07	1.95E-14	6.61E-22	7.53E-37	0.	0.	0.

H-8

ENCORE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.631E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
Y 91M	5.75E-05	1.98E+00	3.54E-01	2.03E-03	3.73E-07	1.26E-14	4.26E-22	4.86E-37	0.	0.	0.
Y 91	2.36E-08	9.41E-02	1.11E-01	1.11E-01	1.05E-01	9.30E-02	8.28E-02	6.56E-02	3.63E-02	1.12E-02	3.44E-03
SR 92	1.09E+01	1.35E-01	2.92E-04	2.94E-12	1.37E-25	0.	0.	0.	0.	0.	0.
Y 92	5.01E-01	1.42E+00	1.58E-02	1.21E-08	7.08E-19	2.42E-39	8.29E-60	0.	0.	0.	0.
Y 93	5.29E-01	3.57E+00	6.97E-01	5.24E-03	1.51E-06	1.25E-13	1.03E-20	7.02E-35	0.	0.	0.
ZR 95	1.02E-03	1.27E-01	1.26E-01	1.22E-01	1.15E-01	1.03E-01	9.31E-02	7.53E-02	4.41E-02	1.52E-02	5.21E-03
NB 95M	2.16E-11	4.30E-04	7.84E-04	1.50E-03	2.02E-03	2.13E-03	1.96E-03	1.59E-03	9.35E-04	3.22E-04	1.11E-04
NB 95	1.13E-10	2.45E-03	4.85E-03	1.16E-02	2.16E-02	3.73E-02	4.81E-02	5.97E-02	5.75E-02	2.76E-02	1.06E-02
ZR 97	2.42E+00	4.13E+00	1.55E+00	8.22E-02	6.18E-04	3.48E-08	1.95E-12	6.18E-21	3.48E-42	0.	0.
NB 97M	1.25E-02	3.96E+00	1.49E+00	7.93E-02	5.93E-04	3.34E-08	1.88E-12	5.93E-21	3.35E-42	0.	0.
NB 97	1.21E+00	4.14E+00	1.56E+00	8.26E-02	6.22E-04	3.74E-08	2.10E-12	6.68E-21	3.76E-42	0.	0.
MO 99	7.19E-03	2.34E+00	1.83E+00	8.66E-01	2.51E-01	2.09E-02	1.74E-03	1.22E-05	4.95E-11	8.15E-22	1.34E-32
TC 99M	6.69E-08	2.06E+00	1.73E+00	8.29E-01	2.39E-01	2.00E-02	1.67E-03	1.16E-05	4.72E-11	7.79E-22	1.28E-32
RU 103	5.74E-05	1.31E-01	1.28E-01	1.22E-01	1.12E-01	9.38E-02	7.87E-02	5.55E-02	2.31E-02	4.01E-03	6.99E-04
RH 103M	3.83E-09	1.31E-01	1.29E-01	1.22E-01	1.12E-01	9.38E-02	7.87E-02	5.55E-02	2.31E-02	4.01E-03	6.99E-04
RU 105	3.69E-01	3.53E-01	8.30E-03	1.09E-07	7.98E-16	4.26E-32	2.28E-48	0.	0.	0.	0.
RH 105M	2.43E-03	3.53E-01	8.33E-03	1.09E-07	8.00E-16	4.29E-32	2.29E-48	0.	0.	0.	0.
RH 105	3.99E-09	1.27E+00	8.33E-01	2.08E-01	2.05E-02	1.99E-04	1.93E-06	1.82E-10	1.58E-20	1.19E-40	8.92E-61
RU 106	3.09E-04	5.85E-03	5.82E-03	5.80E-03	5.75E-03	5.64E-03	5.52E-03	5.32E-03	4.83E-03	4.00E-03	3.32E-03
RH 106	3.34E-06	5.85E-03	5.82E-03	5.80E-03	5.75E-03	5.64E-03	5.52E-03	5.32E-03	4.83E-03	4.00E-03	3.32E-03
PD 109	3.89E-03	9.92E-02	2.89E-02	7.17E-04	1.51E-06	6.73E-12	3.00E-17	5.93E-28	0.	0.	0.
AG 109M	2.25E-05	9.92E-02	2.89E-02	7.17E-04	1.52E-06	6.74E-12	3.00E-17	5.93E-28	0.	0.	0.
PD 111M	4.86E-01	2.36E-02	1.15E-03	1.31E-07	3.55E-14	2.59E-27	1.90E-40	0.	0.	0.	0.
PD 111	1.73E-01	1.90E-02	9.21E-04	1.06E-07	2.87E-14	2.09E-27	1.53E-40	0.	0.	0.	0.
AG 111M	1.37E-03	2.48E-02	1.21E-03	1.39E-07	3.75E-14	2.76E-27	2.01E-40	0.	0.	0.	0.
AG 111	4.90E-10	1.35E-02	1.30E-02	9.88E-03	6.22E-03	2.47E-03	9.79E-04	1.54E-04	1.52E-06	1.47E-10	1.43E-14
PD 112	9.67E-02	4.39E-02	1.99E-02	1.84E-03	3.51E-05	1.27E-08	4.63E-12	6.07E-19	3.83E-36	0.	0.
AG 112	2.91E-06	5.10E-02	2.34E-02	2.17E-03	4.16E-05	1.50E-08	5.45E-12	7.19E-19	4.51E-36	0.	0.
AG 113	9.75E-04	1.03E-02	4.46E-04	3.62E-08	5.54E-15	1.30E-28	3.03E-42	0.	0.	0.	0.
CD 115M	3.01E-09	8.71E-05	8.57E-05	8.16E-05	7.54E-05	6.40E-05	5.47E-05	3.95E-05	1.77E-05	3.51E-06	7.02E-07
CD 115	1.16E-06	1.75E-02	1.28E-02	5.06E-03	1.07E-03	4.77E-05	2.13E-06	4.24E-09	7.49E-16	2.35E-29	7.34E-43
IN 115M	1.45E-11	1.85E-02	1.40E-02	5.53E-03	1.16E-03	5.20E-05	2.32E-06	4.62E-09	8.19E-16	2.56E-29	8.01E-43
CD 117	2.60E-02	5.67E-04	5.51E-07	5.15E-16	4.57E-31	0.	0.	0.	0.	0.	0.
IN 117M	1.25E-06	2.35E-03	2.72E-06	2.63E-15	2.33E-30	0.	0.	0.	0.	0.	0.
IN 117	5.03E-11	1.55E-03	1.84E-06	1.78E-15	1.58E-30	0.	0.	0.	0.	0.	0.
SN 121	5.27E-04	3.01E-02	1.62E-02	2.56E-03	1.17E-04	2.48E-07	5.21E-10	2.32E-15	9.71E-29	0.	0.
SN 123	2.79E-06	2.92E-04	2.89E-04	2.84E-04	2.76E-04	2.61E-04	2.48E-04	2.22E-04	1.68E-04	9.65E-05	5.55E-05
SN 125	7.86E-03	7.31E-03	6.79E-03	5.44E-03	3.76E-03	1.80E-03	8.60E-04	1.97E-04	4.93E-06	3.10E-09	1.94E-12
SB 125	4.72E-05	5.23E-05	5.73E-05	7.00E-05	8.58E-05	1.04E-04	1.12E-04	1.17E-04	1.14E-04	1.07E-04	9.95E-05
SB 126	1.49E-03	1.41E-03	1.34E-03	1.13E-03	8.58E-04	4.92E-04	2.84E-04	9.34E-05	5.84E-06	2.84E-08	5.70E-09

6-H

ENCORE  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.631E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SN127	2.33E+00	8.46E-04	3.07E-07	1.47E-17	9.20E-35	0.	0.	0.	0.	0.	0.
SB127	2.72E-02	1.12E-01	9.35E-02	5.46E-02	2.24E-02	3.74E-03	6.25E-04	1.75E-05	2.28E-09	3.89E-17	6.62E-25
TE127M	2.20E-10	1.71E-04	3.12E-04	6.06E-04	8.38E-04	9.24E-04	8.91E-04	7.90E-04	5.76E-04	3.04E-04	1.61E-04
TE127	1.54E-02	8.01E-02	7.86E-02	4.79E-02	2.02E-02	4.15E-03	1.42E-03	7.97E-04	5.69E-04	3.01E-04	1.59E-04
SB128	6.60E-01	1.12E-01	1.78E-02	6.93E-05	6.72E-09	6.31E-17	5.93E-25	5.23E-41	0.	0.	0.
SB129	3.81E+00	1.95E-01	4.08E-03	3.71E-08	1.48E-16	2.33E-33	3.68E-50	0.	0.	0.	0.
TE129M	7.21E-08	7.59E-03	7.59E-03	7.16E-03	6.48E-03	5.28E-03	4.29E-03	2.86E-03	1.03E-03	1.34E-04	1.75E-05
TE129	2.75E+00	2.29E-01	9.52E-03	4.59E-03	4.14E-03	3.38E-03	2.75E-03	1.83E-03	6.61E-04	8.62E-05	1.12E-05
I130	1.83E-02	4.77E-03	1.25E-03	2.23E-05	2.73E-08	4.06E-14	6.06E-20	1.35E-31	0.	0.	0.
TE131M	7.37E-05	2.58E-01	1.48E-01	2.80E-02	1.75E-03	6.84E-06	2.68E-08	4.08E-13	3.71E-25	0.	0.
TE131	6.79E+01	4.70E-02	2.70E-02	5.13E-03	3.20E-04	1.25E-06	4.88E-09	7.47E-14	6.79E-26	0.	0.
I131	9.87E-03	5.32E-01	5.03E-01	4.04E-01	2.66E-01	1.12E-01	4.76E-02	8.50E-03	1.15E-04	2.09E-08	3.81E-12
XE131M	2.68E-11	2.47E-04	4.68E-04	9.77E-04	1.40E-03	1.38E-03	1.03E-03	4.23E-04	2.82E-05	8.45E-08	2.38E-10
TE132	8.03E-01	1.59E+00	1.28E+00	6.76E-01	2.33E-01	2.76E-02	3.27E-03	4.60E-05	1.08E-09	5.89E-19	3.21E-28
I132	1.97E+00	1.64E+00	1.32E+00	6.96E-01	2.40E-01	2.85E-02	3.37E-03	4.74E-05	1.11E-09	6.03E-19	3.31E-28
I133	8.52E-01	4.75E+00	2.14E+00	1.99E-01	3.79E-03	1.37E-06	4.98E-10	6.57E-17	4.13E-34	0.	0.
XE133M	3.63E-08	4.49E-02	5.31E-02	3.12E-02	7.31E-03	3.43E-04	1.60E-05	3.47E-08	7.59E-15	3.63E-28	1.74E-41
XE133	6.33E-07	8.62E-01	1.16E+00	1.03E+00	5.64E-01	1.52E-01	4.09E-02	2.95E-03	4.11E-06	7.96E-12	1.55E-17
I135	1.44E+01	2.36E+00	1.97E-01	1.15E-04	4.65E-10	7.68E-21	1.26E-31	3.43E-53	0.	0.	0.
XE135M	1.60E-03	7.35E-01	6.14E-02	3.57E-05	1.45E-10	2.39E-21	3.94E-32	1.07E-53	0.	0.	0.
XE135	1.66E+00	6.35E+00	1.55E+00	8.88E-03	1.09E-06	1.53E-14	2.14E-22	4.23E-38	0.	0.	0.
CS136	3.26E-03	3.09E-03	2.93E-03	2.50E-03	1.92E-03	1.12E-03	6.61E-04	2.27E-04	1.58E-05	7.60E-08	3.68E-10
CS137	7.03E-05	7.58E-04	7.58E-04	7.58E-04	7.58E-04	7.58E-04	7.58E-04	7.58E-04	7.54E-04	7.50E-04	7.45E-04
BA137M	1.48E-07	7.07E-04	7.07E-04	7.07E-04	7.07E-04	7.07E-04	7.07E-04	7.07E-04	7.03E-04	6.99E-04	6.95E-04
BA139	9.48E+00	1.01E-03	5.97E-09	1.23E-24	0.	0.	0.	0.	0.	0.	0.
BA140	1.01E-01	5.97E-01	5.68E-01	4.82E-01	3.68E-01	2.14E-01	1.24E-01	4.21E-02	2.81E-03	1.25E-05	5.54E-08
LA140	2.40E-07	2.08E-01	3.35E-01	4.63E-01	4.11E-01	2.46E-01	1.43E-01	4.86E-02	3.23E-03	1.44E-05	6.41E-08
LA141	1.78E+00	7.08E-01	9.93E-03	2.75E-08	1.50E-17	4.49E-36	1.34E-54	0.	0.	0.	0.
CE141	2.21E-07	2.45E-01	2.43E-01	2.28E-01	2.05E-01	1.66E-01	1.33E-01	8.69E-02	2.98E-02	3.51E-03	4.14E-04
LA142	1.18E+01	2.58E-03	4.99E-08	3.67E-22	0.	0.	0.	0.	0.	0.	0.
CE143	7.83E-02	3.22E+00	1.95E+00	4.29E-01	3.45E-02	2.23E-04	1.44E-06	6.05E-11	6.83E-22	0.	0.
PR143	2.29E-08	2.06E-01	3.21E-01	4.14E-01	3.55E-01	2.16E-01	1.31E-01	4.72E-02	3.78E-03	2.40E-05	1.52E-07
CE144	3.16E-03	2.26E-02	2.25E-02	2.23E-02	2.21E-02	2.15E-02	2.10E-02	2.00E-02	1.77E-02	1.39E-02	1.09E-02
PR144	8.66E-07	2.26E-02	2.25E-02	2.23E-02	2.21E-02	2.15E-02	2.10E-02	2.00E-02	1.77E-02	1.39E-02	1.09E-02
PR145	1.25E-01	1.28E+00	7.91E-02	1.88E-05	1.71E-11	1.42E-23	1.17E-35	0.	0.	0.	0.
ND147	1.50E-05	2.52E-01	2.37E-01	1.96E-01	1.44E-01	7.71E-02	4.12E-02	1.18E-02	5.18E-04	1.01E-06	1.96E-09
PM147	4.16E-14	1.88E-04	3.65E-04	8.33E-04	1.44E-03	2.20E-03	2.60E-03	2.89E-03	2.92E-03	2.72E-03	2.53E-03
ND149	2.08E+01	2.01E-03	1.95E-07	1.78E-19	1.52E-39	0.	0.	0.	0.	0.	0.
PM149	2.89E-03	5.34E-01	3.91E-01	1.53E-01	3.19E-02	1.39E-03	6.05E-05	1.15E-07	1.81E-14	4.48E-28	1.12E-41
PM150	2.35E-01	4.96E-04	1.04E-06	9.81E-15	4.10E-28	0.	0.	0.	0.	0.	0.

H-10

ENCORE  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.631E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
PM151	4.86E-02	3.31E-01	1.83E-01	3.08E-02	1.58E-03	4.14E-06	1.09E-08	7.53E-14	9.45E-27	0.	0.	0.
SM153	1.60E-01	1.13E-01	7.90E-02	2.73E-02	4.64E-03	1.35E-04	3.92E-06	3.29E-09	6.79E-17	2.89E-32	1.23E-47	0.
SM156	1.26E-01	2.14E-02	3.66E-03	1.80E-05	2.59E-09	5.33E-17	1.10E-24	4.69E-40	0.	0.	0.	0.
EU155	5.91E-06	2.00E-04	2.00E-04	2.00E-04	1.99E-04	1.99E-04	1.98E-04	1.96E-04	1.92E-04	1.85E-04	1.77E-04	1.77E-04
EU156	3.68E-04	2.99E-03	3.32E-03	2.97E-03	2.36E-03	1.48E-03	9.35E-04	3.71E-04	3.68E-05	3.62E-07	3.57E-09	0.
EU157	2.09E-02	2.41E-02	8.11E-03	3.04E-04	1.28E-06	2.25E-11	3.99E-16	1.24E-25	0.	0.	0.	0.
GD159	3.44E-03	6.77E-03	2.70E-03	1.68E-04	1.65E-06	1.60E-10	1.55E-14	1.46E-22	1.24E-42	0.	0.	0.
TB161	4.00E-05	2.61E-04	2.36E-04	1.74E-04	1.06E-04	3.87E-05	1.41E-05	1.90E-06	1.25E-08	5.42E-13	2.36E-17	0.
TOTAL	2.73E+02	8.03E+01	3.89E+01	1.38E+01	5.32E+00	1.95E+00	1.20E+00	6.77E-01	3.05E-01	1.15E-01	5.75E-02	0.

II-H



ENCORE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.631E-13

DEBRIS DECAY FROM 1 TO 50 YEARS

	ZERO TIME	1.00E+00	1.50E+00	2.00E+00	3.50E+00	5.00E+00	7.00E+00	1.00E+01	2.00E+01	3.50E+01	5.00E+01
BE 7	8.72E-07	7.53E-09	7.00E-10	6.50E-11	5.23E-14	4.19E-17	3.13E-21	2.01E-27	0.	0.	0.
MN 54	5.97E-06	2.57E-06	1.70E-06	1.11E-06	3.19E-07	9.09E-08	1.71E-08	1.40E-09	3.29E-13	1.19E-18	4.30E-24
FE 59	7.32E-06	2.64E-08	1.59E-09	9.53E-11	2.07E-14	4.47E-18	5.82E-23	2.73E-30	0.	0.	0.
CO 57	7.13E-05	2.81E-05	1.76E-05	1.10E-05	2.72E-06	6.71E-07	1.04E-08	6.29E-09	5.50E-13	4.51E-19	0.
CO 58	6.00E-04	1.72E-05	2.92E-06	4.95E-07	2.41E-09	1.17E-11	9.69E-15	2.30E-19	8.79E-35	0.	0.
CO 60	1.38E-05	1.21E-05	1.13E-05	1.06E-05	8.68E-06	7.13E-06	5.48E-06	3.69E-06	9.91E-07	1.38E-07	1.90E-08
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U234	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.52E-01	3.80E-10	3.70E-10	3.60E-10	3.37E-10	3.13E-10	2.84E-10	2.47E-10	1.54E-10	7.53E-11	3.70E-11
* AM241	7.75E-09	7.75E-09	7.75E-09	7.75E-09	7.78E-09	7.82E-09	7.82E-09	7.86E-09	7.89E-09	7.82E-09	7.71E-09
* CM242	2.29E-07	4.86E-08	2.24E-08	1.03E-08	1.00E-09	9.76E-11	4.37E-12	4.14E-14	1.19E-18	1.11E-18	1.03E-18
KR 85	3.69E-06	9.18E-05	8.89E-05	8.61E-05	7.84E-05	7.08E-05	6.23E-05	5.13E-05	2.71E-05	1.04E-05	3.96E-06
SR 89	3.17E-06	7.42E-04	6.49E-05	5.70E-06	3.84E-09	2.59E-12	1.53E-16	6.96E-23	5.05E-44	0.	0.
SR 90	6.39E-06	6.39E-04	6.33E-04	6.27E-04	6.04E-04	5.81E-04	5.53E-04	5.14E-04	4.01E-04	2.77E-04	1.92E-04
Y 90	9.47E-12	6.39E-04	6.33E-04	6.27E-04	6.04E-04	5.81E-04	5.53E-04	5.14E-04	4.01E-04	2.77E-04	1.92E-04
Y 91	2.36E-08	1.59E-03	1.85E-04	2.15E-05	3.37E-08	5.29E-11	9.68E-15	2.38E-20	4.80E-39	0.	0.
ZR 95	1.02E-03	2.61E-03	3.72E-04	5.30E-05	1.55E-07	4.50E-10	1.86E-13	1.57E-18	1.92E-35	0.	0.
NB 95M	2.16E-11	5.52E-05	7.88E-06	1.13E-06	3.27E-09	9.53E-12	3.95E-15	3.33E-20	4.08E-37	0.	0.
NB 95	1.13E-10	5.61E-03	8.06E-04	1.15E-04	3.33E-07	9.67E-10	4.04E-13	3.41E-18	4.17E-35	0.	0.
RU103	5.74E-05	2.23E-04	9.12E-06	3.75E-07	2.56E-11	1.75E-15	4.93E-21	2.32E-29	0.	0.	0.
RH103M	3.83E-09	2.23E-04	9.12E-06	3.75E-07	2.56E-11	1.76E-15	4.93E-21	2.32E-29	0.	0.	0.
RU106	3.09E-04	2.94E-03	2.08E-03	1.47E-03	5.24E-04	1.86E-04	4.68E-05	5.92E-06	5.97E-09	1.92E-13	6.18E-18
RH106	3.34E-06	2.94E-03	2.08E-03	1.47E-03	5.24E-04	1.86E-04	4.68E-05	5.92E-06	5.97E-09	1.92E-13	6.18E-18
SN123	2.79E-06	3.86E-05	1.40E-05	5.09E-06	2.44E-07	1.17E-08	2.04E-10	4.71E-13	7.55E-22	4.86E-35	3.12E-48
SB125	4.72E-05	9.50E-05	8.35E-05	7.35E-05	5.01E-05	3.41E-05	2.04E-05	9.42E-06	7.25E-07	1.54E-08	3.28E-10
TE125M	1.27E-12	3.88E-05	3.45E-05	3.04E-05	2.07E-05	1.41E-05	8.44E-06	3.90E-06	3.00E-07	6.38E-09	1.36E-10
TE127M	2.20E-10	1.06E-04	3.30E-05	1.03E-05	3.18E-07	9.77E-09	9.39E-11	8.83E-14	7.26E-24	5.43E-39	4.04E-54
TE127	1.54E-02	1.04E-04	3.26E-05	1.02E-05	3.14E-07	9.65E-09	9.28E-11	8.76E-14	7.18E-24	5.35E-39	4.00E-54
CS137	7.03E-05	7.41E-04	7.33E-04	7.24E-04	6.99E-04	6.74E-04	6.44E-04	6.02E-04	4.76E-04	3.38E-04	2.39E-04
BA137M	1.48E-07	6.95E-04	6.86E-04	6.78E-04	6.53E-04	6.32E-04	6.02E-04	5.64E-04	4.46E-04	3.16E-04	2.24E-04
CE141	2.21E-07	9.52E-05	1.91E-06	3.84E-08	3.13E-13	2.55E-18	4.18E-25	2.77E-35	0.	0.	0.
CE144	3.16E-03	9.28E-03	5.96E-03	3.81E-03	9.99E-04	2.63E-04	4.42E-05	3.05E-06	4.10E-10	6.44E-16	1.00E-21
FR144	8.66E-07	9.28E-03	5.96E-03	3.81E-03	9.99E-04	2.63E-04	4.42E-05	3.05E-06	4.10E-10	6.44E-16	1.00E-21
PM147	4.16E-14	2.41E-03	2.11E-03	1.85E-03	1.24E-03	8.37E-04	4.92E-04	2.23E-04	1.59E-05	3.00E-07	5.67E-09
EU155	5.91E-06	1.73E-04	1.61E-04	1.50E-04	1.20E-04	9.66E-05	7.21E-05	4.66E-05	1.09E-05	1.22E-06	1.38E-07
TOTAL	1.73E-01	4.14E-02	2.28E-02	1.57E-02	7.13E-03	4.43E-03	3.19E-03	2.55E-03	1.78E-03	1.22E-03	8.50E-04

H-12

**APPENDIX I  
DETAILED RESULTS FOR EVENT HARRY**

HARRY  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.798E-13

TIME		MR/HR	MICROCURIES/SQ METER
ZERO TIME	HOURS	1.08E+02	1.19E+04
1.00E+00		3.41E+01	2.48E+03
2.00E+00		1.35E+01	9.25E+02
3.00E+00		7.21E+00	5.47E+02
4.00E+00		4.47E+00	3.95E+02
6.00E+00		2.33E+00	2.64E+02
9.00E+00		1.37E+00	1.82E+02
1.20E+01		1.00E+00	1.40E+02
1.50E+01		7.86E-01	1.13E+02
1.80E+01		6.42E-01	9.43E+01
2.10E+01		5.38E-01	8.07E+01
1.00E+00	DAYS	4.54E-01	6.94E+01
2.00E+00		2.05E-01	3.30E+01
5.00E+00		8.05E-02	1.23E+01
1.00E+01		3.72E-02	5.11E+00
2.00E+01		1.48E-02	1.97E+00
3.00E+01		8.41E-03	1.20E+00
5.00E+01		3.79E-03	6.61E-01
1.00E+02		1.25E-03	2.84E-01
2.00E+02		4.21E-04	9.92E-02
3.00E+02		1.65E-04	4.85E-02
1.00E+00	YEARS	9.70E-05	3.53E-02
1.50E+00		3.31E-05	2.03E-02
2.00E+00		2.08E-05	1.45E-02
3.50E+00		1.27E-05	7.25E-03
5.00E+00		1.00E-05	4.84E-03
7.00E+00		8.63E-06	3.71E-03
1.00E+01		7.67E-06	3.10E-03
2.00E+01		5.84E-06	2.26E-03
3.50E+01		4.11E-06	1.56E-03
5.00E+01		2.90E-06	1.09E-03

HARRY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.798E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BE 7	1.90E-06	1.90E-06	1.90E-06	1.90E-06	1.90E-06	1.90E-06	1.89E-06	1.89E-06	1.88E-06	1.88E-06	1.88E-06	1.88E-06
* NA 24	2.86E-03	2.73E-03	2.61E-03	2.49E-03	2.38E-03	2.27E-03	2.17E-03	2.07E-03	1.97E-03	1.87E-03	1.77E-03	1.67E-03
MN 54	9.10E-06	9.10E-06	9.10E-06	9.10E-06	9.10E-06	9.10E-06	9.10E-06	9.10E-06	9.02E-06	9.02E-06	9.02E-06	9.02E-06
FE 55	2.07E-05	2.07E-05	2.07E-05	2.07E-05	2.07E-05	2.07E-05	2.07E-05	2.07E-05	2.07E-05	2.07E-05	2.07E-05	2.07E-05
FE 59	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.09E-05	2.09E-05	2.08E-05	2.08E-05
CO 57	4.27E-05	4.27E-05	4.27E-05	4.27E-05	4.27E-05	4.27E-05	4.27E-05	4.27E-05	4.27E-05	4.27E-05	4.27E-05	4.27E-05
CO 58	1.35E-04	1.35E-04	1.35E-04	1.35E-04	1.35E-04	1.35E-04	1.35E-04	1.35E-04	1.35E-04	1.34E-04	1.34E-04	1.34E-04
CO 60	1.99E-05	1.99E-05	1.99E-05	1.99E-05	1.99E-05	1.99E-05	1.99E-05	1.99E-05	1.99E-05	1.99E-05	1.99E-05	1.99E-05
CU 64	2.82E+00	2.67E+00	2.53E+00	2.40E+00	2.27E+00	2.14E+00	2.04E+00	1.93E+00	1.82E+00	1.72E+00	1.62E+00	1.52E+00
CU 67	4.41E-04	4.37E-04	4.30E-04	4.26E-04	4.22E-04	4.18E-04	4.14E-04	4.10E-04	4.06E-04	4.02E-04	3.98E-04	3.94E-04
W 181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU 198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU 199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB 203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U 237	8.22E-02	8.19E-02	8.15E-02	8.12E-02	8.08E-02	8.01E-02	7.90E-02	7.81E-02	7.71E-02	7.60E-02	7.51E-02	7.41E-02
U 239	2.30E+03	3.91E+02	6.68E+01	1.14E+01	1.93E+00	5.63E-02	2.79E-04	1.38E-06	6.81E-09	3.37E-11	1.67E-13	8.13E-16
U 240	8.80E-01	8.38E-01	7.98E-01	7.60E-01	7.23E-01	6.55E-01	5.65E-01	4.87E-01	4.21E-01	3.63E-01	3.13E-01	2.70E-01
NP 239	7.85E-03	1.32E+01	1.52E+01	1.55E+01	1.53E+01	1.50E+01	1.44E+01	1.39E+01	1.34E+01	1.29E+01	1.24E+01	1.19E+01
NP 240M	1.39E-03	8.41E-01	8.05E-01	7.67E-01	7.30E-01	6.60E-01	5.70E-01	4.92E-01	4.24E-01	3.66E-01	3.16E-01	2.73E-01
NP 240	3.53E-11	1.81E-11	9.41E-12	4.86E-12	2.51E-12	6.72E-13	9.26E-14	1.28E-14	1.76E-15	2.43E-16	3.36E-17	4.61E-18
* AM 241	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09
* CM 242	2.28E-07	2.28E-07	2.28E-07	2.28E-07	2.28E-07	2.28E-07	2.28E-07	2.26E-07	2.26E-07	2.26E-07	2.26E-07	2.26E-07
GE 75	7.61E-06	3.69E-02	2.22E-02	1.34E-02	8.05E-03	2.92E-03	6.37E-04	1.40E-04	3.05E-05	6.64E-06	1.45E-06	3.11E-07
GE 77	4.99E-03	1.28E-02	1.21E-02	1.14E-02	1.07E-02	9.46E-03	7.87E-03	6.54E-03	5.45E-03	4.53E-03	3.77E-03	3.11E-03
AS 77	5.15E-05	8.15E-03	8.24E-03	8.29E-03	8.35E-03	8.40E-03	8.40E-03	8.35E-03	8.22E-03	8.05E-03	7.85E-03	7.65E-03
SE 77M	2.03E-09	2.44E-05	2.48E-05	2.49E-05	2.49E-05	2.51E-05	2.53E-05	2.51E-05	2.48E-05	2.42E-05	2.35E-05	2.28E-05
GE 78	7.69E-01	4.80E-01	2.99E-01	1.87E-01	1.17E-01	4.54E-02	1.10E-02	2.67E-03	6.51E-04	1.58E-04	3.84E-05	8.81E-06
AS 78	1.38E-02	2.30E-01	2.83E-01	2.65E-01	2.22E-01	1.31E-01	4.86E-02	1.61E-02	4.99E-03	1.49E-03	4.32E-04	1.11E-04
AS 79	1.52E+01	1.50E-01	1.48E-03	1.46E-05	1.43E-07	1.39E-11	1.32E-17	1.26E-23	1.21E-29	1.15E-35	1.10E-41	1.05E-47
SE 79M	2.26E-02	2.65E-01	2.61E-03	2.58E-05	2.53E-07	2.45E-11	2.34E-17	2.23E-23	2.13E-29	2.03E-35	1.94E-41	1.85E-47
BR 80	9.57E-02	9.03E-03	8.48E-04	7.98E-05	7.51E-06	6.66E-08	5.58E-11	4.65E-14	3.87E-17	3.23E-20	2.70E-23	2.27E-26
SE 81M	7.90E-02	3.69E+00	1.78E+00	8.55E-01	4.11E-01	9.61E-02	1.08E-02	1.21E-03	1.35E-04	1.51E-05	1.70E-06	1.98E-07
SE 81	9.65E-01	4.36E+00	2.52E+00	1.26E+00	6.11E-01	1.43E-01	1.60E-02	1.79E-03	2.00E-04	2.25E-05	2.52E-06	2.89E-07
BR 82	4.82E-04	4.73E-04	4.63E-04	4.55E-04	4.45E-04	4.28E-04	4.04E-04	3.81E-04	3.59E-04	3.38E-04	3.19E-04	3.01E-04
SE 83	4.43E+01	8.40E+00	1.59E+00	3.02E-01	5.71E-02	2.05E-03	1.40E-05	9.49E-08	6.48E-10	4.39E-12	2.79E-14	1.71E-16
BR 83	3.68E-01	5.50E+00	5.09E+00	4.00E+00	3.04E+00	1.72E+00	7.26E-01	3.05E-01	1.29E-01	5.45E-02	2.30E-02	8.11E-03
KR 83M	1.90E-05	1.24E+00	2.54E+00	3.16E+00	3.26E+00	2.72E+00	1.60E+00	8.25E-01	3.97E-01	1.84E-01	8.25E-02	3.71E-03

HARRY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.798E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BR 84	9.34E-02	1.61E+01	4.35E+00	1.18E+00	3.18E-01	2.33E-02	4.60E-04	9.09E-06	1.80E-07	3.56E-09	7.03E-11	
KR 85M	4.47E-03	9.58E+00	8.15E+00	6.96E+00	5.95E+00	4.34E+00	2.71E+00	1.69E+00	1.05E+00	6.55E-01	4.09E-01	
KR 87	7.46E+01	4.31E+01	2.49E+01	1.44E+01	8.32E+00	2.79E+00	5.41E-01	1.05E-01	2.03E-02	3.93E-03	7.60E-04	
KR 88	4.26E+01	3.33E+01	2.60E+01	2.03E+01	1.58E+01	9.61E+00	4.59E+00	2.19E+00	1.04E+00	4.95E-01	2.35E-01	
RB 88	1.08E+01	3.36E+01	2.87E+01	2.26E+01	1.77E+01	1.08E+01	5.14E+00	2.45E+00	1.17E+00	5.54E-01	2.63E-01	
RB 89	5.18E+01	4.86E+01	3.27E+00	2.20E-01	1.47E-02	6.67E-05	2.02E-08	6.09E-12	1.85E-15	5.62E-19	1.70E-22	
SR 89	3.96E-06	1.39E-01	1.48E-01	1.48E-01	1.48E-01	1.48E-01	1.48E-01	1.48E-01	1.48E-01	1.47E-01	1.47E-01	
SR 90	7.98E-06	8.19E-04	8.19E-04	8.19E-04	8.19E-04	8.19E-04	8.19E-04	8.19E-04	8.19E-04	8.19E-04	8.19E-04	
SR 91	9.38E-01	1.75E+01	1.63E+01	1.52E+01	1.41E+01	1.22E+01	9.85E+00	7.97E+00	6.43E+00	5.16E+00	4.17E+00	
Y 91M	6.31E-05	6.02E+00	8.20E+00	8.79E+00	8.67E+00	7.79E+00	6.37E+00	5.13E+00	4.14E+00	3.33E+00	2.69E+00	
Y 91	2.58E-08	5.35E-03	1.23E-02	1.97E-02	2.69E-02	4.03E-02	5.72E-02	7.08E-02	8.20E-02	9.09E-02	9.80E-02	
SR 92	6.84E+00	3.06E+01	2.37E+01	1.83E+01	1.42E+01	8.50E+00	3.95E+00	1.83E+00	8.50E-01	3.95E-01	1.84E-01	
Y 92	3.15E-01	6.43E+00	1.01E+01	1.20E+01	1.27E+01	1.21E+01	9.29E+00	6.33E+00	4.07E+00	2.51E+00	1.51E+00	
SR 93	2.75E+02	4.74E+00	2.62E-02	1.45E-04	7.98E-07	2.44E-11	4.11E-18	6.94E-25	1.17E-31	1.98E-38	3.33E-45	
Y 93	3.36E-01	1.09E+01	1.02E+01	9.55E+00	8.92E+00	7.79E+00	6.34E+00	5.18E+00	4.21E+00	3.45E+00	2.81E+00	
Y 94	4.01E+01	5.47E+01	7.04E+00	9.08E-01	1.17E-01	1.95E-03	4.17E-06	8.95E-09	1.91E-11	4.17E-14	2.31E-15	
Y 95	6.73E+02	1.63E+01	3.59E-01	7.92E-03	1.74E-04	8.46E-08	9.06E-13	9.68E-18	1.03E-22	1.11E-27	1.18E-32	
ZR 95	8.49E-04	8.49E-02	8.66E-02	8.66E-02	8.66E-02	8.66E-02	8.66E-02	8.66E-02	8.66E-02	8.66E-02	8.66E-02	
NB 95	7.23E-11	5.24E-05	1.22E-04	1.92E-04	2.62E-04	4.02E-04	6.09E-04	8.20E-04	1.03E-03	1.23E-03	1.44E-03	
ZR 97	1.56E+00	6.81E+00	6.51E+00	6.27E+00	6.00E+00	5.54E+00	4.90E+00	4.33E+00	3.85E+00	3.39E+00	3.01E+00	
NB 97M	8.05E-03	6.54E+00	6.27E+00	6.03E+00	5.79E+00	5.33E+00	4.71E+00	4.17E+00	3.69E+00	3.26E+00	2.88E+00	
NB 97	7.83E-01	3.42E+00	4.82E+00	5.49E+00	5.76E+00	5.73E+00	5.22E+00	4.66E+00	4.12E+00	3.63E+00	3.23E+00	
NB 98	8.86E+00	3.92E+00	1.73E+00	7.67E-01	3.40E-01	6.65E-02	5.75E-03	4.97E-04	4.33E-05	3.75E-06	3.23E-07	
MO 99	4.69E-03	1.93E+00	1.91E+00	1.90E+00	1.88E+00	1.84E+00	1.78E+00	1.73E+00	1.68E+00	1.62E+00	1.57E+00	
TC 99M	4.36E-08	1.85E-01	3.46E-01	4.90E-01	6.15E-01	8.21E-01	1.04E+00	1.18E+00	1.27E+00	1.32E+00	1.34E+00	
MO101	1.34E+02	6.06E+01	3.52E+00	2.04E-01	1.18E-02	3.96E-05	7.70E-09	1.50E-12	2.92E-16	5.66E-20	1.10E-23	
TC101	5.66E+00	1.70E+02	1.86E+01	1.52E+00	1.11E-01	5.00E-04	1.25E-07	2.80E-11	5.94E-15	1.22E-18	2.47E-22	
MO102	1.11E+03	2.53E+01	5.76E-01	1.32E-02	3.00E-04	1.56E-07	1.86E-12	2.20E-17	2.61E-22	3.09E-27	3.67E-32	
TC102M	7.14E-01	2.14E+01	4.91E-01	1.12E-02	2.55E-04	1.32E-07	1.57E-12	1.86E-17	2.20E-22	2.62E-27	3.11E-32	
TC102	3.34E+03	1.27E+01	2.91E-01	6.61E-03	1.51E-04	7.88E-08	9.36E-13	1.11E-17	1.32E-22	1.56E-27	1.85E-32	
RU103	7.95E-05	1.84E-01	1.84E-01	1.84E-01	1.84E-01	1.83E-01	1.83E-01	1.83E-01	1.82E-01	1.82E-01	1.81E-01	
RH103M	5.30E-09	9.53E-02	1.41E-01	1.64E-01	1.74E-01	1.81E-01	1.83E-01	1.83E-01	1.82E-01	1.82E-01	1.82E-01	
TC104	6.83E+01	4.90E+01	4.90E+00	4.86E-01	4.80E-02	4.73E-04	4.62E-07	4.52E-10	4.41E-13	4.31E-16	4.21E-19	
RU105	5.45E-01	1.89E+01	1.61E+01	1.38E+01	1.18E+01	8.63E+00	5.41E+00	3.38E+00	2.12E+00	1.32E+00	8.31E-01	
RH105M	3.58E-03	1.89E+01	1.62E+01	1.38E+01	1.18E+01	8.67E+00	5.41E+00	3.39E+00	2.12E+00	1.33E+00	8.31E-01	
RH105	5.89E-09	3.84E-01	7.12E-01	9.83E-01	1.21E+00	1.55E+00	1.85E+00	1.99E+00	2.03E+00	2.01E+00	1.96E+00	
RU106	4.68E-04	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	
RH106	5.06E-06	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	8.85E-03	
RH107	1.11E-01	1.51E+01	2.29E+00	3.44E-01	5.19E-02	1.18E-03	4.08E-06	1.41E-08	4.84E-11	1.66E-14	6.5E-17	
PD107M	2.31E-04	3.07E+00	4.63E-01	7.00E-02	1.06E-02	2.41E-04	8.30E-07	2.86E-09	9.85E-12	3.40E-14	1.16E-16	

HARRY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.798E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
PD109	6.49E-03	5.39E-01	5.12E-01	4.85E-01	4.61E-01	4.16E-01	3.58E-01	3.06E-01	2.63E-01	2.25E-01	1.93E-01	1.93E-01
AG109M	3.75E-05	5.39E-01	5.12E-01	4.86E-01	4.62E-01	4.17E-01	3.58E-01	3.06E-01	2.63E-01	2.25E-01	1.93E-01	1.93E-01
PD111M	7.95E-01	7.00E-01	6.17E-01	5.46E-01	4.80E-01	3.74E-01	2.56E-01	1.75E-01	1.20E-01	8.21E-02	5.63E-02	5.63E-02
PD111	2.83E-01	5.10E-01	4.89E-01	4.36E-01	3.86E-01	3.00E-01	2.06E-01	1.41E-01	9.64E-02	6.61E-02	4.54E-02	4.54E-02
AG111M	2.25E-03	6.88E-01	6.46E-01	5.78E-01	5.10E-01	3.94E-01	2.70E-01	1.85E-01	1.27E-01	8.69E-02	5.93E-02	5.93E-02
AG111	8.01E-10	2.37E-03	4.98E-03	7.32E-03	9.40E-03	1.28E-02	1.65E-02	1.89E-02	2.04E-02	2.14E-02	2.20E-02	2.20E-02
PD112	1.54E-01	1.49E-01	1.44E-01	1.39E-01	1.35E-01	1.26E-01	1.15E-01	1.04E-01	9.39E-02	8.50E-02	7.70E-02	7.70E-02
AG112	4.64E-06	2.95E-02	5.21E-02	7.00E-02	8.31E-02	9.96E-02	1.09E-01	1.09E-01	1.04E-01	9.67E-02	8.92E-02	8.92E-02
AG113	1.45E-03	3.11E-01	2.72E-01	2.39E-01	2.10E-01	1.61E-01	1.09E-01	7.37E-02	4.98E-02	3.36E-02	2.27E-02	2.27E-02
AG115	5.21E-01	5.58E-01	6.95E-02	8.68E-03	1.09E-03	1.70E-05	3.32E-08	6.49E-11	1.26E-13	1.25E-16	1.16E-16	1.16E-16
CD115M	4.26E-09	1.13E-04	1.27E-04	1.29E-04	1.29E-04	1.29E-04	1.29E-04	1.29E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04
CD115	1.65E-06	3.10E-02	3.34E-02	3.33E-02	3.29E-02	3.20E-02	3.08E-02	2.96E-02	2.85E-02	2.75E-02	2.64E-02	2.64E-02
IN115M	2.05E-11	3.42E-03	7.61E-03	1.13E-02	1.44E-02	1.92E-02	2.37E-02	2.61E-02	2.72E-02	2.75E-02	2.72E-02	2.72E-02
CD117	3.66E-02	6.10E-01	4.59E-01	3.43E-01	2.57E-01	1.44E-01	6.05E-02	2.55E-02	1.07E-02	4.51E-03	1.90E-03	1.90E-03
IN117M	1.76E-06	2.12E-01	3.07E-01	3.33E-01	3.22E-01	2.54E-01	1.45E-01	7.43E-02	3.57E-02	1.65E-02	7.47E-03	7.47E-03
IN117	7.09E-11	3.87E-02	9.36E-02	1.30E-01	1.45E-01	1.34E-01	8.50E-02	4.55E-02	2.26E-02	1.06E-02	4.90E-03	4.90E-03
CD118	2.42E+00	1.04E+00	4.46E-01	1.90E-01	8.14E-02	1.49E-02	1.17E-03	9.14E-05	7.19E-06	5.63E-07	4.42E-08	4.42E-08
IN118	1.61E-01	1.04E+00	4.46E-01	1.91E-01	8.14E-02	1.49E-02	1.17E-03	9.18E-05	7.19E-06	5.63E-07	4.42E-08	4.42E-08
CD119	6.04E+00	9.42E-02	1.47E-03	2.30E-05	3.59E-07	8.79E-11	3.35E-16	1.28E-21	4.87E-27	1.86E-32	7.12E-38	7.12E-38
IN119M	9.11E-03	1.02E+00	1.11E-01	1.12E-02	1.11E-03	1.10E-05	1.07E-08	1.05E-11	1.02E-14	9.96E-18	9.74E-21	9.74E-21
IN119	4.49E-01	5.36E-02	6.22E-03	6.31E-04	6.31E-05	6.18E-07	6.04E-10	5.91E-13	5.77E-16	5.63E-19	5.50E-22	5.50E-22
SN121	7.45E-04	7.67E-02	7.45E-02	7.28E-02	7.10E-02	6.75E-02	6.22E-02	5.79E-02	5.35E-02	4.95E-02	4.60E-02	4.60E-02
SN123M	4.24E-01	7.92E-01	2.81E-01	9.93E-02	3.51E-02	4.38E-03	1.94E-04	8.58E-06	3.80E-07	1.68E-08	7.41E-10	7.41E-10
SN123	3.98E-06	4.16E-04	4.16E-04	4.16E-04	4.16E-04	4.16E-04	4.16E-04	4.16E-04	4.16E-04	4.16E-04	4.16E-04	4.16E-04
SN125	1.13E-02	1.12E-02	1.12E-02	1.12E-02	1.11E-02	1.11E-02	1.10E-02	1.09E-02	1.08E-02	1.06E-02	1.06E-02	1.06E-02
SB125	6.76E-05	6.79E-05	6.82E-05	6.85E-05	6.88E-05	6.94E-05	7.06E-05	7.15E-05	7.23E-05	7.32E-05	7.41E-05	7.41E-05
SB126	2.12E-03	2.11E-03	2.11E-03	2.10E-03	2.10E-03	2.09E-03	2.07E-03	2.06E-03	2.04E-03	2.03E-03	2.02E-03	2.02E-03
SN127	3.13E+00	2.24E+00	1.61E+00	1.16E+00	8.37E-01	4.31E-01	1.60E-01	5.96E-02	2.21E-02	8.22E-03	3.05E-03	3.05E-03
SB127	3.65E-02	1.26E-01	1.39E-01	1.48E-01	1.55E-01	1.61E-01	1.64E-01	1.62E-01	1.60E-01	1.56E-01	1.53E-01	1.53E-01
TE127	2.06E-02	2.56E-02	3.12E-02	3.70E-02	4.27E-02	5.36E-02	6.86E-02	8.01E-02	8.92E-02	9.62E-02	1.01E-01	1.01E-01
SN128	2.10E+01	1.04E+01	5.13E+00	2.53E+00	1.25E+00	3.06E-01	3.69E-02	4.45E-03	5.37E-04	6.51E-05	7.85E-06	7.85E-06
SB128M	1.07E-02	1.18E+01	6.12E+00	3.02E+00	1.49E+00	3.65E-01	4.40E-02	5.31E-03	6.40E-04	7.74E-05	9.35E-06	9.35E-06
SB128	8.85E-01	8.52E-01	8.01E-01	7.51E-01	7.01E-01	6.01E-01	4.80E-01	3.81E-01	3.02E-01	2.40E-01	1.90E-01	1.90E-01
SN129M	1.35E+01	6.73E+00	3.38E+00	1.69E+00	8.44E-01	2.11E-01	2.64E-02	3.30E-03	4.12E-04	5.16E-05	6.44E-06	6.44E-06
SN129	9.01E+01	8.84E-01	8.73E-03	8.61E-05	8.44E-07	8.21E-11	7.81E-17	7.47E-23	7.13E-29	6.79E-35	6.50E-41	6.50E-41
SB129	5.07E+00	8.50E+00	7.98E+00	7.13E+00	6.27E+00	4.66E+00	2.90E+00	1.80E+00	1.11E+00	6.84E-01	4.21E-01	4.21E-01
TE129M	9.58E-08	1.06E-03	2.18E-03	3.21E-03	4.12E-03	5.59E-03	7.07E-03	7.98E-03	8.55E-03	8.90E-03	9.12E-03	9.12E-03
TE129	3.65E+00	5.02E+00	5.87E+00	6.10E+00	5.87E+00	4.86E+00	3.24E+00	2.04E+00	1.27E+00	7.87E-01	4.88E-01	4.88E-01
SB130M	5.11E-01	9.64E-01	2.53E-03	6.65E-06	1.75E-08	1.21E-13	2.20E-21	4.00E-29	7.26E-37	1.32E-44	2.40E-52	2.40E-52
SB130	8.75E+01	2.65E+01	7.54E+00	2.13E+00	6.04E-01	4.86E-02	1.11E-03	2.53E-05	5.76E-07	1.31E-08	3.00E-10	3.00E-10

HARRY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.798E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
I130	2.44E-02	2.31E-02	2.18E-02	2.06E-02	1.95E-02	1.75E-02	1.47E-02	1.25E-02	1.05E-02	8.92E-03	7.54E-03
SB131	2.04E+02	5.31E+01	8.69E+00	1.43E+00	2.34E-01	6.30E-03	2.77E-05	1.23E-07	5.39E-10	2.38E-12	1.19E-14
TE131M	9.79E-05	5.12E-01	5.84E-01	5.85E-01	5.74E-01	5.48E-01	5.11E-01	4.77E-01	4.45E-01	4.15E-01	3.88E-01
TE131	9.01E+01	9.79E+01	3.19E+01	8.30E+00	2.02E+00	1.89E-01	9.40E-02	8.69E-02	8.10E-02	7.58E-02	7.06E-02
I131	1.31E-02	4.54E-01	6.68E-01	7.32E-01	7.45E-01	7.52E-01	7.52E-01	7.45E-01	7.45E-01	7.39E-01	7.39E-01
TE132	1.05E+00	2.55E+00	2.52E+00	2.50E+00	2.48E+00	2.44E+00	2.37E+00	2.31E+00	2.25E+00	2.19E+00	2.13E+00
I132	2.57E+00	2.57E+00	2.56E+00	2.55E+00	2.53E+00	2.50E+00	2.44E+00	2.38E+00	2.31E+00	2.26E+00	2.20E+00
TE133M	1.27E-01	4.41E+01	1.92E+01	8.37E+00	3.64E+00	6.91E-01	5.69E-02	4.69E-03	3.87E-04	3.19E-05	2.63E-06
TE133	7.16E+02	4.06E+01	4.51E+00	1.49E+00	6.31E-01	1.19E-01	9.88E-03	8.13E-04	6.73E-05	5.54E-06	4.57E-07
I133	1.11E+00	1.19E+01	1.29E+01	1.29E+01	1.27E+01	1.20E+01	1.09E+01	9.88E+00	8.91E+00	8.13E+00	7.34E+00
XE133M	4.72E-08	2.69E-03	6.49E-03	1.04E-02	1.41E-02	2.12E-02	3.07E-02	3.90E-02	4.60E-02	5.20E-02	5.69E-02
XE133	8.25E-07	4.69E-02	1.14E-01	1.82E-01	2.50E-01	3.78E-01	5.55E-01	7.09E-01	8.49E-01	9.70E-01	1.08E+00
TE134	2.25E+02	1.04E+02	3.89E+01	1.44E+01	5.36E+00	7.43E-01	3.80E-02	1.95E-03	9.97E-05	5.12E-06	2.62E-07
I134	1.03E+02	1.38E+02	9.67E+01	5.67E+01	3.04E+01	7.73E+00	8.49E-01	8.67E-02	8.49E-03	8.14E-04	7.73E-05
I135	1.88E+01	3.31E+01	2.99E+01	2.69E+01	2.43E+01	1.97E+01	1.45E+01	1.06E+01	7.78E+00	5.73E+00	4.18E+00
XE135M	2.08E-03	9.57E+00	9.30E+00	8.43E+00	7.57E+00	6.16E+00	4.52E+00	3.31E+00	2.43E+00	1.78E+00	1.31E+00
XE135	2.17E+00	4.29E+00	6.27E+00	7.89E+00	9.19E+00	1.10E+01	1.22E+01	1.23E+01	1.17E+01	1.06E+01	9.51E+00
CS136	5.57E-03	5.55E-03	5.54E-03	5.53E-03	5.52E-03	5.49E-03	5.45E-03	5.42E-03	5.38E-03	5.35E-03	5.31E-03
CS137	9.20E-05	9.92E-04	9.92E-04	9.92E-04	9.92E-04	9.92E-04	9.92E-04	9.92E-04	9.92E-04	9.92E-04	9.92E-04
BA137M	1.94E-07	9.25E-04	9.25E-04	9.25E-04	9.25E-04	9.25E-04	9.25E-04	9.25E-04	9.25E-04	9.25E-04	9.25E-04
XE138	7.18E+02	6.18E+01	5.37E+00	4.66E-01	4.03E-02	3.02E-04	1.97E-07	1.28E-10	8.30E-14	5.39E-17	3.50E-20
CS138	1.07E+02	1.80E+02	6.24E+01	1.83E+01	5.13E+00	3.91E-01	8.13E-03	1.69E-04	3.50E-06	7.29E-08	1.51E-09
CS139	6.74E+02	2.15E+01	2.70E-01	3.39E-03	4.25E-05	6.68E-09	1.33E-14	2.63E-20	5.20E-26	1.03E-31	2.04E-37
BA139	1.24E+01	1.39E+02	8.56E+01	5.20E+01	3.14E+01	1.15E+01	2.56E+00	5.68E-01	1.26E-01	2.80E-02	6.22E-03
BA140	1.11E-01	6.92E-01	6.92E-01	6.86E-01	6.86E-01	6.81E-01	6.81E-01	6.76E-01	6.71E-01	6.65E-01	6.60E-01
LA140	2.63E-07	1.18E-02	2.34E-02	3.48E-02	4.59E-02	6.76E-02	9.87E-02	1.28E-01	1.55E-01	1.81E-01	2.05E-01
BA141	1.66E+02	5.01E+01	4.97E+00	4.93E-01	4.89E-02	4.85E-04	4.74E-07	4.62E-10	4.50E-13	4.42E-16	4.30E-19
LA141	1.53E+00	3.24E+01	3.03E+01	2.56E+01	2.15E+01	1.51E+01	8.84E+00	5.17E+00	3.04E+00	1.78E+00	1.05E+00
CE141	1.89E-07	2.11E-02	4.93E-02	7.42E-02	9.51E-02	1.27E-01	1.58E-01	1.76E-01	1.86E-01	1.92E-01	1.95E-01
BA142	3.31E+02	1.32E+01	3.00E-01	6.85E-03	1.56E-04	8.11E-08	9.63E-13	1.14E-17	1.36E-22	1.61E-27	1.91E-32
LA142	7.61E+00	5.29E+01	3.48E+01	2.22E+01	1.41E+01	5.70E+00	1.47E+00	3.79E-01	9.77E-02	2.52E-02	6.49E-03
LA143	1.26E+02	2.45E+01	1.26E+00	6.46E-02	3.32E-03	8.69E-06	1.17E-09	1.58E-13	2.13E-17	2.87E-21	3.88E-25
CE143	5.02E-02	3.20E+00	3.32E+00	3.23E+00	3.17E+00	3.05E+00	2.86E+00	2.69E+00	2.52E+00	2.37E+00	2.22E+00
PR143	1.47E-08	4.90E-03	1.18E-02	1.87E-02	2.54E-02	3.85E-02	5.67E-02	7.40E-02	8.98E-02	1.05E-01	1.19E-01
CE144	2.01E-03	1.44E-02	1.44E-02	1.44E-02	1.44E-02	1.44E-02	1.44E-02	1.44E-02	1.44E-02	1.44E-02	1.44E-02
PR144	5.53E-07	1.31E-02	1.43E-02	1.44E-02	1.44E-02	1.44E-02	1.44E-02	1.44E-02	1.44E-02	1.44E-02	1.44E-02
PR145	8.05E-02	1.18E+01	1.05E+01	9.36E+00	8.35E+00	6.61E+00	4.66E+00	3.29E+00	2.33E+00	1.65E+00	1.16E+00
CE146	2.34E+02	1.20E+01	6.16E-01	3.15E-02	1.62E-03	4.27E-06	5.75E-10	7.75E-14	1.04E-17	1.41E-21	1.90E-25
PR146	4.84E+00	4.22E+01	9.55E+00	1.80E+00	3.23E-01	1.02E-02	5.61E-05	3.09E-07	1.71E-09	9.47E-12	5.17E-14
PR147	2.72E+01	7.88E+00	2.46E-01	7.68E-03	2.40E-04	2.35E-07	7.16E-12	2.19E-16	6.67E-21	2.04E-25	6.21E-30

HARRY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.798E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
ND147	9.72E-06	1.83E-01	1.88E-01	1.88E-01	1.87E-01	1.86E-01	1.85E-01	1.83E-01	1.82E-01	1.81E-01	1.79E-01
ND149	1.38E+01	9.39E+00	6.39E+00	4.35E+00	2.95E+00	1.37E+00	4.30E-01	1.36E-01	4.28E-02	1.35E-02	4.25E-03
PM149	1.92E-03	1.50E-01	2.49E-01	3.16E-01	3.57E-01	4.02E-01	4.17E-01	4.09E-01	3.99E-01	3.83E-01	3.70E-01
PM150	1.58E-01	1.22E-01	9.43E-02	7.28E-02	5.63E-02	3.38E-02	1.56E-02	7.23E-03	3.35E-03	1.55E-03	7.18E-04
ND151	5.28E+01	1.65E+00	5.16E-02	1.61E-03	5.04E-05	4.92E-08	1.50E-12	4.59E-17	1.40E-21	4.26E-26	1.31E-30
PM151	3.35E-02	3.91E-01	3.94E-01	3.84E-01	3.75E-01	3.56E-01	3.30E-01	3.06E-01	2.85E-01	2.64E-01	2.45E-01
PM152	8.45E+01	8.27E-02	8.06E-05	7.88E-08	7.69E-11	7.35E-17	6.84E-26	6.38E-35	5.94E-44	5.55E-53	5.16E-62
SM153	1.12E-01	1.11E-01	1.09E-01	1.07E-01	1.06E-01	1.03E-01	9.84E-02	9.40E-02	9.00E-02	8.63E-02	8.25E-02
SM155	5.98E+00	9.82E-01	1.61E-01	2.63E-02	4.32E-03	1.16E-04	5.13E-07	2.26E-09	9.96E-12	4.44E-14	1.09E-16
EU155	4.40E-06	1.25E-04	1.45E-04	1.48E-04	1.49E-04	1.49E-04	1.49E-04	1.49E-04	1.49E-04	1.49E-04	1.49E-04
SM156	9.97E-02	9.25E-02	8.60E-02	7.98E-02	7.41E-02	6.40E-02	5.13E-02	4.11E-02	3.30E-02	2.64E-02	2.11E-02
EU156	2.91E-04	4.75E-04	6.45E-04	8.04E-04	9.51E-04	1.21E-03	1.54E-03	1.78E-03	2.00E-03	2.16E-03	2.27E-03
EU157	1.63E-02	5.42E-02	5.17E-02	4.94E-02	4.71E-02	4.30E-02	3.76E-02	3.28E-02	2.86E-02	2.49E-02	2.17E-02
EU158	5.65E-01	2.29E-01	9.26E-02	3.75E-02	1.52E-02	2.49E-03	1.66E-04	1.10E-05	7.29E-07	4.84E-08	3.22E-09
EU159	6.87E-01	6.83E-02	6.77E-03	6.72E-04	6.66E-05	6.57E-07	6.42E-10	6.27E-13	6.11E-16	5.98E-19	5.84E-22
GD159	2.94E-03	1.29E-02	1.34E-02	1.30E-02	1.25E-02	1.16E-02	1.03E-02	9.21E-03	8.19E-03	7.30E-03	6.51E-03
TB161	3.62E-05	2.60E-04	2.59E-04	2.58E-04	2.57E-04	2.54E-04	2.52E-04	2.48E-04	2.45E-04	2.42E-04	2.39E-04
TOTAL	1.19E+04	2.48E+03	9.25E+02	5.47E+02	3.95E+02	2.64E+02	1.82E+02	1.40E+02	1.13E+02	9.43E+01	8.07E+01



HARRY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.798E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
BE 7	1.90E-06	1.88E-06	1.85E-06	1.78E-06	1.67E-06	1.46E-06	1.29E-06	9.90E-07	5.18E-07	1.41E-07	3.83E-08
* NA 24	2.86E-03	9.44E-04	3.11E-04	1.12E-05	4.37E-08	6.67E-13	1.02E-17	2.37E-27	0.	0.	0.
MN 54	9.10E-06	9.02E-06	9.02E-06	8.86E-06	8.78E-06	8.62E-06	8.46E-06	8.06E-06	7.19E-06	5.72E-06	4.56E-06
FE 55	2.07E-05	2.07E-05	2.07E-05	2.06E-05	2.06E-05	2.05E-05	2.02E-05	2.00E-05	1.92E-05	1.79E-05	1.66E-05
FE 59	2.10E-05	2.07E-05	2.04E-05	1.95E-05	1.80E-05	1.55E-05	1.33E-05	9.75E-06	4.53E-06	9.65E-07	2.07E-07
CO 57	4.27E-05	4.27E-05	4.24E-05	4.24E-05	4.18E-05	4.05E-05	3.96E-05	3.77E-05	3.32E-05	2.57E-05	1.99E-05
CO 58	1.35E-04	1.34E-04	1.33E-04	1.29E-04	1.23E-04	1.11E-04	1.01E-04	8.31E-05	5.12E-05	1.94E-05	7.31E-06
CO 60	1.99E-05	1.99E-05	1.99E-05	1.99E-05	1.98E-05	1.98E-05	1.97E-05	1.96E-05	1.91E-05	1.85E-05	1.78E-05
CU 64	2.82E+00	7.67E-01	2.09E-01	4.25E-03	6.38E-06	1.45E-11	3.28E-17	1.69E-28	0.	0.	0.
CU 67	4.41E-04	3.36E-04	2.57E-04	1.14E-04	2.97E-05	2.01E-06	1.35E-07	6.14E-10	8.59E-16	0.	0.
W 181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU 198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU 199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB 203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U 237	8.22E-02	7.42E-02	6.69E-02	4.92E-02	2.94E-02	1.05E-02	3.78E-03	4.83E-04	2.85E-06	3.07E-10	2.07E-10
U 240	8.80E-01	2.71E-01	8.31E-02	2.41E-03	6.62E-06	4.97E-11	3.74E-16	2.11E-26	0.	0.	0.
NP 237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP 239	7.85E-03	1.20E+01	8.93E+00	3.69E+00	8.43E-01	4.41E-02	2.31E-03	6.33E-06	2.49E-12	5.94E-22	5.94E-22
NP 240M	1.39E-03	2.73E-01	8.38E-02	2.43E-03	6.67E-06	5.02E-11	3.77E-16	2.13E-26	0.	0.	0.
AM 241	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.35E-09
* CM 242	2.28E-07	2.26E-07	2.25E-07	2.23E-07	2.18E-07	2.09E-07	2.01E-07	1.84E-07	1.50E-07	9.74E-08	6.37E-08
GE 77	4.99E-03	3.14E-03	7.18E-04	8.68E-06	5.52E-09	2.23E-15	9.01E-22	1.47E-34	0.	0.	0.
AS 77	5.15E-05	7.61E-03	5.50E-03	1.59E-03	1.87E-04	2.53E-06	3.44E-08	6.34E-12	2.94E-21	6.30E-40	1.35E-58
SE 77M	2.03E-09	2.29E-05	1.65E-05	4.78E-06	5.58E-07	7.59E-09	1.03E-10	1.90E-14	8.81E-24	1.88E-42	4.06E-61
AS 78	1.38E-02	1.23E-04	3.60E-09	3.04E-23	0.	0.	0.	0.	0.	0.	0.
BR 82	4.82E-04	3.01E-04	1.88E-04	4.57E-05	4.33E-06	3.89E-08	3.49E-10	2.82E-14	1.65E-24	5.65E-45	1.92E-65
BR 83	3.68E-01	9.70E-03	9.75E-06	9.91E-15	1.01E-29	0.	0.	0.	0.	0.	0.
KR 83M	1.90E-05	4.24E-02	4.82E-05	4.33E-14	4.44E-29	0.	0.	0.	0.	0.	0.
KR 85M	4.47E-03	2.55E-01	5.81E-03	6.90E-08	4.25E-16	1.62E-32	6.13E-49	0.	0.	0.	0.
KR 85	4.62E-06	1.21E-04	1.24E-04	1.24E-04	1.24E-04	1.24E-04	1.24E-04	1.23E-04	1.22E-04	1.20E-04	1.18E-04
KR 87	7.46E+01	1.47E-04	2.91E-10	2.26E-27	0.	0.	0.	0.	0.	0.	0.
KR 88	4.26E+01	1.12E-01	2.94E-04	5.34E-12	6.73E-25	0.	0.	0.	0.	0.	0.
RB 88	1.08E+01	1.25E-01	3.29E-04	5.98E-12	7.50E-25	0.	0.	0.	0.	0.	0.
SR 89	3.96E-06	1.19E-01	1.17E-01	1.12E-01	1.05E-01	9.22E-02	8.06E-02	6.20E-02	3.17E-02	8.35E-03	2.20E-03
SR 90	7.98E-06	8.19E-04	8.19E-04	8.19E-04	8.19E-04	8.19E-04	8.19E-04	8.19E-04	8.12E-04	8.12E-04	8.05E-04
SR Y 90	1.18E-11	1.88E-04	3.32E-04	5.97E-04	7.61E-04	8.12E-04	8.19E-04	8.19E-04	8.12E-04	8.12E-04	8.05E-04
SR 91	9.38E-01	3.36E+00	6.02E-01	3.45E-03	6.31E-07	2.14E-14	7.26E-22	8.26E-37	0.	0.	0.

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HARRY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.798E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
Y 91M	6.31E-05	2.17E+00	3.88E-01	2.23E-03	4.10E-07	1.38E-14	4.67E-22	5.33E-37	0.	0.	0.
Y 91	2.58E-08	1.03E-01	1.22E-01	1.22E-01	1.15E-01	1.02E-01	9.09E-02	7.20E-02	3.98E-02	1.23E-02	3.77E-03
SR 92	6.84E+00	8.53E-02	1.84E-04	1.85E-12	8.66E-26	0.	0.	0.	0.	0.	0.
Y 92	3.15E-01	8.94E-01	9.93E-03	7.64E-09	4.46E-19	1.52E-39	5.22E-60	0.	0.	0.	0.
Y 93	3.36E-01	2.27E+00	4.43E-01	3.33E-03	9.58E-07	7.91E-14	6.53E-21	4.46E-35	0.	0.	0.
ZR 95	6.49E-04	8.12E-02	8.03E-02	7.77E-02	7.38E-02	6.61E-02	5.95E-02	4.81E-02	2.82E-02	9.71E-03	3.33E-03
NB 95M	1.38E-11	2.75E-04	5.01E-04	9.57E-04	1.29E-03	1.36E-03	1.26E-03	1.02E-03	5.98E-04	2.06E-04	7.09E-05
NB 95	7.23E-11	1.57E-03	3.10E-03	7.43E-03	1.38E-02	2.38E-02	3.08E-02	3.82E-02	3.67E-02	1.77E-02	6.78E-03
ZR 97	1.56E+00	2.66E+00	1.00E+00	5.30E-02	3.98E-04	2.24E-08	1.26E-12	3.98E-21	2.25E-42	0.	0.
NB 97M	8.05E-03	2.56E+00	9.61E-01	5.11E-02	3.82E-04	2.15E-08	1.21E-12	3.82E-21	2.16E-42	0.	0.
NB 97	7.83E-01	2.67E+00	1.00E+00	5.33E-02	4.01E-04	2.41E-08	1.36E-12	4.31E-21	2.42E-42	0.	0.
MO 99	4.69E-03	1.53E+00	1.19E+00	5.64E-01	1.63E-01	1.36E-02	1.14E-03	7.94E-06	3.22E-11	5.32E-22	8.75E-33
TC 99M	4.36E-08	1.34E+00	1.13E+00	5.40E-01	1.56E-01	1.30E-02	1.09E-03	7.58E-06	3.08E-11	5.08E-22	8.36E-33
RU103	7.95E-05	1.81E-01	1.78E-01	1.69E-01	1.55E-01	1.30E-01	1.09E-01	7.70E-02	3.20E-02	5.55E-03	9.68E-04
RH103M	5.30E-09	1.81E-01	1.78E-01	1.69E-01	1.55E-01	1.30E-01	1.09E-01	7.70E-02	3.21E-02	5.55E-03	9.68E-04
RU105	5.45E-01	5.21E-01	1.23E-02	1.61E-07	1.18E-15	6.29E-32	3.37E-48	0.	0.	0.	0.
RH105M	3.58E-03	5.21E-01	1.23E-02	1.62E-07	1.18E-15	6.33E-32	3.38E-48	0.	0.	0.	0.
RH105	5.89E-09	1.88E+00	1.23E+00	3.06E-01	3.02E-02	2.94E-04	2.85E-06	2.69E-10	2.34E-20	1.75E-40	1.32E-60
RU106	4.68E-04	8.85E-03	8.82E-03	8.78E-03	8.70E-03	8.55E-03	8.36E-03	8.05E-03	7.32E-03	6.06E-03	5.02E-03
RH106	5.06E-06	8.85E-03	8.82E-03	8.78E-03	8.70E-03	8.55E-03	8.36E-03	8.05E-03	7.32E-03	6.06E-03	5.02E-03
PD109	6.49E-03	1.65E-01	4.82E-02	1.20E-03	2.52E-06	1.12E-11	5.00E-17	9.89E-28	0.	0.	0.
AG109M	3.75E-05	1.65E-01	4.83E-02	1.20E-03	2.53E-06	1.12E-11	5.00E-17	9.90E-28	0.	0.	0.
PD111M	7.95E-01	3.86E-02	1.87E-03	2.15E-07	5.81E-14	4.24E-27	3.11E-40	0.	0.	0.	0.
PD111	2.83E-01	3.11E-02	1.51E-03	1.73E-07	4.69E-14	3.41E-27	2.50E-40	0.	0.	0.	0.
AG111M	2.25E-03	4.06E-02	1.98E-03	2.27E-07	6.14E-14	4.51E-27	3.29E-40	0.	0.	0.	0.
AG111	8.01E-10	2.21E-02	2.12E-02	1.62E-02	1.02E-02	4.03E-03	1.60E-03	2.52E-04	2.48E-06	2.41E-10	2.33E-14
PD112	1.54E-01	7.00E-02	3.17E-02	2.94E-03	5.59E-05	2.03E-08	7.37E-12	9.67E-19	6.11E-36	0.	0.
AG112	4.64E-06	8.12E-02	3.73E-02	3.47E-03	6.62E-05	2.40E-08	8.69E-12	1.15E-18	7.19E-36	0.	0.
AG113	1.45E-03	1.53E-02	6.64E-04	5.39E-08	8.25E-15	1.93E-28	4.51E-42	0.	0.	0.	0.
CD115M	4.26E-09	1.23E-04	1.21E-04	1.15E-04	1.07E-04	9.05E-05	7.73E-05	5.58E-05	2.50E-05	4.96E-06	9.92E-07
CD115	1.65E-06	2.48E-02	1.82E-02	7.15E-03	1.51E-03	6.74E-05	3.01E-06	6.00E-09	1.06E-15	3.32E-29	1.04E-42
IN115M	2.05E-11	2.61E-02	1.98E-02	7.81E-03	1.65E-03	7.36E-05	3.28E-06	6.53E-09	1.16E-15	3.62E-29	1.13E-42
CD117	3.66E-02	7.99E-04	7.77E-07	7.26E-16	6.44E-31	0.	0.	0.	0.	0.	0.
IN117M	1.76E-06	3.32E-03	3.84E-06	3.70E-15	3.29E-30	0.	0.	0.	0.	0.	0.
IN117	7.09E-11	2.19E-03	2.59E-06	2.51E-15	2.22E-30	0.	0.	0.	0.	0.	0.
SN121	7.45E-04	4.25E-02	2.29E-02	3.61E-03	1.66E-04	3.50E-07	7.36E-10	3.28E-15	1.37E-28	0.	0.
SN123	3.99E-06	4.16E-04	4.13E-04	4.05E-04	3.94E-04	3.72E-04	3.53E-04	3.16E-04	2.40E-04	1.38E-04	7.92E-05
SN125	1.13E-02	1.05E-02	9.73E-03	7.79E-03	5.38E-03	2.58E-03	1.23E-03	2.82E-04	7.06E-06	4.44E-09	2.78E-12
SB125	6.76E-05	7.50E-05	8.20E-05	1.00E-04	1.23E-04	1.49E-04	1.60E-04	1.67E-04	1.64E-04	1.53E-04	1.43E-04
SB126	2.12E-03	2.00E-03	1.90E-03	1.61E-03	1.22E-03	6.97E-04	4.02E-04	1.32E-04	8.28E-06	4.02E-08	8.08E-09

HARRY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.798E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SN127	3.13E+00	1.13E-03	4.11E-07	1.96E-17	1.23E-34	0.	0.	0.	0.	0.	0.
SB127	3.65E-02	1.50E-01	1.25E-01	7.31E-02	3.00E-02	5.00E-03	8.37E-04	2.34E-05	3.05E-09	5.21E-17	8.87E-25
TE127M	2.95E-10	2.28E-04	4.18E-04	8.11E-04	1.12E-03	1.24E-03	1.19E-03	1.06E-03	7.71E-04	4.07E-04	2.15E-04
TE127	2.06E-02	1.07E-01	1.05E-01	6.41E-02	2.71E-02	5.56E-03	1.90E-03	1.07E-03	7.61E-04	4.03E-04	2.13E-04
SB126	8.85E-01	1.51E-01	2.38E-02	9.29E-05	9.02E-09	8.46E-17	7.96E-25	7.01E-41	0.	0.	0.
SB129	5.07E+00	2.59E-01	5.42E-03	4.93E-08	1.96E-16	3.10E-33	4.89E-50	0.	0.	0.	0.
TE129M	9.58E-08	1.01E-02	1.01E-02	9.52E-03	8.61E-03	7.01E-03	5.70E-03	3.80E-03	1.37E-03	1.79E-04	2.32E-05
TE129	3.65E+00	3.04E-01	1.27E-02	6.10E-03	5.50E-03	4.49E-03	3.66E-03	2.44E-03	8.78E-04	1.15E-04	1.49E-05
I130	2.44E-02	6.37E-03	1.67E-03	2.98E-05	3.64E-08	5.42E-14	8.09E-20	1.80E-31	0.	0.	0.
TE131M	9.79E-05	3.42E-01	1.96E-01	3.72E-02	2.33E-03	9.07E-06	3.55E-08	5.42E-13	4.93E-25	0.	0.
TE131	9.01E+01	6.24E-02	3.58E-02	6.81E-03	4.25E-04	1.66E-06	6.48E-09	9.92E-14	9.01E-26	0.	0.
I131	1.31E-02	7.06E-01	6.68E-01	5.37E-01	3.53E-01	1.49E-01	6.31E-02	1.13E-02	1.52E-04	2.77E-08	5.06E-12
XE131M	3.55E-11	3.27E-04	6.22E-04	1.30E-03	1.85E-03	1.83E-03	1.36E-03	5.62E-04	3.75E-05	1.12E-07	3.16E-10
TE132	1.05E+00	2.08E+00	1.68E+00	8.84E-01	3.05E-01	3.61E-02	4.28E-03	6.01E-05	1.41E-09	7.69E-19	4.20E-28
I132	2.57E+00	2.14E+00	1.73E+00	9.09E-01	3.14E-01	3.72E-02	4.41E-03	6.19E-05	1.45E-09	7.88E-19	4.32E-28
I133	1.11E+00	6.19E+00	2.79E+00	2.59E-01	4.94E-03	1.79E-06	6.49E-10	8.55E-17	5.37E-34	0.	0.
XE133M	4.72E-08	5.84E-02	6.91E-02	4.06E-02	9.52E-03	4.47E-04	2.08E-05	4.51E-08	9.88E-15	4.72E-28	2.26E-41
XE133	8.25E-07	1.12E+00	1.50E+00	1.35E+00	7.34E-01	1.98E-01	5.33E-02	3.84E-03	5.35E-06	1.04E-11	2.01E-17
I135	1.88E+01	3.07E+00	2.56E-01	1.49E-04	6.05E-10	1.00E-20	1.64E-31	4.46E-53	0.	0.	0.
XE135M	2.08E-03	9.57E-01	8.00E-02	4.65E-05	1.89E-10	3.11E-21	5.13E-32	1.39E-53	0.	0.	0.
XE135	2.17E+00	8.27E+00	2.02E+00	1.16E-02	1.42E-06	1.99E-14	2.79E-22	5.51E-38	0.	0.	0.
CS136	5.57E-03	5.28E-03	5.00E-03	4.26E-03	3.27E-03	1.92E-03	1.13E-03	3.87E-04	2.69E-05	1.30E-07	6.29E-10
CS137	9.20E-05	9.92E-04	9.92E-04	9.92E-04	9.92E-04	9.92E-04	9.92E-04	9.92E-04	9.86E-04	9.81E-04	9.75E-04
BA137M	1.94E-07	9.25E-04	9.25E-04	9.25E-04	9.25E-04	9.25E-04	9.25E-04	9.25E-04	9.20E-04	9.14E-04	9.09E-04
BA139	1.24E+01	1.33E-03	7.84E-09	1.61E-24	0.	0.	0.	0.	0.	0.	0.
BA140	1.11E-01	6.55E-01	6.23E-01	5.28E-01	4.03E-01	2.34E-01	1.36E-01	4.62E-02	3.08E-03	1.37E-05	6.07E-08
LA140	2.63E-07	2.28E-01	3.67E-01	5.07E-01	4.51E-01	2.70E-01	1.57E-01	5.33E-02	3.54E-03	1.58E-05	7.02E-08
LA141	1.53E+00	6.08E-01	8.52E-03	2.36E-08	1.29E-17	3.85E-36	1.15E-54	0.	0.	0.	0.
CE141	1.89E-07	2.10E-01	2.08E-01	1.96E-01	1.76E-01	1.42E-01	1.14E-01	7.46E-02	2.56E-02	3.01E-03	3.55E-04
LA142	7.61E+00	1.67E-03	3.23E-08	2.38E-22	0.	0.	0.	0.	0.	0.	0.
CE143	5.02E-02	2.06E+00	1.25E+00	2.75E-01	2.21E-02	1.43E-04	9.25E-07	3.88E-11	4.37E-22	0.	0.
PR143	1.47E-08	1.32E-01	2.06E-01	2.65E-01	2.28E-01	1.39E-01	8.37E-02	3.02E-02	2.42E-03	1.54E-05	9.75E-08
CE144	2.01E-03	1.44E-02	1.43E-02	1.43E-02	1.41E-02	1.37E-02	1.34E-02	1.28E-02	1.13E-02	8.85E-03	6.95E-03
PR144	5.53E-07	1.44E-02	1.43E-02	1.43E-02	1.41E-02	1.37E-02	1.34E-02	1.28E-02	1.13E-02	8.85E-03	6.95E-03
PR145	8.05E-02	8.23E-01	5.09E-02	1.21E-05	1.10E-11	9.11E-24	7.56E-36	0.	0.	0.	0.
ND147	9.72E-06	1.63E-01	1.54E-01	1.27E-01	9.31E-02	5.00E-02	2.67E-02	7.68E-03	3.36E-04	6.55E-07	1.27E-09
PM147	2.70E-14	1.22E-04	2.37E-04	5.40E-04	9.34E-04	1.43E-03	1.68E-03	1.88E-03	1.89E-03	1.77E-03	1.64E-03
ND149	1.38E+01	1.34E-03	1.29E-07	1.18E-19	1.01E-39	0.	0.	0.	0.	0.	0.
PM149	1.92E-03	3.55E-01	2.60E-01	1.01E-01	2.12E-02	9.23E-04	4.02E-05	7.64E-08	1.20E-14	2.97E-28	7.41E-42
PM150	1.58E-01	3.33E-04	7.00E-07	6.58E-15	2.75E-28	0.	0.	0.	0.	0.	0.

HARRY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.798E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
PM151	3.35E-02	2.28E-01	1.26E-01	2.12E-02	1.09E-03	2.85E-06	7.52E-09	5.18E-14	6.50E-27	0.	0.
SM153	1.12E-01	7.89E-02	5.54E-02	1.91E-02	3.25E-03	9.47E-05	2.75E-06	2.31E-09	4.76E-17	2.03E-32	8.63E-48
SM156	9.97E-02	1.70E-02	2.90E-03	1.43E-05	2.06E-09	4.23E-17	8.72E-25	3.71E-40	0.	0.	0.
EU155	4.40E-06	1.49E-04	1.49E-04	1.49E-04	1.48E-04	1.48E-04	1.47E-04	1.46E-04	1.43E-04	1.37E-04	1.32E-04
EU156	2.91E-04	2.37E-03	2.63E-03	2.36E-03	1.87E-03	1.18E-03	7.41E-04	2.94E-04	2.91E-05	2.87E-07	2.83E-09
EU157	1.63E-02	1.89E-02	6.35E-03	2.38E-04	1.00E-06	1.76E-11	3.12E-16	9.72E-26	0.	0.	0.
GD159	2.94E-03	5.80E-03	2.31E-03	1.44E-04	1.42E-06	1.37E-10	1.33E-14	1.25E-22	1.06E-42	0.	0.
TB161	3.62E-05	2.36E-04	2.13E-04	1.58E-04	9.56E-05	3.50E-05	1.28E-05	1.72E-06	1.14E-08	4.91E-13	2.13E-17
TOTAL	3.10E+02	6.94E+01	3.30E+01	1.23E+01	5.11E+00	1.97E+00	1.20E+00	6.61E-01	2.84E-01	9.92E-02	4.85E-02

HARRY MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 0.500  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 1.798E-13

DEBRIS DECAY FROM 1 TO 50 YEARS

	ZERO TIME	1.00E+00	1.50E+00	2.00E+00	3.50E+00	5.00E+00	7.00E+00	1.00E+01	2.00E+01	3.50E+01	5.00E+01
BE 7	1.90E-06	1.64E-08	1.52E-09	1.42E-10	1.14E-13	9.12E-17	6.82E-21	4.37E-27	0.	0.	0.
MN 54	9.10E-06	3.92E-06	2.59E-06	1.70E-06	4.86E-07	1.39E-07	2.61E-08	2.13E-09	5.01E-13	1.81E-18	6.56E-24
FE 59	2.10E-05	7.60E-08	4.56E-09	2.74E-10	5.95E-14	1.28E-17	1.67E-22	7.85E-30	0.	0.	0.
CO 57	4.27E-05	1.68E-05	1.05E-05	6.61E-06	1.63E-06	4.02E-07	6.20E-09	3.77E-09	3.29E-13	2.70E-19	0.
CO 58	1.35E-04	3.88E-06	6.59E-07	1.12E-07	5.44E-10	2.65E-12	2.18E-15	5.18E-20	1.98E-35	0.	0.
CO 60	1.99E-05	1.75E-05	1.63E-05	1.52E-05	1.25E-05	1.03E-05	7.89E-06	5.32E-06	1.43E-06	1.98E-07	2.74E-08
W 181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W 188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U234	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	8.22E-02	2.05E-10	2.00E-10	1.94E-10	1.82E-10	1.69E-10	1.54E-10	1.33E-10	8.29E-11	4.07E-11	2.00E-11
* AM241	3.35E-09	3.35E-09	3.35E-09	3.35E-09	3.37E-09	3.39E-09	3.39E-09	3.40E-09	3.42E-09	3.39E-09	3.34E-09
* CM242	2.28E-07	4.82E-08	2.22E-08	1.02E-08	9.94E-10	9.68E-11	4.34E-12	4.10E-14	1.18E-18	1.10E-18	1.03E-18
KR 85	4.62E-06	1.15E-04	1.11E-04	1.08E-04	9.82E-05	8.87E-05	7.79E-05	6.43E-05	3.40E-05	1.30E-05	4.96E-06
SR 89	3.96E-06	9.27E-04	8.11E-05	7.13E-06	4.80E-09	3.24E-12	1.91E-16	8.69E-23	6.32E-44	0.	0.
SR 90	7.98E-06	7.98E-04	7.90E-04	7.83E-04	7.54E-04	7.25E-04	6.90E-04	6.41E-04	5.01E-04	3.46E-04	2.39E-04
Y 90	1.18E-11	7.98E-04	7.90E-04	7.83E-04	7.54E-04	7.25E-04	6.90E-04	6.41E-04	5.01E-04	3.46E-04	2.39E-04
Y 91	2.58E-08	1.75E-03	2.03E-04	2.36E-05	3.70E-08	5.81E-11	1.06E-14	2.61E-20	5.27E-39	0.	0.
ZR 95	6.49E-04	1.67E-03	2.38E-04	3.39E-05	9.88E-08	2.88E-10	1.19E-13	2.01E-18	1.23E-35	0.	0.
NB 95M	1.38E-11	3.53E-05	5.04E-06	7.21E-07	2.09E-09	6.09E-12	2.52E-15	2.13E-20	2.61E-37	0.	0.
NB 95	7.23E-11	3.59E-03	5.15E-04	7.35E-05	2.13E-07	6.18E-10	2.58E-13	2.18E-18	2.67E-35	0.	0.
RU103	7.95E-05	3.09E-04	1.26E-05	5.20E-07	3.55E-11	2.43E-15	6.83E-21	3.21E-29	0.	0.	0.
RH103M	5.30E-09	3.09E-04	1.26E-05	5.20E-07	3.55E-11	2.44E-15	6.83E-21	3.22E-29	0.	0.	0.
RH106	4.68E-04	4.45E-03	3.15E-03	2.23E-03	7.93E-04	2.82E-04	7.09E-05	8.97E-06	9.05E-09	2.91E-13	9.35E-18
SN123	3.98E-06	5.51E-05	2.00E-05	7.27E-06	3.49E-07	1.67E-08	2.91E-10	6.72E-13	1.08E-21	6.94E-35	4.45E-48
SB123	6.76E-05	1.36E-04	1.20E-04	1.05E-04	7.18E-05	4.88E-05	2.92E-05	1.35E-05	1.04E-06	2.21E-08	4.71E-10
TE123M	1.82E-12	5.56E-05	4.94E-05	4.35E-05	2.97E-05	2.02E-05	1.21E-05	5.59E-06	4.29E-07	9.15E-09	1.95E-10
TE127M	2.95E-10	1.41E-04	4.42E-05	1.38E-05	4.25E-07	1.31E-08	1.26E-10	1.18E-13	9.72E-24	7.26E-39	5.41E-54
TE127	2.06E-02	1.40E-04	4.37E-05	1.37E-05	4.20E-07	1.29E-08	1.24E-10	1.17E-13	9.62E-24	7.16E-39	5.36E-54
CS137	9.20E-05	9.70E-04	9.59E-04	9.48E-04	9.14E-04	8.81E-04	8.43E-04	7.88E-04	6.22E-04	4.42E-04	3.12E-04
BA137M	1.94E-07	9.09E-04	8.98E-04	8.87E-04	8.54E-04	8.26E-04	7.88E-04	7.38E-04	5.84E-04	4.13E-04	2.93E-04
CE141	1.89E-07	8.17E-05	1.64E-06	3.30E-08	2.69E-13	2.19E-18	3.59E-25	2.38E-35	0.	0.	0.
CE144	2.01E-03	5.92E-03	3.81E-03	2.43E-03	6.37E-04	1.68E-04	2.82E-05	1.94E-06	2.62E-10	4.11E-16	6.40E-22
PR144	5.53E-07	5.92E-03	3.81E-03	2.43E-03	6.37E-04	1.68E-04	2.82E-05	1.94E-06	2.62E-10	4.11E-16	6.40E-22
PM147	2.70E-14	1.57E-03	1.37E-03	1.20E-03	8.08E-04	5.43E-04	3.19E-04	1.45E-04	1.03E-05	1.95E-07	3.68E-09
EU155	4.40E-06	1.29E-04	1.20E-04	1.11E-04	8.95E-05	7.19E-05	5.37E-05	3.47E-05	8.10E-06	9.11E-07	1.03E-07
TOTAL	1.06E-01	3.53E-02	2.03E-02	1.45E-02	7.25E-03	4.84E-03	3.71E-03	3.10E-03	2.26E-03	1.56E-03	1.09E-03

**APPENDIX J**  
**DETAILED RESULTS FOR EVENT GRABLE**

GRABLE  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.910E-13

TIME	MR/HR	MICROCURIES/SQ METER
ZERO TIME HOURS	9.58E+01	8.12E+03
1.00E+00	3.01E+01	1.88E+03
2.00E+00	1.23E+01	7.88E+02
3.00E+00	6.80E+00	5.08E+02
4.00E+00	4.37E+00	3.82E+02
6.00E+00	2.36E+00	2.62E+02
9.00E+00	1.39E+00	1.81E+02
1.20E+01	1.00E+00	1.37E+02
1.50E+01	7.82E-01	1.09E+02
1.80E+01	6.40E-01	9.01E+01
2.10E+01	5.37E-01	7.59E+01
1.00E+00 DAYS	4.53E-01	6.44E+01
2.00E+00	1.95E-01	2.75E+01
5.00E+00	6.46E-02	8.84E+00
1.00E+01	3.09E-02	4.12E+00
2.00E+01	1.37E-02	1.91E+00
3.00E+01	8.26E-03	1.23E+00
5.00E+01	4.11E-03	7.06E-01
1.00E+02	1.67E-03	3.25E-01
2.00E+02	6.21E-04	1.23E-01
3.00E+02	2.37E-04	5.98E-02
1.00E+00 YEARS	1.32E-04	4.21E-02
1.50E+00	3.28E-05	2.21E-02
2.00E+00	1.60E-05	1.50E-02
3.50E+00	8.85E-06	6.87E-03
5.00E+00	7.10E-06	4.37E-03
7.00E+00	6.24E-06	3.23E-03
1.00E+01	5.65E-06	2.62E-03
2.00E+01	4.40E-06	1.85E-03
3.50E+01	3.12E-06	1.27E-03
5.00E+01	2.20E-06	8.86E-04

GRABLE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.910E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BE 7	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
*NA 24	1.74E-02	1.66E-02	1.59E-02	1.51E-02	1.44E-02	1.32E-02	1.15E-02	9.99E-03	8.69E-03	7.58E-03	6.56E-03
MN 54	3.11E-04	3.11E-04	3.11E-04	3.11E-04	3.11E-04	3.11E-04	3.11E-04	3.08E-04	3.08E-04	3.08E-04	3.08E-04
FE 55	9.08E-05	9.08E-05	9.08E-05	9.08E-05	9.08E-05	9.08E-05	9.08E-05	9.08E-05	9.08E-05	9.08E-05	9.08E-05
FE 59	1.77E-05	1.77E-05	1.77E-05	1.77E-05	1.77E-05	1.77E-05	1.76E-05	1.76E-05	1.75E-05	1.75E-05	1.75E-05
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	6.77E-03	6.77E-03	6.77E-03	6.77E-03	6.76E-03	6.76E-03	6.74E-03	6.74E-03	6.73E-03	6.73E-03	6.71E-03
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 64	7.58E-01	7.17E-01	6.79E-01	6.44E-01	6.10E-01	5.47E-01	4.65E-01	3.95E-01	3.36E-01	2.86E-01	2.43E-01
CU 67	4.60E-06	4.56E-06	4.48E-06	4.44E-06	4.40E-06	4.28E-06	4.12E-06	4.01E-06	3.88E-06	3.73E-06	3.63E-06
W181	2.65E-05	2.65E-05	2.65E-05	2.65E-05	2.65E-05	2.65E-05	2.64E-05	2.64E-05	2.64E-05	2.64E-05	2.64E-05
W185	4.18E-02	4.18E-02	4.18E-02	4.18E-02	4.17E-02	4.17E-02	4.17E-02	4.16E-02	4.16E-02	4.15E-02	4.15E-02
W187	1.16E+01	1.13E+01	1.09E+01	1.06E+01	1.04E+01	9.75E+00	8.96E+00	8.22E+00	7.51E+00	6.92E+00	6.31E+00
W188	9.51E-06	9.51E-06	9.51E-06	9.48E-06	9.48E-06	9.48E-06	9.46E-06	9.46E-06	9.44E-06	9.44E-06	9.42E-06
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.29E-02	1.28E-02	1.28E-02	1.27E-02	1.27E-02	1.25E-02	1.24E-02	1.22E-02	1.21E-02	1.19E-02	1.18E-02
U239	4.35E+01	7.42E+00	1.27E+00	2.16E-01	3.67E-02	1.07E-03	5.29E-06	2.61E-08	1.29E-10	6.39E-13	3.16E-15
U240	1.37E-03	1.30E-03	1.24E-03	1.18E-03	1.13E-03	1.02E-03	8.80E-04	7.58E-04	6.55E-04	5.64E-04	4.87E-04
NP239	1.49E-04	2.50E-01	2.89E-01	2.93E-01	2.91E-01	2.84E-01	2.73E-01	2.64E-01	2.54E-01	2.45E-01	2.36E-01
NP240M	2.17E-06	1.31E-03	1.25E-03	1.19E-03	1.14E-03	1.03E-03	8.88E-04	7.66E-04	6.60E-04	5.69E-04	4.92E-04
NP240	5.49E-14	2.82E-14	1.47E-14	7.56E-15	3.91E-15	1.05E-15	1.44E-16	1.99E-17	2.74E-18	3.78E-19	5.23E-20
AM241	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CM242	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GE 75	5.84E-06	2.83E-02	1.71E-02	1.03E-02	6.18E-03	2.24E-03	4.90E-04	1.07E-04	2.34E-05	5.10E-06	1.12E-06
GE 77	3.49E-03	8.98E-03	8.45E-03	7.94E-03	7.48E-03	6.61E-03	5.50E-03	4.57E-03	3.81E-03	3.16E-03	2.63E-03
AS 77	3.60E-05	5.69E-03	5.76E-03	5.80E-03	5.84E-03	5.88E-03	5.88E-03	5.84E-03	5.75E-03	5.63E-03	5.49E-03
SE 77M	1.42E-09	1.70E-05	1.73E-05	1.74E-05	1.74E-05	1.76E-05	1.77E-05	1.76E-05	1.73E-05	1.69E-05	1.64E-05
GE 78	5.22E-01	3.26E-01	2.03E-01	1.27E-01	7.92E-02	3.08E-02	7.49E-03	1.81E-03	4.42E-04	1.07E-04	2.61E-05
AS 78	9.39E-03	1.56E-01	1.92E-01	1.80E-01	1.50E-01	8.88E-02	3.30E-02	1.09E-02	3.39E-03	1.01E-03	2.94E-04
AS 79	1.09E+01	1.07E-01	1.05E-03	1.04E-05	1.02E-07	9.90E-12	9.44E-18	9.01E-24	8.60E-30	8.21E-36	7.84E-42
SE 79M	1.61E-02	1.89E-01	1.86E-03	1.84E-05	1.81E-07	1.75E-11	1.67E-17	1.59E-23	1.52E-29	1.45E-35	1.38E-41
BR 80	7.14E-02	6.74E-03	6.33E-04	5.95E-05	5.61E-06	4.97E-08	4.16E-11	3.47E-14	2.89E-17	2.41E-20	2.01E-23
SE 81M	6.00E-02	2.80E+00	1.35E+00	6.49E-01	3.12E-01	7.30E-02	8.16E-03	9.15E-04	1.03E-04	1.15E-05	1.29E-06
SE 81	7.33E-01	3.31E+00	1.91E+00	9.56E-01	4.64E-01	1.08E-01	1.21E-02	1.36E-03	1.52E-04	1.71E-05	1.91E-06
BR 82	3.85E-04	3.78E-04	3.70E-04	3.63E-04	3.56E-04	3.42E-04	3.23E-04	3.04E-04	2.87E-04	2.70E-04	2.55E-04
SE 83	3.58E+01	6.79E+00	1.29E+00	2.44E-01	4.61E-02	1.66E-03	1.13E-05	7.67E-08	5.24E-10	3.55E-12	2.25E-14
BR 83	2.98E-01	4.44E+00	4.11E+00	3.23E+00	2.46E+00	1.39E+00	5.87E-01	2.47E-01	1.04E-01	4.40E-02	1.86E-02
KR 83M	1.54E-05	1.01E+00	2.05E+00	2.55E+00	2.63E+00	2.20E+00	1.29E+00	6.66E-01	3.21E-01	1.48E-01	6.66E-02



GRABLE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.910E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BR 84	7.72E-02	1.33E+01	3.60E+00	9.75E-01	2.63E-01	1.93E-02	3.81E-04	7.51E-06	1.49E-07	2.94E-09	5.81E-11
KR 85M	3.88E-03	8.32E+00	7.08E+00	6.04E+00	5.17E+00	3.77E+00	2.35E+00	1.47E+00	9.14E-01	5.68E-01	3.55E-01
KR 87	6.60E+01	3.81E+01	2.21E+01	1.27E+01	7.35E+00	2.47E+00	4.78E-01	9.26E-02	1.79E-02	3.47E-03	6.72E-04
KR 88	3.80E+01	2.96E+01	2.31E+01	1.80E+01	1.41E+01	8.57E+00	4.09E+00	1.95E+00	9.25E-01	4.41E-01	2.10E-01
RB 88	9.65E+00	3.00E+01	2.56E+01	2.02E+01	1.58E+01	9.60E+00	4.58E+00	2.18E+00	1.04E+00	4.94E-01	2.35E-01
RB 89	4.54E+01	4.26E+01	2.87E+00	1.93E-01	1.29E-02	5.84E-05	1.77E-08	5.34E-12	1.63E-15	4.92E-19	1.49E-22
SR 89	3.48E-06	1.22E-01	1.30E-01	1.30E-01	1.30E-01	1.30E-01	1.30E-01	1.30E-01	1.30E-01	1.29E-01	1.29E-01
SR 90	7.03E-06	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04
SR 91	9.32E-01	1.74E+01	1.62E+01	1.51E+01	1.40E+01	1.21E+01	9.79E+00	7.91E+00	6.39E+00	5.13E+00	4.14E+00
Y 91M	6.27E-05	5.98E+00	8.15E+00	8.73E+00	8.62E+00	7.74E+00	6.33E+00	5.09E+00	4.11E+00	3.31E+00	2.67E+00
SR 91	2.57E-08	5.32E-03	1.23E-02	1.96E-02	2.67E-02	4.00E-02	5.69E-02	7.03E-02	8.15E-02	9.03E-02	9.73E-02
SR 92	1.17E+01	5.24E+01	4.06E+01	3.15E+01	2.44E+01	1.46E+01	6.77E+00	3.15E+00	1.46E+00	6.77E-01	3.15E-01
Y 92	5.41E-01	1.10E+01	1.73E+01	2.06E+01	2.18E+01	2.08E+01	1.59E+01	1.09E+01	6.99E+00	4.30E+00	2.59E+00
SR 93	4.58E+02	7.89E+00	4.36E-02	2.41E-04	1.33E-06	4.06E-11	6.84E-18	1.15E-24	1.95E-31	3.29E-38	5.54E-45
Y 93	5.59E-01	1.81E+01	1.70E+01	1.59E+01	1.48E+01	1.30E+01	1.06E+01	8.62E+00	7.00E+00	5.75E+00	4.67E+00
Y 94	6.61E+01	9.04E+01	1.16E+01	1.50E+00	1.93E-01	3.21E-03	6.89E-06	1.48E-08	3.16E-11	6.89E-14	3.82E-15
Y 95	2.81E+02	2.65E+01	5.84E-01	1.29E-02	2.84E-04	1.38E-07	1.47E-12	1.58E-17	1.68E-22	1.80E-27	1.92E-32
ZR 95	1.06E-03	1.38E-01	1.41E-01	1.41E-01	1.41E-01	1.41E-01	1.41E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01
NB 95	1.18E-10	8.53E-05	1.99E-04	3.12E-04	4.26E-04	6.53E-04	9.92E-04	1.33E-03	1.67E-03	2.01E-03	2.34E-03
ZR 97	2.46E+00	1.07E+01	1.03E+01	9.88E+00	9.46E+00	8.74E+00	7.72E+00	6.83E+00	6.07E+00	5.34E+00	4.75E+00
NB 97M	1.27E-02	1.03E+01	9.88E+00	9.50E+00	9.12E+00	8.40E+00	7.42E+00	6.58E+00	5.81E+00	5.13E+00	4.54E+00
NB 97	1.23E+00	5.39E+00	7.59E+00	8.65E+00	9.08E+00	9.04E+00	8.23E+00	7.34E+00	6.49E+00	5.73E+00	5.09E+00
NB 98	1.38E+01	6.10E+00	2.70E+00	1.19E+00	5.28E-01	1.03E-01	8.94E-03	7.72E-04	6.73E-05	5.82E-06	5.01E-07
MO 99	7.14E-03	2.95E+00	2.92E+00	2.89E+00	2.86E+00	2.80E+00	2.72E+00	2.63E+00	2.55E+00	2.48E+00	2.40E+00
TC 99M	6.64E-08	2.81E-01	5.28E-01	7.46E-01	9.37E-01	1.25E+00	1.59E+00	1.80E+00	1.93E+00	2.01E+00	2.04E+00
MO101	9.58E+01	4.33E+01	2.51E+00	1.46E-01	8.45E-03	2.83E-05	5.50E-09	1.07E-12	2.08E-16	4.04E-20	7.88E-24
TC101	4.04E+00	1.21E+02	1.33E+01	1.09E+00	7.92E-02	3.57E-04	8.94E-08	2.00E-11	4.25E-15	8.73E-19	1.77E-22
MO102	7.39E+02	1.69E+01	3.84E-01	8.76E-03	2.00E-04	1.04E-07	1.24E-12	1.46E-17	1.74E-22	2.06E-27	2.45E-32
TC102M	4.75E-01	1.43E+01	3.27E-01	7.46E-03	1.70E-04	8.80E-08	1.05E-12	1.24E-17	1.47E-22	1.74E-27	2.07E-32
TC102	2.22E+03	8.48E+00	1.94E-01	4.40E-03	1.01E-04	5.24E-08	6.23E-13	7.39E-18	8.76E-23	1.04E-27	1.23E-32
RU103	4.77E-05	1.11E-01	1.10E-01	1.10E-01	1.10E-01	1.10E-01	1.10E-01	1.10E-01	1.09E-01	1.09E-01	1.09E-01
RH103M	3.18E-09	5.71E-02	8.46E-02	9.81E-02	1.04E-01	1.09E-01	1.10E-01	1.10E-01	1.09E-01	1.09E-01	1.09E-01
TC104	3.79E+01	2.73E+01	2.73E+00	2.70E-01	2.67E-02	2.63E-04	2.57E-07	2.51E-10	2.45E-13	2.39E-16	2.34E-19
RU105	2.54E-01	8.80E+00	7.52E+00	6.45E+00	5.52E+00	4.03E+00	2.53E+00	1.58E+00	9.88E-01	6.19E-01	3.88E-01
RH105M	1.67E-03	8.82E+00	7.54E+00	6.46E+00	5.52E+00	4.05E+00	2.53E+00	1.58E+00	9.92E-01	6.20E-01	3.88E-01
RH105	2.75E-09	1.79E-01	3.32E-01	4.59E-01	5.65E-01	7.23E-01	8.64E-01	9.29E-01	9.47E-01	9.38E-01	9.14E-01
RU106	1.91E-04	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03
RH106	2.06E-06	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03
RH107	2.26E-02	3.06E+00	4.64E-01	6.99E-02	1.05E-02	2.41E-04	8.28E-07	2.86E-09	9.83E-12	3.36E-14	3.35E-18
PD107M	4.69E-05	6.23E-01	9.41E-02	1.42E-02	2.15E-03	4.90E-05	1.69E-07	5.82E-10	2.00E-12	6.90E-15	2.36E-17

J-4

GRABLE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.910E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
PD109	1.42E-03	1.18E-01	1.12E-01	1.06E-01	1.01E-01	9.11E-02	7.83E-02	6.71E-02	5.76E-02	4.93E-02	4.24E-02
AG109M	8.21E-06	1.18E-01	1.12E-01	1.07E-01	1.01E-01	9.14E-02	7.83E-02	6.71E-02	5.76E-02	4.93E-02	4.24E-02
PD111M	2.26E-01	1.99E-01	1.76E-01	1.55E-01	1.37E-01	1.06E-01	7.28E-02	4.99E-02	3.42E-02	2.34E-02	1.60E-02
PD111	8.06E-02	1.45E-01	1.39E-01	1.24E-01	1.10E-01	8.53E-02	5.85E-02	4.01E-02	2.74E-02	1.88E-02	1.29E-02
AG111M	6.40E-04	1.96E-01	1.84E-01	1.65E-01	1.45E-01	1.12E-01	7.68E-02	5.26E-02	3.61E-02	2.47E-02	1.69E-02
AG111	2.28E-10	6.75E-04	1.42E-03	2.09E-03	2.68E-03	3.65E-03	4.69E-03	5.37E-03	5.82E-03	6.10E-03	6.27E-03
PD112	4.94E-02	4.79E-02	4.62E-02	4.47E-02	4.34E-02	4.05E-02	3.67E-02	3.33E-02	3.01E-02	2.72E-02	2.47E-02
AG112	1.49E-06	9.47E-03	1.67E-02	2.24E-02	2.66E-02	3.19E-02	3.51E-02	3.49E-02	3.33E-02	3.10E-02	2.86E-02
AG113	6.75E-04	1.44E-01	1.27E-01	1.11E-01	9.75E-02	7.50E-02	5.08E-02	3.43E-02	2.31E-02	1.56E-02	1.06E-02
AG113M	3.05E-01	3.27E-01	4.06E-02	5.08E-03	6.36E-04	9.94E-06	1.94E-08	3.80E-11	7.36E-14	7.31E-163	6.77E-17
CD115M	2.49E-09	6.63E-05	7.45E-05	7.55E-05	7.55E-05	7.55E-05	7.52E-05	7.52E-05	7.50E-05	7.48E-05	7.48E-05
CD115	9.63E-07	1.81E-02	1.95E-02	1.95E-02	1.92E-02	1.88E-02	1.80E-02	1.73E-02	1.67E-02	1.61E-02	1.54E-02
IN115M	1.20E-11	2.00E-03	4.45E-03	6.61E-03	8.42E-03	1.12E-02	1.39E-02	1.53E-02	1.59E-02	1.61E-02	1.59E-02
CD117	2.17E-02	3.61E-01	2.72E-01	2.03E-01	1.52E-01	8.54E-02	3.58E-02	1.51E-02	6.35E-03	2.67E-03	1.12E-03
IN117M	1.04E-06	1.25E-01	1.82E-01	1.97E-01	1.91E-01	1.50E-01	8.59E-02	4.39E-02	2.11E-02	9.78E-03	4.42E-03
IN117	4.19E-11	2.29E-02	5.54E-02	7.70E-02	8.59E-02	7.90E-02	5.03E-02	2.69E-02	1.34E-02	6.30E-03	2.90E-03
CD118	1.45E+00	6.22E-01	2.67E-01	1.14E-01	4.87E-02	8.92E-03	7.00E-04	5.47E-05	4.30E-06	3.37E-07	2.64E-08
IN118	9.62E-02	6.22E-01	2.67E-01	1.14E-01	4.87E-02	8.94E-03	7.00E-04	5.49E-05	4.30E-06	3.37E-07	2.64E-08
CD119M	3.60E+00	5.62E-02	8.77E-04	1.37E-05	2.14E-07	5.25E-11	2.00E-16	7.64E-22	2.91E-27	1.11E-32	4.25E-38
IN119M	5.43E-03	6.08E-01	6.62E-02	6.67E-03	6.64E-04	6.54E-06	6.38E-09	6.24E-12	6.08E-15	5.94E-18	5.81E-21
IN119	2.68E-01	3.20E-02	3.71E-03	3.77E-04	3.77E-05	3.69E-07	3.60E-10	3.52E-13	3.44E-16	3.36E-19	3.28E-22
SN121	4.38E-04	4.51E-02	4.38E-02	4.28E-02	4.18E-02	3.97E-02	3.66E-02	3.40E-02	3.15E-02	2.91E-02	2.71E-02
SN123M	2.41E-01	4.50E-01	1.60E-01	5.64E-02	1.99E-02	2.49E-03	1.10E-04	4.87E-06	2.16E-07	9.52E-09	4.21E-10
SN123	2.26E-06	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04
SN125	6.34E-03	6.32E-03	6.31E-03	6.29E-03	6.26E-03	6.22E-03	6.17E-03	6.11E-03	6.06E-03	5.99E-03	5.94E-03
SB125	3.81E-05	3.82E-05	3.84E-05	3.86E-05	3.87E-05	3.91E-05	3.97E-05	4.02E-05	4.07E-05	4.12E-05	4.17E-05
SB126	1.26E-03	1.25E-03	1.25E-03	1.25E-03	1.25E-03	1.24E-03	1.23E-03	1.22E-03	1.21E-03	1.21E-03	1.20E-03
SN127	2.29E+00	1.64E+00	1.18E+00	8.50E-01	6.12E-01	3.15E-01	1.17E-01	4.36E-02	1.61E-02	6.01E-03	2.23E-03
SB127	2.67E-02	9.19E-02	1.02E-01	1.08E-01	1.13E-01	1.18E-01	1.20E-01	1.19E-01	1.17E-01	1.14E-01	1.12E-01
TE127	1.51E-02	1.87E-02	2.28E-02	2.70E-02	3.12E-02	3.92E-02	5.02E-02	5.86E-02	6.52E-02	7.03E-02	7.36E-02
SN128	1.52E+01	7.51E+00	3.72E+00	1.84E+00	9.08E-01	2.22E-01	2.68E-02	3.23E-03	3.89E-04	4.72E-05	5.69E-06
SB128M	7.75E-03	8.56E+00	4.44E+00	2.19E+00	1.08E+00	2.65E-01	3.19E-02	3.85E-03	4.64E-04	5.61E-05	6.78E-06
SB128	6.42E-01	6.17E-01	5.81E-01	5.45E-01	5.09E-01	4.36E-01	3.48E-01	2.76E-01	2.19E-01	1.74E-01	1.38E-01
SN129M	1.00E+01	4.98E+00	2.50E+00	1.25E+00	6.25E-01	1.56E-01	1.96E-02	2.45E-03	3.05E-04	3.82E-05	4.77E-06
SN129	6.67E+01	6.55E-01	6.46E-03	6.38E-05	6.25E-07	6.08E-11	5.79E-17	5.53E-23	5.28E-29	5.03E-35	4.82E-41
SB129	3.76E+00	6.29E+00	5.91E+00	5.28E+00	4.65E+00	3.45E+00	2.15E+00	1.33E+00	8.19E-01	5.07E-01	3.12E-01
TE129M	7.10E-08	7.86E-04	1.62E-03	2.38E-03	3.05E-03	4.14E-03	5.24E-03	5.91E-03	6.34E-03	6.59E-03	6.76E-03
TE129	2.70E+00	3.72E+00	4.35E+00	4.52E+00	4.35E+00	3.60E+00	2.40E+00	1.51E+00	9.42E-01	5.83E-01	3.62E-01
SB130M	3.68E-01	6.94E-01	1.82E-03	4.78E-06	1.26E-08	8.69E-14	1.58E-21	2.88E-29	5.22E-37	9.49E-45	1.73E-52
SB130	6.30E+01	1.91E+01	5.42E+00	1.53E+00	4.34E-01	3.50E-02	7.97E-04	1.82E-05	4.15E-07	9.45E-09	2.16E-10

GRABLE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.910E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
I130	1.75E-02	1.66E-02	1.57E-02	1.48E-02	1.40E-02	1.26E-02	1.06E-02	8.97E-03	7.57E-03	6.42E-03	5.42E-03	
SB131	1.48E+02	3.85E+01	6.30E+00	1.03E+00	1.70E-01	4.57E-03	2.01E-05	8.88E-08	3.91E-10	1.73E-12	8.60E-15	
TE131M	7.10E-05	3.71E-01	4.24E-01	4.24E-01	4.16E-01	3.98E-01	3.71E-01	3.46E-01	3.23E-01	3.01E-01	2.81E-01	
TE131	6.53E+01	7.10E+01	2.31E+01	6.02E+00	1.46E+00	1.37E-01	6.82E-02	6.30E-02	5.88E-02	5.50E-02	5.12E-02	
I131	9.50E-03	3.29E-01	4.84E-01	5.31E-01	5.41E-01	5.45E-01	5.41E-01	5.41E-01	5.41E-01	5.36E-01	5.36E-01	
TE132	7.95E-01	1.93E+00	1.91E+00	1.90E+00	1.88E+00	1.84E+00	1.80E+00	1.75E+00	1.70E+00	1.66E+00	1.61E+00	
I132	1.95E+00	1.95E+00	1.94E+00	1.93E+00	1.92E+00	1.89E+00	1.85E+00	1.80E+00	1.75E+00	1.71E+00	1.67E+00	
TE133M	9.82E-02	3.40E+01	1.48E+01	6.45E+00	2.81E+00	5.33E-01	4.39E-02	3.62E-03	2.98E-04	2.46E-05	2.03E-06	
TE133	5.52E+02	3.13E+01	3.48E+00	1.15E+00	4.86E-01	9.21E-02	7.62E-03	6.26E-04	5.19E-05	4.27E-06	3.52E-07	
I133	8.56E-01	9.21E+00	9.96E+00	9.96E+00	9.77E+00	9.26E+00	8.42E+00	7.62E+00	6.87E+00	6.26E+00	5.66E+00	
XE133M	3.64E-08	2.07E-03	5.00E-03	7.99E-03	1.09E-02	1.64E-02	2.37E-02	3.01E-02	3.54E-02	4.01E-02	4.39E-02	
XE133	6.36E-07	3.62E-02	8.79E-02	1.40E-01	1.93E-01	2.92E-01	4.28E-01	5.47E-01	6.55E-01	7.48E-01	8.32E-01	
TE134	1.71E+02	7.91E+01	2.94E+01	1.09E+01	4.06E+00	5.63E-01	2.88E-02	1.47E-03	7.55E-05	3.88E-06	1.99E-07	
I134	7.82E+01	1.05E+02	7.33E+01	4.29E+01	2.31E+01	5.85E+00	6.43E-01	6.57E-02	6.43E-03	6.17E-04	5.85E-05	
I135	1.45E+01	2.55E+01	2.30E+01	2.07E+01	1.87E+01	1.52E+01	1.11E+01	8.14E+00	5.98E+00	4.40E+00	3.22E+00	
XE135M	1.60E-03	7.35E+00	7.14E+00	6.48E+00	5.82E+00	4.74E+00	3.48E+00	2.55E+00	1.87E+00	1.37E+00	1.01E+00	
XE135	1.67E+00	3.29E+00	4.82E+00	6.06E+00	7.06E+00	8.47E+00	9.39E+00	9.43E+00	8.97E+00	8.18E+00	7.31E+00	
CS136	1.32E-03	1.31E-03	1.31E-03	1.31E-03	1.30E-03	1.30E-03	1.29E-03	1.28E-03	1.27E-03	1.26E-03	1.26E-03	
CS137	6.99E-05	7.53E-04	7.53E-04	7.53E-04	7.53E-04	7.53E-04	7.53E-04	7.53E-04	7.53E-04	7.53E-04	7.53E-04	
BA137M	1.47E-07	7.03E-04	7.03E-04	7.03E-04	7.03E-04	7.03E-04	7.03E-04	7.03E-04	7.03E-04	7.03E-04	7.03E-04	
XE138	5.76E+02	4.96E+01	4.31E+00	3.74E-01	3.24E-02	2.43E-04	1.58E-07	1.02E-10	6.66E-14	4.33E-17	2.81E-20	
CS138	8.58E+01	1.44E+02	5.00E+01	1.47E+01	4.12E+00	3.14E-01	6.52E-03	1.35E-04	2.81E-06	5.85E-08	1.21E-09	
CS139	5.08E+02	1.62E+01	2.03E-01	2.56E-03	3.20E-05	5.03E-09	1.00E-14	1.98E-20	3.92E-26	7.77E-32	1.53E-37	
BA139	9.38E+00	1.05E+02	6.45E+01	3.92E+01	2.37E+01	8.70E+00	1.93E+00	4.28E-01	9.53E-02	2.11E-02	4.69E-03	
BA140	1.03E-01	6.41E-01	6.41E-01	6.36E-01	6.36E-01	6.31E-01	6.31E-01	6.26E-01	6.21E-01	6.16E-01	6.11E-01	
LA140	2.44E-07	1.10E-02	2.17E-02	3.22E-02	4.25E-02	6.26E-02	9.14E-02	1.18E-01	1.44E-01	1.68E-01	1.90E-01	
BA141	1.97E+02	5.96E+01	5.92E+00	5.87E-01	5.82E-02	5.78E-04	5.64E-07	5.49E-10	5.35E-13	5.26E-16	5.12E-19	
LA141	1.82E+00	3.86E+01	3.60E+01	3.05E+01	2.56E+01	1.79E+01	1.05E+01	6.15E+00	3.62E+00	2.12E+00	1.24E+00	
CE141	2.25E-07	2.51E-02	5.87E-02	8.83E-02	1.13E-01	1.52E-01	1.88E-01	2.09E-01	2.22E-01	2.29E-01	2.32E-01	
BA142	5.21E+02	2.07E+01	4.72E-01	1.08E-02	2.45E-04	1.27E-07	1.51E-12	1.80E-17	2.13E-22	2.53E-27	3.00E-32	
LA142	1.20E+01	8.29E+01	5.47E+01	3.48E+01	2.21E+01	8.96E+00	2.31E+00	5.96E-01	1.54E-01	3.95E-02	1.02E-02	
LA143	2.03E+02	3.97E+01	2.03E+00	1.04E-01	5.37E-03	1.41E-05	1.89E-09	2.56E-13	3.44E-17	4.64E-21	6.27E-25	
CE143	8.12E-02	5.18E+00	5.37E+00	5.22E+00	5.13E+00	4.94E+00	4.63E+00	4.35E+00	4.08E+00	3.83E+00	3.60E+00	
PR143	2.37E-08	7.93E-03	1.91E-02	3.03E-02	4.11E-02	6.22E-02	9.17E-02	1.20E-01	1.45E-01	1.70E-01	1.92E-01	
CE144	3.28E-03	2.35E-02	2.35E-02	2.35E-02	2.35E-02	2.35E-02	2.35E-02	2.35E-02	2.35E-02	2.35E-02	2.35E-02	
PR144	9.00E-07	2.14E-02	2.33E-02	2.34E-02	2.35E-02	2.35E-02	2.35E-02	2.35E-02	2.35E-02	2.35E-02	2.35E-02	
PR145	1.28E-01	1.87E+01	1.67E+01	1.48E+01	1.32E+01	1.05E+01	7.39E+00	5.22E+00	3.70E+00	2.61E+00	1.85E+00	
CE146	3.57E+02	1.83E+01	9.40E-01	4.80E-02	2.47E-03	6.51E-06	8.77E-10	1.18E-13	1.59E-17	2.15E-21	2.89E-25	
PR146	7.39E+00	6.43E+01	1.46E+01	2.74E+00	4.93E-01	1.55E-02	8.56E-05	4.72E-07	2.61E-09	1.44E-11	7.89E-14	
PR147	4.17E+01	1.21E+01	3.77E-01	1.18E-02	3.68E-04	3.59E-07	1.10E-11	3.35E-16	1.02E-20	3.12E-25	9.52E-30	

GRABLE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.910E-13

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
ND147	1.49E-05	2.80E-01	2.88E-01	2.88E-01	2.87E-01	2.85E-01	2.83E-01	2.81E-01	2.79E-01	2.77E-01	2.74E-01	
ND149	1.93E+01	1.31E+01	8.94E+00	6.09E+00	4.12E+00	1.92E+00	6.02E-01	1.90E-01	5.98E-02	1.88E-02	5.95E-03	
PM149	2.69E-03	2.10E-01	3.49E-01	4.41E-01	5.00E-01	5.62E-01	5.84E-01	5.73E-01	5.58E-01	5.36E-01	5.18E-01	
PM150	2.14E-01	1.65E-01	1.28E-01	9.87E-02	7.63E-02	4.58E-02	2.12E-02	9.81E-03	4.55E-03	2.10E-03	9.74E-04	
ND151	6.44E+01	2.01E+00	6.30E-02	1.97E-03	6.16E-05	6.01E-08	1.84E-12	5.61E-17	1.71E-21	5.21E-26	1.59E-30	
PM151	4.08E-02	4.78E-01	4.80E-01	4.69E-01	4.57E-01	4.34E-01	4.03E-01	3.74E-01	3.48E-01	3.22E-01	2.99E-01	
PM152	1.00E+02	9.81E-02	9.57E-05	9.35E-08	9.13E-11	8.72E-17	8.12E-26	7.57E-35	7.05E-44	6.59E-53	6.12E-62	
SM153	1.27E-01	1.25E-01	1.23E-01	1.21E-01	1.20E-01	1.16E-01	1.11E-01	1.06E-01	1.02E-01	9.74E-02	9.31E-02	
SM155	5.45E+00	8.96E-01	1.47E-01	2.40E-02	3.94E-03	1.06E-04	4.68E-07	2.06E-09	9.08E-12	4.05E-14	9.93E-17	
EU155	4.01E-06	1.14E-04	1.32E-04	1.35E-04	1.36E-04	1.36E-04	1.36E-04	1.36E-04	1.36E-04	1.36E-04	1.36E-04	
SM156	6.39E-02	5.93E-02	5.51E-02	5.12E-02	4.75E-02	4.10E-02	3.29E-02	2.64E-02	2.12E-02	1.69E-02	1.36E-02	
EU156	1.87E-04	3.05E-04	4.14E-04	5.16E-04	6.10E-04	7.78E-04	9.89E-04	1.14E-03	1.28E-03	1.38E-03	1.46E-03	
EU157	1.19E-02	3.94E-02	3.76E-02	3.59E-02	3.43E-02	3.13E-02	2.73E-02	2.39E-02	2.08E-02	1.81E-02	1.58E-02	
EU158	2.19E-01	8.86E-02	3.58E-02	1.45E-02	5.88E-03	9.62E-04	6.41E-05	4.25E-06	2.82E-07	1.87E-08	1.24E-09	
EU159	2.80E-01	2.78E-02	2.75E-03	2.74E-04	2.71E-05	2.67E-07	2.61E-10	2.55E-13	2.49E-16	2.43E-19	2.38E-22	
GD159	1.20E-03	5.25E-03	5.46E-03	5.29E-03	5.09E-03	4.72E-03	4.21E-03	3.75E-03	3.33E-03	2.97E-03	2.65E-03	
TB161	8.08E-06	5.81E-05	5.77E-05	5.75E-05	5.74E-05	5.68E-05	5.62E-05	5.55E-05	5.47E-05	5.41E-05	5.34E-05	
TOTAL	8.12E+03	1.88E+03	7.88E+02	5.08E+02	3.82E+02	2.62E+02	1.81E+02	1.37E+02	1.09E+02	9.01E+01	7.59E+01	

GRABLE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.910E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
BE 7	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
*NA 24	1.74E-02	5.73E-03	1.89E-03	6.77E-05	2.65E-07	4.05E-12	6.18E-17	1.44E-26	0.	0.	0.
MN 54	3.11E-04	3.08E-04	3.08E-04	3.02E-04	3.00E-04	2.94E-04	2.89E-04	2.75E-04	2.46E-04	1.95E-04	1.56E-04
FE 55	9.08E-05	9.08E-05	9.08E-05	9.03E-05	9.01E-05	8.97E-05	8.87E-05	8.76E-05	8.42E-05	7.85E-05	7.29E-05
FE 59	1.77E-05	1.74E-05	1.72E-05	1.64E-05	1.52E-05	1.30E-05	1.12E-05	8.20E-06	3.81E-06	8.12E-07	1.74E-07
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	6.77E-03	6.71E-03	6.64E-03	6.44E-03	6.15E-03	5.57E-03	5.06E-03	4.16E-03	2.56E-03	9.69E-04	3.66E-04
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CU 64	7.58E-01	2.06E-01	5.63E-02	1.14E-03	1.72E-06	3.90E-12	8.83E-18	4.55E-29	0.	0.	0.
CU 67	4.60E-06	3.50E-06	2.68E-06	1.19E-06	3.10E-07	2.09E-08	1.41E-09	6.40E-12	8.96E-18	0.	0.
W181	2.65E-05	2.64E-05	2.61E-05	2.58E-05	2.50E-05	2.37E-05	2.23E-05	1.99E-05	1.49E-05	8.41E-06	4.74E-06
W185	4.18E-02	4.14E-02	4.07E-02	3.99E-02	3.82E-02	3.47E-02	3.17E-02	2.63E-02	1.66E-02	6.60E-03	2.62E-03
W187	1.16E+01	5.80E+00	2.89E+00	3.59E-01	1.10E-02	1.05E-05	9.92E-09	8.96E-17	0.	0.	0.
W188	9.51E-06	9.39E-06	9.30E-06	9.04E-06	8.61E-06	7.77E-06	7.03E-06	5.77E-06	3.49E-06	1.29E-06	4.74E-07
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.29E-02	1.16E-02	1.05E-02	7.71E-03	4.61E-03	1.65E-03	5.92E-04	7.57E-05	4.47E-07	4.80E-11	3.24E-11
U240	1.37E-03	4.22E-04	1.29E-04	3.75E-06	1.03E-08	7.74E-14	5.82E-19	3.29E-29	0.	0.	0.
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP239	1.49E-04	2.27E-01	1.69E-01	6.99E-02	1.60E-02	8.36E-04	4.38E-05	1.20E-07	4.72E-14	1.13E-23	1.13E-23
NP240M	2.17E-06	4.24E-04	1.30E-04	3.78E-06	1.04E-08	7.82E-14	5.88E-19	3.31E-29	0.	0.	0.
AM241	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CM242	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GE 77	3.49E-03	2.20E-03	5.02E-04	6.07E-06	3.86E-09	1.56E-15	6.30E-22	1.03E-34	0.	0.	0.
AS 77	3.60E-05	5.32E-03	3.85E-03	1.11E-03	1.30E-04	1.77E-06	2.40E-08	4.43E-12	2.05E-21	4.40E-40	9.45E-59
SE 77M	1.42E-09	1.60E-05	1.15E-05	3.34E-06	3.90E-07	5.31E-09	7.21E-11	1.33E-14	6.16E-24	1.32E-42	2.84E-61
AS 78	9.39E-03	8.36E-05	2.45E-09	2.07E-23	0.	0.	0.	0.	0.	0.	0.
BR 82	3.85E-04	2.40E-04	1.50E-04	3.65E-05	3.46E-06	3.11E-08	2.79E-10	2.25E-14	1.31E-24	4.51E-45	1.54E-65
BR 83	2.98E-01	7.84E-03	7.88E-06	8.00E-15	8.17E-30	0.	0.	0.	0.	0.	0.
KR 83M	1.54E-05	3.43E-02	3.89E-05	3.50E-14	3.59E-29	0.	0.	0.	0.	0.	0.
KR 85M	3.88E-03	2.22E-01	5.05E-03	5.99E-08	3.69E-16	1.41E-32	5.32E-49	0.	0.	0.	0.
KR 85	4.01E-06	1.05E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.06E-04	1.04E-04	1.02E-04
KR 87	6.60E+01	1.30E-04	2.58E-10	2.00E-27	0.	0.	0.	0.	0.	0.	0.
KR 88	3.80E+01	1.00E-01	2.62E-04	4.76E-12	6.00E-25	0.	0.	0.	0.	0.	0.
RB 88	9.65E+00	1.11E-01	2.94E-04	5.33E-12	6.68E-25	0.	0.	0.	0.	0.	0.
SR 89	3.48E-06	1.04E-01	1.03E-01	9.86E-02	9.25E-02	8.08E-02	7.06E-02	5.44E-02	2.78E-02	7.32E-03	1.93E-03
SR 90	7.03E-06	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.22E-04	7.16E-04	7.16E-04	7.09E-04
Y 90	1.04E-11	1.65E-04	2.93E-04	5.26E-04	6.71E-04	7.16E-04	7.22E-04	7.22E-04	7.16E-04	7.16E-04	7.09E-04
SR 91	9.32E-01	3.34E+00	5.98E-01	3.43E-03	6.27E-07	2.13E-14	7.21E-22	8.21E-37	0.	0.	0.

GRABLE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.910E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

J-6

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
Y 91M	6.27E-05	2.16E+00	3.86E-01	2.22E-03	4.07E-07	1.37E-14	4.64E-22	5.30E-37	0.	0.	0.	0.
Y 91	2.57E-08	1.03E-01	1.21E-01	1.21E-01	1.14E-01	1.01E-01	9.03E-02	7.15E-02	3.96E-02	1.22E-02	3.75E-03	0.
SR 92	1.17E+01	1.46E-01	3.16E-04	3.17E-12	1.49E-25	0.	0.	0.	0.	0.	0.	0.
Y 92	5.41E-01	1.53E+00	1.70E-02	1.31E-08	7.65E-19	2.62E-39	8.96E-60	0.	0.	0.	0.	0.
Y 93	5.59E-01	3.78E+00	7.37E-01	5.54E-03	1.59E-06	1.32E-13	1.09E-20	7.42E-35	0.	0.	0.	0.
ZR 95	1.06E-03	1.32E-01	1.31E-01	1.26E-01	1.20E-01	1.07E-01	9.68E-02	7.83E-02	4.59E-02	1.58E-02	5.42E-03	0.
NB 95M	2.25E-11	4.47E-04	8.16E-04	1.56E-03	2.10E-03	2.21E-03	2.04E-03	1.66E-03	9.73E-04	3.35E-04	1.15E-04	0.
NB 95	1.18E-10	2.55E-03	5.05E-03	1.21E-02	2.25E-02	3.88E-02	5.00E-02	6.21E-02	5.98E-02	2.87E-02	1.10E-02	0.
ZR 97	2.46E+00	4.20E+00	1.58E+00	8.36E-02	6.28E-04	3.53E-08	1.99E-12	6.28E-21	3.54E-42	0.	0.	0.
NB 97M	1.27E-02	4.03E+00	1.51E+00	8.06E-02	6.02E-04	3.39E-08	1.91E-12	6.02E-21	3.41E-42	0.	0.	0.
NB 97	1.23E+00	4.21E+00	1.58E+00	8.40E-02	6.32E-04	3.81E-08	2.14E-12	6.79E-21	3.82E-42	0.	0.	0.
MO 99	7.14E-03	2.33E+00	1.82E+00	8.60E-01	2.49E-01	2.08E-02	1.73E-03	1.21E-05	4.91E-11	8.10E-22	1.33E-32	0.
TC 99M	6.64E-08	2.04E+00	1.72E+00	8.24E-01	2.38E-01	1.98E-02	1.66E-03	1.16E-05	4.69E-11	7.74E-22	1.27E-32	0.
RU103	4.77E-05	1.09E-01	1.07E-01	1.01E-01	9.29E-02	7.79E-02	6.54E-02	4.61E-02	1.92E-02	3.33E-03	5.81E-04	0.
RH103M	3.18E-09	1.09E-01	1.07E-01	1.01E-01	9.29E-02	7.79E-02	6.54E-02	4.61E-02	1.92E-02	3.33E-03	5.81E-04	0.
RU105	2.54E-01	2.43E-01	5.72E-03	7.52E-08	5.50E-16	2.93E-32	1.57E-48	0.	0.	0.	0.	0.
RH105M	1.67E-03	2.43E-01	5.74E-03	7.54E-08	5.52E-16	2.95E-32	1.58E-48	0.	0.	0.	0.	0.
RH105	2.75E-09	8.79E-01	5.74E-01	1.43E-01	1.41E-02	1.37E-04	1.33E-06	1.26E-10	1.09E-20	8.19E-41	6.15E-61	0.
RU106	1.91E-04	3.61E-03	3.59E-03	3.58E-03	3.55E-03	3.49E-03	3.41E-03	3.28E-03	2.99E-03	2.47E-03	2.05E-03	0.
RH106	2.06E-06	3.61E-03	3.59E-03	3.58E-03	3.55E-03	3.49E-03	3.41E-03	3.28E-03	2.99E-03	2.47E-03	2.05E-03	0.
PD109	1.42E-03	3.62E-02	1.06E-02	2.62E-04	5.52E-07	2.46E-12	1.10E-17	2.17E-28	0.	0.	0.	0.
AG109M	8.21E-06	3.62E-02	1.06E-02	2.62E-04	5.54E-07	2.46E-12	1.10E-17	2.17E-28	0.	0.	0.	0.
PD111M	2.26E-01	1.10E-02	5.34E-04	6.12E-08	1.65E-14	1.21E-27	8.87E-41	0.	0.	0.	0.	0.
PD111	8.06E-02	8.87E-03	4.29E-04	4.92E-08	1.33E-14	9.71E-28	7.12E-41	0.	0.	0.	0.	0.
AG111M	6.40E-04	1.16E-02	5.63E-04	6.48E-08	1.75E-14	1.28E-27	9.37E-41	0.	0.	0.	0.	0.
AG111	2.28E-10	6.29E-03	6.05E-03	4.60E-03	2.90E-03	1.15E-03	4.56E-04	7.19E-05	7.07E-07	6.85E-11	6.64E-15	0.
PD112	4.94E-02	2.24E-02	1.01E-02	9.42E-04	1.79E-05	6.50E-09	2.36E-12	3.10E-19	1.96E-36	0.	0.	0.
AG112	1.49E-06	2.60E-02	1.20E-02	1.11E-03	2.12E-05	7.68E-09	2.78E-12	3.67E-19	2.30E-36	0.	0.	0.
AG113	6.75E-04	7.13E-03	3.09E-04	2.51E-08	3.84E-15	8.98E-29	2.10E-42	0.	0.	0.	0.	0.
CD115M	2.49E-09	7.21E-05	7.09E-05	6.75E-05	6.24E-05	5.30E-05	4.52E-05	3.27E-05	1.46E-05	2.90E-06	5.81E-07	0.
CD115	9.63E-07	1.45E-02	1.06E-02	4.19E-03	8.83E-04	3.94E-05	1.76E-06	3.51E-09	6.19E-16	1.94E-29	6.07E-43	0.
IN115M	1.20E-11	1.53E-02	1.16E-02	4.57E-03	9.63E-04	4.31E-05	1.92E-06	3.82E-09	6.77E-16	2.12E-29	6.63E-43	0.
CD117	2.17E-02	4.72E-04	4.60E-07	4.29E-16	3.81E-31	0.	0.	0.	0.	0.	0.	0.
IN117M	1.04E-06	1.96E-03	2.27E-06	2.19E-15	1.95E-30	0.	0.	0.	0.	0.	0.	0.
IN117	4.19E-11	1.29E-03	1.53E-06	1.48E-15	1.32E-30	0.	0.	0.	0.	0.	0.	0.
SN121	4.38E-04	2.50E-02	1.35E-02	2.12E-03	9.74E-05	2.06E-07	4.33E-10	1.93E-15	8.07E-29	0.	0.	0.
SN123	2.26E-06	2.36E-04	2.34E-04	2.30E-04	2.24E-04	2.12E-04	2.01E-04	1.80E-04	1.36E-04	7.82E-05	4.50E-05	0.
SN125	6.34E-03	5.89E-03	5.48E-03	4.39E-03	3.03E-03	1.45E-03	6.94E-04	1.59E-04	3.97E-06	2.50E-09	1.57E-12	0.
SB125	3.81E-05	4.22E-05	4.62E-05	5.64E-05	6.92E-05	8.38E-05	9.02E-05	9.40E-05	9.22E-05	8.61E-05	8.03E-05	0.
SB126	1.26E-03	1.19E-03	1.13E-03	9.53E-04	7.23E-04	4.14E-04	2.39E-04	7.86E-05	4.92E-06	2.39E-08	4.80E-09	0.

GRABLE  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.910E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SN127	2.29E+00	8.28E-04	3.01E-07	1.44E-17	9.01E-35	0.	0.	0.	0.	0.	0.	0.
SB127	2.67E-02	1.09E-01	9.16E-02	5.35E-02	2.19E-02	3.66E-03	6.12E-04	1.71E-05	0.	2.23E-09	3.81E-17	6.48E-25
TE127M	2.16E-10	1.67E-04	3.06E-04	5.93E-04	8.20E-04	9.05E-04	8.72E-04	7.73E-04	5.84E-04	2.98E-04	1.57E-04	1.57E-04
TE127	1.51E-02	7.84E-02	7.69E-02	4.69E-02	1.98E-02	4.06E-03	1.39E-03	7.60E-04	5.57E-04	2.94E-04	1.56E-04	1.56E-04
SB128	6.42E-01	1.09E-01	1.73E-02	6.74E-05	6.54E-09	6.13E-17	5.77E-25	5.09E-41	0.	0.	0.	0.
SB129	3.76E+00	1.92E-01	4.01E-03	3.65E-08	1.45E-16	2.29E-33	3.62E-50	0.	0.	0.	0.	0.
TE129M	7.10E-08	7.48E-03	7.48E-03	7.05E-03	6.38E-03	5.20E-03	4.22E-03	2.81E-03	1.01E-03	1.32E-04	1.72E-05	1.72E-05
TE129	2.70E+00	2.25E-01	9.38E-03	4.52E-03	4.08E-03	3.32E-03	2.71E-03	1.80E-03	6.50E-04	8.49E-05	1.10E-05	1.10E-05
I130	1.75E-02	4.58E-03	1.20E-03	2.14E-05	2.62E-08	3.90E-14	5.82E-20	1.30E-31	0.	0.	0.	0.
TE131M	7.10E-05	2.48E-01	1.42E-01	2.70E-02	1.69E-03	6.58E-06	2.58E-08	3.93E-13	3.57E-25	0.	0.	0.
TE131	6.53E-01	4.53E-02	2.60E-02	4.94E-03	3.08E-04	1.20E-06	4.70E-09	7.19E-14	6.53E-26	0.	0.	0.
I131	9.50E-03	5.12E-01	4.84E-01	3.89E-01	2.56E-01	1.08E-01	4.58E-02	8.18E-03	1.10E-04	2.01E-08	3.67E-12	3.67E-12
XE131M	2.58E-11	2.37E-04	4.51E-04	9.40E-04	1.34E-03	1.33E-03	9.87E-04	4.08E-04	2.72E-05	8.13E-08	2.29E-10	2.29E-10
TE132	7.95E-01	1.57E+00	1.27E+00	6.69E-01	2.31E-01	2.74E-02	3.24E-03	4.55E-05	1.06E-09	5.83E-19	3.18E-28	3.18E-28
I132	1.95E+00	1.62E+00	1.31E+00	6.89E-01	2.31E-01	2.82E-02	3.34E-03	4.55E-05	1.10E-09	5.97E-19	3.28E-28	3.28E-28
I133	8.56E-01	4.77E+00	2.15E+00	2.00E-01	3.81E-03	1.38E-06	5.00E-10	6.59E-17	4.14E-34	0.	0.	0.
XE133M	3.64E-08	4.50E-02	5.33E-02	3.13E-02	7.34E-03	3.45E-04	1.60E-05	3.48E-08	7.62E-15	3.64E-28	1.74E-41	1.74E-41
XE133	6.36E-07	8.65E-01	1.16E+00	1.04E+00	5.66E-01	1.53E-01	4.11E-02	2.96E-03	4.12E-06	7.99E-12	1.55E-17	1.55E-17
I135	1.45E+01	2.36E+00	1.97E-01	1.15E-04	4.65E-10	7.68E-21	1.26E-31	3.43E-53	0.	0.	0.	0.
XE135M	1.60E-03	7.35E-01	6.15E-02	3.58E-05	1.45E-10	2.39E-21	3.94E-32	1.07E-53	0.	0.	0.	0.
XE135	1.67E+00	6.36E+00	1.55E+00	8.89E-03	1.09E-06	1.53E-14	2.14E-22	4.24E-38	0.	0.	0.	0.
CS136	1.32E-03	1.25E-03	1.18E-03	1.01E-03	7.72E-04	4.53E-04	2.67E-04	9.15E-05	6.36E-06	3.06E-08	1.49E-10	1.49E-10
CS137	6.99E-05	7.53E-04	7.53E-04	7.53E-04	7.53E-04	7.53E-04	7.53E-04	7.53E-04	7.49E-04	7.45E-04	7.41E-04	7.41E-04
BA137M	1.47E-07	7.03E-04	7.03E-04	7.03E-04	7.03E-04	7.03E-04	7.03E-04	7.03E-04	6.99E-04	6.95E-04	6.91E-04	6.91E-04
BA139	9.38E+00	1.00E-03	5.91E-09	1.22E-24	0.	0.	0.	0.	0.	0.	0.	0.
BA140	1.03E-01	6.06E-01	5.77E-01	4.89E-01	3.73E-01	2.17E-01	1.26E-01	4.28E-02	2.86E-03	1.27E-05	5.62E-08	5.62E-08
LA140	2.44E-07	2.11E-01	3.40E-01	4.70E-01	4.18E-01	2.50E-01	1.45E-01	4.94E-02	3.28E-03	1.46E-05	6.50E-08	6.50E-08
LA141	1.82E+00	7.23E-01	1.01E-02	2.81E-08	1.54E-17	4.58E-36	1.37E-54	0.	0.	0.	0.	0.
CE141	2.25E-07	2.50E-01	2.48E-01	2.33E-01	2.09E-01	1.69E-01	1.36E-01	8.88E-02	3.05E-02	3.59E-03	4.23E-04	4.23E-04
LA142	1.20E+01	2.62E-03	5.07E-08	3.73E-22	0.	0.	0.	0.	0.	0.	0.	0.
CE143	8.12E-02	3.34E+00	2.02E+00	4.45E-01	3.58E-02	2.31E-04	1.50E-06	6.27E-11	7.08E-22	0.	0.	0.
PR143	2.37E-08	2.14E-01	3.32E-01	4.29E-01	3.68E-01	2.24E-01	1.35E-01	4.89E-02	3.91E-03	2.48E-05	1.58E-07	1.58E-07
CE144	3.28E-03	2.34E-02	2.33E-02	2.32E-02	2.29E-02	2.24E-02	2.18E-02	2.08E-02	1.84E-02	1.44E-02	1.13E-02	1.13E-02
PR144	9.00E-07	2.34E-02	2.33E-02	2.32E-02	2.29E-02	2.24E-02	2.18E-02	2.08E-02	1.84E-02	1.44E-02	1.13E-02	1.13E-02
PR145	1.28E-01	1.30E+00	8.07E-02	1.91E-05	1.74E-11	1.44E-23	1.20E-35	0.	0.	0.	0.	0.
ND147	1.49E-05	2.50E-01	2.35E-01	1.95E-01	1.43E-01	7.67E-02	4.09E-02	1.18E-02	5.15E-04	1.00E-06	1.95E-09	1.95E-09
PM147	4.13E-14	1.87E-04	3.63E-04	8.28E-04	1.43E-03	2.18E-03	2.58E-03	2.88E-03	2.90E-03	2.70E-03	2.52E-03	2.52E-03
ND149	1.93E+01	1.87E-03	1.81E-07	1.65E-19	1.41E-39	0.	0.	0.	0.	0.	0.	0.
PM149	2.69E-03	4.96E-01	3.63E-01	1.42E-01	2.96E-02	1.29E-03	5.62E-05	1.07E-07	1.69E-14	4.16E-28	1.04E-41	1.04E-41
PM150	2.14E-01	4.51E-04	9.50E-07	8.92E-15	3.73E-28	0.	0.	0.	0.	0.	0.	0.

GRABLE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.910E-13

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
PM151	4.08E-02	2.78E-01	1.54E-01	2.59E-02	1.33E-03	3.48E-06	9.18E-09	6.33E-14	7.94E-27	0.	0.	0.
SM153	1.27E-01	8.91E-02	6.26E-02	2.16E-02	3.67E-03	1.07E-04	3.10E-06	2.61E-09	5.38E-17	2.29E-32	9.74E-48	0.
SM156	6.39E-02	1.09E-02	1.86E-03	9.16E-06	1.32E-09	2.71E-17	5.60E-25	2.38E-40	0.	0.	0.	0.
EU155	4.01E-06	1.36E-04	1.36E-04	1.36E-04	1.35E-04	1.35E-04	1.34E-04	1.33E-04	1.31E-04	1.25E-04	1.20E-04	1.20E-04
EU156	1.87E-04	1.52E-03	1.69E-03	1.51E-03	1.20E-03	7.54E-04	4.75E-04	1.89E-04	1.87E-05	1.84E-07	1.81E-09	0.
EU157	1.19E-02	1.37E-02	4.62E-03	1.73E-04	7.28E-07	1.28E-11	2.27E-16	7.07E-26	0.	0.	0.	0.
GD159	1.20E-03	2.36E-03	9.39E-04	5.85E-05	5.76E-07	5.58E-11	5.41E-15	5.08E-23	4.34E-43	0.	0.	0.
TB161	8.08E-06	5.28E-05	4.76E-05	3.53E-05	2.13E-05	7.81E-06	2.86E-06	3.83E-07	2.53E-09	1.10E-13	4.76E-18	0.
TOTAL	2.82E+02	6.44E+01	2.75E+01	8.84E+00	4.12E+00	1.91E+00	1.23E+00	7.06E-01	3.25E-01	1.23E-01	5.98E-02	0.



GRABLE MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 2.910E-13

## DEBRIS DECAY FROM 1 TO 50 YEARS

	ZERO	TIME	1.00E+00	1.50E+00	2.00E+00	3.50E+00	5.00E+00	7.00E+00	1.00E+01	2.00E+01	3.50E+01	5.00E+01
BE 7	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MN 54	3.11E-04	1.34E-04	8.83E-05	5.80E-05	1.66E-05	4.73E-06	8.91E-07	7.29E-08	1.71E-11	6.19E-17	2.24E-22	
FE 59	1.77E-05	6.39E-08	3.83E-09	2.31E-10	5.01E-14	1.08E-17	1.41E-22	6.60E-30	0.	0.	0.	0.
CO 57	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CO 58	6.77E-03	1.94E-04	3.30E-05	5.59E-06	2.72E-08	1.33E-10	1.09E-13	2.59E-18	9.91E-34	0.	0.	0.
CO 60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W181	2.65E-05	3.26E-06	1.15E-06	4.02E-07	1.75E-07	7.57E-10	1.15E-11	2.16E-14	1.77E-23	0.	0.	0.
W185	4.18E-02	1.44E-03	2.66E-04	4.93E-05	3.14E-07	2.01E-09	2.36E-12	9.57E-17	0.	0.	0.	0.
W188	9.51E-06	2.47E-07	4.01E-08	6.43E-09	2.72E-11	1.14E-13	7.70E-17	1.36E-21	0.	0.	0.	0.
U234	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	1.29E-02	3.21E-11	3.13E-11	3.04E-11	2.85E-11	2.65E-11	2.41E-11	2.09E-11	1.30E-11	6.37E-12	3.13E-12	
AM241	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
CM242	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
KR 85	4.01E-06	9.97E-05	9.66E-05	9.35E-05	8.52E-05	7.70E-05	6.77E-05	5.58E-05	2.95E-05	1.13E-05	4.30E-06	
SR 89	3.48E-06	8.13E-04	7.11E-05	6.25E-06	4.21E-09	2.84E-12	1.68E-16	7.62E-23	5.54E-44	0.	0.	0.
SR 90	7.03E-06	7.03E-04	6.96E-04	6.90E-04	6.64E-04	6.39E-04	6.08E-04	5.65E-04	4.41E-04	3.05E-04	2.11E-04	
Y 90	1.04E-11	7.03E-04	6.96E-04	6.90E-04	6.64E-04	6.39E-04	6.08E-04	5.65E-04	4.41E-04	3.05E-04	2.11E-04	
Y 91	2.57E-08	1.74E-03	2.02E-04	2.34E-05	3.68E-08	5.77E-11	1.06E-14	2.59E-20	5.23E-39	0.	0.	0.
ZR 95	1.06E-03	2.72E-03	3.87E-04	5.51E-05	1.61E-07	4.68E-10	1.94E-13	1.64E-18	2.00E-35	0.	0.	0.
NB 95M	2.25E-11	5.75E-05	8.20E-06	1.17E-06	3.41E-09	9.92E-12	4.11E-15	3.47E-20	4.25E-37	0.	0.	0.
NB 95	1.18E-10	5.84E-03	8.39E-04	1.20E-04	3.47E-07	1.01E-09	4.20E-13	3.54E-18	4.34E-35	0.	0.	0.
RU103	4.77E-05	1.85E-04	7.58E-06	3.12E-07	2.13E-11	1.46E-15	4.09E-21	1.92E-29	0.	0.	0.	0.
RH103M	3.18E-09	1.85E-04	7.58E-06	3.12E-07	2.13E-11	1.46E-15	4.09E-21	1.93E-29	0.	0.	0.	0.
RU106	1.91E-04	1.81E-03	1.28E-03	9.10E-04	3.24E-04	1.15E-04	2.89E-05	3.66E-06	3.69E-09	1.19E-13	3.81E-18	
RH106	2.06E-06	1.81E-03	1.28E-03	9.10E-04	3.24E-04	1.15E-04	2.89E-05	3.66E-06	3.69E-09	1.19E-13	3.81E-18	
SN123	2.26E-06	3.13E-05	1.14E-05	4.13E-06	1.98E-07	9.50E-09	1.66E-10	3.82E-13	6.12E-22	3.94E-35	2.53E-48	
SB125	3.81E-05	7.66E-05	6.74E-05	5.93E-05	4.04E-05	2.75E-05	1.64E-05	7.60E-06	5.84E-07	1.24E-08	2.65E-10	
TE125M	1.02E-12	3.13E-05	2.78E-05	2.45E-05	1.67E-05	1.14E-05	6.80E-06	3.15E-06	2.42E-07	5.15E-09	1.10E-10	
TE127M	2.16E-10	1.03E-04	3.23E-05	1.01E-05	3.11E-07	9.56E-09	9.19E-11	8.64E-14	7.10E-24	5.31E-39	3.96E-54	
TE127	1.51E-02	1.02E-04	3.19E-05	1.00E-05	3.07E-07	9.45E-09	9.08E-11	8.57E-14	7.03E-24	5.24E-39	3.92E-54	
CS137	6.99E-05	7.37E-04	7.28E-04	7.20E-04	6.95E-04	6.70E-04	6.40E-04	5.99E-04	4.73E-04	3.36E-04	2.37E-04	
BA137M	1.47E-07	6.91E-04	6.82E-04	6.74E-04	6.49E-04	6.28E-04	5.99E-04	5.61E-04	4.44E-04	3.14E-04	2.22E-04	
CE141	2.25E-07	9.72E-05	1.95E-06	3.93E-08	3.20E-13	2.60E-18	4.27E-25	2.83E-35	0.	0.	0.	0.
CE144	3.28E-03	9.63E-03	6.19E-03	3.95E-03	1.04E-03	2.73E-04	4.59E-05	3.17E-06	4.26E-10	6.68E-16	1.04E-21	
PR144	9.00E-07	9.63E-03	6.19E-03	3.95E-03	1.04E-03	2.73E-04	4.59E-05	3.17E-06	4.26E-10	6.68E-16	1.04E-21	
PM147	4.13E-14	2.40E-03	2.10E-03	1.84E-03	1.24E-03	8.33E-04	4.89E-04	2.22E-04	1.58E-05	2.98E-07	5.64E-09	
EU155	4.01E-06	1.17E-04	1.09E-04	1.01E-04	8.16E-05	6.56E-05	4.89E-05	3.16E-05	7.39E-06	8.31E-07	9.35E-08	
TOTAL	8.16E-02	4.21E-02	2.21E-02	1.50E-02	6.87E-03	4.37E-03	3.23E-03	2.62E-03	1.85E-03	1.27E-03	8.86E-04	

**APPENDIX K**  
**DETAILED RESULTS FOR EVENT CLIMAX**

CLIMAX  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 7.624E-14

TIME	MR/HR	MICROCURIES/SQ METER
ZERO TIME HOURS	1 04E+02	9.64E+03
1.00E+00	3.19E+01	2.13E+03
2.00E+00	1.29E+01	8.52E+02
3.00E+00	7.10E+00	5.34E+02
4.00E+00	4.53E+00	3.99E+02
6.00E+00	2.42E+00	2.72E+02
9.00E+00	1.40E+00	1.87E+02
1.20E+01	1.00E+00	1.42E+02
1.50E+01	7.77E-01	1.13E+02
1.80E+01	6.31E-01	9.34E+01
2.10E+01	5.28E-01	7.89E+01
1.00E+00 DAYS	4.44E-01	6.71E+01
2.00E+00	1.93E-01	2.97E+01
5.00E+00	7.05E-02	1.05E+01
1.00E+01	3.47E-02	4.73E+00
2.00E+01	1.56E-02	2.08E+00
3.00E+01	9.72E-03	1.33E+00
5.00E+01	5.14E-03	7.71E-01
1.00E+02	2.24E-03	3.57E-01
2.00E+02	8.30E-04	1.35E-01
3.00E+02	3.17E-04	6.54E-02
1.00E+00 YEARS	1.75E-04	4.60E-02
1.50E+00	4.17E-05	2.42E-02
2.00E+00	1.90E-05	1.64E-02
3.50E+00	1.00E-05	7.46E-03
5.00E+00	7.98E-06	4.67E-03
7.00E+00	6.92E-06	3.40E-03
1.00E+01	6.18E-06	2.73E-03
2.00E+01	4.72E-06	1.91E-03
3.50E+01	3.32E-06	1.31E-03
5.00E+01	2.34E-06	9.13E-04

CLIMAX MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 7.624E-14

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
*BE 7	3.07E-07	3.06E-07	3.06E-07	3.06E-07	3.06E-07	3.06E-07	3.06E-07	3.05E-07	3.04E-07	3.04E-07	3.03E-07
**NA 24	2.31E-05	2.21E-05	2.11E-05	2.01E-05	1.92E-05	1.75E-05	1.53E-05	1.33E-05	1.16E-05	1.01E-05	8.74E-06
**MN 54	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.08E-05	2.08E-05	2.08E-05	2.08E-05
*FE 55	3.72E-05	3.72E-05	3.72E-05	3.72E-05	3.72E-05	3.72E-05	3.72E-05	3.72E-05	3.72E-05	3.72E-05	3.72E-05
*FE 59	3.09E-05	3.09E-05	3.09E-05	3.09E-05	3.09E-05	3.08E-05	3.08E-05	3.07E-05	3.06E-05	3.06E-05	3.06E-05
*CO 57	3.77E-05	3.77E-05	3.77E-05	3.77E-05	3.77E-05	3.77E-05	3.77E-05	3.77E-05	3.77E-05	3.77E-05	3.77E-05
*CO 58	8.74E-02	8.74E-02	8.74E-02	8.74E-02	8.73E-02	8.73E-02	8.71E-02	8.71E-02	8.69E-02	8.69E-02	8.67E-02
*CO 60	1.57E-05	1.57E-05	1.57E-05	1.57E-05	1.57E-05	1.57E-05	1.57E-05	1.57E-05	1.57E-05	1.57E-05	1.57E-05
*CU 64	2.42E+00	2.29E+00	2.16E+00	2.05E+00	1.94E+00	1.75E+00	1.48E+00	1.26E+00	1.07E+00	9.12E-01	7.75E-01
*CU 67	1.09E-04	1.08E-04	1.06E-04	1.05E-04	1.04E-04	1.01E-04	9.77E-05	9.49E-05	9.19E-05	8.84E-05	8.59E-05
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	7.70E-02	7.66E-02	7.63E-02	7.60E-02	7.56E-02	7.50E-02	7.40E-02	7.31E-02	7.21E-02	7.11E-02	7.03E-02
U239	8.73E+02	1.49E+02	2.54E+01	4.33E+00	7.35E-01	2.14E-02	1.06E-04	5.24E-07	2.59E-09	1.28E-11	6.34E-14
U240	2.95E-01	2.81E-01	2.68E-01	2.55E-01	2.43E-01	2.20E-01	1.90E-01	1.64E-01	1.41E-01	1.22E-01	1.05E-01
NP239	2.99E-03	5.01E+00	5.79E+00	5.88E+00	5.84E+00	5.70E+00	5.47E+00	5.28E+00	5.10E+00	4.92E+00	4.73E+00
NP240M	4.67E-04	2.82E-01	2.70E-01	2.57E-01	2.45E-01	2.22E-01	1.91E-01	1.65E-01	1.42E-01	1.23E-01	1.06E-01
NP240	1.18E-11	6.08E-12	3.16E-12	1.63E-12	8.43E-13	2.25E-13	3.11E-14	4.29E-15	5.92E-16	8.15E-17	1.13E-17
*AM241	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09
*CM242	1.44E-07	1.44E-07	1.44E-07	1.44E-07	1.44E-07	1.44E-07	1.43E-07	1.43E-07	1.43E-07	1.43E-07	1.43E-07
GE 75	6.11E-06	2.96E-02	1.78E-02	1.07E-02	6.46E-03	2.34E-03	5.12E-04	1.12E-04	2.45E-05	5.33E-06	1.17E-06
GE 77	3.79E-03	9.75E-03	9.18E-03	8.63E-03	8.13E-03	7.19E-03	5.98E-03	4.97E-03	4.14E-03	3.44E-03	2.86E-03
AS 77	3.92E-05	6.19E-03	6.26E-03	6.30E-03	6.34E-03	6.39E-03	6.39E-03	6.34E-03	6.25E-03	6.12E-03	5.96E-03
SE 77M	1.54E-09	1.85E-05	1.88E-05	1.89E-05	1.89E-05	1.91E-05	1.92E-05	1.91E-05	1.88E-05	1.84E-05	1.78E-05
GE 78	5.73E-01	3.58E-01	2.23E-01	1.39E-01	8.70E-02	3.38E-02	8.22E-03	1.99E-03	4.86E-04	1.18E-04	2.87E-05
AS 78	1.03E-02	1.71E-01	2.11E-01	1.98E-01	1.65E-01	9.75E-02	3.62E-02	1.20E-02	3.72E-03	1.11E-03	3.22E-04
AS 79	1.17E+01	1.15E-01	1.14E-03	1.12E-05	1.10E-07	1.07E-11	1.02E-17	9.72E-24	9.27E-30	8.85E-36	8.45E-42
SE 79M	1.74E-02	2.04E-01	2.01E-03	1.98E-05	1.95E-07	1.88E-11	1.80E-17	1.72E-23	1.64E-29	1.56E-35	1.49E-41
BR 80	7.58E-02	7.16E-03	6.73E-04	6.33E-05	5.96E-06	5.28E-08	4.42E-11	3.68E-14	3.07E-17	2.56E-20	2.14E-23
SE 81M	6.36E-02	2.97E+00	1.43E+00	6.89E-01	3.31E-01	7.74E-02	8.66E-03	9.71E-04	1.09E-04	1.22E-05	1.37E-06
SE 81	7.77E-01	3.51E+00	2.03E+00	1.01E+00	4.92E-01	1.15E-01	1.29E-02	1.44E-03	1.61E-04	1.81E-05	2.03E-06
BR 82	4.00E-04	3.92E-04	3.84E-04	3.77E-04	3.70E-04	3.55E-04	3.35E-04	3.16E-04	2.98E-04	2.81E-04	2.65E-04
SE 83	3.72E+01	7.05E+00	1.34E+00	2.53E-01	4.78E-02	1.72E-03	1.17E-05	7.96E-08	5.44E-10	3.68E-12	2.34E-14
BR 83	3.09E-01	4.61E+00	4.27E+00	3.36E+00	2.55E+00	1.44E+00	6.09E-01	2.56E-01	1.08E-01	4.57E-02	1.93E-02
KR 83M	1.60E-05	1.04E+00	2.13E+00	2.65E+00	2.73E+00	2.28E+00	1.34E+00	6.92E-01	3.33E-01	1.54E-01	6.92E-02

K-3

CLIMAX MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 7.624E-14

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
BR 84	7.93E-02	1.37E+01	3.70E+00	1.00E+00	2.70E-01	1.98E-02	3.91E-04	7.72E-06	1.53E-07	3.02E-09	5.97E-11
KR 85M	3.91E-03	8.38E+00	7.13E+00	6.09E+00	5.20E+00	3.80E+00	2.37E+00	1.48E+00	9.21E-01	5.72E-01	3.58E-01
KR 87	6.56E+01	3.78E+01	2.19E+01	1.27E+01	7.30E+00	2.45E+00	4.75E-01	9.20E-02	1.78E-02	3.45E-03	6.67E-04
KR 88	3.77E+01	2.94E+01	2.30E+01	1.79E+01	1.40E+01	8.51E+00	4.06E+00	1.93E+00	9.19E-01	4.38E-01	2.08E-01
RB 88	9.58E+00	2.98E+01	2.54E+01	2.00E+01	1.57E+01	9.53E+00	4.55E+00	2.17E+00	1.03E+00	4.91E-01	2.33E-01
RB 89	4.54E+01	4.26E+01	2.87E+00	1.93E-01	1.29E-02	5.84E-05	1.77E-08	5.33E-12	1.63E-15	4.92E-19	1.49E-22
SR 89	3.47E-06	1.22E-01	1.30E-01	1.30E-01	1.30E-01	1.30E-01	1.30E-01	1.30E-01	1.30E-01	1.29E-01	1.29E-01
SR 90	7.01E-06	7.20E-04	7.20E-04	7.20E-04	7.20E-04	7.20E-04	7.20E-04	7.20E-04	7.20E-04	7.20E-04	7.20E-04
SR 91	9.35E-01	1.74E+01	1.62E+01	1.51E+01	1.40E+01	1.22E+01	9.82E+00	7.93E+00	6.41E+00	5.14E+00	4.15E+00
Y 91M	6.29E-05	6.00E+00	8.17E+00	8.76E+00	8.64E+00	7.76E+00	6.35E+00	5.11E+00	4.12E+00	3.32E+00	2.68E+00
Y 91	2.57E-08	5.33E-03	1.23E-02	1.96E-02	2.68E-02	4.01E-02	5.70E-02	7.05E-02	8.17E-02	9.05E-02	9.76E-02
SR 92	1.18E+01	5.29E+01	4.10E+01	3.17E+01	2.46E+01	1.47E+01	6.83E+00	3.17E+00	1.47E+00	6.83E-01	3.18E-01
Y 92	5.46E-01	1.11E+01	1.75E+01	2.08E+01	2.20E+01	2.10E+01	1.61E+01	1.10E+01	7.05E+00	4.34E+00	2.62E+00
SR 93	4.69E+02	8.07E+00	4.46E-02	2.46E-04	1.36E-06	4.15E-11	7.00E-18	1.18E-24	1.99E-31	3.36E-38	5.67E-45
Y 93	5.72E-01	1.85E+01	1.74E+01	1.63E+01	1.52E+01	1.33E+01	1.08E+01	8.82E+00	7.16E+00	5.88E+00	4.78E+00
Y 94	6.80E+01	9.29E+01	1.20E+01	1.54E+00	1.99E-01	3.30E-03	7.08E-06	1.52E-08	3.25E-11	7.08E-14	3.92E-15
Y 95	2.91E+02	2.74E+01	6.04E-01	1.33E-02	2.93E-04	1.42E-07	1.52E-12	1.63E-17	1.74E-22	1.86E-27	1.99E-32
ZR 95	1.09E-03	1.43E-01	1.46E-01	1.46E-01	1.46E-01	1.46E-01	1.46E-01	1.45E-01	1.45E-01	1.45E-01	1.45E-01
NB 95	1.22E-10	6.82E-05	2.06E-04	3.23E-04	4.41E-04	6.76E-04	1.03E-03	1.38E-03	1.72E-03	2.07E-03	2.42E-03
ZR 97	2.59E+00	1.13E+01	1.08E+01	1.04E+01	9.94E+00	9.18E+00	8.11E+00	7.17E+00	6.37E+00	5.62E+00	4.99E+00
NB 97M	1.33E-02	1.08E+01	1.04E+01	9.98E+00	9.58E+00	8.82E+00	7.80E+00	6.91E+00	6.11E+00	5.39E+00	4.77E+00
NB 97	1.30E+00	5.66E+00	7.98E+00	9.09E+00	9.54E+00	9.49E+00	8.65E+00	7.71E+00	6.82E+00	6.02E+00	5.35E+00
NB 98	1.45E+01	6.44E+00	2.85E+00	1.26E+00	5.58E-01	1.09E-01	9.45E-03	8.16E-04	7.11E-05	6.15E-06	5.30E-07
MO 99	7.61E-03	3.14E+00	3.11E+00	3.08E+00	3.04E+00	2.98E+00	2.89E+00	2.80E+00	2.72E+00	2.64E+00	2.55E+00
TC 99M	7.08E-08	2.99E-01	5.62E-01	7.95E-01	9.98E-01	1.33E+00	1.69E+00	1.92E+00	2.06E+00	2.14E+00	2.17E+00
MO 101	1.05E+02	4.75E+01	2.76E+00	1.60E-01	9.28E-03	3.11E-05	6.04E-09	1.18E-12	2.29E-16	4.44E-20	8.65E-24
TC 101	4.44E+00	1.33E+02	1.46E+01	1.19E+00	8.70E-02	3.92E-04	9.81E-08	2.20E-11	4.66E-15	9.59E-19	1.94E-22
MO 102	8.42E+02	1.92E+01	4.37E-01	9.98E-03	2.28E-04	1.18E-07	1.41E-12	1.67E-17	1.98E-22	2.34E-27	2.79E-32
TC 102M	5.41E-01	1.62E+01	3.72E-01	8.50E-03	1.94E-04	1.00E-07	1.19E-12	1.41E-17	1.67E-22	1.98E-27	2.36E-32
TC 102	2.53E+03	9.66E+00	2.20E-01	5.01E-03	1.15E-04	5.97E-08	7.09E-13	8.42E-18	9.98E-23	1.18E-27	1.40E-32
RU 103	5.75E-05	1.33E-01	1.33E-01	1.33E-01	1.33E-01	1.33E-01	1.32E-01	1.32E-01	1.32E-01	1.32E-01	1.31E-01
RH 103M	3.83E-09	6.89E-02	1.02E-01	1.18E-01	1.26E-01	1.31E-01	1.32E-01	1.32E-01	1.32E-01	1.32E-01	1.32E-01
TC 104	4.73E+01	3.40E+01	3.40E+00	3.36E-01	3.33E-02	3.28E-04	3.20E-07	3.13E-10	3.06E-13	2.99E-16	2.92E-19
RU 105	3.47E-01	1.20E+01	1.02E+01	8.78E+00	7.51E+00	5.49E+00	3.44E+00	2.15E+00	1.35E+00	8.43E-01	5.29E-01
RH 105M	2.28E-03	1.20E+01	1.03E+01	8.81E+00	7.51E+00	5.52E+00	3.44E+00	2.16E+00	1.35E+00	8.45E-01	5.29E-01
RH 105	3.74E-09	2.44E-01	4.53E-01	6.25E-01	7.69E-01	9.84E-01	1.18E+00	1.27E+00	1.29E+00	1.28E+00	1.24E+00
RU 106	2.82E-04	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03
RH 106	3.05E-06	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03	5.34E-03
RH 107	5.23E-02	7.11E+00	1.08E+00	1.62E-01	2.45E-02	5.58E-04	1.92E-06	6.63E-09	2.28E-11	7.81E-14	7.77E-18
PD 107M	1.09E-04	1.45E+00	2.18E-01	3.30E-02	4.98E-03	1.14E-04	3.91E-07	1.35E-09	4.64E-12	1.60E-14	5.47E-17

K-4

CLIMAX MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 7.624E-14

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
PD109	3.14E-03	2.60E-01	2.47E-01	2.34E-01	2.23E-01	2.01E-01	1.73E-01	1.48E-01	1.27E-01	1.09E-01	9.34E-02
AG109M	1.81E-05	2.60E-01	2.47E-01	2.35E-01	2.23E-01	2.02E-01	1.73E-01	1.48E-01	1.27E-01	1.09E-01	9.34E-02
PD111M	4.03E-01	3.55E-01	3.13E-01	2.77E-01	2.43E-01	1.89E-01	1.30E-01	8.88E-02	6.09E-02	4.16E-02	2.86E-02
PD111	1.43E-01	2.59E-01	2.48E-01	2.21E-01	1.95E-01	1.52E-01	1.04E-01	7.14E-02	4.88E-02	3.35E-02	2.30E-02
AG111M	1.14E-03	3.49E-01	3.28E-01	2.93E-01	2.59E-01	2.00E-01	1.37E-01	9.36E-02	6.42E-02	4.40E-02	3.01E-02
AG111	4.06E-10	1.20E-03	2.53E-03	3.71E-03	4.76E-03	6.49E-03	8.34E-03	9.56E-03	1.04E-02	1.09E-02	1.12E-02
PD112	8.29E-02	8.04E-02	7.76E-02	7.51E-02	7.28E-02	6.80E-02	6.17E-02	5.59E-02	5.05E-02	4.57E-02	4.14E-02
AG112	2.50E-06	1.59E-02	2.81E-02	3.77E-02	4.47E-02	5.36E-02	6.89E-02	8.66E-02	1.04E-01	1.21E-01	1.40E-01
AG113	9.07E-04	1.94E-01	1.70E-01	1.49E-01	1.31E-01	1.01E-01	6.82E-02	4.61E-02	3.11E-02	2.10E-02	1.42E-02
AG115	3.62E-01	3.88E-01	4.82E-02	6.03E-03	7.55E-04	1.18E-05	2.31E-08	4.51E-11	8.73E-14	8.67E-163	8.04E-17
CD115M	2.96E-09	7.87E-05	8.84E-05	8.96E-05	8.96E-05	8.96E-05	8.93E-05	8.93E-05	8.90E-05	8.87E-05	8.87E-05
CD115	1.14E-06	2.15E-02	2.32E-02	2.31E-02	2.28E-02	2.23E-02	2.14E-02	2.06E-02	1.98E-02	1.91E-02	1.83E-02
IN115M	1.42E-11	2.38E-03	5.28E-03	7.84E-03	9.99E-03	1.33E-02	1.65E-02	1.81E-02	1.89E-02	1.91E-02	1.89E-02
CD117	2.56E-02	4.26E-01	3.21E-01	2.40E-01	1.80E-01	1.01E-01	4.23E-02	1.78E-02	7.50E-03	3.15E-03	1.33E-03
IN117M	1.23E-06	1.48E-01	2.15E-01	2.33E-01	2.25E-01	1.77E-01	1.01E-01	5.19E-02	2.49E-02	1.16E-02	5.22E-03
IN117	4.95E-11	2.70E-02	6.54E-02	9.09E-02	1.01E-01	9.33E-02	5.94E-02	3.18E-02	1.58E-02	7.44E-03	3.42E-03
CD118	1.70E+00	7.31E-01	3.14E-01	1.34E-01	5.72E-02	1.05E-02	8.22E-04	6.42E-05	5.05E-06	3.96E-07	3.10E-08
IN118	1.13E-01	7.31E-01	3.14E-01	1.34E-01	5.72E-02	1.05E-02	8.22E-04	6.42E-05	5.05E-06	3.96E-07	3.10E-08
CD119	4.24E+00	6.61E-02	1.03E-03	1.61E-05	2.52E-07	6.17E-11	2.35E-16	8.98E-22	3.42E-27	1.31E-32	5.00E-38
IN119M	6.39E-03	7.15E-01	7.78E-02	7.84E-03	7.81E-04	7.69E-06	7.50E-09	7.34E-12	7.15E-15	6.99E-18	6.83E-21
IN119	3.15E-01	3.76E-02	4.36E-03	4.43E-04	4.43E-05	4.33E-07	4.24E-10	4.14E-13	4.05E-16	3.95E-19	3.86E-22
SN121	5.18E-04	5.34E-02	5.18E-02	5.06E-02	4.94E-02	4.70E-02	4.33E-02	4.03E-02	3.72E-02	3.45E-02	3.20E-02
SN123M	2.89E-01	5.40E-01	1.92E-01	6.77E-02	2.39E-02	2.99E-03	1.32E-04	5.85E-06	2.59E-07	1.14E-08	5.06E-10
SN123	2.71E-06	2.84E-04	2.84E-04	2.84E-04	2.84E-04	2.84E-04	2.84E-04	2.84E-04	2.84E-04	2.84E-04	2.84E-04
SN125	7.62E-03	7.60E-03	7.58E-03	7.56E-03	7.52E-03	7.48E-03	7.42E-03	7.34E-03	7.28E-03	7.20E-03	7.14E-03
SB125	4.57E-05	4.59E-05	4.61E-05	4.63E-05	4.65E-05	4.69E-05	4.77E-05	4.83E-05	4.89E-05	4.95E-05	5.01E-05
SB126	1.46E-03	1.46E-03	1.46E-03	1.45E-03	1.45E-03	1.44E-03	1.43E-03	1.42E-03	1.41E-03	1.40E-03	1.39E-03
SN127	2.41E+00	1.73E+00	1.25E+00	8.98E-01	6.46E-01	3.33E-01	1.24E-01	4.60E-02	1.71E-02	6.35E-03	2.36E-03
SB127	2.82E-02	9.71E-02	1.08E-01	1.15E-01	1.20E-01	1.25E-01	1.27E-01	1.25E-01	1.23E-01	1.21E-01	1.18E-01
TE127	1.59E-02	1.98E-02	2.41E-02	2.86E-02	3.30E-02	4.14E-02	5.30E-02	6.19E-02	6.89E-02	7.43E-02	7.78E-02
SN128	1.61E+01	7.97E+00	3.95E+00	1.95E+00	9.64E-01	2.35E-01	2.84E-02	3.43E-03	4.13E-04	5.01E-05	6.04E-06
SB128M	8.22E-03	9.08E+00	4.71E+00	2.33E+00	1.15E+00	2.81E-01	3.38E-02	4.09E-03	4.93E-04	5.95E-05	7.20E-06
SB128	6.81E-01	6.55E-01	6.17E-01	5.78E-01	5.40E-01	4.63E-01	3.69E-01	2.93E-01	2.33E-01	1.85E-01	1.47E-01
SN129M	1.06E+01	5.27E+00	2.64E+00	1.32E+00	6.61E-01	1.65E-01	2.07E-02	2.58E-03	3.23E-04	4.03E-05	5.04E-06
SN129	7.05E+01	6.92E-01	6.83E-03	6.74E-05	6.61E-07	6.43E-11	6.11E-17	5.85E-23	5.58E-29	5.31E-35	5.09E-41
SB129	3.97E+00	6.65E+00	6.25E+00	5.58E+00	4.91E+00	3.65E+00	2.27E+00	1.41E+00	8.66E-01	5.36E-01	3.29E-01
TE129M	7.50E-08	8.30E-04	1.71E-03	2.51E-03	3.23E-03	4.37E-03	5.53E-03	6.25E-03	6.70E-03	6.96E-03	7.14E-03
TE129	2.86E+00	3.93E+00	4.60E+00	4.78E+00	4.60E+00	3.81E+00	2.54E+00	1.60E+00	9.95E-01	6.16E-01	3.82E-01
SB130M	3.96E-01	7.48E-01	1.96E-03	5.16E-06	1.36E-08	9.37E-14	1.71E-21	3.10E-29	5.63E-37	1.02E-44	1.86E-52
SB130	6.79E+01	2.06E+01	5.85E+00	1.66E+00	4.69E-01	3.77E-02	8.60E-04	1.96E-05	4.47E-07	1.02E-08	2.33E-10

K-5

CLIMAX MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 7.624E-14

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
I130	1.89E-02	1.79E-02	1.69E-02	1.60E-02	1.51E-02	1.35E-02	1.14E-02	9.67E-03	8.17E-03	6.92E-03	5.85E-03
SB131	1.60E+02	4.17E+01	6.82E+00	1.12E+00	1.84E-01	4.95E-03	2.18E-05	9.62E-08	4.24E-10	1.87E-12	9.32E-15
TE131M	7.69E-05	4.02E-01	4.59E-01	4.59E-01	4.50E-01	4.31E-01	4.02E-01	3.75E-01	3.50E-01	3.26E-01	3.04E-01
TE131	7.08E+01	7.69E+01	2.50E+01	6.52E+00	1.58E+00	1.49E-01	7.38E-02	6.82E-02	6.36E-02	5.96E-02	5.55E-02
I131	1.03E-02	3.56E-01	5.24E-01	5.75E-01	5.85E-01	5.90E-01	5.90E-01	5.85E-01	5.85E-01	5.80E-01	5.80E-01
TE132	8.48E-01	2.06E+00	2.04E+00	2.02E+00	2.00E+00	1.97E+00	1.92E+00	1.87E+00	1.82E+00	1.77E+00	1.72E+00
I132	2.08E+00	2.08E+00	2.07E+00	2.06E+00	2.05E+00	2.02E+00	1.97E+00	1.92E+00	1.87E+00	1.82E+00	1.78E+00
TE133M	1.04E-01	3.59E+01	1.56E+01	6.81E+00	2.96E+00	5.63E-01	4.63E-02	3.82E-03	3.15E-04	2.60E-05	2.14E-06
TE133	5.82E+02	3.30E+01	3.67E+00	1.21E+00	5.13E-01	9.72E-02	8.04E-03	6.61E-04	5.48E-05	4.51E-06	3.72E-07
I133	9.03E-01	9.72E+00	1.05E+01	1.05E+01	1.03E+01	9.77E+00	8.88E+00	8.04E+00	7.25E+00	6.61E+00	5.97E+00
XE133M	3.84E-08	2.19E-03	5.29E-03	8.44E-03	1.15E-02	1.73E-02	2.50E-02	3.17E-02	3.74E-02	4.23E-02	4.63E-02
XE133	6.71E-07	3.82E-02	9.28E-02	1.48E-01	2.03E-01	3.08E-01	4.52E-01	5.77E-01	6.91E-01	7.90E-01	8.78E-01
TE134	1.82E+02	8.43E+01	3.14E+01	1.17E+01	4.33E+00	6.00E-01	3.07E-02	1.57E-03	8.05E-05	4.14E-06	2.12E-07
I134	8.34E+01	1.11E+02	7.81E+01	4.58E+01	2.46E+01	6.24E+00	6.86E-01	7.00E-02	6.86E-03	6.57E-04	6.24E-05
I135	1.53E+01	2.70E+01	2.43E+01	2.19E+01	1.98E+01	1.61E+01	1.18E+01	8.62E+00	6.33E+00	4.66E+00	3.40E+00
XE135M	1.69E-03	7.79E+00	7.57E+00	6.86E+00	6.16E+00	5.01E+00	3.68E+00	2.70E+00	1.98E+00	1.45E+00	1.06E+00
XE135	1.76E+00	3.49E+00	5.10E+00	6.42E+00	7.48E+00	8.97E+00	9.94E+00	9.98E+00	9.50E+00	8.66E+00	7.74E+00
CS136	2.54E-03	2.53E-03	2.53E-03	2.53E-03	2.52E-03	2.51E-03	2.49E-03	2.47E-03	2.46E-03	2.44E-03	2.42E-03
CS137	7.42E-05	8.00E-04	8.00E-04	8.00E-04	8.00E-04	8.00E-04	8.00E-04	8.00E-04	8.00E-04	8.00E-04	8.00E-04
BA137M	1.56E-07	7.46E-04	7.46E-04	7.46E-04	7.46E-04	7.46E-04	7.46E-04	7.46E-04	7.46E-04	7.46E-04	7.46E-04
XE138	6.01E+02	5.17E+01	4.49E+00	3.89E-01	3.37E-02	2.53E-04	1.64E-07	1.07E-10	6.94E-14	4.51E-17	2.93E-20
CS138	8.94E+01	1.50E+02	2.22E+01	1.53E+01	4.29E+00	3.27E-01	6.80E-03	1.41E-04	2.93E-06	6.10E-08	1.26E-09
CS139	5.40E+02	1.72E+01	2.16E-01	2.71E-03	3.40E-05	5.35E-09	1.06E-14	2.10E-20	4.16E-26	8.25E-32	1.63E-37
BA139	9.97E+00	1.11E+02	6.85E+01	4.16E+01	2.52E+01	9.24E+00	2.05E+00	4.55E-01	1.01E-01	2.24E-02	4.98E-03
BA140	1.08E-01	6.74E-01	6.74E-01	6.69E-01	6.69E-01	6.64E-01	6.64E-01	6.59E-01	6.53E-01	6.48E-01	6.43E-01
LA140	2.57E-07	1.15E-02	2.28E-02	3.39E-02	4.48E-02	6.59E-02	9.62E-02	1.25E-01	1.51E-01	1.76E-01	2.00E-01
BA141	2.06E+02	6.23E+01	6.18E+00	6.13E-01	6.09E-02	6.04E-04	5.89E-07	5.74E-10	5.59E-13	5.50E-16	5.35E-19
LA141	1.90E+00	4.03E+01	3.76E+01	3.19E+01	2.67E+01	1.87E+01	1.10E+01	6.43E+00	3.78E+00	2.22E+00	1.30E+00
CE141	2.36E-07	2.62E-02	6.13E-02	9.23E-02	1.18E-01	1.59E-01	1.97E-01	2.19E-01	2.32E-01	2.39E-01	2.43E-01
BA142	5.46E+02	2.17E+01	4.95E+01	1.13E-02	2.57E-04	1.34E-07	1.59E-12	1.88E-17	2.23E-22	2.65E-27	3.14E-32
LA142	1.25E+01	8.69E+01	5.73E+01	3.65E+01	2.32E+01	9.39E+00	2.42E+00	6.24E-01	1.61E-01	4.14E-02	1.07E-02
LA143	2.11E+02	4.11E+01	2.11E+00	1.08E-01	5.56E-03	1.46E-05	1.96E-09	2.65E-13	3.57E-17	4.81E-21	6.49E-25
CE143	8.41E-08	5.36E+00	5.56E+00	5.41E+00	5.31E+00	5.12E+00	4.79E+00	4.50E+00	4.23E+00	3.96E+00	3.72E+00
PR143	2.46E-02	8.21E-03	1.98E-02	3.13E-02	4.26E-02	6.44E-02	9.49E-02	1.24E-01	1.51E-01	1.76E-01	1.99E-01
CE144	3.40E-03	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.43E-02	2.43E-02	2.43E-02	2.43E-02	2.43E-02
PR144	9.33E-07	2.22E-02	2.42E-02	2.43E-02	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.43E-02	2.43E-02	2.43E-02
PR145	1.34E-01	1.97E+01	1.75E+01	1.56E+01	1.39E+01	1.10E+01	7.75E+00	5.47E+00	3.88E+00	2.74E+00	1.94E+00
CE146	3.83E+02	1.96E+01	1.01E+00	5.14E-02	2.65E-03	6.97E-06	9.38E-10	1.26E-13	1.70E-17	2.30E-21	3.10E-25
PR146	7.91E+00	6.88E+01	1.56E+01	2.93E+00	5.27E-01	1.66E-02	9.16E-05	5.05E-07	2.80E-09	1.55E-11	8.45E-14
PR147	4.46E+01	1.29E+01	4.02E-01	1.26E-02	3.93E-04	3.84E-07	1.17E-11	3.58E-16	1.09E-20	3.34E-25	1.02E-29

K-6

CLIMAX MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 7.624E-14

DEBRIS DECAY FROM 1 TO 21 HOURS

	ZERO	TIME	1.00E+00	2.00E+00	3.00E+00	4.00E+00	6.00E+00	9.00E+00	1.20E+01	1.50E+01	1.80E+01	2.10E+01
ND147	1.59E-05	2.99E-01	3.08E-01	3.07E-01	3.06E-01	3.05E-01	3.03E-01	3.00E-01	2.98E-01	2.96E-01	2.93E-01	
ND149	2.16E+01	1.47E+01	1.00E+01	6.83E+00	4.62E+00	2.15E+00	6.75E-01	2.13E-01	6.71E-02	2.11E-02	6.67E-03	
PM149	3.02E-03	2.36E-01	3.91E-01	4.95E-01	5.61E-01	6.30E-01	6.55E-01	6.43E-01	6.26E-01	6.02E-01	5.81E-01	
PM150	2.43E-01	1.88E-01	1.45E-01	1.12E-01	8.66E-02	5.20E-02	2.41E-02	1.11E-02	5.16E-03	2.39E-03	1.11E-03	
ND151	7.73E+01	2.41E+00	7.55E-02	2.36E-03	7.38E-05	7.21E-08	2.20E-12	6.73E-17	2.05E-21	6.24E-26	1.91E-30	
PM151	4.90E-02	5.73E-01	5.76E-01	5.62E-01	5.48E-01	5.21E-01	4.83E-01	4.48E-01	4.17E-01	3.86E-01	3.59E-01	
PM152	1.22E+02	1.19E-01	1.16E-04	1.14E-07	1.11E-10	1.06E-16	9.86E-26	9.20E-35	8.57E-44	8.00E-53	7.44E-62	
SM153	1.58E-01	1.56E-01	1.54E-01	1.52E-01	1.50E-01	1.45E-01	1.39E-01	1.33E-01	1.27E-01	1.22E-01	1.16E-01	
SM155	7.48E+00	1.23E+00	2.01E-01	3.29E-02	5.40E-03	1.45E-04	6.41E-07	2.82E-09	1.25E-11	5.55E-14	1.36E-16	
EU155	5.50E-06	1.57E-04	1.82E-04	1.85E-04	1.86E-04	1.86E-04	1.86E-04	1.86E-04	1.86E-04	1.86E-04	1.86E-04	
SM156	1.09E-01	1.01E-01	9.37E-02	8.70E-02	8.08E-02	6.97E-02	5.59E-02	4.48E-02	3.60E-02	2.88E-02	2.30E-02	
EU156	3.18E-04	5.18E-04	7.03E-04	8.76E-04	1.04E-03	1.32E-03	1.68E-03	1.95E-03	2.18E-03	2.35E-03	2.47E-03	
EU157	1.83E-02	6.06E-02	5.78E-02	5.53E-02	5.27E-02	4.82E-02	4.21E-02	3.67E-02	3.20E-02	2.78E-02	2.43E-02	
EU158	5.04E-01	2.04E-01	8.25E-02	3.34E-02	1.35E-02	2.21E-03	1.48E-04	9.78E-06	6.50E-07	4.31E-08	2.87E-09	
EU159	6.23E-01	6.19E-02	6.14E-03	6.10E-04	6.04E-05	5.96E-07	5.82E-10	5.68E-13	5.55E-16	5.42E-19	5.30E-22	
GD159	2.67E-03	1.17E-02	1.22E-02	1.18E-02	1.14E-02	1.05E-02	9.37E-03	8.35E-03	7.43E-03	6.62E-03	5.90E-03	
TB161	2.83E-05	2.03E-04	2.02E-04	2.01E-04	2.01E-04	1.99E-04	1.97E-04	1.94E-04	1.91E-04	1.89E-04	1.87E-04	
TOTAL	9.64E+03	2.13E+03	8.52E+02	5.34E+02	3.99E+02	2.72E+02	1.87E+02	1.42E+02	1.13E+02	9.34E+01	7.89E+01	



CLIMAX MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 7.624E-14

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
*BE 7	3.07E-07	3.03E-07	2.99E-07	2.88E-07	2.70E-07	2.37E-07	2.08E-07	1.60E-07	8.37E-08	2.27E-08	6.19E-09	
*NA 24	2.31E-05	7.63E-06	2.52E-06	9.02E-08	3.53E-10	5.40E-15	8.23E-20	1.92E-29	0.	0.	0.	0.
*MN 54	2.10E-05	2.08E-05	2.08E-05	2.05E-05	2.03E-05	1.99E-05	1.95E-05	1.86E-05	1.66E-05	1.32E-05	1.05E-05	
*FE 55	3.72E-05	3.72E-05	3.72E-05	3.70E-05	3.69E-05	3.67E-05	3.64E-05	3.59E-05	3.45E-05	3.22E-05	2.99E-05	
*FE 59	3.09E-05	3.05E-05	3.00E-05	2.86E-05	2.65E-05	2.27E-05	1.95E-05	1.43E-05	6.65E-06	1.42E-06	3.05E-07	
*CO 57	3.77E-05	3.77E-05	3.74E-05	3.74E-05	3.68E-05	3.57E-05	3.49E-05	3.32E-05	2.93E-05	2.26E-05	1.75E-05	
*CO 58	8.74E-02	8.67E-02	8.58E-02	8.32E-02	7.94E-02	7.20E-02	6.53E-02	5.38E-02	3.31E-02	1.25E-02	4.73E-03	
*CO 60	1.57E-05	1.57E-05	1.57E-05	1.57E-05	1.56E-05	1.56E-05	1.55E-05	1.54E-05	1.51E-05	1.46E-05	1.40E-05	
*CU 64	2.42E+00	6.58E-01	1.79E-01	3.65E-03	5.47E-06	1.24E-11	2.82E-17	1.45E-28	0.	0.	0.	0.
*CU 67	1.09E-04	8.30E-05	6.33E-05	2.82E-05	7.34E-06	4.95E-07	3.34E-08	1.52E-10	2.12E-16	0.	0.	0.
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W187	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU198	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
AU199	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
PB203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	7.70E-02	6.95E-02	6.26E-02	4.61E-02	2.75E-02	9.87E-03	3.54E-03	4.52E-04	2.67E-06	2.87E-10	1.94E-10	
U240	2.95E-01	9.10E-02	2.79E-02	8.09E-04	2.22E-06	1.67E-11	1.26E-16	7.09E-27	0.	0.	0.	0.
NP237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
NP239	2.99E-03	4.56E+00	3.40E+00	1.40E+00	3.21E-01	1.68E-02	8.78E-04	2.41E-06	9.47E-13	2.26E-22	2.26E-22	
NP240M	4.67E-04	9.15E-02	2.81E-02	8.15E-04	2.24E-06	1.69E-11	1.27E-16	7.14E-27	0.	0.	0.	0.
*AM241	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.82E-09	
*CM242	1.44E-07	1.43E-07	1.42E-07	1.41E-07	1.38E-07	1.32E-07	1.27E-07	1.16E-07	9.45E-08	6.15E-08	4.02E-08	
GE 77	3.79E-03	2.39E-03	5.46E-04	6.60E-06	4.20E-09	1.70E-15	6.85E-22	1.12E-34	0.	0.	0.	0.
AS 77	3.92E-05	5.78E-03	4.18E-03	1.21E-03	1.42E-04	1.92E-06	2.61E-08	4.81E-12	2.23E-21	4.79E-40	1.03E-58	
SE 77M	1.54E-09	1.74E-05	1.25E-05	3.64E-06	4.24E-07	5.77E-09	7.83E-11	1.45E-14	6.69E-24	1.43E-42	3.09E-61	
AS 78	1.03E-02	9.17E-05	2.69E-09	2.27E-23	0.	0.	0.	0.	0.	0.	0.	0.
BR 82	4.00E-04	2.50E-04	1.56E-04	3.79E-05	3.59E-06	3.23E-08	2.90E-10	2.34E-14	1.37E-24	4.69E-45	1.60E-65	
BR 83	3.09E-01	8.13E-03	8.18E-06	8.31E-15	8.48E-30	0.	0.	0.	0.	0.	0.	0.
KR 83M	1.60E-05	3.56E-02	4.04E-05	3.63E-14	3.73E-29	0.	0.	0.	0.	0.	0.	0.
KR 85M	3.91E-03	2.23E-01	5.08E-03	6.04E-08	3.72E-16	1.42E-32	5.36E-49	0.	0.	0.	0.	0.
KR 85	4.04E-06	1.06E-04	1.08E-04	1.08E-04	1.08E-04	1.08E-04	1.08E-04	1.08E-04	1.07E-04	1.05E-04	1.03E-04	
KR 87	6.56E+01	1.29E-04	2.56E-10	1.98E-27	0.	0.	0.	0.	0.	0.	0.	0.
KR 88	3.77E+01	9.92E-02	2.60E-04	4.73E-12	5.95E-25	0.	0.	0.	0.	0.	0.	0.
RB 88	9.58E+00	1.11E-01	2.91E-04	5.29E-12	6.64E-25	0.	0.	0.	0.	0.	0.	0.
SR 89	3.47E-06	1.04E-01	1.03E-01	9.86E-02	9.25E-02	8.08E-02	7.06E-02	5.44E-02	2.78E-02	7.32E-03	1.93E-03	
SR 90	7.01E-06	7.20E-04	7.20E-04	7.20E-04	7.20E-04	7.20E-04	7.20E-04	7.20E-04	7.14E-04	7.14E-04	7.07E-04	
Y 90	1.04E-11	1.65E-04	2.92E-04	5.24E-04	6.69E-04	7.14E-04	7.20E-04	7.20E-04	7.14E-04	7.14E-04	7.07E-04	
SR 91	9.35E-01	3.34E+00	6.00E-01	3.44E-03	6.29E-07	2.13E-14	7.23E-22	8.23E-37	0.	0.	0.	0.

K-8

CLIMAX MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 7.624E-14

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO	TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
Y 91M	6.29E-05	2.16E+00	3.87E-01	2.22E-03	4.08E-07	1.38E-14	4.66E-22	5.31E-37	0.	0.	0.	0.
Y 91	2.57E-08	1.03E-01	1.22E-01	1.22E-01	1.15E-01	1.02E-01	9.05E-02	7.17E-02	3.97E-02	1.22E-02	3.76E-03	0.
SR 92	1.18E+01	1.48E-01	3.18E-04	3.20E-12	1.50E-25	0.	0.	0.	0.	0.	0.	0.
Y 92M	5.46E-01	1.55E+00	1.72E-02	1.32E-08	7.71E-19	2.64E-39	9.03E-60	0.	0.	0.	0.	0.
Y 93	5.72E-01	3.87E+00	7.54E-01	5.67E-03	1.63E-06	1.35E-13	1.11E-20	7.59E-35	0.	0.	0.	0.
ZR 95	1.09E-03	1.37E-01	1.35E-01	1.31E-01	1.24E-01	1.11E-01	1.00E-01	8.10E-02	4.74E-02	1.63E-02	5.61E-03	0.
NB 95M	2.32E-11	4.62E-04	8.43E-04	1.61E-03	2.17E-03	2.29E-03	2.11E-03	1.72E-03	1.01E-03	3.46E-04	1.19E-04	0.
NB 95	1.22E-10	2.64E-03	5.22E-03	1.25E-02	2.32E-02	4.01E-02	5.17E-02	6.42E-02	6.18E-02	2.97E-02	1.14E-02	0.
ZR 97	2.59E+00	4.41E+00	1.66E+00	8.78E-02	6.60E-04	3.71E-08	2.09E-12	6.60E-21	3.72E-42	0.	0.	0.
NB 97M	1.33E-02	4.23E+00	1.59E+00	8.47E-02	6.33E-04	3.57E-08	2.01E-12	6.33E-21	3.58E-42	0.	0.	0.
NB 97	1.30E+00	4.43E+00	1.66E+00	8.82E-02	6.64E-04	4.00E-08	2.25E-12	7.13E-21	4.01E-42	0.	0.	0.
MC 99	7.61E-03	2.48E+00	1.93E+00	9.16E-01	2.65E-01	2.21E-02	1.85E-03	1.29E-05	5.23E-11	8.63E-22	1.42E-32	0.
TC 99M	7.08E-08	2.18E+00	1.83E+00	8.77E-01	2.53E-01	2.11E-02	1.76E-03	1.23E-05	4.99E-11	8.24E-22	1.36E-32	0.
RU103	5.75E-05	1.31E-01	1.29E-01	1.22E-01	1.12E-01	9.39E-02	7.88E-02	5.56E-02	2.31E-02	4.02E-03	7.00E-04	0.
RH103M	3.83E-09	1.31E-01	1.29E-01	1.22E-01	1.12E-01	9.39E-02	7.88E-02	5.56E-02	2.32E-02	4.02E-03	7.00E-04	0.
RU105	3.47E-01	3.31E-01	7.79E-03	1.02E-07	7.49E-16	4.00E-32	2.14E-48	0.	0.	0.	0.	0.
RH105M	2.28E-03	3.31E-01	7.82E-03	1.03E-07	7.51E-16	4.02E-32	2.15E-48	0.	0.	0.	0.	0.
RU105	3.74E-09	1.20E+00	7.82E-01	1.95E-01	1.92E-02	1.87E-04	1.81E-06	1.71E-10	1.49E-20	1.12E-40	8.38E-61	0.
RU106	2.82E-04	5.34E-03	5.31E-03	5.29E-03	5.24E-03	5.15E-03	5.04E-03	4.85E-03	4.41E-03	3.65E-03	3.03E-03	0.
RH106	3.05E-06	5.34E-03	5.31E-03	5.29E-03	5.24E-03	5.15E-03	5.04E-03	4.85E-03	4.41E-03	3.65E-03	3.03E-03	0.
PD109	3.14E-03	7.99E-02	2.33E-02	5.78E-04	1.22E-06	5.42E-12	2.42E-17	4.78E-28	0.	0.	0.	0.
AG109M	1.81E-05	7.99E-02	2.33E-02	5.78E-04	1.22E-06	5.43E-12	2.42E-17	4.78E-28	0.	0.	0.	0.
PD111M	4.03E-01	1.95E-02	9.50E-04	1.09E-07	2.95E-14	2.15E-27	1.58E-40	0.	0.	0.	0.	0.
PD111	1.43E-01	1.58E-02	7.64E-04	8.76E-08	2.37E-14	1.73E-27	1.27E-40	0.	0.	0.	0.	0.
AG111M	1.14E-03	2.06E-02	1.00E-03	1.15E-07	3.11E-14	2.28E-27	1.67E-40	0.	0.	0.	0.	0.
AG111	4.06E-10	1.12E-02	1.08E-02	8.19E-03	5.16E-03	2.04E-03	8.12E-04	1.28E-04	1.26E-06	1.22E-10	1.18E-14	0.
PD112	8.29E-02	3.77E-02	1.70E-02	1.58E-03	3.01E-05	1.09E-08	3.97E-12	5.21E-19	3.29E-36	0.	0.	0.
AG112	2.50E-06	4.37E-02	2.01E-02	1.87E-03	3.56E-05	1.29E-08	4.68E-12	6.17E-19	3.87E-36	0.	0.	0.
AG113	9.07E-04	9.59E-03	4.15E-04	3.37E-08	5.15E-15	1.21E-28	2.82E-42	0.	0.	0.	0.	0.
CD115M	2.96E-09	8.56E-05	8.41E-05	8.01E-05	7.41E-05	6.29E-05	5.37E-05	3.88E-05	1.73E-05	3.45E-06	6.89E-07	0.
CD115	1.14E-06	1.72E-02	1.26E-02	4.97E-03	1.05E-03	4.68E-05	2.09E-06	4.16E-09	7.35E-16	2.30E-29	7.21E-43	0.
IN115M	1.42E-11	1.81E-02	1.38E-02	5.43E-03	1.14E-03	5.11E-05	2.28E-06	4.54E-09	8.04E-16	2.52E-29	7.87E-43	0.
CD117	2.56E-02	5.58E-04	5.43E-07	5.07E-16	4.50E-31	0.	0.	0.	0.	0.	0.	0.
IN117M	1.23E-06	2.32E-03	2.68E-06	2.59E-15	2.30E-30	0.	0.	0.	0.	0.	0.	0.
IN117	4.95E-11	1.53E-03	1.81E-06	1.75E-15	1.55E-30	0.	0.	0.	0.	0.	0.	0.
SN121	5.18E-04	2.96E-02	1.59E-02	2.51E-03	1.15E-04	2.43E-07	5.12E-10	2.28E-15	9.55E-29	0.	0.	0.
SN123	2.71E-06	2.84E-04	2.81E-04	2.76E-04	2.69E-04	2.54E-04	2.41E-04	2.16E-04	1.63E-04	9.39E-05	5.40E-05	0.
SN125	7.62E-03	7.08E-03	6.58E-03	5.27E-03	3.64E-03	1.74E-03	8.33E-04	1.91E-04	4.77E-06	3.00E-09	1.88E-12	0.
SB125	4.57E-05	5.07E-05	5.55E-05	6.78E-05	8.31E-05	1.01E-04	1.08E-04	1.13E-04	1.11E-04	1.03E-04	9.65E-05	0.
SB126	1.46E-03	1.38E-03	1.31E-03	1.11E-03	8.40E-04	4.81E-04	2.78E-04	9.14E-05	5.72E-06	2.78E-08	5.58E-09	0.

K-9

CLIMAX MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 7.624E-14

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
SN127	2.41E+00	8.74E-04	3.18E-07	1.52E-17	9.52E-35	0.	0.	0.	0.	0.	0.
SB127	2.82E-02	1.16E-01	9.67E-02	5.65E-02	2.31E-02	3.87E-03	6.46E-04	1.81E-05	2.36E-09	4.02E-17	6.85E-25
TE127M	2.28E-10	1.76E-04	3.23E-04	6.27E-04	8.67E-04	9.56E-04	9.21E-04	8.16E-04	5.96E-04	3.15E-04	1.66E-04
TE127	1.59E-02	8.28E-02	8.13E-02	4.95E-02	2.09E-02	4.30E-03	1.47E-03	8.24E-04	5.88E-04	3.11E-04	1.64E-04
SB128	6.81E-01	1.16E-01	1.83E-02	7.15E-05	6.94E-09	6.51E-17	6.13E-25	5.40E-41	0.	0.	0.
SB129	3.97E+00	2.03E-01	4.24E-03	3.86E-08	1.54E-16	2.42E-33	3.83E-50	0.	0.	0.	0.
TE129M	7.50E-08	7.90E-03	7.90E-03	7.45E-03	6.74E-03	5.49E-03	4.46E-03	2.97E-03	1.07E-03	1.40E-04	1.82E-05
TE129	2.86E+00	2.38E-01	9.91E-03	4.78E-03	4.31E-03	3.51E-03	2.87E-03	1.91E-03	6.87E-04	8.97E-05	1.16E-05
I130	1.89E-02	4.94E-03	1.29E-03	2.31E-05	2.82E-08	4.21E-14	6.28E-20	1.40E-31	0.	0.	0.
TE131M	7.69E-05	2.69E-01	1.54E-01	2.92E-02	1.83E-03	7.13E-06	2.79E-08	4.26E-13	3.87E-25	0.	0.
TE131	7.08E+01	4.90E-02	2.81E-02	5.34E-03	3.33E-04	1.30E-06	5.09E-09	7.79E-14	7.08E-26	0.	0.
I131	1.03E-02	5.55E-01	5.24E-01	4.21E-01	2.77E-01	1.17E-01	4.96E-02	8.86E-03	1.20E-04	2.18E-08	3.97E-12
XE131M	2.79E-11	2.57E-04	4.88E-04	1.02E-03	1.46E-03	1.44E-03	1.07E-03	4.41E-04	2.94E-05	8.81E-08	2.48E-10
TE132	8.48E-01	1.68E+00	1.36E+00	7.14E-01	2.46E-01	2.92E-02	3.46E-03	4.86E-05	1.14E-09	6.22E-19	3.39E-28
I132	2.08E+00	1.73E+00	1.40E+00	7.35E-01	2.54E-01	3.01E-02	3.56E-03	5.01E-05	1.17E-09	6.37E-19	3.49E-28
I133	9.03E-01	5.03E+00	2.27E+00	2.11E-01	4.02E-03	1.46E-06	5.28E-10	6.96E-17	4.37E-34	0.	0.
XE133M	3.84E-08	4.75E-02	5.63E-02	3.30E-02	7.75E-03	3.64E-04	1.69E-05	3.67E-08	8.04E-15	3.84E-28	1.84E-41
XE133	6.71E-07	9.13E-01	1.22E+00	1.10E+00	5.97E-01	1.61E-01	4.34E-02	3.12E-03	4.35E-06	8.44E-12	1.64E-17
I135	1.53E+01	2.50E+00	2.08E-01	1.21E-04	4.93E-10	8.14E-21	1.34E-31	3.63E-53	0.	0.	0.
XE135M	1.69E-03	7.79E-01	6.51E-02	3.79E-05	1.54E-10	2.53E-21	4.17E-32	1.13E-53	0.	0.	0.
XE135	1.76E+00	6.73E+00	1.65E+00	9.41E-03	1.15E-06	1.62E-14	2.27E-22	4.49E-38	0.	0.	0.
CS136	2.54E-03	2.41E-03	2.28E-03	1.95E-03	1.49E-03	8.76E-04	5.15E-04	1.77E-04	1.23E-05	5.92E-08	2.87E-10
CS137	7.42E-05	8.00E-04	8.00E-04	8.00E-04	8.00E-04	8.00E-04	8.00E-04	8.00E-04	7.95E-04	7.91E-04	7.86E-04
BA137M	1.56E-07	7.46E-04	7.46E-04	7.46E-04	7.46E-04	7.46E-04	7.46E-04	7.46E-04	7.42E-04	7.38E-04	7.33E-04
BA139	9.97E+00	1.06E-03	6.28E-09	1.29E-24	0.	0.	0.	0.	0.	0.	0.
BA140	1.08E-01	6.38E-01	6.07E-01	5.15E-01	3.93E-01	2.28E-01	1.33E-01	4.50E-02	3.00E-03	1.34E-05	5.92E-08
LA140	2.57E-07	2.22E-01	3.58E-01	4.94E-01	4.39E-01	2.63E-01	1.53E-01	5.20E-02	3.45E-03	1.54E-05	6.84E-08
LA141	1.90E+00	7.56E-01	1.06E-02	2.93E-08	1.60E-17	4.79E-36	1.43E-54	0.	0.	0.	0.
CE141	2.36E-07	2.61E-01	2.59E-01	2.43E-01	2.18E-01	1.77E-01	1.42E-01	9.28E-02	3.19E-02	3.75E-03	4.42E-04
LA142	1.25E+01	2.75E-03	5.32E-08	3.91E-22	0.	0.	0.	0.	0.	0.	0.
CE143	8.41E-02	3.46E+00	2.09E+00	4.60E-01	3.70E-02	2.40E-04	1.55E-06	6.49E-11	7.33E-22	0.	0.
PR143	2.46E-08	2.21E-01	3.44E-01	4.45E-01	3.81E-01	2.32E-01	1.40E-01	5.07E-02	4.05E-03	2.57E-05	1.63E-07
CE144	3.40E-03	2.43E-02	2.42E-02	2.41E-02	2.38E-02	2.32E-02	2.26E-02	2.16E-02	1.91E-02	1.49E-02	1.17E-02
PR144	9.33E-07	2.43E-02	2.42E-02	2.41E-02	2.38E-02	2.32E-02	2.26E-02	2.16E-02	1.91E-02	1.49E-02	1.17E-02
PR145	1.34E-01	1.37E+00	8.46E-02	2.01E-05	1.83E-11	1.52E-23	1.26E-35	0.	0.	0.	0.
ND147	1.59E-05	2.67E-01	2.51E-01	2.08E-01	1.52E-01	8.19E-02	4.37E-02	1.26E-02	5.51E-04	1.07E-06	2.08E-09
PM147	4.41E-14	2.00E-04	3.87E-04	8.85E-04	1.53E-03	2.33E-03	2.76E-03	3.07E-03	3.10E-03	2.89E-03	2.69E-03
ND149	2.16E+01	2.10E-03	2.03E-07	1.85E-19	1.58E-39	0.	0.	0.	0.	0.	0.
PM149	3.02E-03	5.57E-01	4.08E-01	1.59E-01	3.32E-02	1.45E-03	6.30E-05	1.20E-07	1.89E-14	4.67E-28	1.16E-41
PM150	2.43E-01	5.12E-04	1.08E-06	1.01E-14	4.24E-28	0.	0.	0.	0.	0.	0.

K-10

CLIMAX MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 7.624E-14

DEBRIS DECAY FROM 1 TO 300 DAYS

	ZERO TIME	1.00E+00	2.00E+00	5.00E+00	1.00E+01	2.00E+01	3.00E+01	5.00E+01	1.00E+02	2.00E+02	3.00E+02
PM151	4.90E-02	3.34E-01	1.84E-01	3.10E-02	1.59E-03	4.17E-06	1.10E-08	7.59E-14	9.52E-27	0.	0.
SM153	1.58E-01	1.11E-01	7.82E-02	2.70E-02	4.59E-03	1.34E-04	3.88E-06	3.26E-09	6.72E-17	2.86E-32	1.22E-47
SM156	1.09E-01	1.85E-02	3.16E-03	1.56E-05	2.24E-09	4.61E-17	9.51E-25	4.05E-40	0.	0.	0.
EU155	5.50E-06	1.86E-04	1.86E-04	1.86E-04	1.85E-04	1.85E-04	1.84E-04	1.82E-04	1.79E-04	1.72E-04	1.65E-04
EU156	3.18E-04	2.58E-03	2.86E-03	2.57E-03	2.04E-03	1.28E-03	8.08E-04	3.21E-04	3.18E-05	3.13E-07	3.08E-09
EU157	1.83E-02	2.11E-02	7.11E-03	2.67E-04	1.12E-06	1.97E-11	3.49E-16	1.09E-25	0.	0.	0.
GD159	2.67E-03	5.26E-03	2.09E-03	1.30E-04	1.28E-06	1.24E-10	1.21E-14	1.13E-22	9.66E-43	0.	0.
TB161	2.83E-05	1.85E-04	1.67E-04	1.23E-04	7.46E-05	2.73E-05	1.00E-05	1.34E-06	8.86E-09	3.83E-13	1.67E-17
TOTAL	2.83E+02	6.71E+01	2.97E+01	1.05E+01	4.73E+00	2.08E+00	1.33E+00	7.71E-01	3.57E-01	1.35E-01	6.54E-02

CLIMAX MICROCURIES/SQ METER  
 MR/HR AT H+12 HOURS = 1.000  
 FRACTION OF REFRACTORIES PRESENT = 1.000  
 RELAXATION LENGTH = 0.16 GM/SQCM  
 BOMB FRACTION PER SQ. METER = 7.624E-14

DEBRIS DECAY FROM 1 TO 50 YEARS

	ZERO TIME	1.00E+00	1.50E+00	2.00E+00	3.50E+00	5.00E+00	7.00E+00	1.00E+01	2.00E+01	3.50E+01	5.00E+01
*BE 7	3.07E-07	2.65E-09	2.46E-10	2.29E-11	1.84E-14	1.47E-17	1.10E-21	7.07E-28	0.	0.	0.
*FMZ 54	2.10E-05	9.06E-06	5.97E-06	3.93E-06	1.12E-06	3.20E-07	6.03E-08	4.93E-09	1.16E-12	4.19E-18	1.51E-23
*FFZ 59	3.09E-05	1.12E-07	6.70E-09	4.03E-10	8.74E-14	1.89E-17	2.46E-22	1.15E-29	0.	0.	0.
*CCG 57	3.77E-05	1.48E-05	9.29E-06	5.83E-06	1.44E-06	3.54E-07	5.47E-09	3.32E-09	2.90E-13	2.38E-19	0.
*CCO 58	8.74E-05	2.51E-03	4.26E-04	7.22E-05	3.52E-07	1.71E-09	1.41E-12	3.35E-17	1.28E-32	0.	0.
*CCO 60	1.57E-05	1.38E-05	1.28E-05	1.20E-05	9.86E-06	8.10E-06	6.22E-06	4.20E-06	1.13E-06	1.56E-07	2.16E-08
W181	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W185	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
W188	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U234	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
U237	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
*AM241	7.70E-02	1.92E-10	1.87E-10	1.82E-10	1.70E-10	1.58E-10	1.44E-10	1.25E-10	7.76E-11	3.81E-11	1.87E-11
*CM242	5.82E-09	5.82E-09	5.82E-09	5.82E-09	5.84E-09	5.87E-09	5.87E-09	5.90E-09	5.93E-09	5.87E-09	5.79E-09
KR 85	1.44E-07	3.04E-08	1.40E-08	6.44E-09	6.27E-10	6.11E-11	2.74E-12	2.59E-14	7.44E-19	6.94E-19	6.47E-19
SR 89	4.04E-06	1.00E-04	9.73E-05	9.42E-05	8.59E-05	7.75E-05	6.82E-05	5.62E-05	2.97E-05	1.13E-05	4.33E-06
SR 90	3.47E-06	8.13E-04	7.11E-05	6.25E-06	4.21E-09	2.84E-12	1.68E-16	7.62E-23	5.54E-44	0.	0.
Y 90	7.01E-06	7.01E-04	6.95E-04	6.88E-04	6.63E-04	6.37E-04	6.07E-04	5.63E-04	4.40E-04	3.04E-04	2.10E-04
ZR 95	1.04E-11	7.01E-04	6.95E-04	6.88E-04	6.63E-04	6.37E-04	6.07E-04	5.63E-04	4.40E-04	3.04E-04	2.10E-04
NB 95M	2.57E-08	1.74E-03	2.02E-04	2.35E-05	3.69E-08	5.78E-11	1.06E-14	2.60E-20	5.25E-39	0.	0.
NB 95	1.09E-03	2.81E-03	4.01E-04	5.70E-05	1.66E-07	4.84E-10	2.00E-13	1.69E-18	2.07E-35	0.	0.
RU 103	2.32E-11	5.94E-05	8.48E-06	1.21E-06	3.52E-09	1.03E-11	4.24E-15	3.58E-20	4.39E-37	0.	0.
RH 103M	1.22E-11	6.04E-03	8.67E-04	1.24E-04	3.58E-07	1.04E-09	4.34E-13	3.67E-18	4.49E-35	0.	0.
RU 106	5.75E-05	2.23E-04	9.14E-06	3.76E-07	2.56E-11	1.76E-15	4.94E-21	2.32E-29	0.	0.	0.
RH 106	3.83E-09	2.24E-04	9.14E-06	3.76E-07	2.57E-11	1.76E-15	4.94E-21	2.32E-29	0.	0.	0.
SN 123	2.82E-04	2.68E-03	1.90E-03	1.34E-03	4.78E-04	1.70E-04	4.27E-05	5.41E-06	5.45E-09	1.75E-13	5.64E-18
SB 125	3.05E-04	2.68E-03	1.90E-03	1.34E-03	4.78E-04	1.70E-04	4.27E-05	5.41E-06	5.45E-09	1.75E-13	5.64E-18
TE 125M	2.71E-03	3.76E-05	1.36E-05	4.96E-06	2.38E-07	1.14E-08	1.99E-10	4.58E-13	7.35E-22	4.73E-35	3.04E-48
TE 127	4.57E-03	9.21E-05	8.09E-05	7.12E-05	4.85E-05	3.30E-05	1.97E-05	9.13E-06	7.02E-07	1.49E-08	3.18E-10
CE 137	1.23E-12	3.76E-05	3.34E-05	2.94E-05	2.01E-05	1.37E-05	8.17E-06	3.78E-06	2.90E-07	6.19E-09	1.32E-10
PR 144	2.28E-04	1.09E-04	3.41E-05	1.07E-05	3.29E-07	1.01E-08	9.71E-11	9.13E-14	7.51E-24	5.61E-39	4.18E-54
PM 147	1.59E-02	1.08E-04	3.37E-05	1.06E-05	3.25E-07	9.98E-09	9.60E-11	9.05E-14	7.43E-24	5.53E-39	4.14E-54
EU 155	7.42E-05	7.82E-04	7.73E-04	7.64E-04	7.38E-04	7.11E-04	6.80E-04	6.35E-04	5.02E-04	3.57E-04	2.52E-04
TOTAL	1.85E-01	4.60E-02	2.42E-02	1.64E-02	7.46E-03	4.67E-03	3.40E-03	2.73E-03	1.91E-03	1.31E-03	9.13E-04

K-12