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**Radionuclide Mass Inventory,
Activity, Decay Heat, and Dose
Rate Parametric Data for TRIGA
Spent Nuclear Fuels**

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J. W Sterbentz

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and Dose Rate Parametric Data For
TRIGA Spent Nuclear Fuels**

J. W. Sterbentz

Published March 1997

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ABSTRACT

Parametric burnup calculations are performed to estimate radionuclide isotopic mass and activity concentrations for four different Training, Research, and Isotope General Atomics (TRIGA) nuclear reactor fuel element types:

- (1) Aluminum-clad standard,
- (2) Stainless Steel-clad standard,
- (3) High-enrichment Fuel Life Improvement Program (FLIP), and
- (4) Low-enrichment Fuel Life Improvement Program (FLIP-LEU-I).

Parametric activity data are tabulated for 145 important radionuclides that can be used to generate gamma-ray emission source terms or provide mass quantity estimates as a function of decay time.

Fuel element decay heats and dose rates are also presented parametrically as a function of burnup and decay time. Dose rates are given at the fuel element midplane for contact, 3.0-feet, and 3.0-meter detector locations in air.

The data herein are estimates based on specially derived Beginning-of-Life (BOL) neutron cross sections using geometrically-explicit TRIGA reactor core models. The calculated parametric data should represent good estimates relative to actual values, although no experimental data were available for direct comparison and validation. However, because the cross sections were not updated as a function of burnup, the actinide concentrations may deviate from the actual values at the higher burnups.

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1.0 INTRODUCTION

1.1 Purpose

This report is a compilation of calculated parametric burnup results for Training, Research, and Isotope General Atomics (TRIGA) fuels and is intended to be a reference document. The parametric results are required by a number of organizations that support work in the areas of planning, handling, transportation, and storage of TRIGA spent nuclear fuels at the Idaho National Engineering and Environmental Laboratory (INEEL). In addition, INEEL organizations managing the reacquisition, handling, transport, and packaging of the Foreign Research Reactor (FRR) TRIGA fuels should find the data in this report useful for both the verification of information supplied by the reactor site and for the estimation of important data that may have been overlooked and not supplied.

The parametric data in this report includes estimates of radionuclide isotopic mass, activity, decay heat, and dose rates for four different TRIGA spent nuclear fuels. Data are presented parametrically for the following variables: (1) TRIGA fuel type, (2) fuel burnup, (3) decay time following removal from the reactor, and (4) distance in air from the fuel element for the dose rate calculations. Other studies include the effects of burnup period duration and Beginning-of-Life (BOL) unrodded, axial flux profiles (thermal and fast) for a typical TRIGA element.

The parametric data can be used to more fully characterize a TRIGA spent nuclear fuel element given only limited initial information. For example, if one is given only an estimated burnup and the core removal date for a particular fuel element, the actinide, activation, and fission product radionuclide inventory, decay heat, and dose rate can be estimated through the interpolation of pertinent table and figure data herein. Correlation of the table data to burnup is facilitated through the use of multiple but equivalent units of fuel burnup, e.g. MWd, MWd/MTU, atom percent ^{235}U fission, etc.

If the fuel element burnup is unknown, but a gross gamma dose rate measurement and the core removal date are known, one could estimate a corresponding burnup using the information here and then go on to interpolate the pertinent table and figure data to estimate the actinide, activation, and fission product radionuclide inventory and decay heat.

The isotopic activity data can also be used as input for the generation of gamma-ray source terms for specific cask loading applications, for example. In addition, the isotopic activities can easily be

converted to isotopic mass concentrations by dividing by the specific activity (curies/gram). See Appendix Y for three different isotopic conversion factors.

1.2 TRIGA Fuels Types

Burnup calculations have been performed for the following four different TRIGA fuel element types:

- (1) Aluminum-clad standard,
- (2) Stainless Steel-clad standard,
- (3) High-enrichment Fuel Life Improvement Program (FLIP),
- (4) Low-enrichment Fuel Life Improvement Program (FLIP-LEU-I).

These four fuel types represent the majority of the TRIGA spent nuclear fuel element volume currently at the INEEL. Table 1 gives the basic characteristics and loadings at BOL for these fuels per Reference 1. These data are used in the burnup calculations.

2.0 COMPUTER CODES

The following four computer codes were used in the burnup and dose rate calculations.

2.1 MCNP

The MCNP4A (Monte Carlo N-Particle) code² version 4A, is a general purpose, continuous energy, generalized geometry, coupled neutron-photon-electron Monte Carlo transport code. The neutron energy range is from 10^{-5} eV to 20 MeV, the photon energy range is from 1 keV to 100 MeV, and the electron energy is from 1 keV to 1000 MeV. Tally quantities include particle or energy current and flux across a surface and flux, energy deposition, and reaction rates averaged over cell volume. A wide variety of nuclide cross sections and reactions are available from the ENDF/B-IV, ENDF/B-V, and ENDF/B-VI data sets.

2.2 MOCUP

The MOCUP code³ (MCNP-ORIGEN2 Coupled Utility Program code) is a system of external processors that links input and output files from the MCNP4A and ORIGEN2 codes in order to perform a time-dependent burnup of a fuel composition. This linkage of the MCNP4A and ORIGEN2 codes by MOCUP is referred to as the MOCUP code system.

The MOCUP code is a recently-developed INEEL code. The MOCUP code is composed of three processing modules, namely, mcnpPRO, origenPRO, and compPRO. Each module performs a specific, sequential task during each burnup iteration.

Verification of MOCUP and the MOCUP code system is easy and straightforward and has been done extensively to ensure proper code execution. No modifications are required to either MCNP or ORIGEN2 codes to run in the MOCUP code system.

2.3 ORIGEN2

The **ORIGEN2** code^{4,5} version 1 is used for calculating the buildup, decay, and processing of radioactive isotopes. Several standard libraries of cross section, decay, and production data are available with the code to allow for tailored applications. These libraries are described in detail in Reference 6. ORIGEN2 will output concentrations, activities, and decay heats for over 1700 activation products, actinide and daughter products, and fission product isotopes. A special feature in ORIGEN2 is a user option to modify the standard cross section libraries (base library) with user calculated cross sections, thereby allowing a burnup calculation to be more reactor specific. ORIGEN2 performs its depletion calculations with effective one-group cross sections with depletion controlled either by total power or by the irradiation flux level. The matrix exponential method is used to solve the large numbers of coupled differential equations describing the complex burnup and decay mechanisms between the nuclides.

2.4 QAD-CG

The **QAD-CG** code⁷ (Combinatorial Geometry version of the QAD-P5A Point Kernel Shielding Code) is a neutron and gamma-ray transport computer code. Point-to-point or ray-tracing transport methods are used to estimate radiation fluxes through complex three-dimensional shield configurations using dose buildup factors interpolated from tabulated table data. The powerful combinatorial geometry package allows fully explicit TRIGA element modelling in air for the dose rate calculation.

3.0 METHODOLOGY

The methodology used to perform the cross section generation and burnup calculations is in accordance with the procedure and methodology detailed in Reference 6.

3.1 Neutron Cross Sections

MCNP computer models were developed for a Mark I TRIGA reactor core. These models are a 1/12-symmetric core model representation of a six hex-ring core surrounded by a graphite radial reflector and submerged in light water coolant/moderator. The core models are fully explicit in geometry⁸ and include all fuel element material and geometry details¹. Figures 1 and 2 show the MCNP core model geometry in the horizontal x-y plane and an axial view of the core in the x-z plane, respectively.

A core model was developed for each of the four fuel types considered. Each model contains a full core complement of a single fuel element type. From these four models, four separate BOL updated neutron cross section libraries were developed; one library for each fuel type. The calculated one-group cross sections in each library represent an average for all the elements in the core and are not for a specific core position. Certainly the cross sections will vary as a function of core position, however, because detailed information of this type is generally not available, an average over the entire core appears to be reasonable since fuel elements are typically and frequently moved around in a typical operational TRIGA reactor core. The cross sections, therefore, represent a core-average of the neutron spatial and spectral effects.

The cross sections used in the parametric analyses here are only for BOL. One would expect the true radionuclide isotopic concentrations to deviate somewhat from the true concentrations with increasing burnup. For the low-to-medium burnup TRIGA elements, which the majority of TRIGA elements are, the BOL cross sections should produce adequate results. The cross section development methodology can be used to generate burnup-dependent cross sections as well. This would be appropriate if greater accuracy mass concentration (particularly actinide concentrations) is desired or a comparison to experimental data is required for calculational validation.

3.2 Neutron Cross Section Comparison

Selected BOL cross sections generated for the four different TRIGA fuel element cores are given in Table 2. Note the differences in magnitude between the capture and fission cross sections for the three heavy metal actinides, namely, ²³⁵U, ²³⁸U, and ²³⁹Pu. These differences primarily affect the production and destruction of other actinides with burnup.

Table 2 also compares cross sections from a standard ORIGEN2 Pressurized Water Reactor (PWR) and a Boiling Water Reactor (BWR) cross section library. Note the relatively slight variation between the PWR and BWR cross sections and the larger differences relative to the TRIGA fuel cross sections. This points out the fact that isotope cross sections can vary

significantly from one reactor type to another, despite the fact that both a TRIGA and PWR reactor are light-water moderated/cooled.

3.3 ORIGEN2 Burnup Calculations

The ORIGEN2 code is used to perform the burnup calculations. Code input data includes the neutron cross sections, BOL fuel loadings, reactor or element power levels, and the burnup and decay times.

The burnup time period was assumed to be a fixed 4-year period with the reactor power or element power level held steady and constant over the 4-years. The magnitude of the element power was then varied to achieve the desired total fuel element burnup. Tables 3, 4, 5, and 6 list the burnup parameters used in the calculations for each of the four fuel types.

The assumption of a 4-year steady-state operation is fictitious for any given spent TRIGA fuel element. TRIGA reactors in general operate sporadically and seldom in a steady-state mode for any length of time, however, the 4-year steady-state burnup period here is conservative from the standpoint that most TRIGA fuel elements remain in the TRIGA core for long periods of time. When an element loses its reactivity, it is simply moved to the core periphery and replaced by a newer or more reactive element. Elements often have in-core residence times greater than 10-years.

From a calculational point of view, the most conservative estimate of decay heat, gamma source term intensity, activity, etc. would occur for a reactor running non-stop at steady-state full power until the desired burnup was achieved. A reasonable assumption here is that the total integrated burnup is achieved at steady-state power over a 4-year period. Four years being considerably shorter than 10-12 years, but not so conservative as 2-years. The bottom line is that no matter what the burnup period duration is or whether the power level is steady-state or sporadic, after approximately 3-years decay following removal from the core, the fuel element decay heat, activity, dose rate, etc. tend to converge.

Following the 4-year burnup period, the fuel element radionuclide inventory is calculated at ten different decay times: 0-weeks, 2-weeks, 4-weeks, 3-months, 0.5-year, 1-year, 3-years, 5-years, 10-years, and 20-years.

In addition to the heavy metal fuel mass loadings included as part of the ORIGEN2 input data, other fuel element material masses are also included, for example, the cladding, fuel matrix, graphite end reflectors, integral burnable poisons, poison discs, and structural end fittings. Impurities in

each material mass are also included. A list of these impurities for selected materials (Stainless Steel 304, reactor-grade graphite, Zircaloy-4, and Aluminum-1100) are given in Appendix Z. Note: the TRIGA aluminum cladding and end fittings are actually Aluminum-1100F (copper content 0.12 wt% versus the 0.125 wt% used here to represent the standard Aluminum-1100).

4.0 RESULTS

The parametric data results for the most part are presented in self-explanatory tables and figures. The following subsections simply identify corresponding tables and figures and briefly discuss any important points.

4.1 Activity

Appendices A, S, F, and L are abridged ORIGEN2 outputs that list the activity levels in curies of the 145 important radionuclides (activation products, actinides and daughters, and fission products) as a function of burnup and decay time following removal from the reactor core. Appendix A is for the Aluminum-clad standard TRIGA fuel element; Appendix S is for the Stainless steel-clad standard TRIGA fuel element; Appendix F is for the high enrichment FLIP TRIGA fuel element; and Appendix L is for the low enrichment FLIP-LEU-I TRIGA fuel element.

Each table within a given appendix is for a specific burnup level and the ten different decay times. For example, Appendix A contains eight different burnup tables (A.1, A.2, ...A.8). The parametric burnup starts with Table A.1 at 0.5 gram (g) ^{235}U burnup and increases to 7.0 g ^{235}U in Table A.8. In addition, the total curie levels for the 145 isotopes and the full ORIGEN2 isotopic inventory are provided at the end of each table.

4.2 Decay Heat

Figures* 3 and 4 show graphically the decay heats (Watts/fuel element) as a function of burnup and decay time for a TRIGA fuel element. Since the decay heat is due primarily to the beta-gamma decay energy from the fission products (~98% of total heat load), the decay heat curves are given only as a function of burnup since they are relatively independent of the fuel type. Figure 3 is for low burnups typical of the Aluminum-clad and Stainless Steel-clad standard elements. Figure 4 is

* For Figures 3-14, the decay time at 1-day is really for 0-days (zero decay time), this was done for ease of plotting.

for the higher burnup FLIP-type fuel elements. Data plotted on Figures 3 and 4 are also given in Tables 7 and 8.

4.3 Dose Rates

TRIGA fuel element dose rate estimates (mrem/hr) as a function of burnup and decay time are shown in Figures* 5, 6, 7, 8, 9, and 10. Figures 5, 6, and 7 are for the lower burnup standard elements (0.0-3.8 MWd) and Figures 8, 9, and 10 are for the higher burnup FLIP elements (4.75-66.52 MWd). Dose rate data are tabulated in Tables 14-19. All calculated dose rates are for the axial midplane of a single fuel element. Dose rate detector locations include: (1) surface contact (outer clad surface), (2) 3.0-feet in air, and (3) 3.0-meters in air from the fuel element radial centerline.

Note: The iron (Fe) buildup factor in QAD-CG was used in all the dose rate calculations.

4.4 Burnup Period

The decay heat, radionuclide inventory, and dose rate calculations are all based on an assumed 4-year burnup period or time in the reactor core. Obviously not all fuel elements will remain in the reactor core for exactly 4-years and it is therefore of interest to see what effect a variable burnup period would have on the decay heat. In order to study this effect, we will again assume constant, steady-state element power over the burnup period and ensure that the total integrated fuel burnups are equal for each of the variable burnup periods through appropriate adjustment of the fuel element power level.

Burnup periods of 1-year, 2-years, 4-years, and 8-years were used to study this effect. Figures* 11, 12, 13, and 14 show the variation in decay heat as a function of burnup period and ^{235}U burnup of 1, 5, 20, and 50 grams, respectively. As expected, the decay heat is higher for the shorter burnup periods for relatively short decay times following removal from the core. However, after approximately 1000-days or 3-years, the decay heat curves tend to converge. Therefore, after approximately 3-years decay, the burnup period has relatively little influence on the decay heat. The same conclusion could be applied to the dose rates. The burnup period would also have little effect on mass and activity concentrations of actinides and fission products with relatively long half-lives.

4.5 Actinide Concentration

Actinide mass concentrations as a function of burnup are given in Tables 9, 10, 11, and 12 for the Aluminum-clad standard, Stainless Steel-clad standard, FLIP, and FLIP-LEU-I elements. These concentrations (grams/fuel element) are given only for zero decay time following removal from the

reactor core. Actinide concentrations at different decay times can be readily calculated based on the activity levels given in Appendices A, S, F, and L.

4.6 Axial Flux Profile

BOL thermal and fast neutron flux profiles are given in Table 13 as a function of axial position above midplane for a typical 15-inch TRIGA fuel element. The profiles are assumed to be symmetric about the midplane and are calculated without control rods or strong absorber materials in the vicinity of the fuel element. The fluxes are unnormalized and relative in nature. The thermal flux is for neutrons in the energy range of 0.0-1.0 eV; the fast flux from 1.0 eV to 20.0 MeV. The total flux is also given.

5.0 CONCLUSIONS

Radionuclide inventory estimates are calculated on a per element basis in terms of activity (curies) and mass (grams) for four different TRIGA fuel elements. Inventories are provided as a function of burnup and decay time following removal from the reactor core. The parametric data are presented in a self-explanatory manner and are intended primarily to be a basis for other calculational estimates. For example, the isotopic activity presented in Appendix F for a high enrichment FLIP fuel element with a known burnup and decay time can be used to develop source terms for gamma-ray shielding studies.

In the parametric analysis here, the fuel element decay times following removal from the reactor span the relatively short time period of 0-20 years. Longer decay times or specific decay times can easily be accommodated, if required.

The burnup methodology is quite flexible and can be utilized in a more rigorous fashion if desired to support validation or experimental benchmark data work. For example, burnup-dependent neutron cross sections can be generated at various points throughout the burnup period for the higher fuel burnups in order to improve the accuracy of the higher order actinide isotopic mass and activity estimates.

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Table 1. BOL Characteristics for four different TRIGA fuel element types*.

	Aluminum-clad Standard	Stainless Steel-clad Standard	FLIP	FLIP-LEU-I
BOL U-235 (g)	36.0	39.0	137.0	101.0
BOL U-238 (g)	144.0	156.0	59.0	403.0
BOL Uranium (g)	180.0	195.0	196.0	504.0
Enrichment	20.0	20.0	70.0	20.0
Clad	Aluminum	Stainless Steel	Stainless Steel	Stainless Steel
U wt% in ZrH	8.0	8.5	8.5	20.0
H:Zr atom ratio	1.0	1.7	1.6	1.6
Erbium Poison (g)	0.0	0.0	36.0	20.0
Poison Disc	19.7 g Sm ₂ O ₃ (2 discs assumed)	8.38 g Mo disc	none	none
Graphite Mass (g)	450.0	450.0	450.0	450.0
Stainless Steel 304 Mass (g)	0.0	800.0		
Aluminum 1100 Mass (g)	280.0	0.0	0.0	0.0
Zr Mass (g)	2070.0	2088.0	2060.0	2060.0

* Per single element basis.

Table 2. BOL neutron cross section comparison.

Isotope	Aluminum-clad TRIGA (barns)	Stainless Steel-clad TRIGA (barns)	FLIP TRIGA (barns)	FLIP-LEU-I TRIGA (barns)	PWR (barns)	BWR (barns)
U-235 capture	19.50	20.87	9.60	11.03	10.46	11.21
U-235 fission	100.20	107.90	41.68	50.14	46.71	50.00
U-238 capture	2.74	2.84	4.41	2.08	0.90	0.92
U-238 fission	0.09	0.09	0.11	0.11	0.10	0.08
Pu-239 capture	109.60	122.40	56.51	65.36	58.61	63.07
Pu-239 fission	210.20	232.50	100.30	117.80	106.20	114.10
Alpha*	0.195	0.193	0.230	0.220	0.224	0.224

* Capture-to-fission ratio for U-235 only.

Table 3. Parametric burnup data for the Aluminum-clad standard fuel element.

U-235 Burnup (grams)	U-235 Burnup (%)	U-235 Burnup (MWd)	Burnup (MWd/MTU)	U-235 Depletion (grams)	Uniform Element Power Level (MWt)
0.5	1.39	0.48	2640	0.60	3.254E-04
1	2.78	0.95	5279	1.18	6.508E-04
2	5.56	1.90	10558	2.34	1.302E-03
3	8.33	2.85	15837	3.50	1.953E-03
4	11.11	3.80	21116	4.66	2.603E-03
5	13.89	4.75	26395	5.80	3.254E-03
6	16.67	5.70	31674	6.94	3.905E-03
7	19.44	6.65	36953	8.07	4.556E-03

Table 4. Parametric burnup data for the Stainless Steel-clad standard fuel element.

U-235 Burnup (grams)	U-235 Burnup (%)	U-235 Burnup (MWd)	Burnup (MWd/MTU)	U-235 Depletion (grams)	Uniform Element Power Level (MWt)
0.5	1.28	0.48	2436	0.59	3.254E-04
1	2.56	0.95	4873	1.18	6.508E-04
2	5.13	1.90	9746	2.34	1.302E-03
3	7.69	2.85	14619	3.51	1.953E-03
4	10.26	3.80	19492	4.66	2.603E-03
5	12.82	4.75	24365	5.81	3.254E-03
6	15.38	5.70	29238	6.95	3.905E-03
7	17.95	6.65	34111	8.08	4.556E-03

Table 5. Parametric burnup data for the high enrichment FLIP fuel element.

U-235 Burnup (grams)	U-235 Burnup (%)	U-235 Burnup (MWd)	Burnup (MWd/MTU)	U-235 Depletion (grams)	Uniform Element Power Level (MWt)
5	3.65	4.75	24241	6.10	3.254E-03
10	7.30	9.50	48481	12.10	6.508E-03
15	10.95	14.25	72722	18.20	9.763E-03
20	14.60	19.00	96962	24.20	1.302E-02
25	18.25	23.76	121203	30.10	1.627E-02
30	21.90	28.51	145443	36.10	1.953E-02
35	25.55	33.26	169684	41.96	2.278E-02
40	29.20	38.01	193924	47.82	2.603E-02
45	32.85	42.76	218165	53.63	2.929E-02
50	36.50	47.51	242406	59.40	3.254E-02
55	40.15	52.26	266646	65.12	3.580E-02
60	43.80	57.01	290887	70.76	3.905E-02
65	47.45	61.76	315127	76.35	4.230E-02
70	51.09	66.52	339368	81.84	4.556E-02

Table 6. Parametric burnup data for low enrichment FLIP-LEU-I fuel element.

U-235 Burnup (grams)	U-235 Burnup (%)	U-235 Burnup (MWd)	Burnup (MWd/MTU)	U-235 Depletion (grams)	Uniform Element Power Level (MWt)
5	4.95	4.75	9427	5.94	3.254E-03
10	9.90	9.50	18854	11.76	6.508E-03
15	14.85	14.25	28281	17.74	9.763E-03
20	19.80	19.00	37708	23.08	1.302E-02
25	24.75	23.76	47134	28.55	1.627E-02
30	29.70	28.51	56561	33.92	1.953E-02
35	34.65	33.26	65988	39.15	2.278E-02
40	39.60	38.01	75415	44.25	2.603E-02

**Table 7. Decay Heat (Watts) as a function of decay time and burnup.
(Low Burnups)**

Single Element 36 g U-235 (BOL)
 144 g U-238 (BOL)
 180 g U (BOL)
 20 % Initial U235 Enrichment (BOL)

Decay Time	Watts							
	alum.1	alum.2	alum.3	alum.4	alum.5	alum.6	alum.7	alum.8
0-days	20.670	40.820	81.270	121.400	161.000	200.300	239.200	277.600
14-days	0.673	1.333	2.670	4.012	5.355	6.703	8.056	9.412
28-days	0.499	0.988	1.980	2.978	3.978	4.984	5.994	7.009
0.25-years	0.260	0.516	1.038	1.565	2.098	2.636	3.181	3.731
0.5-years	0.152	0.302	0.610	0.924	1.243	1.569	1.902	2.241
1-years	0.079	0.157	0.320	0.489	0.664	0.845	1.032	1.225
5-years	0.018	0.036	0.076	0.120	0.167	0.217	0.271	0.330
10-years	0.014	0.028	0.059	0.091	0.126	0.163	0.203	0.244
20-years	0.011	0.022	0.044	0.068	0.092	0.118	0.144	0.172

BURNUP	alum.1	alum.2	alum.3	alum.4	alum.5	alum.6	alum.7	alum.8
BU*: U-235	0.5 g	1.0 g	2.0 g	3.0 g	4.0 g	5.0 g	6.0 g	7.0 g
BU*: % U-235	1.39%	2.78%	5.56%	8.33%	11.11%	13.89%	16.67%	19.44%
BU*: MWd	0.48	0.95	1.90	2.85	3.80	4.75	5.70	6.65
BU*: MWd/MTU	2639	5278	10555	15833	21111	26389	31667	36944
U-235 DEPL**	0.6 g	1.18 g	2.34 g	3.50 g	4.66 g	5.80 g	6.94 g	8.07 g

* BU = Burnup or Fissioned U-235

** DEPL = Depleted U-235 due to fission and transmutation

**Table 8. Decay Heat (Watts) as a function of decay time and burnup.
(High Burnups)**

Single Element: 137 g U-235
 59 g U-238
 196 g U
 69.90 % Initial U235 Enrichment

Decay Time	Watts							
	f.1	f.2	f.3	f.4	f.5	f.6	f.7	f.8
0-days	201.900	401.400	598.300	792.400	983.100	1170.000	1353.000	1532.000
14-days	6.764	13.550	20.330	27.120	33.900	40.670	47.410	54.130
28-days	5.046	10.110	15.180	20.260	25.350	30.430	35.510	40.580
0.25-years	2.689	5.398	8.125	10.870	13.640	16.430	19.240	22.070
0.5-years	1.621	3.263	4.924	6.609	8.317	10.050	11.810	13.610
1-years	0.894	1.806	2.737	3.690	4.666	5.668	6.697	7.758
5-years	0.239	0.485	0.738	0.999	1.268	1.548	1.838	2.141
10-years	0.168	0.339	0.512	0.689	0.869	1.054	1.243	1.437
20-years	0.114	0.228	0.344	0.460	0.579	0.699	0.821	0.946

BURNUP	f.1	f.2	f.3	f.4	f.5	f.6	f.7	f.8
BU*: U-235	5.0 g	10.0 g	15.0 g	20.0 g	25.0 g	30.0 g	35.0 g	40.0 g
BU*: % U-235	3.65%	7.30%	10.95%	14.60%	18.25%	21.90%	25.55%	29.20%
BU*: MWd	4.75	9.50	14.25	19.00	23.76	28.51	33.26	38.01
BU*: MWd/MTU	24235	48481	72722	96962	121200	145440	169680	193920
U-235 DEPL**	6.1 g	12.1 g	18.2 g	24.2 g	30.1 g	36.1 g	41.96 g	47.82 g

* BU = Burnup or Fissioned U-235

** DEPL =Depleted U-235 due to fission and transmutation

Table 8. continued

Decay Time	Watts					
	f.9	f.10	f.11	f.12	f.13	f.14
0-days	1705.000	1872.000	2032.000	2184.000	2327.000	2459.000
14-days	60.820	67.460	74.050	80.560	87.010	93.350
28-days	45.640	50.680	55.710	60.690	65.660	70.560
0.25-years	24.930	27.810	30.720	33.650	36.620	39.600
0.5-years	15.430	17.300	19.200	21.140	23.140	25.180
1-years	8.852	9.983	11.160	12.370	13.650	14.970
5-years	2.457	2.789	3.139	3.508	3.901	4.318
10-years	1.639	1.847	2.063	2.289	2.527	2.776
20-years	1.073	1.205	1.340	1.480	1.626	1.777

BURNUP	f.9	f.10	f.11	f.12	f.13	f.14
BU*: U-235	45.0 g	50.0 g	55.0 g	60.0 g	65.0 g	70.0 g
BU*: % U-235	32.85%	36.50%	40.15%	43.80%	47.44%	51.09%
BU*: MWd	42.76	47.51	52.26	57.01	61.77	66.52
BU*: MWd/MTU	218170	242410	266650	290887	315127	339370
U-235 DEPL**	53.63 g	59.40 g	65.12 g	70.76 g	76.35 g	81.84 g

Table 9. Actinide Mass Concentrations as a function of burnup for the Aluminum-clad standard fuel element.

Single Element: 36 g U-235 (BOL)
 144 g U-238 (BOL)
 180 g U (BOL)
 20 % Initial U235 Enrichment (BOL)

Actinide Isotope	alum.1 (g/element)	alum.2 (g/element)	alum.3 (g/element)	alum.4 (g/element)	alum.5 (g/element)	alum.6 (g/element)	alum.7 (g/element)	alum.8 (g/element)
TH229	7.722E-14	1.669E-13	3.923E-13	6.797E-13	1.032E-12	1.454E-12	1.950E-12	2.524E-12
TH230	5.895E-11	1.158E-10	2.296E-10	3.421E-10	4.532E-10	5.631E-10	6.720E-10	7.797E-10
TH232	5.665E-09	1.119E-08	2.231E-08	3.337E-08	4.434E-08	5.525E-08	6.609E-08	7.685E-08
PA231	1.374E-07	1.356E-07	1.320E-07	1.285E-07	1.250E-07	1.214E-07	1.179E-07	1.144E-07
U232	6.417E-10	1.269E-09	2.534E-09	3.801E-09	5.069E-09	6.344E-09	7.628E-09	8.925E-09
U233	8.116E-09	1.595E-08	3.146E-08	4.652E-08	6.111E-08	7.525E-08	8.890E-08	1.021E-07
U234	1.058E-05	2.079E-05	4.124E-05	6.152E-05	8.161E-05	1.017E-04	1.217E-04	1.417E-04
U235	3.540E+01	3.482E+01	3.366E+01	3.250E+01	3.134E+01	3.020E+01	2.906E+01	2.793E+01
U236	9.733E-02	1.922E-01	3.825E-01	5.711E-01	7.577E-01	9.427E-01	1.126E+00	1.307E+00
U238	1.439E+02	1.439E+02	1.438E+02	1.437E+02	1.435E+02	1.434E+02	1.433E+02	1.431E+02
U235 Enrich	19.73	19.46	18.93	18.39	17.85	17.30	16.75	16.21
NP237	1.426E-04	3.992E-04	1.277E-03	2.651E-03	4.531E-03	6.941E-03	9.895E-03	1.341E-02
PU236	5.983E-13	3.161E-12	1.952E-11	6.032E-11	1.379E-10	2.666E-10	4.618E-10	7.412E-10
PU238	4.498E-07	2.342E-06	1.425E-05	4.367E-05	9.932E-05	1.911E-04	3.297E-04	5.269E-04
PU239	5.390E-02	1.050E-01	2.035E-01	2.958E-01	3.820E-01	4.625E-01	5.374E-01	6.069E-01
PU240	4.116E-04	1.592E-03	6.197E-03	1.358E-02	2.348E-02	3.569E-02	4.997E-02	6.610E-02
PU241	4.515E-06	3.462E-05	2.706E-04	8.936E-04	2.068E-03	3.947E-03	6.660E-03	1.032E-02
PU242	1.423E-08	2.185E-07	3.499E-06	1.777E-05	5.625E-05	1.378E-04	2.866E-04	5.327E-04
AM241	2.182E-07	1.668E-06	1.296E-05	4.251E-05	9.771E-05	1.851E-04	3.099E-04	4.764E-04
AM242M	6.405E-11	9.429E-10	1.387E-08	6.476E-08	1.886E-07	4.252E-07	8.145E-07	1.395E-06
AM243	1.352E-11	4.137E-10	1.344E-08	1.040E-07	4.458E-07	1.387E-06	3.523E-06	7.773E-06
CM244	3.412E-14	2.088E-12	1.384E-10	1.641E-09	9.581E-09	3.811E-08	1.188E-07	3.129E-07
CM245	1.059E-17	1.286E-15	1.715E-13	3.070E-12	2.404E-11	1.203E-10	4.530E-10	1.402E-09
CM246	1.170E-20	2.839E-18	7.719E-16	2.115E-14	2.252E-13	1.439E-12	6.642E-12	2.451E-11

BU*: U-235	0.5 g	1.0 g	2.0 g	3.0 g	4.0 g	5.0 g	6.0 g	7.0 g
BU*: % U-235	1.39%	2.78%	5.56%	8.33%	11.11%	13.89%	16.67%	19.44%
BU*: MWd	0.48	0.95	1.90	2.85	3.80	4.75	5.70	6.65
BU*: MWd/MTU	2639	5278	10555	15833	21111	26389	31667	36944
U-235 DEPL**	0.6 g	1.18 g	2.34 g	3.50 g	4.66 g	5.80 g	6.94 g	8.07 g

* BU = Burnup or Fissioned U-235

** DEPL = Depleted U-235 due to fission and transmutation

Table 10. Actinide Mass Concentrations as a function of burnup for the Stainless Steel-clad standard fuel element.

Single Element: 39 g U-235 (BOL)
 156 g U-238 (BOL)
 195 g U (BOL)
 20 % Initial U235 Enrichment at BOL

Actinide Isotope	ss.1 (g/element)	ss.2 (g/element)	ss.3 (g/element)	ss.4 (g/element)	ss.5 (g/element)	ss.6 (g/element)	ss.7 (g/element)	ss.8 (g/element)
TH229	2.737E-12	5.414E-12	1.081E-11	1.621E-11	2.158E-11	2.696E-11	3.233E-11	3.770E-11
TH230	6.086E-11	1.187E-10	2.347E-10	3.498E-10	4.638E-10	5.770E-10	6.894E-10	8.011E-10
TH232	7.997E-04	7.994E-04	7.987E-04	7.981E-04	7.974E-04	7.967E-04	7.959E-04	7.952E-04
PA231	1.494E-07	1.481E-07	1.455E-07	1.429E-07	1.403E-07	1.377E-07	1.352E-07	1.326E-07
U232	5.981E-10	1.186E-09	2.385E-09	3.601E-09	4.834E-09	6.090E-09	7.373E-09	8.684E-09
U233	3.183E-07	6.286E-07	1.252E-06	1.871E-06	2.483E-06	3.091E-06	3.694E-06	4.291E-06
U234	1.027E-05	2.009E-05	3.977E-05	5.930E-05	7.865E-05	9.794E-05	1.172E-04	1.364E-04
U235	3.841E+01	3.782E+01	3.666E+01	3.549E+01	3.434E+01	3.319E+01	3.205E+01	3.092E+01
U236	9.679E-02	1.912E-01	3.806E-01	5.687E-01	7.548E-01	9.396E-01	1.123E+00	1.304E+00
U238	1.559E+02	1.559E+02	1.558E+02	1.557E+02	1.556E+02	1.554E+02	1.553E+02	1.552E+02
U235 Enrich	19.76	19.50	19.01	18.51	18.01	17.51	17.01	16.50
NP237	1.313E-04	3.595E-04	1.127E-03	2.315E-03	3.933E-03	5.999E-03	8.526E-03	1.153E-02
PU236	4.997E-13	2.583E-12	1.557E-11	4.750E-11	1.077E-10	2.067E-10	3.562E-10	5.690E-10
PU238	3.759E-07	1.915E-06	1.138E-05	3.442E-05	7.760E-05	1.484E-04	2.546E-04	4.053E-04
PU239	5.189E-02	1.012E-01	1.963E-01	2.857E-01	3.694E-01	4.478E-01	5.211E-01	5.894E-01
PU240	3.797E-04	1.470E-03	5.738E-03	1.261E-02	2.186E-02	3.333E-02	4.681E-02	6.210E-02
PU241	3.614E-06	2.774E-05	2.172E-04	7.185E-04	1.666E-03	3.186E-03	5.388E-03	8.367E-03
PU242	1.075E-08	1.651E-07	2.644E-06	1.343E-05	4.251E-05	1.041E-04	2.166E-04	4.026E-04
AM241	1.747E-07	1.337E-06	1.041E-05	3.423E-05	7.888E-05	1.499E-04	2.516E-04	3.879E-04
AM242M	4.403E-11	6.497E-10	9.602E-09	4.505E-08	1.318E-07	2.985E-07	5.747E-07	9.887E-07
AM243	8.618E-12	2.637E-10	8.558E-09	6.616E-08	2.833E-07	8.808E-07	2.234E-06	4.924E-06
CM244	1.870E-14	1.143E-12	7.560E-11	8.940E-10	5.204E-09	2.064E-08	6.414E-08	1.685E-07
CM245	4.946E-18	5.999E-16	7.978E-14	1.424E-12	1.111E-11	5.544E-11	2.080E-10	6.413E-10
CM246	5.042E-21	1.221E-18	3.305E-16	9.011E-15	9.552E-14	6.072E-13	2.788E-12	1.023E-11

BU*: U-235	0.5 g	1.0 g	2.0 g	3.0 g	4.0 g	5.0 g	6.0 g	7.0 g
BU*: % U-235	1.28%	2.56%	5.13%	7.69%	10.26%	12.82%	15.38%	17.95%
BU*: MWd	0.48	0.95	1.90	2.85	3.80	4.75	5.70	6.65
BU*: MWd/MTU	2462	4872	9744	14615	19487	24359	29231	34103
U-235 DEPL**	0.59 g	1.18 g	2.34 g	3.51 g	4.66 g	5.81 g	6.95 g	8.08 g

* BU = Burnup or Fissioned U-235

** DEPL =Depleted U-235 due to fission and transmutation

Table 11. Actinide Mass Concentrations as a function of burnup for the High-Enrichment FLIP fuel element.

Single Element: 137 g U-235 (BOL)
 59 g U-238 (BOL)
 196 g U (BOL)
 70 % Initial U235 Enrichment (BOL)

Actinide Isotope	f.1 (g/element)	f.2 (g/element)	f.3 (g/element)	f.4 (g/element)	f.5 (g/element)	f.6 (g/element)	f.7 (g/element)	f.8 (g/element)
TH229	1.942E-11	4.054E-11	6.347E-11	8.843E-11	1.156E-10	1.453E-10	1.779E-10	2.139E-10
TH230	1.857E-09	3.663E-09	5.419E-09	7.129E-09	8.794E-09	1.042E-08	1.200E-08	1.354E-08
TH232	7.980E-04	7.959E-04	7.937E-04	7.915E-04	7.891E-04	7.866E-04	7.840E-04	7.812E-04
PA231	5.063E-07	4.832E-07	4.604E-07	4.378E-07	4.154E-07	3.934E-07	3.716E-07	3.501E-07
U232	1.522E-08	3.038E-08	4.568E-08	6.137E-08	7.769E-08	9.493E-08	1.134E-07	1.334E-07
U233	2.146E-06	4.249E-06	6.307E-06	8.319E-06	1.028E-05	1.219E-05	1.404E-05	1.583E-05
U234	3.292E-04	6.520E-04	9.701E-04	1.286E-03	1.601E-03	1.919E-03	2.242E-03	2.572E-03
U235	1.309E+02	1.249E+02	1.188E+02	1.128E+02	1.069E+02	1.009E+02	9.504E+01	8.918E+01
U236	1.138E+00	2.261E+00	3.368E+00	4.457E+00	5.528E+00	6.578E+00	7.606E+00	8.610E+00
U238	5.877E+01	5.852E+01	5.827E+01	5.800E+01	5.772E+01	5.743E+01	5.713E+01	5.681E+01
U235 Enrich	68.60	67.27	65.84	64.36	62.83	61.18	59.48	57.68
NP237	4.998E-03	1.968E-02	4.443E-02	7.969E-02	1.259E-01	1.835E-01	2.531E-01	3.352E-01
PU236	1.470E-10	1.173E-09	4.057E-09	9.937E-09	2.013E-08	3.618E-08	5.987E-08	9.332E-08
PU238	5.007E-05	3.976E-04	1.371E-03	3.349E-03	6.765E-03	1.212E-02	1.999E-02	3.104E-02
PU239	2.148E-01	4.084E-01	5.819E-01	7.364E-01	8.730E-01	9.931E-01	1.098E+00	1.188E+00
PU240	5.170E-03	1.920E-02	4.003E-02	6.583E-02	9.499E-02	1.261E-01	1.579E-01	1.894E-01
PU241	3.313E-04	2.502E-03	7.952E-03	1.772E-02	3.247E-02	5.251E-02	7.783E-02	1.082E-01
PU242	3.074E-06	4.829E-05	2.397E-04	7.429E-04	1.777E-03	3.608E-03	6.538E-03	1.090E-02
AM241	1.593E-05	1.192E-04	3.751E-04	8.268E-04	1.496E-03	2.388E-03	3.487E-03	4.767E-03
AM242M	2.832E-08	3.990E-07	1.775E-06	4.928E-06	1.055E-05	1.914E-05	3.096E-05	4.698E-05
AM243	1.927E-08	6.173E-07	4.689E-06	1.978E-05	6.042E-05	1.505E-04	3.255E-04	6.349E-04
CM244	3.041E-10	2.017E-08	2.382E-07	1.390E-06	5.515E-06	1.716E-05	4.514E-05	1.051E-04
CM245	6.337E-13	8.543E-11	1.538E-09	1.217E-08	6.140E-08	2.333E-07	7.290E-07	1.976E-06
CM246	1.745E-15	4.857E-13	1.355E-11	1.480E-10	9.674E-10	4.578E-09	1.735E-08	5.598E-08

BU*: U-235	5.0 g	10.0 g	15.0 g	20.0 g	25.0 g	30.0 g	35.0 g	40.0 g
BU*: % U-235	3.65%	7.30%	10.95%	14.60%	18.25%	21.90%	25.55%	29.20%
BU*: MWd	4.75	9.50	14.25	19.00	23.76	28.51	33.26	38.01
BU*: MWd/MTU	24235	48481	72722	96962	121200	145440	169680	193920
U-235 DEPL**	6.1 g	12.1 g	18.2g	24.2 g	30.1 g	36.1 g	41.96 g	47.82 g

* BU = Burnup or Fissioned U-235

** DEPL =Depleted U-235 due to fission and transmutation

Table 11. continued . . .

Single Element 137 g U-235 (BOL)
 59 g U-238 (BOL)
 196 g U (BOL)
 70 % Initial U235 Enrichment (BOL)

Actinide Isotope	f.9 (g/element)	f.10 (g/element)	f.11 (g/element)	f.12 (g/element)	f.13 (g/element)	f.14 (g/element)
TH229	2.537E-10	2.980E-10	3.478E-10	4.037E-10	4.673E-10	5.394E-10
TH230	1.504E-08	1.651E-08	1.794E-08	1.934E-08	2.070E-08	2.202E-08
TH232	7.783E-04	7.751E-04	7.718E-04	7.683E-04	7.645E-04	7.605E-04
PA231	3.290E-07	3.082E-07	2.878E-07	2.679E-07	2.485E-07	2.296E-07
U232	1.553E-07	1.796E-07	2.067E-07	2.370E-07	2.713E-07	3.098E-07
U233	1.756E-05	1.922E-05	2.080E-05	2.230E-05	2.371E-05	2.502E-05
U234	2.914E-03	3.269E-03	3.643E-03	4.038E-03	4.460E-03	4.911E-03
U235	8.337E+01	7.760E+01	7.188E+01	6.624E+01	6.065E+01	5.516E+01
U236	9.588E+00	1.053E+01	1.145E+01	1.233E+01	1.316E+01	1.395E+01
U238	5.647E+01	5.612E+01	5.574E+01	5.534E+01	5.491E+01	5.446E+01
U235 Enrich	55.79	53.79	51.68	49.46	47.12	44.64
NP237	4.303E-01	5.389E-01	6.619E-01	7.994E-01	9.526E-01	1.121E+00
PU236	1.390E-07	1.998E-07	2.793E-07	3.812E-07	5.109E-07	6.732E-07
PU238	4.604E-02	6.587E-02	9.159E-02	1.243E-01	1.656E-01	2.169E-01
PU239	1.264E+00	1.329E+00	1.383E+00	1.427E+00	1.462E+00	1.490E+00
PU240	2.197E-01	2.482E-01	2.744E-01	2.977E-01	3.182E-01	3.357E-01
PU241	1.430E-01	1.815E-01	2.229E-01	2.659E-01	3.098E-01	3.530E-01
PU242	1.705E-02	2.535E-02	3.616E-02	4.980E-02	6.666E-02	8.691E-02
AM241	6.186E-03	7.693E-03	9.230E-03	1.073E-02	1.213E-02	1.337E-02
AM242M	6.391E-05	8.419E-05	1.061E-04	1.285E-04	1.506E-04	1.711E-04
AM243	1.144E-03	1.937E-03	3.118E-03	4.807E-03	7.158E-03	1.032E-02
CM244	2.230E-04	4.400E-04	8.190E-04	1.451E-03	2.476E-03	4.075E-03
CM245	4.807E-06	1.074E-05	2.244E-05	4.428E-05	8.357E-05	1.514E-04
CM246	1.599E-07	4.153E-07	1.000E-06	2.263E-06	4.878E-06	1.006E-05

BU*: U-235	45.0 g	50.0 g	55.0 g	60.0 g	65.0 g	70.0 g
BU*: % U-235	32.85%	36.50%	40.15%	43.80%	47.44%	51.09%
BU*: MWd	42.76	47.51	52.26	57.01	61.77	66.52
BU*: MWd/MTU	218170	242410	266650	290887	315127	339370
U-235 DEPL**	53.63 g	59.4 g	65.12 g	70.76 g	76.35 g	81.84 g

Table 12. Actinide Mass Concentrations as a function of burnup for the Low-Enrichment FLIP-LEU-I fuel element.

Single Element: 101 g U-235 (BOL)
 403 g U-238 (BOL)
 504 g U (BOL)
 20 % Initial U235 Enrichment (BOL)

Actinide Isotope	leu.1 (g/element)	leu.2 (g/element)	leu.3 (g/element)	leu.4 (g/element)	leu.5 (g/element)	leu.6 (g/element)	leu.7 (g/element)	leu.8 (g/element)
TH229	3.605E-10	7.064E-10	1.039E-09	1.359E-09	1.668E-09	1.968E-09	2.260E-09	2.545E-09
TH230	2.075E-09	4.105E-09	6.104E-09	8.077E-09	1.003E-08	1.197E-08	1.389E-08	1.581E-08
TH232	1.518E-02	1.513E-02	1.508E-02	1.503E-02	1.498E-02	1.492E-02	1.486E-02	1.480E-02
PA231	4.434E-07	4.946E-07	5.443E-07	5.922E-07	6.384E-07	6.829E-07	7.254E-07	7.660E-07
U232	1.498E-08	3.489E-08	6.014E-08	9.117E-08	1.283E-07	1.724E-07	2.235E-07	2.823E-07
U233	4.216E-05	8.295E-05	1.224E-04	1.604E-04	1.969E-04	2.320E-04	2.654E-04	2.971E-04
U234	2.569E-04	5.055E-04	7.494E-04	9.915E-04	1.234E-03	1.482E-03	1.736E-03	2.002E-03
U235	9.506E+01	8.924E+01	8.353E+01	7.792E+01	7.245E+01	6.708E+01	6.185E+01	5.675E+01
U236	1.070E+00	2.109E+00	3.117E+00	4.093E+00	5.033E+00	5.940E+00	6.807E+00	7.634E+00
U238	4.021E+02	4.012E+02	4.003E+02	3.993E+02	3.982E+02	3.971E+02	3.960E+02	3.948E+02
U235 Enrich	19.08	18.12	17.15	16.19	15.23	14.27	13.31	12.36
NP237	6.837E-03	2.339E-02	4.986E-02	8.649E-02	1.334E-01	1.910E-01	2.592E-01	3.383E-01
PU236	2.300E-10	1.544E-09	4.977E-09	1.171E-08	2.309E-08	4.072E-08	6.630E-08	1.019E-07
PU238	9.336E-05	6.225E-04	2.003E-03	4.710E-03	9.266E-03	1.630E-02	2.642E-02	4.038E-02
PU239	7.605E-01	1.418E+00	1.983E+00	2.465E+00	2.871E+00	3.212E+00	3.492E+00	3.721E+00
PU240	2.364E-02	8.588E-02	1.752E-01	2.822E-01	3.983E-01	5.177E-01	6.344E-01	7.447E-01
PU241	1.703E-03	1.251E-02	3.871E-02	8.398E-02	1.495E-01	2.352E-01	3.384E-01	4.561E-01
PU242	2.099E-05	3.224E-04	1.568E-03	4.759E-03	1.113E-02	2.214E-02	3.922E-02	6.388E-02
AM241	8.192E-05	5.965E-04	1.827E-03	3.917E-03	6.882E-03	1.067E-02	1.509E-02	1.997E-02
AM242M	1.578E-07	2.099E-06	8.855E-06	2.336E-05	4.751E-05	8.218E-05	1.266E-04	1.791E-04
AM243	1.441E-07	4.518E-06	3.367E-05	1.395E-04	4.173E-04	1.021E-03	2.163E-03	4.130E-03
CM244	2.529E-09	1.646E-07	1.914E-06	1.101E-05	4.295E-05	1.319E-04	3.412E-04	7.813E-04
CM245	5.864E-12	7.730E-10	1.366E-08	1.062E-07	5.245E-07	1.960E-06	5.999E-06	1.592E-05
CM246	2.216E-14	6.048E-12	1.662E-10	1.789E-09	1.149E-08	5.372E-08	2.003E-07	6.352E-07

BU*: U-235	5.0 g	10.0 g	15.0 g	20.0 g	25.0 g	30.0 g	35.0 g	40.0 g
BU*: % U-235	4.95%	9.90%	14.85%	19.80%	24.75%	29.70%	34.65%	39.60%
BU*: MWd	4.75	9.50	14.25	19.00	23.76	28.51	33.26	38.01
BU*: MWd/MTU	9427	18854	28281	37708	47134	56561	65988	75415
U-235 DEPL**	5.94 g	11.76 g	17.74 g	23.08 g	28.55 g	33.92 g	39.15 g	44.25 g

* BU = Burnup or Fissioned U-235

** DEPL =Depleted U-235 due to fission and transmutation

Table 13. Unnormalized Thermal and Fast axial flux profiles for a typical 15-inch Stainless Steel-clad TRIGA fuel element.

Axial Position Above Midplane (cm)	Thermal Flux (n/cm2/sec)	Fast Flux (n/cm2/sec)	Total Flux (n/cm2/sec)
1.1906	8.8967E-03	1.5951E-02	2.4848E-02
3.5719	8.8438E-03	1.5735E-02	2.4579E-02
5.9531	8.4509E-03	1.5307E-02	2.3758E-02
8.3344	7.9323E-03	1.4391E-02	2.2324E-02
10.7156	7.4165E-03	1.3072E-02	2.0488E-02
13.0969	6.5190E-03	1.1650E-02	1.8169E-02
15.4781	5.5885E-03	9.7558E-03	1.5344E-02
17.8594	4.9246E-03	7.6562E-03	1.2581E-02
20.1359	4.8782E-03	5.2460E-03	1.0124E-02
22.3076	4.4816E-03	3.7667E-03	8.2483E-03
24.4793	3.6544E-03	2.6483E-03	6.3027E-03
26.6510	2.6960E-03	1.8488E-03	4.5448E-03
27.7622	1.9482E-03	1.5834E-03	3.5316E-03
28.9020	1.2996E-03	1.1824E-03	2.4821E-03
31.1309	5.5709E-04	7.9028E-04	1.3474E-03
33.3597	3.1107E-04	4.8005E-04	7.9112E-04
35.5886	2.3700E-04	2.8767E-04	5.2468E-04

**Table 14. TRIGA fuel element midplane dose rate at surface contact.
(Low Burnups)**

Decay Time (Days)	CONTACT DOSE RATE (mrem/hr)				
	Burnup 0.48 MWd	Burnup 0.95 MWd	Burnup 1.90 MWd	Burnup 2.85 MWd	Burnup 3.80 MWd
1.0	1.500E+08	2.963E+08	5.902E+08	8.818E+08	1.170E+09
14.0	9.539E+06	1.891E+07	3.796E+07	5.716E+07	7.647E+07
30.0	6.766E+06	1.343E+07	2.699E+07	4.072E+07	5.454E+07
90.0	3.078E+06	6.124E+06	1.238E+07	1.879E+07	2.532E+07
182.5	1.410E+06	2.824E+06	5.779E+06	8.872E+06	1.210E+07
365.0	4.479E+05	9.172E+05	1.960E+06	3.131E+06	4.430E+06
1825.0	1.617E+05	3.389E+05	7.546E+05	1.248E+06	1.820E+06
3650.0	1.368E+05	2.826E+05	6.129E+05	9.919E+05	1.419E+06
7300.0	1.060E+05	2.149E+05	4.505E+05	7.077E+05	9.851E+05

**Table 15. TRIGA fuel element midplane dose rate at 3-feet in air.
(Low Burnups)**

Decay Time (Days)	3-FEET IN AIR DOSE RATE (mrem/hr)				
	Burnup 0.48 MWd	Burnup 0.95 MWd	Burnup 1.90 MWd	Burnup 2.85 MWd	Burnup 3.80 MWd
1.0	5.028E+05	9.931E+05	1.979E+06	2.956E+06	3.924E+06
14.0	3.177E+04	6.299E+04	1.264E+05	1.904E+05	2.547E+05
30.0	2.255E+04	4.475E+04	8.997E+04	1.357E+05	1.818E+05
90.0	1.032E+04	2.053E+04	4.151E+04	6.296E+04	8.484E+04
182.5	4.771E+03	9.552E+03	1.954E+04	2.998E+04	4.087E+04
365.0	1.564E+03	3.198E+03	6.811E+03	1.085E+04	1.532E+04
1825.0	5.601E+02	1.171E+03	2.596E+03	4.280E+03	6.222E+03
3650.0	4.727E+02	9.745E+02	2.107E+03	3.401E+03	4.853E+03
7300.0	3.661E+02	7.415E+02	1.551E+03	2.433E+03	3.381E+03

**Table 16. TRIGA fuel element midplane dose rate at 3-meters in air.
(Low Burnups)**

Decay Time (Days)	3-METERS IN AIR DOSE RATE (mrem/hr)				
	Burnup 0.48 MWd	Burnup 0.95 MWd	Burnup 1.90 MWd	Burnup 2.85 MWd	Burnup 3.80 MWd
1.0	4.840E+04	9.561E+04	1.905E+05	2.846E+05	3.778E+05
14.0	3.059E+03	6.065E+03	1.217E+04	1.833E+04	2.452E+04
30.0	2.172E+03	4.309E+03	8.663E+03	1.307E+04	1.751E+04
90.0	9.936E+02	1.976E+03	3.996E+03	6.062E+03	8.169E+03
182.5	4.593E+02	9.196E+02	1.881E+03	2.887E+03	3.935E+03
365.0	1.505E+02	3.078E+02	6.555E+02	1.045E+03	1.474E+03
1825.0	5.392E+01	1.127E+02	2.499E+02	4.121E+02	5.991E+02
3650.0	4.551E+01	9.383E+01	2.029E+02	3.274E+02	4.673E+02
7300.0	3.526E+01	7.139E+01	1.494E+02	2.343E+02	3.256E+02

**Table 17. TRIGA fuel element midplane dose rate at surface contact.
(High Burnups)**

Decay Time (Days)	CONTACT DOSE RATE (mrem/hr)					
	Burnup 4.75 MWd	Burnup 9.50 MWd	Burnup 14.25 MWd	Burnup 19.0 MWd	Burnup 23.76 MWd	Burnup 28.51 MWd
1.0	1.478E+09	2.940E+09	4.386E+09	5.812E+09	7.217E+09	8.597E+09
14.0	9.701E+07	1.946E+08	2.928E+08	3.912E+08	4.899E+08	5.888E+08
30.0	6.961E+07	1.399E+08	2.108E+08	2.822E+08	3.540E+08	4.261E+08
90.0	3.326E+07	6.714E+07	1.016E+08	1.367E+08	1.724E+08	2.088E+08
182.5	1.687E+07	3.429E+07	5.228E+07	7.086E+07	9.008E+07	1.100E+08
365.0	7.276E+06	1.503E+07	2.328E+07	3.207E+07	4.146E+07	5.149E+07
1825.0	3.196E+06	6.556E+06	1.010E+07	1.382E+07	1.777E+07	2.194E+07
3650.0	2.156E+06	4.370E+06	6.645E+06	8.991E+06	1.141E+07	1.391E+07
7300.0	1.253E+06	2.519E+06	3.797E+06	5.092E+06	6.402E+06	7.731E+06

**Table 17. TRIGA fuel element midplane dose rate at surface contact.
(High Burnups) continued . . .**

Decay Time (Days)	CONTACT DOSE RATE (mrem/hr)				
	Burnup 33.26 MWd	Burnup 38.01 MWd	Burnup 47.51 MWd	Burnup 57.01 MWd	Burnup 66.52 MWd
1.0	9.947E+09	1.127E+10	1.379E+10	1.613E+10	1.821E+10
14.0	6.876E+08	7.863E+08	9.830E+08	1.178E+09	1.370E+09
30.0	4.987E+08	5.717E+08	7.182E+08	8.656E+08	1.013E+09
90.0	2.459E+08	2.837E+08	3.617E+08	4.432E+08	5.288E+08
182.5	1.307E+08	1.521E+08	1.977E+08	2.475E+08	3.023E+08
365.0	6.222E+07	7.372E+07	9.928E+07	1.289E+08	1.634E+08
1825.0	2.636E+07	3.106E+07	4.138E+07	5.317E+07	6.677E+07
3650.0	1.650E+07	1.919E+07	2.490E+07	3.112E+07	3.800E+07
7300.0	9.079E+06	1.045E+07	1.326E+07	1.619E+07	1.925E+07

**Table 18. TRIGA fuel element midplane dose rate at 3-feet in air.
(High Burnups)**

Decay Time (Days)	3-FEET IN AIR DOSE RATE (mrem/hr)					
	Burnup 4.75 MWd	Burnup 9.50 MWd	Burnup 14.25 MWd	Burnup 19.0 MWd	Burnup 23.76 MWd	Burnup 28.51 MWd
1.0	4.947E+06	9.844E+06	1.468E+07	1.946E+07	2.416E+07	2.878E+07
14.0	3.228E+05	6.477E+05	9.743E+05	1.302E+06	1.630E+06	1.960E+06
30.0	2.317E+05	4.658E+05	7.017E+05	9.394E+05	1.178E+06	1.419E+06
90.0	1.111E+05	2.243E+05	3.394E+05	4.565E+05	5.759E+05	6.974E+05
182.5	5.662E+04	1.150E+05	1.753E+05	2.376E+05	3.019E+05	3.687E+05
365.0	2.465E+04	5.086E+04	7.872E+04	1.084E+05	1.400E+05	1.737E+05
1825.0	1.068E+04	2.190E+04	3.371E+04	4.612E+04	5.926E+04	7.314E+04
3650.0	7.258E+03	1.471E+04	2.235E+04	3.022E+04	3.833E+04	4.671E+04
7300.0	4.279E+03	8.597E+03	1.296E+04	1.737E+04	2.183E+04	2.636E+04

**Table 18. TRIGA fuel element midplane dose rate at 3-feet in air.
(High Burnups) continued . . .**

Decay Time (Days)	3-FEET IN AIR DOSE RATE (mrem/hr)				
	Burnup 33.26 MWd	Burnup 38.01 MWd	Burnup 47.51 MWd	Burnup 57.01 MWd	Burnup 66.52 MWd
1.0	3.330E+07	3.773E+07	4.618E+07	5.401E+07	6.100E+07
14.0	2.289E+06	2.618E+06	3.273E+06	3.923E+06	4.564E+06
30.0	1.661E+06	1.903E+06	2.391E+06	2.882E+06	3.373E+06
90.0	8.212E+05	9.472E+05	1.207E+06	1.479E+06	1.764E+06
182.5	4.377E+05	5.095E+05	6.619E+05	8.280E+05	1.011E+06
365.0	2.098E+05	2.483E+05	3.339E+05	4.328E+05	5.481E+05
1825.0	8.783E+04	1.034E+05	1.377E+05	1.768E+05	2.218E+05
3650.0	5.537E+04	6.437E+04	8.344E+04	1.042E+05	1.271E+05
7300.0	3.094E+04	3.559E+04	4.514E+04	5.504E+04	6.538E+04

**Table 19. TRIGA fuel element midplane dose rate at 3-meters in air.
(High Burnups)**

Decay Time (Days)	3-METERS IN AIR DOSE RATE (mrem/hr)					
	Burnup 4.75 MWd	Burnup 9.50 MWd	Burnup 14.25 MWd	Burnup 19.0 MWd	Burnup 23.76 MWd	Burnup 28.51 MWd
1.0	4.763E+05	9.477E+05	1.414E+06	1.873E+06	2.326E+06	2.771E+06
14.0	3.108E+04	6.236E+04	9.381E+04	1.254E+05	1.570E+05	1.887E+05
30.0	2.231E+04	4.485E+04	6.757E+04	9.045E+04	1.135E+05	1.366E+05
90.0	1.070E+04	2.160E+04	3.268E+04	4.396E+04	5.545E+04	6.715E+04
182.5	5.451E+03	1.108E+04	1.688E+04	2.287E+04	2.907E+04	3.550E+04
365.0	2.373E+03	4.896E+03	7.578E+03	1.043E+04	1.348E+04	1.673E+04
1825.0	1.028E+03	2.109E+03	3.246E+03	4.441E+03	5.707E+03	7.043E+03
3650.0	6.989E+02	1.416E+03	2.152E+03	2.910E+03	3.691E+03	4.498E+03
7300.0	4.120E+02	8.279E+02	1.248E+03	1.673E+03	2.102E+03	2.538E+03

**Table 19. TRIGA fuel element midplane dose rate at 3-meters in air.
(High Burnups) continued . . .**

Decay Time (Days)	3-METERS IN AIR DOSE RATE (mrem/hr)				
	Burnup 33.26 MWd	Burnup 38.01 MWd	Burnup 47.51 MWd	Burnup 57.01 MWd	Burnup 66.52 MWd
1.0	3.206E+06	3.632E+06	4.446E+06	5.200E+06	5.873E+06
14.0	2.204E+05	2.521E+05	3.152E+05	3.777E+05	4.395E+05
30.0	1.599E+05	1.833E+05	2.302E+05	2.775E+05	3.248E+05
90.0	7.907E+04	9.120E+04	1.163E+05	1.424E+05	1.698E+05
182.5	4.214E+04	4.906E+04	6.373E+04	7.973E+04	9.730E+04
365.0	2.019E+04	2.391E+04	3.215E+04	4.167E+04	5.277E+04
1825.0	8.457E+03	9.961E+03	1.326E+04	1.702E+04	2.136E+04
3650.0	5.332E+03	6.199E+03	8.035E+03	1.003E+04	1.224E+04
7300.0	2.979E+03	3.427E+03	4.347E+03	5.300E+03	6.296E+03

Figure 1. MCNP MARK I TRIGA 1/12 core model x-y plane view.

Figure 2. MCNP MARK I TRIGA 1/12 core model x-z plane view.

Figure 3. Decay Heat as a function of time and burnup.
(Low Burnups)

Figure 4. Decay Heat as a function of time and burnup.
(High Burnups)

**Figure 5. TRIGA fuel element midplane dose rate at surface contact.
(Low Burnups)**

**Figure 6. TRIGA fuel element midplane dose rate at 3-feet in air.
(Low Burnups)**

Figure 7. TRIGA fuel element midplane dose rate at 3-meters in air.
(Low Burnups)

**Figure 8. TRIGA fuel element midplane dose rate at surface contact.
(High Burnups)**

**Figure 9. TRIGA fuel element midplane dose rate at 3-feet in air.
(High Burnups)**

Figure 10. TRIGA fuel element midplane dose rate at 3-meters in air.
(High Burnups)

Figure 11. Decay Heat as a function of burnup period and decay time.
(1.0 grams U-235 burnup)

Figure 12. Decay Heat as a function of burnup period and decay time.
(5.0 grams U-235 burnup)

Figure 13. Decay Heat as a function of burnup period and decay time.
(20.0 grams U-235 burnup)

**Figure 14. Decay Heat as a function of burnup period and decay time.
(50.0 grams U-235 burnup)**

APPENDIX A

Aluminum-clad Standard TRIGA fuel element

**Activity
vs
Burnup/Decay Time**

Table A.1 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table A.1 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: alum.1

BURNUP (BU)

BU: U-235 0.5 g
 BU: % U-235 1.39%
 BU: MWd 0.48
 BU: MWd/MTU 2639
 U-235 DEPL 0.6 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	6.768E-03	6.753E-03	6.738E-03	6.674E-03	6.581E-03	6.398E-03	5.719E-03	5.112E-03	3.862E-03	2.204E-03
BE 10	1.028E-08	1.028E-08	1.028E-08	1.028E-08	1.028E-08	1.028E-08	1.028E-08	1.028E-08	1.028E-08	1.028E-08
C 14	1.894E-05	1.894E-05	1.894E-05	1.894E-05	1.894E-05	1.894E-05	1.894E-05	1.893E-05	1.892E-05	1.890E-05
CL 36	1.889E-08	1.889E-08	1.889E-08	1.889E-08	1.889E-08	1.889E-08	1.889E-08	1.889E-08	1.889E-08	1.889E-08
CR 51	5.759E-02	4.058E-02	2.859E-02	5.875E-03	5.993E-04	6.236E-06	7.312E-14	8.573E-22	1.276E-41	0.000E+00
MN 54	1.986E-03	1.926E-03	1.867E-03	1.622E-03	1.325E-03	8.840E-04	1.751E-04	3.468E-05	6.054E-07	1.845E-10
FE 55	1.415E-02	1.401E-02	1.386E-02	1.324E-02	1.239E-02	1.084E-02	6.363E-03	3.735E-03	9.857E-04	6.866E-05
FE 59	5.949E-04	4.795E-04	3.865E-04	1.459E-04	3.578E-05	2.152E-06	2.814E-11	3.681E-16	2.278E-28	0.000E+00
CO 60	2.609E-02	2.596E-02	2.583E-02	2.525E-02	2.443E-02	2.288E-02	1.759E-02	1.352E-02	7.009E-03	1.883E-03
NI 59	5.170E-07	5.170E-07	5.170E-07	5.170E-07	5.170E-07	5.170E-07	5.170E-07	5.170E-07	5.170E-07	5.169E-07
NI 63	7.029E-05	7.027E-05	7.025E-05	7.016E-05	7.002E-05	6.976E-05	6.872E-05	6.769E-05	6.519E-05	6.046E-05
ZN 65	4.467E-03	4.293E-03	4.126E-03	3.447E-03	2.659E-03	1.583E-03	1.988E-04	2.496E-05	1.395E-07	4.354E-12
SE 79	6.235E-06	6.235E-06	6.235E-06	6.235E-06	6.235E-06	6.235E-06	6.235E-06	6.234E-06	6.234E-06	6.233E-06
KR 85	1.694E-01	1.690E-01	1.686E-01	1.667E-01	1.640E-01	1.588E-01	1.395E-01	1.226E-01	8.877E-02	4.652E-02
RB 87	4.287E-10	4.287E-10	4.287E-10	4.287E-10	4.287E-10	4.287E-10	4.287E-10	4.287E-10	4.287E-10	4.287E-10
SR 89	1.312E+01	1.083E+01	8.938E+00	3.751E+00	1.072E+00	8.756E-02	3.895E-06	1.733E-10	2.288E-21	0.000E+00
SR 90	1.427E+00	1.425E+00	1.424E+00	1.418E+00	1.410E+00	1.393E+00	1.329E+00	1.267E+00	1.125E+00	8.867E-01
Y 90	1.485E+00	1.427E+00	1.425E+00	1.419E+00	1.410E+00	1.394E+00	1.329E+00	1.267E+00	1.125E+00	8.869E-01
Y 91	1.601E+01	1.366E+01	1.157E+01	5.472E+00	1.856E+00	2.137E-01	3.747E-05	6.572E-09	2.678E-18	4.443E-37
ZR 93	3.888E-05	3.889E-05	3.889E-05	3.889E-05	3.889E-05	3.889E-05	3.889E-05	3.889E-05	3.889E-05	3.889E-05
ZR 95	1.896E+01	1.629E+01	1.400E+01	7.056E+00	2.626E+00	3.636E-01	1.336E-04	4.913E-08	1.273E-16	8.545E-34
NB 93M	3.524E-06	3.590E-06	3.655E-06	3.948E-06	4.365E-06	5.184E-06	8.260E-06	1.104E-05	1.687E-05	2.488E-05

Table A.1 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	1.575E-06	1.575E-06	1.575E-06	1.575E-06	1.575E-06	1.575E-06	1.575E-06	1.575E-06	1.575E-06	1.574E-06
NB 95	1.942E+01	1.896E+01	1.803E+01	1.191E+01	5.207E+00	7.899E-01	2.967E-04	1.091E-07	2.826E-16	1.898E-33
NB 95M	1.332E-01	1.204E-01	1.038E-01	5.235E-02	1.948E-02	2.698E-03	9.915E-07	3.645E-10	9.443E-19	6.340E-36
MO 93	3.883E-08	3.883E-08	3.883E-08	3.883E-08	3.883E-08	3.883E-08	3.881E-08	3.880E-08	3.876E-08	3.868E-08
TC 99	2.138E-04	2.144E-04	2.144E-04	2.144E-04	2.144E-04	2.144E-04	2.144E-04	2.144E-04	2.144E-04	2.144E-04
RU103	8.715E+00	6.807E+00	5.317E+00	1.742E+00	3.481E-01	1.391E-02	3.540E-08	9.013E-14	9.322E-28	0.000E+00
RU106	1.116E+00	1.087E+00	1.059E+00	9.400E-01	7.916E-01	5.614E-01	1.420E-01	3.594E-02	1.157E-03	1.199E-06
RH103M	7.848E+00	6.137E+00	4.794E+00	1.570E+00	3.138E-01	1.254E-02	3.191E-08	8.125E-14	8.403E-28	0.000E+00
RH106	1.118E+00	1.087E+00	1.059E+00	9.400E-01	7.916E-01	5.614E-01	1.420E-01	3.594E-02	1.157E-03	1.199E-06
PD107	2.374E-07	2.374E-07	2.374E-07	2.374E-07	2.374E-07	2.374E-07	2.374E-07	2.374E-07	2.374E-07	2.374E-07
AG110	1.627E-03	9.104E-07	8.757E-07	7.347E-07	5.705E-07	3.438E-07	4.539E-08	5.991E-09	3.793E-11	1.520E-15
AG110M	7.115E-05	6.845E-05	6.584E-05	5.524E-05	4.289E-05	2.586E-05	3.413E-06	4.505E-07	2.852E-09	1.143E-13
AG111	7.974E-02	2.173E-02	5.908E-03	1.644E-05	3.379E-09	1.428E-16	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.862E-04	1.859E-04	1.856E-04	1.840E-04	1.819E-04	1.776E-04	1.615E-04	1.469E-04	1.158E-04	7.206E-05
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	4.363E-03	3.510E-03	2.823E-03	1.056E-03	2.557E-04	1.499E-05	1.771E-10	2.092E-15	1.003E-27	0.000E+00
IN114	5.783E-05	1.843E-05	1.515E-05	6.249E-06	1.742E-06	1.353E-07	4.935E-12	1.800E-16	1.444E-27	0.000E+00
IN114M	2.343E-05	1.925E-05	1.583E-05	6.530E-06	1.820E-06	1.414E-07	5.158E-12	1.880E-16	1.510E-27	0.000E+00
IN115M	4.433E-02	6.219E-04	8.178E-06	7.418E-08	1.796E-08	1.053E-09	1.244E-14	1.469E-19	7.040E-32	0.000E+00
SN119M	2.081E-01	2.000E-01	1.923E-01	1.608E-01	1.242E-01	7.411E-02	9.397E-03	1.191E-03	6.823E-06	2.237E-10
SN121M	3.145E-05	3.144E-05	3.142E-05	3.135E-05	3.123E-05	3.102E-05	3.017E-05	2.934E-05	2.738E-05	2.383E-05
SN123	2.608E-02	2.420E-02	2.244E-02	1.599E-02	9.797E-03	3.679E-03	7.319E-05	1.456E-06	8.127E-11	2.531E-19
SN125	1.092E-01	3.989E-02	1.458E-02	1.544E-04	2.184E-07	4.367E-13	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	5.670E-06	5.670E-06	5.670E-06	5.670E-06	5.670E-06	5.670E-06	5.670E-06	5.670E-06	5.670E-06	5.670E-06
SB124	1.773E-04	1.509E-04	1.284E-04	6.199E-05	2.168E-05	2.651E-06	5.926E-10	1.325E-13	9.905E-23	5.534E-41
SB125	1.445E-01	1.438E-01	1.427E-01	1.368E-01	1.285E-01	1.134E-01	6.876E-02	4.170E-02	1.194E-02	9.795E-04
SB126	2.886E-03	1.319E-03	6.037E-04	1.834E-05	9.004E-07	7.939E-07	7.938E-07	7.938E-07	7.938E-07	7.937E-07
SB126M	1.410E-03	5.670E-06	5.670E-06	5.670E-06	5.670E-06	5.670E-06	5.670E-06	5.670E-06	5.670E-06	5.670E-06
TE123M	2.704E-08	2.493E-08	2.299E-08	1.594E-08	9.396E-09	3.265E-09	4.761E-11	6.942E-13	1.782E-17	1.175E-26
TE125M	3.210E-02	3.226E-02	3.237E-02	3.220E-02	3.095E-02	2.761E-02	1.678E-02	1.018E-02	2.913E-03	2.390E-04
TE127	4.466E-01	9.238E-02	5.542E-02	3.519E-02	1.970E-02	6.173E-03	5.950E-05	5.735E-07	5.230E-12	4.351E-22
TE127M	6.187E-02	5.854E-02	5.371E-02	3.593E-02	2.011E-02	6.302E-03	6.074E-05	5.855E-07	5.340E-12	4.442E-22
TE129	1.882E+00	1.384E-01	1.037E-01	2.812E-02	4.280E-03	9.916E-05	2.858E-11	8.235E-18	3.672E-34	0.000E+00
TE129M	2.824E-01	2.126E-01	1.593E-01	4.319E-02	6.575E-03	1.523E-04	4.390E-11	1.265E-17	5.641E-34	0.000E+00
I129	3.478E-07	3.482E-07	3.485E-07	3.492E-07	3.494E-07	3.495E-07	3.495E-07	3.495E-07	3.495E-07	3.495E-07
I131	7.936E+00	2.438E+00	7.293E-01	3.125E-03	1.198E-06	1.762E-13	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A.1 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	8.809E-02	6.598E-02	3.727E-02	1.287E-03	6.650E-06	1.612E-10	5.468E-29	1.855E-47	0.000E+00	0.000E+00
XE133	1.853E+01	3.581E+00	5.641E-01	1.323E-04	7.669E-10	2.577E-20	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.784E-02	1.761E-02	1.739E-02	1.641E-02	1.509E-02	1.275E-02	6.513E-03	3.327E-03	6.202E-04	2.156E-05
CS135	2.109E-05	2.110E-05	2.110E-05	2.110E-05	2.110E-05	2.110E-05	2.110E-05	2.110E-05	2.110E-05	2.110E-05
CS136	2.805E-02	1.338E-02	6.378E-03	2.246E-04	1.798E-06	1.153E-10	1.946E-27	3.285E-44	0.000E+00	0.000E+00
CS137	1.485E+00	1.484E+00	1.482E+00	1.476E+00	1.468E+00	1.451E+00	1.386E+00	1.323E+00	1.179E+00	9.358E-01
BA136M	4.623E-03	2.204E-03	1.051E-03	3.702E-05	2.964E-07	1.900E-11	3.207E-28	5.414E-45	0.000E+00	0.000E+00
BA137M	1.406E+00	1.404E+00	1.402E+00	1.397E+00	1.389E+00	1.373E+00	1.311E+00	1.252E+00	1.115E+00	8.852E-01
BA140	1.705E+01	7.982E+00	3.738E+00	1.213E-01	8.631E-04	4.370E-08	2.871E-25	1.886E-42	0.000E+00	0.000E+00
LA140	1.707E+01	9.178E+00	4.301E+00	1.396E-01	9.932E-04	5.029E-08	3.304E-25	2.171E-42	0.000E+00	0.000E+00
CE141	1.620E+01	1.208E+01	8.964E+00	2.327E+00	3.326E-01	6.794E-03	1.183E-09	2.060E-16	2.605E-33	0.000E+00
CE142	4.276E-10	4.277E-10	4.277E-10	4.277E-10	4.277E-10	4.277E-10	4.277E-10	4.277E-10	4.277E-10	4.277E-10
CE144	1.445E+01	1.397E+01	1.350E+01	1.157E+01	9.263E+00	5.936E+00	1.001E+00	1.688E-01	1.971E-03	2.687E-07
PR143	1.622E+01	8.832E+00	4.320E+00	1.705E-01	1.610E-03	1.435E-07	9.050E-24	5.708E-40	0.000E+00	0.000E+00
PR144	1.446E+01	1.397E+01	1.350E+01	1.157E+01	9.263E+00	5.936E+00	1.001E+00	1.688E-01	1.971E-03	2.687E-07
PR144M	1.736E-01	1.676E-01	1.620E-01	1.389E-01	1.112E-01	7.123E-02	1.201E-02	2.025E-03	2.365E-05	3.225E-09
ND144	1.443E-14	1.461E-14	1.478E-14	1.550E-14	1.636E-14	1.759E-14	1.942E-14	1.973E-14	1.979E-14	1.979E-14
ND147	6.265E+00	2.608E+00	1.084E+00	2.059E-02	6.762E-05	7.293E-10	9.867E-30	1.335E-49	0.000E+00	0.000E+00
PM145	4.713E-04	4.772E-04	4.829E-04	5.065E-04	5.345E-04	5.741E-04	6.135E-04	5.859E-04	4.866E-04	3.291E-04
PM147	4.022E+00	4.024E+00	4.001E+00	3.834E+00	3.589E+00	3.145E+00	1.855E+00	1.094E+00	2.922E-01	2.084E-02
PM148M	1.349E-02	1.067E-02	8.432E-03	2.917E-03	6.305E-04	2.947E-05	1.406E-10	6.709E-16	3.337E-29	0.000E+00
PM148	4.373E-02	7.655E-03	1.633E-03	1.647E-04	3.552E-05	1.660E-06	7.920E-12	3.779E-17	1.879E-30	0.000E+00
SM145	4.478E-03	4.352E-03	4.230E-03	3.718E-03	3.087E-03	2.128E-03	4.805E-04	1.085E-04	2.630E-06	1.544E-09
SM147	6.557E-08	6.557E-08	6.557E-08	6.558E-08	6.558E-08	6.559E-08	6.563E-08	6.564E-08	6.566E-08	6.567E-08
SM151	1.626E-01	1.626E-01	1.625E-01	1.624E-01	1.620E-01	1.614E-01	1.589E-01	1.565E-01	1.506E-01	1.394E-01
EU152	7.794E-04	7.778E-04	7.763E-04	7.695E-04	7.598E-04	7.407E-04	6.689E-04	6.042E-04	4.684E-04	2.815E-04
EU154	6.884E-02	6.862E-02	6.841E-02	6.746E-02	6.612E-02	6.351E-02	5.406E-02	4.602E-02	3.076E-02	1.375E-02
EU155	3.820E-01	3.799E-01	3.779E-01	3.689E-01	3.562E-01	3.322E-01	2.512E-01	1.900E-01	9.450E-02	2.338E-02
EU156	8.184E-02	4.379E-02	2.311E-02	1.288E-03	2.001E-05	4.822E-09	1.628E-23	5.499E-38	0.000E+00	0.000E+00
GD153	3.901E-04	3.747E-04	3.601E-04	3.004E-04	2.313E-04	1.372E-04	1.695E-05	2.095E-06	1.125E-08	3.243E-13
TB160	2.061E-04	1.803E-04	1.576E-04	8.594E-05	3.583E-05	6.229E-06	5.690E-09	5.198E-12	1.311E-19	8.337E-35
TL206	7.097E-07	1.109E-13	1.109E-13	1.109E-13	1.109E-13	1.109E-13	1.109E-13	1.109E-13	1.109E-13	1.109E-13
TL207	4.208E-10	4.211E-10	4.231E-10	4.492E-10	5.024E-10	6.315E-10	1.236E-09	1.987E-09	4.511E-09	1.189E-08
TL208	1.935E-09	1.964E-09	2.011E-09	2.247E-09	2.526E-09	3.011E-09	4.257E-09	4.845E-09	5.206E-09	4.965E-09
PB210	9.274E-17	9.552E-17	9.816E-17	1.099E-16	1.281E-16	1.719E-16	4.600E-16	9.696E-16	3.543E-15	1.660E-14
PB211	4.220E-10	4.223E-10	4.243E-10	4.505E-10	5.038E-10	6.333E-10	1.240E-09	1.993E-09	4.524E-09	1.192E-08

Table A.1 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	5.387E-09	5.466E-09	5.596E-09	6.254E-09	7.030E-09	8.381E-09	1.185E-08	1.348E-08	1.449E-08	1.382E-08
BI211	4.220E-10	4.223E-10	4.243E-10	4.505E-10	5.038E-10	6.333E-10	1.240E-09	1.993E-09	4.524E-09	1.192E-08
BI212	5.387E-09	5.466E-09	5.596E-09	6.254E-09	7.030E-09	8.381E-09	1.185E-08	1.348E-08	1.449E-08	1.382E-08
PO212	3.451E-09	3.502E-09	3.586E-09	4.007E-09	4.504E-09	5.370E-09	7.591E-09	8.639E-09	9.283E-09	8.854E-09
PO215	4.220E-10	4.223E-10	4.243E-10	4.505E-10	5.038E-10	6.333E-10	1.240E-09	1.993E-09	4.524E-09	1.192E-08
PO216	5.387E-09	5.466E-09	5.596E-09	6.254E-09	7.030E-09	8.381E-09	1.185E-08	1.348E-08	1.449E-08	1.382E-08
RN219	4.220E-10	4.223E-10	4.243E-10	4.505E-10	5.038E-10	6.333E-10	1.240E-09	1.993E-09	4.524E-09	1.192E-08
RN220	5.387E-09	5.466E-09	5.596E-09	6.254E-09	7.030E-09	8.381E-09	1.185E-08	1.348E-08	1.449E-08	1.382E-08
FR223	5.815E-12	5.925E-12	6.036E-12	6.547E-12	7.318E-12	8.976E-12	1.709E-11	2.746E-11	6.238E-11	1.644E-10
RA223	4.220E-10	4.223E-10	4.243E-10	4.505E-10	5.038E-10	6.333E-10	1.240E-09	1.993E-09	4.524E-09	1.192E-08
RA224	5.387E-09	5.466E-09	5.596E-09	6.254E-09	7.030E-09	8.381E-09	1.185E-08	1.348E-08	1.449E-08	1.382E-08
RA226	2.014E-15	2.060E-15	2.106E-15	2.318E-15	2.638E-15	3.328E-15	6.757E-15	1.126E-14	2.724E-14	7.964E-14
RA228	5.382E-10	5.424E-10	5.465E-10	5.650E-10	5.911E-10	6.414E-10	8.184E-10	9.624E-10	1.215E-09	1.456E-09
AC227	4.214E-10	4.294E-10	4.374E-10	4.744E-10	5.303E-10	6.505E-10	1.238E-09	1.990E-09	4.520E-09	1.191E-08
TH227	4.161E-10	4.176E-10	4.217E-10	4.528E-10	5.065E-10	6.234E-10	1.223E-09	1.965E-09	4.462E-09	1.176E-08
TH228	5.377E-09	5.513E-09	5.646E-09	6.226E-09	7.000E-09	8.350E-09	1.183E-08	1.345E-08	1.448E-08	1.382E-08
TH229	1.184E-11	1.207E-11	1.230E-11	1.335E-11	1.487E-11	1.792E-11	3.010E-11	4.227E-11	7.271E-11	1.335E-10
TH230	2.727E-12	2.751E-12	2.775E-12	2.882E-12	3.036E-12	3.345E-12	4.586E-12	5.832E-12	8.973E-12	1.536E-11
TH231	8.139E-05	7.657E-05	7.657E-05	7.656E-05	7.656E-05	7.656E-05	7.656E-05	7.656E-05	7.656E-05	7.656E-05
TH232	1.589E-09	1.589E-09	1.589E-09	1.589E-09	1.589E-09	1.589E-09	1.589E-09	1.589E-09	1.589E-09	1.589E-09
TH234	4.842E-05	4.842E-05	4.842E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05
PA231	6.894E-09	6.963E-09	7.032E-09	7.320E-09	7.731E-09	8.547E-09	1.179E-08	1.503E-08	2.313E-08	3.932E-08
PA233	3.736E-03	2.610E-03	1.822E-03	3.593E-04	3.462E-05	4.204E-07	1.016E-07	1.016E-07	1.016E-07	1.016E-07
PA234M	4.859E-05	4.842E-05	4.842E-05	4.842E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05
PA234	4.309E-07	6.294E-08	6.294E-08	6.294E-08	6.294E-08	6.294E-08	6.294E-08	6.294E-08	6.294E-08	6.294E-08
U232	1.460E-08	1.464E-08	1.463E-08	1.461E-08	1.457E-08	1.451E-08	1.423E-08	1.396E-08	1.331E-08	1.209E-08
U233	6.280E-08	6.333E-08	6.370E-08	6.438E-08	6.453E-08	6.455E-08	6.455E-08	6.455E-08	6.455E-08	6.455E-08
U234	6.864E-08	6.864E-08	6.865E-08	6.868E-08	6.872E-08	6.880E-08	6.911E-08	6.943E-08	7.022E-08	7.178E-08
U235	7.656E-05	7.656E-05	7.656E-05	7.656E-05	7.656E-05	7.656E-05	7.656E-05	7.656E-05	7.656E-05	7.656E-05
U236	6.299E-06	6.299E-06	6.299E-06	6.299E-06	6.299E-06	6.299E-06	6.299E-06	6.299E-06	6.299E-06	6.299E-06
U237	1.116E-01	2.649E-02	6.292E-03	9.507E-06	9.216E-10	1.088E-10	9.881E-11	8.974E-11	7.056E-11	4.361E-11
U238	4.841E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05	4.841E-05
NP237	1.006E-07	1.013E-07	1.015E-07	1.016E-07	1.016E-07	1.016E-07	1.016E-07	1.016E-07	1.016E-07	1.016E-07
PU236	3.180E-10	3.160E-10	3.130E-10	3.001E-10	2.824E-10	2.501E-10	1.539E-10	9.465E-11	2.809E-11	2.476E-12
PU237	4.808E-09	3.887E-09	3.142E-09	1.201E-09	3.001E-10	1.873E-11	2.840E-16	4.307E-21	3.858E-33	0.000E+00
PU238	7.704E-06	7.739E-06	7.737E-06	7.728E-06	7.715E-06	7.686E-06	7.567E-06	7.449E-06	7.161E-06	6.617E-06

Table A.1 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	3.352E-03	3.360E-03	3.360E-03	3.360E-03	3.360E-03	3.360E-03	3.360E-03	3.359E-03	3.359E-03	3.358E-03
PU240	9.384E-05	9.384E-05	9.384E-05	9.384E-05	9.383E-05	9.383E-05	9.381E-05	9.379E-05	9.374E-05	9.364E-05
PU241	4.653E-04	4.644E-04	4.636E-04	4.597E-04	4.542E-04	4.434E-04	4.028E-04	3.658E-04	2.876E-04	1.778E-04
PU242	5.435E-11	5.435E-11	5.435E-11	5.435E-11	5.435E-11	5.435E-11	5.435E-11	5.435E-11	5.435E-11	5.436E-11
PU244	4.714E-22	4.714E-22	4.714E-22	4.714E-22	4.714E-22	4.714E-22	4.714E-22	4.714E-22	4.714E-22	4.714E-22
AM241	7.491E-07	7.776E-07	8.061E-07	9.340E-07	1.117E-06	1.475E-06	2.823E-06	4.043E-06	6.606E-06	1.013E-05
AM242M	6.227E-10	6.226E-10	6.225E-10	6.220E-10	6.213E-10	6.199E-10	6.143E-10	6.087E-10	5.950E-10	5.685E-10
AM242	2.955E-06	6.210E-10	6.194E-10	6.189E-10	6.182E-10	6.168E-10	6.112E-10	6.057E-10	5.920E-10	5.657E-10
AM243	2.696E-12	2.698E-12	2.698E-12	2.698E-12	2.698E-12	2.698E-12	2.697E-12	2.697E-12	2.696E-12	2.693E-12
CM242	1.427E-06	1.354E-06	1.276E-06	9.753E-07	6.621E-07	3.053E-07	1.423E-08	1.120E-09	4.901E-10	4.678E-10
CM243	3.695E-12	3.692E-12	3.688E-12	3.673E-12	3.651E-12	3.607E-12	3.435E-12	3.272E-12	2.898E-12	2.273E-12
CM244	2.762E-12	2.761E-12	2.757E-12	2.739E-12	2.713E-12	2.662E-12	2.466E-12	2.284E-12	1.887E-12	1.287E-12
CM245	1.819E-18	1.819E-18	1.819E-18	1.819E-18	1.819E-18	1.818E-18	1.818E-18	1.818E-18	1.817E-18	1.816E-18
CM246	3.596E-21	3.596E-21	3.596E-21	3.595E-21	3.595E-21	3.595E-21	3.594E-21	3.593E-21	3.590E-21	3.585E-21
CM247	5.804E-29	5.804E-29	5.804E-29	5.804E-29	5.804E-29	5.804E-29	5.804E-29	5.804E-29	5.804E-29	5.804E-29
Subtotal Ci**	2.292E+02	1.616E+02	1.272E+02	7.038E+01	4.243E+01	2.432E+01	1.025E+01	7.214E+00	5.240E+00	3.849E+00
Total Ci***	1.744E+03	1.656E+02	1.281E+02	7.086E+01	4.270E+01	2.441E+01	1.025E+01	7.214E+00	5.240E+00	3.849E+00

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table A.2 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table A.2 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: alum.2

BURNUP (BU)

BU: U-235 1.0 g
 BU: % U-235 2.78%
 BU: MWd 0.95
 BU: MWd/MTU 5278
 U-235 DEPL 1.18 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	1.340E-02	1.338E-02	1.335E-02	1.323E-02	1.304E-02	1.267E-02	1.133E-02	1.013E-02	7.652E-03	4.367E-03
BE 10	2.049E-08	2.049E-08	2.049E-08	2.049E-08	2.049E-08	2.049E-08	2.049E-08	2.049E-08	2.049E-08	2.049E-08
C 14	3.774E-05	3.774E-05	3.774E-05	3.774E-05	3.774E-05	3.773E-05	3.772E-05	3.772E-05	3.769E-05	3.765E-05
CL 36	3.762E-08	3.762E-08	3.762E-08	3.762E-08	3.762E-08	3.762E-08	3.762E-08	3.762E-08	3.762E-08	3.762E-08
CR 51	1.153E-01	8.122E-02	5.722E-02	1.176E-02	1.200E-03	1.248E-05	1.464E-13	1.716E-21	2.554E-41	0.000E+00
MN 54	3.968E-03	3.847E-03	3.729E-03	3.241E-03	2.647E-03	1.766E-03	3.498E-04	6.927E-05	1.209E-06	3.686E-10
FE 55	2.822E-02	2.793E-02	2.765E-02	2.640E-02	2.470E-02	2.162E-02	1.269E-02	7.448E-03	1.966E-03	1.369E-04
FE 59	1.191E-03	9.602E-04	7.740E-04	2.922E-04	7.165E-05	4.309E-06	5.636E-11	7.372E-16	4.562E-28	0.000E+00
CO 60	5.198E-02	5.172E-02	5.146E-02	5.030E-02	4.868E-02	4.558E-02	3.504E-02	2.694E-02	1.396E-02	3.751E-03
NI 59	1.029E-06	1.029E-06	1.029E-06	1.029E-06	1.029E-06	1.029E-06	1.029E-06	1.029E-06	1.029E-06	1.029E-06
NI 63	1.400E-04	1.400E-04	1.399E-04	1.397E-04	1.395E-04	1.389E-04	1.369E-04	1.348E-04	1.298E-04	1.204E-04
ZN 65	8.930E-03	8.581E-03	8.247E-03	6.890E-03	5.316E-03	3.164E-03	3.973E-04	4.989E-05	2.788E-07	8.702E-12
SE 79	1.234E-05	1.234E-05	1.234E-05	1.234E-05	1.234E-05	1.234E-05	1.234E-05	1.233E-05	1.233E-05	1.233E-05
KR 85	3.348E-01	3.341E-01	3.333E-01	3.295E-01	3.243E-01	3.140E-01	2.759E-01	2.425E-01	1.755E-01	9.198E-02
RB 87	8.366E-10	8.366E-10	8.366E-10	8.366E-10	8.366E-10	8.366E-10	8.366E-10	8.366E-10	8.366E-10	8.366E-10
SR 89	2.589E+01	2.137E+01	1.763E+01	7.401E+00	2.115E+00	1.727E-01	7.686E-06	3.419E-10	4.515E-21	0.000E+00
SR 90	2.821E+00	2.818E+00	2.815E+00	2.804E+00	2.787E+00	2.754E+00	2.626E+00	2.504E+00	2.223E+00	1.753E+00
Y 90	2.938E+00	2.822E+00	2.816E+00	2.805E+00	2.788E+00	2.755E+00	2.627E+00	2.505E+00	2.224E+00	1.753E+00
Y 91	3.161E+01	2.697E+01	2.285E+01	1.080E+01	3.664E+00	4.216E-01	7.395E-05	1.297E-08	5.283E-18	8.769E-37
ZR 93	7.699E-05	7.701E-05	7.701E-05	7.701E-05	7.701E-05	7.701E-05	7.701E-05	7.701E-05	7.701E-05	7.701E-05
ZR 95	3.749E+01	3.222E+01	2.769E+01	1.396E+01	5.192E+00	7.190E-01	2.643E-04	9.716E-08	2.517E-16	1.690E-33
NB 93M	6.978E-06	7.108E-06	7.236E-06	7.816E-06	8.642E-06	1.027E-05	1.635E-05	2.186E-05	3.339E-05	4.927E-05

Table A.2 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	3.138E-06	3.138E-06	3.138E-06	3.138E-06	3.138E-06	3.138E-06	3.138E-06	3.138E-06	3.137E-06	3.136E-06
NB 95	3.840E+01	3.750E+01	3.565E+01	2.355E+01	1.030E+01	1.562E+00	5.867E-04	2.157E-07	5.589E-16	3.751E-33
NB 95M	2.635E-01	2.380E-01	2.054E-01	1.035E-01	3.852E-02	5.334E-03	1.961E-06	7.208E-10	1.867E-18	1.254E-35
MO 93	7.736E-08	7.736E-08	7.736E-08	7.736E-08	7.735E-08	7.734E-08	7.731E-08	7.728E-08	7.721E-08	7.705E-08
TC 99	4.227E-04	4.239E-04	4.240E-04	4.240E-04	4.240E-04	4.240E-04	4.239E-04	4.239E-04	4.239E-04	4.239E-04
RU103	1.729E+01	1.350E+01	1.055E+01	3.455E+00	6.905E-01	2.758E-02	7.022E-08	1.788E-13	1.849E-27	0.000E+00
RU106	2.251E+00	2.193E+00	2.136E+00	1.896E+00	1.597E+00	1.132E+00	2.865E-01	7.248E-02	2.334E-03	2.419E-06
RH103M	1.557E+01	1.217E+01	9.508E+00	3.115E+00	6.225E-01	2.486E-02	6.330E-08	1.612E-13	1.667E-27	0.000E+00
RH106	2.259E+00	2.193E+00	2.136E+00	1.896E+00	1.597E+00	1.132E+00	2.865E-01	7.248E-02	2.334E-03	2.419E-06
PD107	4.805E-07	4.805E-07	4.805E-07	4.805E-07	4.805E-07	4.805E-07	4.805E-07	4.805E-07	4.805E-07	4.805E-07
AG110	5.212E-03	2.734E-06	2.630E-06	2.207E-06	1.714E-06	1.033E-06	1.363E-07	1.799E-08	1.139E-10	4.566E-15
AG110M	2.137E-04	2.055E-04	1.977E-04	1.659E-04	1.288E-04	7.764E-05	1.025E-05	1.353E-06	8.564E-09	3.432E-13
AG111	1.619E-01	4.414E-02	1.200E-02	3.338E-05	6.862E-09	2.901E-16	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	3.704E-04	3.698E-04	3.691E-04	3.661E-04	3.618E-04	3.533E-04	3.213E-04	2.922E-04	2.304E-04	1.433E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	8.674E-03	6.979E-03	5.613E-03	2.100E-03	5.086E-04	2.981E-05	3.521E-10	4.158E-15	1.993E-27	0.000E+00
IN114	1.522E-04	4.889E-05	4.019E-05	1.658E-05	4.621E-06	3.591E-07	1.309E-11	4.774E-16	3.832E-27	0.000E+00
IN114M	6.215E-05	5.109E-05	4.199E-05	1.732E-05	4.829E-06	3.752E-07	1.368E-11	4.988E-16	4.004E-27	0.000E+00
IN115M	8.807E-02	1.236E-03	1.625E-05	1.475E-07	3.571E-08	2.093E-09	2.472E-14	2.920E-19	1.400E-31	0.000E+00
SN119M	4.159E-01	3.998E-01	3.842E-01	3.213E-01	2.483E-01	1.481E-01	1.878E-02	2.381E-03	1.364E-05	4.471E-10
SN121M	6.266E-05	6.263E-05	6.260E-05	6.244E-05	6.223E-05	6.179E-05	6.011E-05	5.847E-05	5.455E-05	4.749E-05
SN123	5.191E-02	4.815E-02	4.468E-02	3.181E-02	1.949E-02	7.322E-03	1.457E-04	2.898E-06	1.618E-10	5.038E-19
SN125	2.180E-01	7.967E-02	2.911E-02	3.083E-04	4.361E-07	8.723E-13	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	1.125E-05	1.125E-05	1.125E-05	1.125E-05	1.125E-05	1.125E-05	1.125E-05	1.125E-05	1.125E-05	1.125E-05
SB124	4.491E-04	3.823E-04	3.253E-04	1.571E-04	5.492E-05	6.716E-06	1.502E-09	3.358E-13	2.510E-22	1.402E-40
SB125	2.877E-01	2.863E-01	2.840E-01	2.723E-01	2.557E-01	2.257E-01	1.369E-01	8.301E-02	2.377E-02	1.950E-03
SB126	5.772E-03	2.639E-03	1.207E-03	3.667E-05	1.788E-06	1.575E-06	1.575E-06	1.575E-06	1.575E-06	1.575E-06
SB126M	2.830E-03	1.125E-05	1.125E-05	1.125E-05	1.125E-05	1.125E-05	1.125E-05	1.125E-05	1.125E-05	1.125E-05
TE123M	1.263E-07	1.165E-07	1.074E-07	7.448E-08	4.391E-08	1.525E-08	2.224E-10	3.244E-12	8.326E-17	5.487E-26
TE125M	6.388E-02	6.421E-02	6.442E-02	6.409E-02	6.162E-02	5.497E-02	3.340E-02	2.025E-02	5.800E-03	4.757E-04
TE127	8.880E-01	1.837E-01	1.102E-01	7.000E-02	3.919E-02	1.228E-02	1.183E-04	1.141E-06	1.040E-11	8.655E-22
TE127M	1.231E-01	1.164E-01	1.068E-01	7.147E-02	4.001E-02	1.253E-02	1.208E-04	1.165E-06	1.062E-11	8.836E-22
TE129	3.730E+00	2.743E-01	2.055E-01	5.574E-02	8.484E-03	1.966E-04	5.665E-11	1.633E-17	7.279E-34	0.000E+00
TE129M	5.598E-01	4.214E-01	3.157E-01	8.562E-02	1.303E-02	3.020E-04	8.703E-11	2.508E-17	1.118E-33	0.000E+00
I129	6.890E-07	6.900E-07	6.906E-07	6.919E-07	6.924E-07	6.924E-07	6.924E-07	6.924E-07	6.924E-07	6.924E-07
I131	1.569E+01	4.821E+00	1.442E+00	6.180E-03	2.369E-06	3.483E-13	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A.2 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	1.742E-01	1.305E-01	7.369E-02	2.545E-03	1.315E-05	3.186E-10	1.081E-28	3.668E-47	0.000E+00	0.000E+00
XE133	3.660E+01	7.074E+00	1.114E+00	2.614E-04	1.515E-09	5.091E-20	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	6.922E-02	6.833E-02	6.746E-02	6.365E-02	5.852E-02	4.947E-02	2.527E-02	1.291E-02	2.406E-03	8.364E-05
CS135	4.062E-05	4.065E-05	4.065E-05	4.065E-05	4.065E-05	4.065E-05	4.065E-05	4.065E-05	4.065E-05	4.065E-05
CS136	7.063E-02	3.367E-02	1.606E-02	5.655E-04	4.527E-06	2.902E-10	4.899E-27	8.270E-44	0.000E+00	0.000E+00
CS137	2.939E+00	2.936E+00	2.934E+00	2.922E+00	2.905E+00	2.872E+00	2.742E+00	2.618E+00	2.333E+00	1.852E+00
BA136M	1.164E-02	5.550E-03	2.646E-03	9.319E-05	7.461E-07	4.782E-11	8.073E-28	1.363E-44	0.000E+00	0.000E+00
BA137M	2.782E+00	2.778E+00	2.775E+00	2.764E+00	2.748E+00	2.717E+00	2.594E+00	2.477E+00	2.207E+00	1.752E+00
BA140	3.366E+01	1.576E+01	7.381E+00	2.395E-01	1.704E-03	8.629E-08	5.670E-25	3.725E-42	0.000E+00	0.000E+00
LA140	3.371E+01	1.812E+01	8.494E+00	2.757E-01	1.961E-03	9.930E-08	6.525E-25	4.287E-42	0.000E+00	0.000E+00
CE141	3.198E+01	2.386E+01	1.770E+01	4.596E+00	6.569E-01	1.342E-02	2.336E-09	4.067E-16	5.144E-33	0.000E+00
CE142	8.453E-10	8.454E-10	8.454E-10	8.454E-10	8.454E-10	8.454E-10	8.454E-10	8.454E-10	8.454E-10	8.454E-10
CE144	2.858E+01	2.762E+01	2.669E+01	2.288E+01	1.831E+01	1.173E+01	1.979E+00	3.337E-01	3.896E-03	5.313E-07
PR143	3.202E+01	1.743E+01	8.527E+00	3.366E-01	3.178E-03	2.832E-07	1.786E-23	1.127E-39	0.000E+00	0.000E+00
PR144	2.858E+01	2.762E+01	2.669E+01	2.288E+01	1.831E+01	1.174E+01	1.979E+00	3.337E-01	3.897E-03	5.313E-07
PR144M	3.431E-01	3.314E-01	3.203E-01	2.745E-01	2.198E-01	1.408E-01	2.375E-02	4.004E-03	4.676E-05	6.375E-09
ND144	2.867E-14	2.902E-14	2.937E-14	3.078E-14	3.247E-14	3.491E-14	3.853E-14	3.914E-14	3.926E-14	3.927E-14
ND147	1.237E+01	5.150E+00	2.142E+00	4.067E-02	1.335E-04	1.440E-09	1.949E-29	2.636E-49	0.000E+00	0.000E+00
PM145	9.375E-04	9.493E-04	9.607E-04	1.008E-03	1.064E-03	1.143E-03	1.222E-03	1.167E-03	9.692E-04	6.555E-04
PM147	7.909E+00	7.912E+00	7.867E+00	7.538E+00	7.057E+00	6.184E+00	3.647E+00	2.151E+00	5.745E-01	4.099E-02
PM148M	5.169E-02	4.086E-02	3.231E-02	1.117E-02	2.416E-03	1.129E-04	5.387E-10	2.571E-15	1.278E-28	0.000E+00
PM148	1.719E-01	3.004E-02	6.373E-03	6.312E-04	1.361E-04	6.360E-06	3.034E-11	1.448E-16	7.201E-30	0.000E+00
SM145	8.941E-03	8.690E-03	8.445E-03	7.424E-03	6.164E-03	4.249E-03	9.595E-04	2.167E-04	5.250E-06	3.083E-09
SM147	6.542E-08	6.542E-08	6.542E-08	6.543E-08	6.544E-08	6.547E-08	6.553E-08	6.557E-08	6.560E-08	6.562E-08
SM151	3.610E-01	3.610E-01	3.609E-01	3.604E-01	3.598E-01	3.584E-01	3.529E-01	3.475E-01	3.344E-01	3.096E-01
EU152	2.697E-03	2.692E-03	2.686E-03	2.662E-03	2.629E-03	2.563E-03	2.315E-03	2.091E-03	1.621E-03	9.738E-04
EU154	2.698E-01	2.690E-01	2.681E-01	2.644E-01	2.592E-01	2.489E-01	2.119E-01	1.804E-01	1.206E-01	5.389E-02
EU155	7.461E-01	7.422E-01	7.382E-01	7.205E-01	6.958E-01	6.488E-01	4.907E-01	3.712E-01	1.846E-01	4.567E-02
EU156	2.387E-01	1.272E-01	6.714E-02	3.743E-03	5.810E-05	1.401E-08	4.730E-23	1.597E-37	0.000E+00	0.000E+00
GD153	8.324E-04	7.997E-04	7.683E-04	6.410E-04	4.936E-04	2.926E-04	3.617E-05	4.469E-06	2.400E-08	6.921E-13
TB160	4.300E-04	3.760E-04	3.288E-04	1.793E-04	7.475E-05	1.300E-05	1.187E-08	1.084E-11	2.735E-19	1.739E-34
TL206	1.421E-06	2.210E-13	2.210E-13	2.210E-13	2.210E-13	2.210E-13	2.210E-13	2.210E-13	2.210E-13	2.210E-13
TL207	4.405E-10	4.409E-10	4.429E-10	4.702E-10	5.255E-10	6.594E-10	1.279E-09	2.040E-09	4.573E-09	1.191E-08
TL208	3.944E-09	4.003E-09	4.099E-09	4.587E-09	5.161E-09	6.159E-09	8.696E-09	9.861E-09	1.049E-08	9.859E-09
PB210	2.227E-16	2.291E-16	2.348E-16	2.583E-16	2.936E-16	3.779E-16	9.352E-16	1.922E-15	6.907E-15	3.215E-14
PB211	4.417E-10	4.421E-10	4.442E-10	4.715E-10	5.270E-10	6.612E-10	1.283E-09	2.046E-09	4.586E-09	1.194E-08

Table A.2 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.098E-08	1.114E-08	1.141E-08	1.277E-08	1.436E-08	1.714E-08	2.420E-08	2.745E-08	2.920E-08	2.744E-08
BI211	4.417E-10	4.421E-10	4.442E-10	4.715E-10	5.270E-10	6.612E-10	1.283E-09	2.046E-09	4.586E-09	1.194E-08
BI212	1.098E-08	1.114E-08	1.141E-08	1.277E-08	1.436E-08	1.714E-08	2.420E-08	2.745E-08	2.920E-08	2.744E-08
PO212	7.033E-09	7.138E-09	7.310E-09	8.179E-09	9.203E-09	1.098E-08	1.551E-08	1.758E-08	1.871E-08	1.758E-08
PO215	4.417E-10	4.421E-10	4.442E-10	4.715E-10	5.270E-10	6.612E-10	1.283E-09	2.046E-09	4.586E-09	1.194E-08
PO216	1.098E-08	1.114E-08	1.141E-08	1.277E-08	1.436E-08	1.714E-08	2.420E-08	2.745E-08	2.920E-08	2.744E-08
RN219	4.417E-10	4.421E-10	4.442E-10	4.715E-10	5.270E-10	6.612E-10	1.283E-09	2.046E-09	4.586E-09	1.194E-08
RN220	1.098E-08	1.114E-08	1.141E-08	1.277E-08	1.436E-08	1.714E-08	2.420E-08	2.745E-08	2.920E-08	2.744E-08
FR223	6.088E-12	6.202E-12	6.318E-12	6.851E-12	7.653E-12	9.370E-12	1.768E-11	2.819E-11	6.323E-11	1.647E-10
RA223	4.417E-10	4.421E-10	4.442E-10	4.715E-10	5.270E-10	6.612E-10	1.283E-09	2.046E-09	4.586E-09	1.194E-08
RA224	1.098E-08	1.114E-08	1.141E-08	1.277E-08	1.436E-08	1.714E-08	2.420E-08	2.745E-08	2.920E-08	2.744E-08
RA226	3.912E-15	4.000E-15	4.090E-15	4.503E-15	5.125E-15	6.468E-15	1.313E-14	2.186E-14	5.278E-14	1.539E-13
RA228	5.379E-10	5.421E-10	5.462E-10	5.647E-10	5.909E-10	6.411E-10	8.180E-10	9.619E-10	1.215E-09	1.455E-09
AC227	4.411E-10	4.494E-10	4.578E-10	4.965E-10	5.546E-10	6.790E-10	1.281E-09	2.043E-09	4.582E-09	1.193E-08
TH227	4.356E-10	4.372E-10	4.415E-10	4.739E-10	5.298E-10	6.509E-10	1.265E-09	2.018E-09	4.522E-09	1.178E-08
TH228	1.096E-08	1.124E-08	1.151E-08	1.271E-08	1.430E-08	1.708E-08	2.416E-08	2.738E-08	2.918E-08	2.743E-08
TH229	2.337E-11	2.382E-11	2.427E-11	2.634E-11	2.935E-11	3.536E-11	5.943E-11	8.348E-11	1.436E-10	2.638E-10
TH230	5.312E-12	5.357E-12	5.403E-12	5.610E-12	5.908E-12	6.505E-12	8.899E-12	1.130E-11	1.735E-11	2.960E-11
TH231	8.496E-05	7.531E-05	7.531E-05	7.530E-05	7.530E-05	7.530E-05	7.530E-05	7.530E-05	7.530E-05	7.530E-05
TH232	1.588E-09	1.588E-09	1.588E-09	1.588E-09	1.588E-09	1.588E-09	1.588E-09	1.588E-09	1.588E-09	1.588E-09
TH234	4.841E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05
PA231	7.207E-09	7.276E-09	7.344E-09	7.626E-09	8.031E-09	8.834E-09	1.202E-08	1.521E-08	2.318E-08	3.910E-08
PA233	7.476E-03	5.222E-03	3.646E-03	7.191E-04	6.936E-05	9.225E-07	2.846E-07	2.846E-07	2.847E-07	2.849E-07
PA234M	4.910E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05
PA234	1.537E-06	6.292E-08	6.292E-08	6.292E-08	6.291E-08	6.291E-08	6.291E-08	6.291E-08	6.291E-08	6.291E-08
U232	3.059E-08	3.066E-08	3.065E-08	3.060E-08	3.053E-08	3.039E-08	2.983E-08	2.927E-08	2.791E-08	2.536E-08
U233	1.240E-07	1.251E-07	1.258E-07	1.272E-07	1.275E-07	1.275E-07	1.275E-07	1.275E-07	1.275E-07	1.275E-07
U234	1.326E-07	1.326E-07	1.326E-07	1.326E-07	1.327E-07	1.328E-07	1.333E-07	1.338E-07	1.350E-07	1.374E-07
U235	7.530E-05	7.530E-05	7.530E-05	7.530E-05	7.530E-05	7.530E-05	7.530E-05	7.530E-05	7.530E-05	7.530E-05
U236	1.244E-05	1.244E-05	1.244E-05	1.244E-05	1.244E-05	1.244E-05	1.244E-05	1.244E-05	1.244E-05	1.244E-05
U237	3.513E-01	8.342E-02	1.981E-02	2.994E-05	3.406E-09	8.342E-10	7.577E-10	6.882E-10	5.411E-10	3.345E-10
U238	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05	4.840E-05
NP237	2.815E-07	2.838E-07	2.844E-07	2.846E-07	2.846E-07	2.846E-07	2.846E-07	2.846E-07	2.847E-07	2.849E-07
PU236	1.680E-09	1.670E-09	1.654E-09	1.586E-09	1.493E-09	1.322E-09	8.132E-10	5.002E-10	1.485E-10	1.308E-11
PU237	1.893E-08	1.530E-08	1.237E-08	4.730E-09	1.182E-09	7.373E-11	1.118E-15	1.696E-20	1.519E-32	0.000E+00
PU238	4.012E-05	4.032E-05	4.032E-05	4.028E-05	4.023E-05	4.010E-05	3.949E-05	3.888E-05	3.737E-05	3.454E-05

Table A.2 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	6.532E-03	6.548E-03	6.548E-03	6.548E-03	6.548E-03	6.548E-03	6.547E-03	6.547E-03	6.546E-03	6.544E-03
PU240	3.628E-04	3.628E-04	3.628E-04	3.628E-04	3.628E-04	3.628E-04	3.627E-04	3.626E-04	3.625E-04	3.621E-04
PU241	3.568E-03	3.562E-03	3.555E-03	3.526E-03	3.483E-03	3.401E-03	3.089E-03	2.805E-03	2.206E-03	1.363E-03
PU242	8.347E-10	8.347E-10	8.347E-10	8.347E-10	8.347E-10	8.347E-10	8.347E-10	8.347E-10	8.347E-10	8.347E-10
PU244	2.894E-20	2.894E-20	2.894E-20	2.894E-20	2.894E-20	2.894E-20	2.894E-20	2.894E-20	2.894E-20	2.894E-20
AM241	5.728E-06	5.946E-06	6.165E-06	7.146E-06	8.547E-06	1.130E-05	2.164E-05	3.099E-05	5.064E-05	7.765E-05
AM242M	9.167E-09	9.166E-09	9.164E-09	9.157E-09	9.147E-09	9.126E-09	9.043E-09	8.961E-09	8.759E-09	8.369E-09
AM242	4.524E-05	9.142E-09	9.118E-09	9.111E-09	9.101E-09	9.080E-09	8.998E-09	8.916E-09	8.715E-09	8.327E-09
AM243	8.251E-11	8.259E-11	8.259E-11	8.259E-11	8.258E-11	8.258E-11	8.257E-11	8.255E-11	8.251E-11	8.243E-11
CM242	2.186E-05	2.075E-05	1.955E-05	1.495E-05	1.015E-05	4.678E-06	2.177E-07	1.685E-08	7.215E-09	6.887E-09
CM243	1.129E-10	1.128E-10	1.127E-10	1.122E-10	1.115E-10	1.102E-10	1.050E-10	9.999E-11	8.855E-11	6.944E-11
CM244	1.690E-10	1.690E-10	1.687E-10	1.676E-10	1.660E-10	1.629E-10	1.509E-10	1.398E-10	1.154E-10	7.874E-11
CM245	2.209E-16	2.209E-16	2.209E-16	2.209E-16	2.209E-16	2.209E-16	2.208E-16	2.208E-16	2.207E-16	2.205E-16
CM246	8.725E-19	8.725E-19	8.725E-19	8.725E-19	8.724E-19	8.724E-19	8.721E-19	8.718E-19	8.712E-19	8.699E-19
CM247	2.810E-26	2.810E-26	2.810E-26	2.810E-26	2.810E-26	2.810E-26	2.810E-26	2.810E-26	2.810E-26	2.810E-26
Subtotal Ci**	4.537E+02	3.198E+02	2.518E+02	1.394E+02	8.411E+01	4.829E+01	2.041E+01	1.439E+01	1.046E+01	7.674E+00
Total Ci***	3.447E+03	3.276E+02	2.535E+02	1.403E+02	8.465E+01	4.847E+01	2.042E+01	1.439E+01	1.046E+01	7.674E+00

• Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table A.3 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table A.3 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: alum.3

BURNUP (BU)

BU: U-235 2.0 g
 BU: % U-235 5.56%
 BU: MWd 1.90
 BU: MWd/MTU 10555
 U-235 DEPL 2.34 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H ³	2.686E-02	2.681E-02	2.675E-02	2.650E-02	2.612E-02	2.540E-02	2.271E-02	2.029E-02	1.534E-02	8.751E-03
BE 10	4.153E-08	4.153E-08	4.153E-08	4.153E-08	4.153E-08	4.153E-08	4.153E-08	4.153E-08	4.153E-08	4.153E-08
C 14	7.649E-05	7.649E-05	7.649E-05	7.649E-05	7.649E-05	7.649E-05	7.647E-05	7.645E-05	7.640E-05	7.631E-05
CL 36	7.619E-08	7.619E-08	7.619E-08	7.619E-08	7.619E-08	7.619E-08	7.619E-08	7.619E-08	7.619E-08	7.619E-08
CR 51	2.360E-01	1.663E-01	1.171E-01	2.407E-02	2.456E-03	2.555E-05	2.996E-13	3.513E-21	5.229E-41	0.000E+00
MN 54	8.089E-03	7.842E-03	7.602E-03	6.607E-03	5.396E-03	3.600E-03	7.130E-04	1.412E-04	2.465E-06	7.513E-10
FE 55	5.732E-02	5.674E-02	5.616E-02	5.363E-02	5.017E-02	4.391E-02	2.577E-02	1.513E-02	3.993E-03	2.781E-04
FE 59	2.441E-03	1.967E-03	1.586E-03	5.985E-04	1.468E-04	8.827E-06	1.155E-10	1.510E-15	9.346E-28	0.000E+00
CO 60	1.054E-01	1.049E-01	1.043E-01	1.020E-01	9.869E-02	9.241E-02	7.105E-02	5.463E-02	2.831E-02	7.605E-03
NI 59	2.082E-06	2.082E-06	2.082E-06	2.082E-06	2.082E-06	2.082E-06	2.082E-06	2.082E-06	2.082E-06	2.082E-06
NI 63	2.836E-04	2.835E-04	2.835E-04	2.831E-04	2.826E-04	2.815E-04	2.773E-04	2.731E-04	2.631E-04	2.440E-04
ZN 65	1.823E-02	1.751E-02	1.683E-02	1.406E-02	1.085E-02	6.458E-03	8.110E-04	1.018E-04	5.689E-07	1.776E-11
SE 79	2.465E-05	2.465E-05	2.465E-05	2.465E-05	2.465E-05	2.465E-05	2.465E-05	2.465E-05	2.465E-05	2.465E-05
KR 85	6.682E-01	6.667E-01	6.650E-01	6.576E-01	6.471E-01	6.265E-01	5.506E-01	4.838E-01	3.503E-01	1.836E-01
RB 87	1.658E-09	1.658E-09	1.658E-09	1.658E-09	1.658E-09	1.658E-09	1.658E-09	1.658E-09	1.658E-09	1.658E-09
SR 89	5.145E+01	4.246E+01	3.503E+01	1.470E+01	4.203E+00	3.432E-01	1.527E-05	6.794E-10	8.970E-21	0.000E+00
SR 90	5.627E+00	5.622E+00	5.617E+00	5.594E+00	5.561E+00	5.495E+00	5.240E+00	4.996E+00	4.436E+00	3.497E+00
Y 90	5.872E+00	5.630E+00	5.618E+00	5.595E+00	5.562E+00	5.496E+00	5.241E+00	4.997E+00	4.437E+00	3.498E+00
Y 91	6.285E+01	5.362E+01	4.542E+01	2.148E+01	7.284E+00	8.382E-01	1.470E-04	2.579E-08	1.050E-17	1.743E-36
ZR 93	1.541E-04	1.542E-04	1.542E-04	1.542E-04	1.542E-04	1.542E-04	1.542E-04	1.542E-04	1.542E-04	1.542E-04
ZR 95	7.485E+01	6.432E+01	5.527E+01	2.786E+01	1.037E+01	1.435E+00	5.276E-04	1.940E-07	5.026E-16	3.373E-33
NB 93M	1.397E-05	1.423E-05	1.448E-05	1.565E-05	1.730E-05	2.054E-05	3.273E-05	4.375E-05	6.683E-05	9.861E-05

Table A.3 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	6.355E-06	6.355E-06	6.355E-06	6.355E-06	6.355E-06	6.355E-06	6.354E-06	6.354E-06	6.353E-06	6.351E-06
NB 95	7.664E+01	7.486E+01	7.116E+01	4.703E+01	2.055E+01	3.118E+00	1.171E-03	4.306E-07	1.116E-15	7.489E-33
NB 95M	5.260E-01	4.752E-01	4.099E-01	2.066E-01	7.689E-02	1.065E-02	3.914E-06	1.439E-09	3.727E-18	2.503E-35
MO 93	1.568E-07	1.568E-07	1.568E-07	1.568E-07	1.568E-07	1.568E-07	1.567E-07	1.566E-07	1.565E-07	1.562E-07
TC 99	8.437E-04	8.461E-04	8.462E-04	8.462E-04	8.462E-04	8.462E-04	8.462E-04	8.462E-04	8.462E-04	8.462E-04
RU103	3.471E+01	2.712E+01	2.118E+01	6.938E+00	1.387E+00	5.539E-02	1.410E-07	3.590E-13	3.713E-27	0.000E+00
RU106	4.671E+00	4.550E+00	4.431E+00	3.934E+00	3.313E+00	2.350E+00	5.945E-01	1.504E-01	4.842E-03	5.020E-06
RH103M	3.126E+01	2.444E+01	1.909E+01	6.255E+00	1.250E+00	4.993E-02	1.271E-07	3.237E-13	3.347E-27	0.000E+00
RH106	4.702E+00	4.550E+00	4.431E+00	3.934E+00	3.313E+00	2.350E+00	5.945E-01	1.504E-01	4.842E-03	5.020E-06
PD107	1.004E-06	1.004E-06	1.004E-06	1.004E-06	1.004E-06	1.004E-06	1.004E-06	1.004E-06	1.004E-06	1.004E-06
AG110	1.968E-02	9.713E-06	9.343E-06	7.840E-06	6.087E-06	3.669E-06	4.844E-07	6.393E-08	4.047E-10	1.622E-14
AG110M	7.593E-04	7.303E-04	7.025E-04	5.895E-04	4.577E-04	2.759E-04	3.641E-05	4.806E-06	3.044E-08	1.220E-12
AG111	3.404E-01	9.276E-02	2.522E-02	7.015E-05	1.442E-08	6.096E-16	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	7.483E-04	7.471E-04	7.457E-04	7.396E-04	7.309E-04	7.137E-04	6.491E-04	5.903E-04	4.655E-04	2.896E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	1.751E-02	1.408E-02	1.133E-02	4.238E-03	1.026E-03	6.016E-05	7.105E-10	8.392E-15	4.023E-27	0.000E+00
IN114	4.650E-04	1.506E-04	1.238E-04	5.107E-05	1.424E-05	1.106E-06	4.033E-11	1.471E-15	1.180E-26	0.000E+00
IN114M	1.914E-04	1.573E-04	1.293E-04	5.336E-05	1.488E-05	1.156E-06	4.214E-11	1.536E-15	1.233E-26	0.000E+00
IN115M	1.775E-01	2.490E-03	3.275E-05	2.976E-07	7.205E-08	4.224E-09	4.989E-14	5.892E-19	2.824E-31	0.000E+00
SN119M	8.489E-01	8.159E-01	7.842E-01	6.557E-01	5.065E-01	3.022E-01	3.833E-02	4.861E-03	2.782E-05	9.124E-10
SN121M	1.270E-04	1.270E-04	1.269E-04	1.266E-04	1.262E-04	1.252E-04	1.219E-04	1.185E-04	1.106E-04	9.626E-05
SN123	1.050E-01	9.740E-02	9.036E-02	6.435E-02	3.943E-02	1.481E-02	2.946E-04	5.860E-06	3.271E-10	1.019E-18
SN125	4.442E-01	1.623E-01	5.932E-02	6.281E-04	8.884E-07	1.777E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	2.262E-05	2.262E-05	2.262E-05	2.262E-05	2.262E-05	2.262E-05	2.262E-05	2.262E-05	2.262E-05	2.262E-05
SB124	1.311E-03	1.116E-03	9.500E-04	4.586E-04	1.604E-04	1.961E-05	4.384E-09	9.802E-13	7.328E-22	4.094E-40
SB125	5.821E-01	5.792E-01	5.747E-01	5.509E-01	5.175E-01	4.567E-01	2.770E-01	1.680E-01	4.810E-02	3.946E-03
SB126	1.179E-02	5.390E-03	2.466E-03	7.484E-05	3.602E-06	3.168E-06	3.167E-06	3.167E-06	3.167E-06	3.167E-06
SB126M	5.819E-03	2.262E-05	2.262E-05	2.262E-05	2.262E-05	2.262E-05	2.262E-05	2.262E-05	2.262E-05	2.262E-05
TE123M	6.866E-07	6.331E-07	5.838E-07	4.048E-07	2.386E-07	8.291E-08	1.209E-09	1.762E-11	4.525E-16	2.982E-25
TE125M	1.292E-01	1.299E-01	1.303E-01	1.297E-01	1.247E-01	1.112E-01	6.758E-02	4.099E-02	1.174E-02	9.626E-04
TE127	1.792E+00	3.709E-01	2.226E-01	1.414E-01	7.914E-02	2.480E-02	2.390E-04	2.304E-06	2.101E-11	1.748E-21
TE127M	2.486E-01	2.351E-01	2.157E-01	1.443E-01	8.079E-02	2.531E-02	2.440E-04	2.352E-06	2.145E-11	1.784E-21
TE129	7.478E+00	5.502E-01	4.122E-01	1.118E-01	1.702E-02	3.943E-04	1.136E-10	3.275E-17	1.460E-33	0.000E+00
TE129M	1.123E+00	8.453E-01	6.332E-01	1.717E-01	2.614E-02	6.057E-04	1.746E-10	5.030E-17	2.243E-33	0.000E+00
I129	1.381E-06	1.383E-06	1.384E-06	1.387E-06	1.387E-06	1.388E-06	1.388E-06	1.388E-06	1.388E-06	1.388E-06
I131	3.131E+01	9.620E+00	2.878E+00	1.233E-02	4.728E-06	6.951E-13	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A.3 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	3.476E-01	2.603E-01	1.471E-01	5.078E-03	2.624E-05	6.359E-10	2.158E-28	7.320E-47	0.000E+00	0.000E+00
XE133	7.290E+01	1.409E+01	2.220E+00	5.206E-04	3.018E-09	1.014E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	2.786E-01	2.751E-01	2.716E-01	2.563E-01	2.356E-01	1.991E-01	1.017E-01	5.196E-02	9.686E-03	3.367E-04
CS135	7.698E-05	7.703E-05	7.703E-05	7.703E-05	7.703E-05	7.703E-05	7.703E-05	7.703E-05	7.703E-05	7.703E-05
CS136	1.998E-01	9.526E-02	4.542E-02	1.600E-03	1.281E-05	8.209E-10	1.386E-26	2.340E-43	0.000E+00	0.000E+00
CS137	5.876E+00	5.871E+00	5.866E+00	5.843E+00	5.809E+00	5.742E+00	5.483E+00	5.236E+00	4.665E+00	3.703E+00
BA136M	3.293E-02	1.570E-02	7.485E-03	2.636E-04	2.111E-06	1.353E-10	2.284E-27	3.856E-44	0.000E+00	0.000E+00
BA137M	5.562E+00	5.554E+00	5.549E+00	5.527E+00	5.495E+00	5.432E+00	5.187E+00	4.953E+00	4.413E+00	3.503E+00
BA140	6.700E+01	3.137E+01	1.469E+01	4.767E-01	3.392E-03	1.717E-07	1.128E-24	7.414E-42	0.000E+00	0.000E+00
LA140	6.714E+01	3.607E+01	1.691E+01	5.486E-01	3.904E-03	1.976E-07	1.299E-24	8.532E-42	0.000E+00	0.000E+00
CE141	6.366E+01	4.749E+01	3.524E+01	9.148E+00	1.307E+00	2.671E-02	4.650E-09	8.096E-16	1.024E-32	0.000E+00
CE142	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09
CE144	5.701E+01	5.510E+01	5.325E+01	4.564E+01	3.654E+01	2.341E+01	3.948E+00	6.657E-01	7.774E-03	1.060E-06
PR143	6.368E+01	3.467E+01	1.696E+01	6.694E-01	6.320E-03	5.632E-07	3.552E-23	2.241E-39	0.000E+00	0.000E+00
PR144	5.703E+01	5.510E+01	5.325E+01	4.564E+01	3.654E+01	2.341E+01	3.948E+00	6.658E-01	7.774E-03	1.060E-06
PR144M	6.845E-01	6.612E-01	6.390E-01	5.477E-01	4.384E-01	2.810E-01	4.738E-02	7.989E-03	9.329E-05	1.272E-08
ND144	5.792E-14	5.863E-14	5.932E-14	6.214E-14	6.552E-14	7.038E-14	7.760E-14	7.882E-14	7.906E-14	7.906E-14
ND147	2.463E+01	1.025E+01	4.263E+00	8.095E-02	2.658E-04	2.867E-09	3.879E-29	5.248E-49	0.000E+00	0.000E+00
PM145	1.894E-03	1.918E-03	1.942E-03	2.038E-03	2.152E-03	2.313E-03	2.475E-03	2.364E-03	1.964E-03	1.328E-03
PM147	1.560E+01	1.561E+01	1.552E+01	1.487E+01	1.392E+01	1.220E+01	7.197E+00	4.244E+00	1.134E+00	8.087E-02
PM148M	1.978E-01	1.564E-01	1.236E-01	4.276E-02	9.244E-03	4.320E-04	2.061E-09	9.836E-15	4.891E-28	0.000E+00
PM148	6.923E-01	1.206E-01	2.532E-02	2.415E-03	5.207E-04	2.433E-05	1.161E-10	5.540E-16	2.755E-29	0.000E+00
SM145	1.821E-02	1.770E-02	1.720E-02	1.512E-02	1.255E-02	8.652E-03	1.954E-03	4.412E-04	1.069E-05	6.278E-09
SM147	6.509E-08	6.509E-08	6.510E-08	6.511E-08	6.514E-08	6.518E-08	6.530E-08	6.537E-08	6.545E-08	6.548E-08
SM151	7.514E-01	7.513E-01	7.511E-01	7.502E-01	7.487E-01	7.458E-01	7.345E-01	7.232E-01	6.959E-01	6.444E-01
EU152	9.875E-03	9.856E-03	9.837E-03	9.751E-03	9.627E-03	9.385E-03	8.476E-03	7.655E-03	5.934E-03	3.566E-03
EU154	1.081E+00	1.078E+00	1.075E+00	1.059E+00	1.038E+00	9.971E-01	8.488E-01	7.226E-01	4.830E-01	2.158E-01
EU155	1.469E+00	1.461E+00	1.453E+00	1.419E+00	1.370E+00	1.277E+00	9.660E-01	7.305E-01	3.634E-01	8.990E-02
EU156	7.907E-01	4.198E-01	2.216E-01	1.235E-02	1.917E-04	4.622E-08	1.561E-22	5.272E-37	0.000E+00	0.000E+00
GD153	2.155E-03	2.071E-03	1.989E-03	1.660E-03	1.278E-03	7.578E-04	9.366E-05	1.158E-05	6.215E-08	1.792E-12
TB160	9.569E-04	8.368E-04	7.316E-04	3.990E-04	1.664E-04	2.893E-05	2.642E-08	2.413E-11	6.087E-19	3.871E-34
TL206	2.909E-06	4.479E-13	4.479E-13	4.479E-13	4.479E-13	4.479E-13	4.479E-13	4.479E-13	4.479E-13	4.479E-13
TL207	4.802E-10	4.806E-10	4.828E-10	5.124E-10	5.722E-10	7.157E-10	1.366E-09	2.147E-09	4.698E-09	1.195E-08
TL208	8.647E-09	8.778E-09	8.992E-09	1.007E-08	1.134E-08	1.355E-08	1.914E-08	2.169E-08	2.298E-08	2.143E-08
PB210	6.459E-16	6.633E-16	6.776E-16	7.278E-16	7.968E-16	9.609E-16	2.054E-15	4.001E-15	1.385E-14	6.389E-14
PB211	4.815E-10	4.819E-10	4.842E-10	5.138E-10	5.738E-10	7.177E-10	1.370E-09	2.153E-09	4.712E-09	1.198E-08

Table A.3 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	2.407E-08	2.443E-08	2.503E-08	2.803E-08	3.157E-08	3.771E-08	5.328E-08	6.036E-08	6.395E-08	5.965E-08
BI211	4.815E-10	4.819E-10	4.842E-10	5.138E-10	5.738E-10	7.177E-10	1.370E-09	2.153E-09	4.712E-09	1.198E-08
BI212	2.407E-08	2.443E-08	2.503E-08	2.803E-08	3.157E-08	3.771E-08	5.328E-08	6.036E-08	6.395E-08	5.965E-08
PO212	1.542E-08	1.565E-08	1.603E-08	1.796E-08	2.023E-08	2.416E-08	3.414E-08	3.867E-08	4.097E-08	3.822E-08
PO215	4.815E-10	4.819E-10	4.842E-10	5.138E-10	5.738E-10	7.177E-10	1.370E-09	2.153E-09	4.712E-09	1.198E-08
PO216	2.407E-08	2.443E-08	2.503E-08	2.803E-08	3.157E-08	3.771E-08	5.328E-08	6.036E-08	6.395E-08	5.965E-08
RN219	4.815E-10	4.819E-10	4.842E-10	5.138E-10	5.738E-10	7.177E-10	1.370E-09	2.153E-09	4.712E-09	1.198E-08
RN220	2.407E-08	2.443E-08	2.503E-08	2.803E-08	3.157E-08	3.771E-08	5.328E-08	6.036E-08	6.395E-08	5.965E-08
FR223	6.636E-12	6.761E-12	6.886E-12	7.464E-12	8.329E-12	1.016E-11	1.888E-11	2.968E-11	6.496E-11	1.653E-10
RA223	4.815E-10	4.819E-10	4.842E-10	5.138E-10	5.738E-10	7.177E-10	1.370E-09	2.153E-09	4.712E-09	1.198E-08
RA224	2.407E-08	2.443E-08	2.502E-08	2.803E-08	3.157E-08	3.771E-08	5.328E-08	6.036E-08	6.395E-08	5.965E-08
RA226	7.763E-15	7.939E-15	8.117E-15	8.938E-15	1.018E-14	1.284E-14	2.605E-14	4.335E-14	1.046E-13	3.055E-13
RA228	5.374E-10	5.416E-10	5.457E-10	5.642E-10	5.903E-10	6.405E-10	8.173E-10	9.610E-10	1.214E-09	1.454E-09
AC227	4.809E-10	4.899E-10	4.990E-10	5.409E-10	6.035E-10	7.366E-10	1.368E-09	2.150E-09	4.707E-09	1.198E-08
TH227	4.749E-10	4.766E-10	4.812E-10	5.164E-10	5.768E-10	7.065E-10	1.351E-09	2.124E-09	4.647E-09	1.182E-08
TH228	2.402E-08	2.464E-08	2.525E-08	2.790E-08	3.143E-08	3.758E-08	5.318E-08	6.022E-08	6.390E-08	5.964E-08
TH229	4.643E-11	4.733E-11	4.823E-11	5.236E-11	5.834E-11	7.033E-11	1.183E-10	1.662E-10	2.860E-10	5.254E-10
TH230	1.057E-11	1.066E-11	1.075E-11	1.115E-11	1.174E-11	1.292E-11	1.764E-11	2.239E-11	3.440E-11	5.893E-11
TH231	9.254E-05	7.279E-05	7.279E-05	7.278E-05	7.278E-05	7.278E-05	7.278E-05	7.278E-05	7.278E-05	7.278E-05
TH232	1.587E-09	1.587E-09	1.587E-09	1.587E-09	1.587E-09	1.587E-09	1.587E-09	1.587E-09	1.587E-09	1.587E-09
TH234	4.839E-05	4.838E-05	4.837E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05
PA231	7.845E-09	7.912E-09	7.978E-09	8.251E-09	8.642E-09	9.417E-09	1.250E-08	1.558E-08	2.328E-08	3.867E-08
PA233	1.529E-02	1.068E-02	7.456E-03	1.471E-03	1.422E-04	2.216E-06	9.117E-07	9.118E-07	9.123E-07	9.140E-07
PA234M	5.128E-05	4.838E-05	4.837E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05
PA234	6.236E-06	6.290E-08	6.289E-08	6.287E-08	6.286E-08	6.286E-08	6.286E-08	6.286E-08	6.286E-08	6.286E-08
U232	6.816E-08	6.832E-08	6.830E-08	6.820E-08	6.806E-08	6.778E-08	6.661E-08	6.541E-08	6.242E-08	5.673E-08
U233	2.469E-07	2.491E-07	2.506E-07	2.533E-07	2.540E-07	2.540E-07	2.540E-07	2.540E-07	2.541E-07	2.541E-07
U234	2.608E-07	2.609E-07	2.609E-07	2.610E-07	2.613E-07	2.617E-07	2.633E-07	2.650E-07	2.689E-07	2.765E-07
U235	7.278E-05	7.278E-05	7.278E-05	7.278E-05	7.278E-05	7.278E-05	7.278E-05	7.278E-05	7.278E-05	7.278E-05
U236	2.475E-05	2.475E-05	2.475E-05	2.475E-05	2.475E-05	2.475E-05	2.475E-05	2.475E-05	2.475E-05	2.476E-05
U237	1.245E+00	2.956E-01	7.021E-02	1.061E-04	1.572E-08	6.521E-09	5.923E-09	5.380E-09	4.230E-09	2.615E-09
U238	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05	4.836E-05
NP237	9.008E-07	9.090E-07	9.109E-07	9.116E-07	9.116E-07	9.116E-07	9.117E-07	9.118E-07	9.123E-07	9.140E-07
PU236	1.037E-08	1.031E-08	1.022E-08	9.795E-09	9.217E-09	8.163E-09	5.021E-09	3.089E-09	9.167E-10	8.079E-11
PU237	7.782E-08	6.290E-08	5.084E-08	1.944E-08	4.856E-09	3.031E-10	4.596E-15	6.971E-20	6.244E-32	0.000E+00
PU238	2.440E-04	2.454E-04	2.454E-04	2.455E-04	2.454E-04	2.448E-04	2.414E-04	2.376E-04	2.284E-04	2.111E-04

Table A.3 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	1.266E-02	1.269E-02	1.269E-02	1.269E-02	1.269E-02	1.269E-02	1.269E-02	1.269E-02	1.269E-02	1.268E-02
PU240	1.413E-03	1.413E-03	1.413E-03	1.413E-03	1.413E-03	1.412E-03	1.412E-03	1.412E-03	1.411E-03	1.410E-03
PU241	2.789E-02	2.784E-02	2.779E-02	2.756E-02	2.723E-02	2.658E-02	2.415E-02	2.193E-02	1.724E-02	1.066E-02
PU242	1.337E-08	1.337E-08	1.337E-08	1.337E-08	1.337E-08	1.337E-08	1.337E-08	1.337E-08	1.337E-08	1.337E-08
PU244	1.932E-18	1.932E-18	1.932E-18	1.932E-18	1.932E-18	1.932E-18	1.932E-18	1.932E-18	1.932E-18	1.932E-18
AM241	4.450E-05	4.621E-05	4.791E-05	5.558E-05	6.654E-05	8.803E-05	1.689E-04	2.420E-04	3.956E-04	6.067E-04
AM242M	1.349E-07	1.348E-07	1.348E-07	1.347E-07	1.345E-07	1.342E-07	1.330E-07	1.318E-07	1.288E-07	1.231E-07
AM242	7.196E-04	1.345E-07	1.341E-07	1.340E-07	1.339E-07	1.336E-07	1.324E-07	1.312E-07	1.282E-07	1.225E-07
AM243	2.681E-09	2.683E-09	2.683E-09	2.683E-09	2.683E-09	2.683E-09	2.683E-09	2.682E-09	2.681E-09	2.678E-09
CM242	3.485E-04	3.307E-04	3.116E-04	2.382E-04	1.617E-04	7.456E-05	3.461E-06	2.596E-07	1.061E-07	1.013E-07
CM243	3.654E-09	3.651E-09	3.647E-09	3.632E-09	3.610E-09	3.566E-09	3.397E-09	3.236E-09	2.866E-09	2.247E-09
CM244	1.121E-08	1.120E-08	1.119E-08	1.111E-08	1.101E-08	1.080E-08	1.000E-08	9.267E-09	7.654E-09	5.221E-09
CM245	2.946E-14	2.946E-14	2.946E-14	2.946E-14	2.946E-14	2.946E-14	2.946E-14	2.945E-14	2.944E-14	2.941E-14
CM246	2.372E-16	2.372E-16	2.372E-16	2.372E-16	2.372E-16	2.372E-16	2.371E-16	2.370E-16	2.369E-16	2.365E-16
CM247	1.553E-23	1.553E-23	1.553E-23	1.553E-23	1.553E-23	1.553E-23	1.553E-23	1.553E-23	1.553E-23	1.553E-23
Subtotal Ci**	9.069E+02	6.391E+02	5.033E+02	2.790E+02	1.686E+02	9.706E+01	4.124E+01	2.913E+01	2.116E+01	1.547E+01
Total Ci***	6.872E+03	6.547E+02	5.067E+02	2.809E+02	1.697E+02	9.742E+01	4.125E+01	2.913E+01	2.116E+01	1.547E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table A.4 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table A.4 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: alum.4

BURNUP (BU)

BU: U-235 3.0 g
 BU: % U-235 8.33%
 BU: MWd 2.85
 BU: MWd/MTU 15833
 U-235 DEPL 3.50 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	4.040E-02	4.032E-02	4.023E-02	3.984E-02	3.928E-02	3.820E-02	3.415E-02	3.052E-02	2.306E-02	1.316E-02
BE 10	6.319E-08	6.319E-08	6.319E-08	6.319E-08	6.319E-08	6.319E-08	6.319E-08	6.319E-08	6.318E-08	6.318E-08
C 14	1.164E-04	1.164E-04	1.164E-04	1.164E-04	1.164E-04	1.164E-04	1.163E-04	1.163E-04	1.162E-04	1.161E-04
CL 36	1.158E-07	1.158E-07	1.158E-07	1.158E-07	1.158E-07	1.158E-07	1.158E-07	1.158E-07	1.158E-07	1.158E-07
CR 51	3.627E-01	2.556E-01	1.800E-01	3.700E-02	3.774E-03	3.928E-05	4.605E-13	5.399E-21	8.037E-41	0.000E+00
MN 54	1.238E-02	1.200E-02	1.164E-02	1.011E-02	8.260E-03	5.510E-03	1.091E-03	2.161E-04	3.773E-06	1.150E-09
FE 55	8.741E-02	8.652E-02	8.564E-02	8.178E-02	7.651E-02	6.697E-02	3.931E-02	2.307E-02	6.089E-03	4.242E-04
FE 59	3.755E-03	3.027E-03	2.439E-03	9.208E-04	2.258E-04	1.358E-05	1.776E-10	2.324E-15	1.438E-27	0.000E+00
CO 60	1.604E-01	1.596E-01	1.588E-01	1.552E-01	1.502E-01	1.407E-01	1.081E-01	8.314E-02	4.309E-02	1.158E-02
NI 59	3.162E-06	3.162E-06	3.162E-06	3.162E-06	3.162E-06	3.162E-06	3.162E-06	3.162E-06	3.162E-06	3.162E-06
NI 63	4.314E-04	4.312E-04	4.311E-04	4.305E-04	4.297E-04	4.281E-04	4.217E-04	4.154E-04	4.001E-04	3.711E-04
ZN 65	2.793E-02	2.684E-02	2.579E-02	2.155E-02	1.663E-02	9.897E-03	1.243E-03	1.561E-04	8.719E-07	2.722E-11
SE 79	3.696E-05	3.696E-05	3.696E-05	3.696E-05	3.696E-05	3.696E-05	3.696E-05	3.696E-05	3.696E-05	3.696E-05
KR 85	1.001E+00	9.984E-01	9.959E-01	9.848E-01	9.690E-01	9.382E-01	8.245E-01	7.245E-01	5.245E-01	2.749E-01
RB 87	2.477E-09	2.477E-09	2.477E-09	2.477E-09	2.477E-09	2.477E-09	2.477E-09	2.477E-09	2.477E-09	2.477E-09
SR 89	7.669E+01	6.330E+01	5.223E+01	2.192E+01	6.265E+00	5.117E-01	2.276E-05	1.013E-09	1.337E-20	0.000E+00
SR 90	8.424E+00	8.416E+00	8.409E+00	8.374E+00	8.325E+00	8.226E+00	7.844E+00	7.480E+00	6.641E+00	5.235E+00
Y 90	8.805E+00	8.428E+00	8.411E+00	8.376E+00	8.327E+00	8.228E+00	7.846E+00	7.481E+00	6.643E+00	5.236E+00
Y 91	9.375E+01	7.998E+01	6.776E+01	3.203E+01	1.086E+01	1.250E+00	2.193E-04	3.846E-08	1.567E-17	2.601E-36
ZR 93	2.315E-04	2.316E-04	2.316E-04	2.316E-04	2.316E-04	2.316E-04	2.316E-04	2.316E-04	2.316E-04	2.316E-04
ZR 95	1.121E+02	9.635E+01	8.280E+01	4.173E+01	1.553E+01	2.150E+00	7.904E-04	2.905E-07	7.528E-16	5.054E-33
NB 93M	2.098E-05	2.137E-05	2.176E-05	2.350E-05	2.598E-05	3.086E-05	4.918E-05	6.572E-05	1.004E-04	1.481E-04

Table A.4 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	9.663E-06	9.663E-06	9.663E-06	9.663E-06	9.662E-06	9.662E-06	9.662E-06	9.661E-06	9.659E-06	9.656E-06
NB 95	1.148E+02	1.121E+02	1.066E+02	7.044E+01	3.079E+01	4.672E+00	1.755E-03	6.450E-07	1.671E-15	1.122E-32
NB 95M	7.880E-01	7.119E-01	6.140E-01	3.096E-01	1.152E-01	1.595E-02	5.863E-06	2.155E-09	5.584E-18	3.748E-35
MO 93	2.386E-07	2.386E-07	2.386E-07	2.385E-07	2.385E-07	2.385E-07	2.384E-07	2.383E-07	2.381E-07	2.376E-07
TC 99	1.264E-03	1.267E-03	1.267E-03	1.267E-03	1.267E-03	1.267E-03	1.267E-03	1.267E-03	1.267E-03	1.267E-03
RU103	5.230E+01	4.085E+01	3.191E+01	1.045E+01	2.089E+00	8.345E-02	2.125E-07	5.409E-13	5.594E-27	0.000E+00
RU106	7.264E+00	7.075E+00	6.891E+00	6.117E+00	5.152E+00	3.654E+00	9.244E-01	2.339E-01	7.530E-03	7.806E-06
RH103M	4.710E+01	3.683E+01	2.877E+01	9.424E+00	1.883E+00	7.523E-02	1.915E-07	4.876E-13	5.043E-27	0.000E+00
RH106	7.337E+00	7.075E+00	6.891E+00	6.117E+00	5.152E+00	3.654E+00	9.244E-01	2.339E-01	7.530E-03	7.806E-06
PD107	1.570E-06	1.570E-06	1.570E-06	1.570E-06	1.570E-06	1.570E-06	1.570E-06	1.570E-06	1.570E-06	1.570E-06
AG110	4.597E-02	2.197E-05	2.113E-05	1.774E-05	1.377E-05	8.299E-06	1.096E-06	1.446E-07	9.155E-10	3.670E-14
AG110M	1.718E-03	1.652E-03	1.589E-03	1.333E-03	1.035E-03	6.240E-04	8.237E-05	1.087E-05	6.884E-08	2.759E-12
AG111	5.354E-01	1.459E-01	3.967E-02	1.104E-04	2.269E-08	9.590E-16	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.135E-03	1.133E-03	1.131E-03	1.121E-03	1.108E-03	1.082E-03	9.840E-04	8.949E-04	7.058E-04	4.390E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	2.651E-02	2.132E-02	1.716E-02	6.418E-03	1.554E-03	9.110E-05	1.076E-09	1.270E-14	6.091E-27	0.000E+00
IN114	9.566E-04	3.111E-04	2.558E-04	1.055E-04	2.941E-05	2.286E-06	8.331E-11	3.037E-15	2.438E-26	0.000E+00
IN114M	3.955E-04	3.250E-04	2.672E-04	1.102E-04	3.072E-05	2.388E-06	8.706E-11	3.174E-15	2.548E-26	0.000E+00
IN115M	2.684E-01	3.765E-03	4.951E-05	4.506E-07	1.091E-07	6.395E-09	7.553E-14	8.921E-19	4.276E-31	0.000E+00
SN119M	1.300E+00	1.250E+00	1.202E+00	1.004E+00	7.762E-01	4.632E-01	5.874E-02	7.448E-03	4.264E-05	1.398E-09
SN121M	1.932E-04	1.931E-04	1.930E-04	1.926E-04	1.919E-04	1.906E-04	1.854E-04	1.803E-04	1.683E-04	1.465E-04
SN123	1.594E-01	1.479E-01	1.372E-01	9.769E-02	5.987E-02	2.248E-02	4.473E-04	8.898E-06	4.966E-10	1.547E-18
SN125	6.792E-01	2.481E-01	9.070E-02	9.605E-04	1.359E-06	2.717E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	3.413E-05	3.413E-05	3.413E-05	3.413E-05	3.413E-05	3.413E-05	3.413E-05	3.413E-05	3.413E-05	3.413E-05
SB124	2.623E-03	2.233E-03	1.900E-03	9.173E-04	3.207E-04	3.922E-05	8.770E-09	1.961E-12	1.466E-21	8.189E-40
SB125	8.841E-01	8.797E-01	8.728E-01	8.366E-01	7.859E-01	6.936E-01	4.206E-01	2.550E-01	7.305E-02	5.992E-03
SB126	1.807E-02	8.261E-03	3.779E-03	1.146E-04	5.445E-06	4.779E-06	4.779E-06	4.778E-06	4.778E-06	4.778E-06
SB126M	8.970E-03	3.413E-05	3.413E-05	3.413E-05	3.413E-05	3.413E-05	3.413E-05	3.413E-05	3.413E-05	3.413E-05
TE123M	1.996E-06	1.841E-06	1.697E-06	1.176E-06	6.935E-07	2.410E-07	3.514E-09	5.124E-11	1.315E-15	8.667E-25
TE125M	1.961E-01	1.971E-01	1.978E-01	1.969E-01	1.893E-01	1.690E-01	1.027E-01	6.225E-02	1.782E-02	1.462E-03
TE127	2.712E+00	5.617E-01	3.373E-01	2.142E-01	1.199E-01	3.757E-02	3.621E-04	3.490E-06	3.183E-11	2.648E-21
TE127M	3.766E-01	3.563E-01	3.269E-01	2.187E-01	1.224E-01	3.835E-02	3.697E-04	3.563E-06	3.250E-11	2.704E-21
TE129	1.125E+01	8.279E-01	6.202E-01	1.682E-01	2.561E-02	5.933E-04	1.710E-10	4.927E-17	2.197E-33	0.000E+00
TE129M	1.690E+00	1.272E+00	9.529E-01	2.584E-01	3.934E-02	9.114E-04	2.627E-10	7.570E-17	3.375E-33	0.000E+00
I129	2.076E-06	2.079E-06	2.081E-06	2.085E-06	2.086E-06	2.086E-06	2.086E-06	2.086E-06	2.086E-06	2.086E-06
I131	4.687E+01	1.440E+01	4.308E+00	1.846E-02	7.079E-06	1.041E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A.4 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	5.203E-01	3.898E-01	2.202E-01	7.602E-03	3.928E-05	9.520E-10	3.230E-28	1.096E-46	0.000E+00	0.000E+00
XE133	1.089E+02	2.106E+01	3.318E+00	7.780E-04	4.510E-09	1.516E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	6.357E-01	6.276E-01	6.196E-01	5.845E-01	5.374E-01	4.543E-01	2.321E-01	1.185E-01	2.209E-02	7.681E-04
CS135	1.096E-04	1.097E-04	1.097E-04	1.097E-04	1.097E-04	1.097E-04	1.097E-04	1.097E-04	1.097E-04	1.097E-04
CS136	3.834E-01	1.828E-01	8.717E-02	3.070E-03	2.458E-05	1.575E-09	2.660E-26	4.490E-43	0.000E+00	0.000E+00
CS137	8.817E+00	8.809E+00	8.801E+00	8.766E+00	8.716E+00	8.616E+00	8.227E+00	7.856E+00	6.999E+00	5.556E+00
BA136M	6.319E-02	3.013E-02	1.437E-02	5.059E-04	4.051E-06	2.596E-10	4.383E-27	7.400E-44	0.000E+00	0.000E+00
BA137M	8.345E+00	8.333E+00	8.326E+00	8.293E+00	8.245E+00	8.150E+00	7.783E+00	7.431E+00	6.621E+00	5.256E+00
BA140	1.000E+02	4.685E+01	2.194E+01	7.119E-01	5.065E-03	2.564E-07	1.685E-24	1.107E-41	0.000E+00	0.000E+00
LA140	1.003E+02	5.387E+01	2.524E+01	8.192E-01	5.829E-03	2.951E-07	1.939E-24	1.274E-41	0.000E+00	0.000E+00
CE141	9.507E+01	7.092E+01	5.262E+01	1.366E+01	1.953E+00	3.988E-02	6.944E-09	1.209E-15	1.529E-32	0.000E+00
CE142	2.532E-09	2.532E-09	2.532E-09	2.532E-09	2.532E-09	2.532E-09	2.532E-09	2.532E-09	2.532E-09	2.532E-09
CE144	8.536E+01	8.249E+01	7.972E+01	6.833E+01	5.470E+01	3.505E+01	5.911E+00	9.967E-01	1.164E-02	1.587E-06
PR143	9.501E+01	5.173E+01	2.530E+01	9.988E-01	9.429E-03	8.403E-07	5.300E-23	3.343E-39	0.000E+00	0.000E+00
PR144	8.538E+01	8.250E+01	7.973E+01	6.833E+01	5.470E+01	3.505E+01	5.911E+00	9.967E-01	1.164E-02	1.587E-06
PR144M	1.025E+00	9.899E-01	9.567E-01	8.200E-01	6.564E-01	4.206E-01	7.093E-02	1.196E-02	1.397E-04	1.904E-08
ND144	8.788E-14	8.895E-14	8.997E-14	9.420E-14	9.925E-14	1.065E-13	1.173E-13	1.191E-13	1.195E-13	1.195E-13
ND147	3.678E+01	1.531E+01	6.366E+00	1.209E-01	3.970E-04	4.282E-09	5.793E-29	7.837E-49	0.000E+00	0.000E+00
PM145	2.873E-03	2.910E-03	2.945E-03	3.092E-03	3.267E-03	3.514E-03	3.763E-03	3.596E-03	2.987E-03	2.020E-03
PM147	2.309E+01	2.310E+01	2.297E+01	2.201E+01	2.061E+01	1.806E+01	1.065E+01	6.281E+00	1.678E+00	1.197E-01
PM148M	4.454E-01	3.522E-01	2.784E-01	9.630E-02	2.082E-02	9.730E-04	4.643E-09	2.215E-14	1.102E-27	0.000E+00
PM148	1.572E+00	2.737E-01	5.736E-02	5.440E-03	1.173E-03	5.481E-05	2.615E-10	1.248E-15	6.205E-29	0.000E+00
SM145	2.784E-02	2.705E-02	2.629E-02	2.311E-02	1.919E-02	1.323E-02	2.987E-03	6.746E-04	1.635E-05	9.599E-09
SM147	6.475E-08	6.476E-08	6.476E-08	6.479E-08	6.482E-08	6.489E-08	6.507E-08	6.518E-08	6.529E-08	6.533E-08
SM151	1.082E+00	1.081E+00	1.081E+00	1.080E+00	1.078E+00	1.073E+00	1.057E+00	1.041E+00	1.002E+00	9.275E-01
EU152	2.044E-02	2.040E-02	2.036E-02	2.018E-02	1.993E-02	1.943E-02	1.754E-02	1.584E-02	1.228E-02	7.380E-03
EU154	2.439E+00	2.432E+00	2.424E+00	2.390E+00	2.343E+00	2.250E+00	1.915E+00	1.630E+00	1.090E+00	4.870E-01
EU155	2.201E+00	2.190E+00	2.178E+00	2.126E+00	2.053E+00	1.915E+00	1.448E+00	1.095E+00	5.447E-01	1.348E-01
EU156	1.680E+00	8.908E-01	4.701E-01	2.620E-02	4.069E-04	9.808E-08	3.312E-22	1.119E-36	0.000E+00	0.000E+00
GD153	4.432E-03	4.258E-03	4.090E-03	3.413E-03	2.628E-03	1.558E-03	1.926E-04	2.380E-05	1.277E-07	3.685E-12
TB160	1.597E-03	1.397E-03	1.222E-03	6.662E-04	2.778E-04	4.829E-05	4.412E-08	4.029E-11	1.016E-18	6.463E-34
TL206	4.474E-06	6.815E-13	6.815E-13	6.815E-13	6.815E-13	6.815E-13	6.815E-13	6.815E-13	6.815E-13	6.815E-13
TL207	5.197E-10	5.202E-10	5.226E-10	5.545E-10	6.188E-10	7.721E-10	1.453E-09	2.256E-09	4.826E-09	1.200E-08
TL208	1.425E-08	1.447E-08	1.482E-08	1.661E-08	1.873E-08	2.240E-08	3.170E-08	3.594E-08	3.808E-08	3.546E-08
PB210	1.346E-15	1.381E-15	1.408E-15	1.489E-15	1.591E-15	1.831E-15	3.448E-15	6.345E-15	2.108E-14	9.642E-14
PB211	5.211E-10	5.216E-10	5.240E-10	5.560E-10	6.206E-10	7.742E-10	1.457E-09	2.262E-09	4.840E-09	1.203E-08

Table A.4 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	3.966E-08	4.027E-08	4.126E-08	4.624E-08	5.212E-08	6.234E-08	8.823E-08	1.000E-07	1.060E-07	9.868E-08
BI211	5.211E-10	5.216E-10	5.240E-10	5.560E-10	6.206E-10	7.742E-10	1.457E-09	2.262E-09	4.840E-09	1.203E-08
BI212	3.966E-08	4.027E-08	4.126E-08	4.624E-08	5.212E-08	6.234E-08	8.823E-08	1.000E-07	1.060E-07	9.868E-08
PO212	2.541E-08	2.580E-08	2.643E-08	2.963E-08	3.340E-08	3.994E-08	5.653E-08	6.408E-08	6.790E-08	6.322E-08
PO215	5.211E-10	5.216E-10	5.240E-10	5.560E-10	6.206E-10	7.742E-10	1.457E-09	2.262E-09	4.840E-09	1.203E-08
PO216	3.966E-08	4.027E-08	4.126E-08	4.624E-08	5.212E-08	6.234E-08	8.823E-08	1.000E-07	1.060E-07	9.868E-08
RN219	5.211E-10	5.216E-10	5.240E-10	5.560E-10	6.206E-10	7.742E-10	1.457E-09	2.262E-09	4.840E-09	1.203E-08
RN220	3.966E-08	4.027E-08	4.126E-08	4.624E-08	5.212E-08	6.234E-08	8.823E-08	1.000E-07	1.060E-07	9.868E-08
FR223	7.182E-12	7.317E-12	7.453E-12	8.076E-12	9.004E-12	1.096E-11	2.008E-11	3.117E-11	6.673E-11	1.659E-10
RA223	5.211E-10	5.216E-10	5.240E-10	5.560E-10	6.206E-10	7.742E-10	1.457E-09	2.262E-09	4.840E-09	1.203E-08
RA224	3.966E-08	4.027E-08	4.126E-08	4.624E-08	5.212E-08	6.234E-08	8.823E-08	1.000E-07	1.060E-07	9.868E-08
RA226	1.164E-14	1.191E-14	1.218E-14	1.341E-14	1.527E-14	1.927E-14	3.907E-14	6.502E-14	1.571E-13	4.614E-13
RA228	5.369E-10	5.410E-10	5.452E-10	5.636E-10	5.897E-10	6.399E-10	8.165E-10	9.601E-10	1.212E-09	1.453E-09
AC227	5.205E-10	5.302E-10	5.401E-10	5.852E-10	6.525E-10	7.943E-10	1.455E-09	2.259E-09	4.835E-09	1.202E-08
TH227	5.140E-10	5.158E-10	5.208E-10	5.587E-10	6.237E-10	7.621E-10	1.437E-09	2.231E-09	4.773E-09	1.187E-08
TH228	3.960E-08	4.062E-08	4.164E-08	4.604E-08	5.190E-08	6.211E-08	8.807E-08	9.979E-08	1.059E-07	9.867E-08
TH229	6.922E-11	7.057E-11	7.192E-11	7.808E-11	8.703E-11	1.049E-10	1.766E-10	2.483E-10	4.273E-10	7.853E-10
TH230	1.587E-11	1.601E-11	1.614E-11	1.675E-11	1.762E-11	1.938E-11	2.644E-11	3.359E-11	5.181E-11	8.966E-11
TH231	1.006E-04	7.028E-05	7.028E-05	7.027E-05	7.027E-05	7.027E-05	7.027E-05	7.027E-05	7.027E-05	7.027E-05
TH232	1.585E-09	1.585E-09	1.585E-09	1.585E-09	1.585E-09	1.585E-09	1.585E-09	1.585E-09	1.585E-09	1.585E-09
TH234	4.840E-05	4.837E-05	4.835E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05
PA231	8.489E-09	8.555E-09	8.618E-09	8.882E-09	9.260E-09	1.001E-08	1.299E-08	1.596E-08	2.339E-08	3.825E-08
PA233	2.348E-02	1.640E-02	1.145E-02	2.260E-03	2.189E-04	3.897E-06	1.893E-06	1.894E-06	1.895E-06	1.901E-06
PA234M	5.522E-05	4.837E-05	4.835E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05
PA234	1.464E-05	6.288E-08	6.286E-08	6.282E-08	6.281E-08	6.281E-08	6.281E-08	6.281E-08	6.281E-08	6.281E-08
U232	1.132E-07	1.135E-07	1.135E-07	1.133E-07	1.131E-07	1.127E-07	1.110E-07	1.091E-07	1.042E-07	9.475E-08
U233	3.688E-07	3.721E-07	3.744E-07	3.787E-07	3.797E-07	3.798E-07	3.798E-07	3.798E-07	3.798E-07	3.799E-07
U234	3.883E-07	3.884E-07	3.885E-07	3.889E-07	3.895E-07	3.906E-07	3.951E-07	3.996E-07	4.104E-07	4.310E-07
U235	7.027E-05	7.027E-05	7.027E-05	7.027E-05	7.027E-05	7.027E-05	7.027E-05	7.027E-05	7.027E-05	7.027E-05
U236	3.697E-05	3.697E-05	3.697E-05	3.697E-05	3.697E-05	3.697E-05	3.697E-05	3.697E-05	3.697E-05	3.697E-05
U237	2.715E+00	6.448E-01	1.531E-01	2.314E-04	4.178E-08	2.153E-08	1.956E-08	1.776E-08	1.397E-08	8.633E-09
U238	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05	4.832E-05
NP237	1.869E-06	1.887E-06	1.891E-06	1.893E-06	1.893E-06	1.893E-06	1.893E-06	1.894E-06	1.895E-06	1.901E-06
PU236	3.206E-08	3.187E-08	3.157E-08	3.027E-08	2.849E-08	2.523E-08	1.552E-08	9.547E-09	2.833E-09	2.497E-10
PU237	1.843E-07	1.490E-07	1.204E-07	4.605E-08	1.150E-08	7.179E-10	1.089E-14	1.651E-19	1.479E-31	0.000E+00
PU238	7.480E-04	7.526E-04	7.530E-04	7.538E-04	7.543E-04	7.536E-04	7.436E-04	7.320E-04	7.037E-04	6.503E-04

Table A.4 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	1.840E-02	1.845E-02	1.845E-02	1.845E-02	1.845E-02	1.845E-02	1.845E-02	1.845E-02	1.845E-02	1.844E-02	1.844E-02
PU240	3.096E-03	3.096E-03	3.096E-03	3.096E-03	3.096E-03	3.096E-03	3.095E-03	3.095E-03	3.094E-03	3.092E-03	3.089E-03
PU241	9.210E-02	9.194E-02	9.177E-02	9.100E-02	8.992E-02	8.778E-02	7.973E-02	7.241E-02	5.693E-02	5.693E-02	3.519E-02
PU242	6.789E-08	6.789E-08	6.789E-08	6.789E-08	6.789E-08	6.789E-08	6.789E-08	6.789E-08	6.789E-08	6.789E-08	6.789E-08
PU244	2.306E-17	2.306E-17	2.306E-17	2.306E-17	2.306E-17	2.306E-17	2.306E-17	2.306E-17	2.306E-17	2.306E-17	2.306E-17
AM241	1.460E-04	1.516E-04	1.572E-04	1.826E-04	2.187E-04	2.897E-04	5.566E-04	7.980E-04	1.305E-03	1.305E-03	2.003E-03
AM242M	6.297E-07	6.296E-07	6.295E-07	6.290E-07	6.283E-07	6.268E-07	6.211E-07	6.155E-07	6.016E-07	6.016E-07	5.748E-07
AM242	3.630E-03	6.282E-07	6.263E-07	6.258E-07	6.251E-07	6.237E-07	6.180E-07	6.124E-07	5.986E-07	5.986E-07	5.720E-07
AM243	2.074E-08	2.076E-08	2.076E-08	2.076E-08	2.076E-08	2.076E-08	2.076E-08	2.075E-08	2.074E-08	2.074E-08	2.072E-08
CM242	1.762E-03	1.672E-03	1.575E-03	1.204E-03	8.175E-04	3.769E-04	1.746E-05	1.270E-06	4.956E-07	4.956E-07	4.730E-07
CM243	2.815E-08	2.812E-08	2.810E-08	2.798E-08	2.781E-08	2.747E-08	2.617E-08	2.493E-08	2.208E-08	2.208E-08	1.731E-08
CM244	1.328E-07	1.328E-07	1.326E-07	1.318E-07	1.305E-07	1.280E-07	1.186E-07	1.099E-07	9.075E-08	9.075E-08	6.191E-08
CM245	5.274E-13	5.274E-13	5.274E-13	5.273E-13	5.273E-13	5.273E-13	5.272E-13	5.271E-13	5.269E-13	5.269E-13	5.265E-13
CM246	6.498E-15	6.498E-15	6.498E-15	6.498E-15	6.498E-15	6.497E-15	6.496E-15	6.494E-15	6.489E-15	6.489E-15	6.479E-15
CM247	6.492E-22	6.492E-22	6.492E-22	6.492E-22	6.492E-22	6.492E-22	6.492E-22	6.492E-22	6.492E-22	6.492E-22	6.492E-22
Subtotal Ci**	1.360E+03	9.583E+02	7.550E+02	4.190E+02	2.537E+02	1.464E+02	6.247E+01	4.419E+01	3.207E+01	3.207E+01	2.333E+01
Total Ci***	1.028E+04	9.819E+02	7.599E+02	4.218E+02	2.553E+02	1.469E+02	6.248E+01	4.419E+01	3.207E+01	3.207E+01	2.333E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGIN output isotopes.

Table A.5 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table A.5 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: alum.5

BURNUP (BU)

BU: U-235 4.0 g
 BU: % U-235 11.11%
 BU: MWd 3.80
 BU: MWd/MTU 21111
 U-235 DEPL 4.66 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	5.398E-02	5.386E-02	5.375E-02	5.322E-02	5.248E-02	5.103E-02	4.561E-02	4.078E-02	3.081E-02	1.758E-02
BE 10	8.544E-08	8.544E-08	8.544E-08	8.544E-08	8.544E-08	8.544E-08	8.544E-08	8.544E-08	8.544E-08	8.544E-08
C 14	1.573E-04	1.573E-04	1.573E-04	1.573E-04	1.573E-04	1.573E-04	1.573E-04	1.573E-04	1.572E-04	1.570E-04
CL 36	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07
CR 51	4.957E-01	3.492E-01	2.460E-01	5.056E-02	5.158E-03	5.367E-05	6.293E-13	7.378E-21	1.098E-40	0.000E+00
MN 54	1.685E-02	1.633E-02	1.583E-02	1.376E-02	1.124E-02	7.497E-03	1.485E-03	2.941E-04	5.134E-06	1.565E-09
FE 55	1.185E-01	1.173E-01	1.161E-01	1.108E-01	1.037E-01	9.077E-02	5.327E-02	3.127E-02	8.253E-03	5.749E-04
FE 59	5.136E-03	4.140E-03	3.337E-03	1.260E-03	3.089E-04	1.858E-05	2.430E-10	3.178E-15	1.967E-27	0.000E+00
CO 60	2.170E-01	2.159E-01	2.148E-01	2.100E-01	2.032E-01	1.903E-01	1.463E-01	1.125E-01	5.829E-02	1.566E-02
NI 59	4.268E-06	4.268E-06	4.268E-06	4.268E-06	4.268E-06	4.268E-06	4.268E-06	4.268E-06	4.267E-06	4.267E-06
NI 63	5.830E-04	5.829E-04	5.827E-04	5.819E-04	5.808E-04	5.787E-04	5.700E-04	5.615E-04	5.407E-04	5.015E-04
ZN 65	3.805E-02	3.656E-02	3.514E-02	2.936E-02	2.265E-02	1.348E-02	1.693E-03	2.126E-04	1.188E-06	3.708E-11
SE 79	4.924E-05	4.925E-05	4.924E-05	4.924E-05	4.924E-05	4.924E-05	4.924E-05	4.924E-05	4.924E-05	4.923E-05
KR 85	1.331E+00	1.328E+00	1.325E+00	1.310E+00	1.289E+00	1.248E+00	1.097E+00	9.639E-01	6.978E-01	3.657E-01
RB 87	3.291E-09	3.291E-09	3.291E-09	3.291E-09	3.291E-09	3.291E-09	3.291E-09	3.291E-09	3.291E-09	3.291E-09
SR 89	1.015E+02	8.381E+01	6.916E+01	2.902E+01	8.295E+00	6.775E-01	3.014E-05	1.341E-09	1.771E-20	0.000E+00
SR 90	1.120E+01	1.119E+01	1.118E+01	1.114E+01	1.107E+01	1.094E+01	1.043E+01	9.948E+00	8.833E+00	6.963E+00
Y 90	1.173E+01	1.121E+01	1.119E+01	1.114E+01	1.107E+01	1.094E+01	1.044E+01	9.951E+00	8.835E+00	6.965E+00
Y 91	1.242E+02	1.060E+02	8.978E+01	4.244E+01	1.439E+01	1.656E+00	2.906E-04	5.096E-08	2.077E-17	3.446E-36
ZR 93	3.089E-04	3.090E-04	3.090E-04	3.090E-04	3.090E-04	3.090E-04	3.090E-04	3.090E-04	3.090E-04	3.090E-04
ZR 95	1.493E+02	1.282E+02	1.102E+02	5.553E+01	2.067E+01	2.862E+00	1.052E-03	3.866E-07	1.002E-15	6.726E-33
NB 93M	2.801E-05	2.852E-05	2.903E-05	3.137E-05	3.468E-05	4.119E-05	6.564E-05	8.771E-05	1.340E-04	1.977E-04

Table A.5 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	1.305E-05	1.305E-05	1.305E-05	1.305E-05	1.305E-05	1.305E-05	1.305E-05	1.305E-05	1.305E-05	1.304E-05
NB 95	1.528E+02	1.493E+02	1.419E+02	9.375E+01	4.098E+01	6.217E+00	2.336E-03	8.584E-07	2.224E-15	1.493E-32
NB 95M	1.049E+00	9.473E-01	8.172E-01	4.120E-01	1.533E-01	2.123E-02	7.803E-06	2.868E-09	7.432E-18	4.989E-35
MO 93	3.226E-07	3.226E-07	3.226E-07	3.226E-07	3.225E-07	3.225E-07	3.224E-07	3.223E-07	3.219E-07	3.213E-07
TC 99	1.681E-03	1.686E-03	1.686E-03	1.686E-03	1.686E-03	1.686E-03	1.686E-03	1.686E-03	1.686E-03	1.686E-03
RU103	7.000E+01	5.468E+01	4.271E+01	1.399E+01	2.796E+00	1.117E-01	2.843E-07	7.239E-13	7.487E-27	0.000E+00
RU106	1.002E+01	9.762E+00	9.508E+00	8.441E+00	7.108E+00	5.041E+00	1.276E+00	3.227E-01	1.039E-02	1.077E-05
RH103M	6.304E+01	4.929E+01	3.850E+01	1.261E+01	2.521E+00	1.007E-01	2.563E-07	6.526E-13	6.749E-27	0.000E+00
RH106	1.016E+01	9.762E+00	9.508E+00	8.441E+00	7.108E+00	5.041E+00	1.276E+00	3.227E-01	1.039E-02	1.077E-05
PD107	2.179E-06	2.179E-06	2.179E-06	2.179E-06	2.179E-06	2.179E-06	2.179E-06	2.179E-06	2.179E-06	2.179E-06
AG110	8.680E-02	4.058E-05	3.904E-05	3.276E-05	2.543E-05	1.533E-05	2.023E-06	2.671E-07	1.691E-09	6.777E-14
AG110M	3.172E-03	3.051E-03	2.935E-03	2.463E-03	1.913E-03	1.152E-03	1.521E-04	2.009E-05	1.271E-07	5.095E-12
AG111	7.467E-01	2.035E-01	5.532E-02	1.539E-04	3.164E-08	1.337E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.528E-03	1.526E-03	1.523E-03	1.510E-03	1.493E-03	1.458E-03	1.325E-03	1.205E-03	9.507E-04	5.913E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	3.565E-02	2.868E-02	2.308E-02	8.633E-03	2.090E-03	1.225E-04	1.448E-09	1.709E-14	8.193E-27	0.000E+00
IN114	1.646E-03	5.364E-04	4.410E-04	1.819E-04	5.071E-05	3.941E-06	1.437E-10	5.238E-15	4.205E-26	0.000E+00
IN114M	6.819E-04	5.605E-04	4.608E-04	1.901E-04	5.299E-05	4.117E-06	1.501E-10	5.474E-15	4.393E-26	0.000E+00
IN115M	3.605E-01	5.057E-03	6.651E-05	6.061E-07	1.467E-07	8.602E-09	1.016E-13	1.200E-18	5.752E-31	0.000E+00
SN119M	1.772E+00	1.703E+00	1.636E+00	1.369E+00	1.057E+00	6.309E-01	8.000E-02	1.014E-02	5.808E-05	1.904E-09
SN121M	2.614E-04	2.613E-04	2.611E-04	2.604E-04	2.596E-04	2.578E-04	2.507E-04	2.438E-04	2.276E-04	1.980E-04
SN123	2.151E-01	1.995E-01	1.851E-01	1.318E-01	8.077E-02	3.034E-02	6.034E-04	1.200E-05	6.700E-10	2.087E-18
SN125	9.229E-01	3.373E-01	1.233E-01	1.305E-03	1.846E-06	3.692E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	4.575E-05	4.575E-05	4.575E-05	4.575E-05	4.575E-05	4.575E-05	4.575E-05	4.575E-05	4.575E-05	4.574E-05
SB124	4.420E-03	3.762E-03	3.202E-03	1.546E-03	5.405E-04	6.608E-05	1.477E-08	3.304E-12	2.469E-21	1.379E-39
SB125	1.193E+00	1.187E+00	1.178E+00	1.129E+00	1.061E+00	9.360E-01	5.676E-01	3.442E-01	9.859E-02	8.086E-03
SB126	2.460E-02	1.125E-02	5.145E-03	1.559E-04	7.313E-06	6.405E-06	6.405E-06	6.405E-06	6.404E-06	6.404E-06
SB126M	1.227E-02	4.575E-05	4.575E-05	4.575E-05	4.575E-05	4.575E-05	4.575E-05	4.575E-05	4.575E-05	4.574E-05
TE123M	4.422E-06	4.078E-06	3.759E-06	2.606E-06	1.537E-06	5.339E-07	7.786E-09	1.135E-10	2.914E-15	1.920E-24
TE125M	2.644E-01	2.659E-01	2.668E-01	2.656E-01	2.554E-01	2.280E-01	1.385E-01	8.401E-02	2.405E-02	1.973E-03
TE127	3.646E+00	7.555E-01	4.539E-01	2.883E-01	1.614E-01	5.056E-02	4.873E-04	4.697E-06	4.284E-11	3.564E-21
TE127M	5.069E-01	4.795E-01	4.399E-01	2.943E-01	1.647E-01	5.162E-02	4.975E-04	4.795E-06	4.374E-11	3.638E-21
TE129	1.503E+01	1.107E+00	8.290E-01	2.248E-01	3.422E-02	7.929E-04	2.285E-10	6.585E-17	2.936E-33	0.000E+00
TE129M	2.258E+00	1.700E+00	1.273E+00	3.454E-01	5.257E-02	1.218E-03	3.510E-10	1.012E-16	4.511E-33	0.000E+00
I129	2.773E-06	2.777E-06	2.780E-06	2.785E-06	2.787E-06	2.787E-06	2.787E-06	2.787E-06	2.787E-06	2.787E-06
I131	6.233E+01	1.915E+01	5.729E+00	2.455E-02	9.413E-06	1.384E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A.5 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	6.919E-01	5.183E-01	2.928E-01	1.011E-02	5.223E-05	1.266E-09	4.295E-28	1.457E-46	0.000E+00	0.000E+00
XE133	1.446E+02	2.795E+01	4.404E+00	1.033E-03	5.987E-09	2.012E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.147E+00	1.132E+00	1.117E+00	1.055E+00	9.696E-01	8.197E-01	4.187E-01	2.138E-01	3.986E-02	1.385E-03
CS135	1.388E-04	1.389E-04	1.389E-04	1.389E-04	1.389E-04	1.389E-04	1.389E-04	1.389E-04	1.389E-04	1.389E-04
CS136	6.176E-01	2.945E-01	1.404E-01	4.944E-03	3.959E-05	2.537E-09	4.284E-26	7.231E-43	0.000E+00	0.000E+00
CS137	1.175E+01	1.174E+01	1.173E+01	1.169E+01	1.162E+01	1.148E+01	1.097E+01	1.047E+01	9.330E+00	7.406E+00
BA136M	1.018E-01	4.853E-02	2.314E-02	8.148E-04	6.524E-06	4.182E-10	7.059E-27	1.192E-43	0.000E+00	0.000E+00
BA137M	1.112E+01	1.111E+01	1.110E+01	1.105E+01	1.099E+01	1.086E+01	1.037E+01	9.906E+00	8.826E+00	7.006E+00
BA140	1.327E+02	6.213E+01	2.909E+01	9.442E-01	6.718E-03	3.401E-07	2.235E-24	1.468E-41	0.000E+00	0.000E+00
LA140	1.331E+02	7.144E+01	3.348E+01	1.087E+00	7.731E-03	3.914E-07	2.572E-24	1.690E-41	0.000E+00	0.000E+00
CE141	1.261E+02	9.407E+01	6.979E+01	1.812E+01	2.590E+00	5.290E-02	9.211E-09	1.604E-15	2.028E-32	0.000E+00
CE142	3.372E-09	3.373E-09	3.373E-09	3.373E-09	3.373E-09	3.373E-09	3.373E-09	3.373E-09	3.373E-09	3.373E-09
CE144	1.135E+02	1.097E+02	1.060E+02	9.088E+01	7.275E+01	4.662E+01	7.861E+00	1.326E+00	1.548E-02	2.111E-06
PR143	1.259E+02	6.855E+01	3.353E+01	1.324E+00	1.250E-02	1.114E-06	7.024E-23	4.430E-39	0.000E+00	0.000E+00
PR144	1.136E+02	1.097E+02	1.060E+02	9.088E+01	7.275E+01	4.662E+01	7.862E+00	1.326E+00	1.548E-02	2.111E-06
PR144M	1.363E+00	1.317E+00	1.272E+00	1.091E+00	8.730E-01	5.594E-01	9.434E-02	1.591E-02	1.858E-04	2.533E-08
ND144	1.185E-13	1.199E-13	1.212E-13	1.269E-13	1.336E-13	1.433E-13	1.576E-13	1.601E-13	1.605E-13	1.606E-13
ND147	4.879E+01	2.031E+01	8.445E+00	1.604E-01	5.266E-04	5.679E-09	7.684E-29	1.040E-48	0.000E+00	0.000E+00
PM145	3.872E-03	3.922E-03	3.971E-03	4.171E-03	4.409E-03	4.745E-03	5.086E-03	4.860E-03	4.037E-03	2.731E-03
PM147	3.034E+01	3.036E+01	3.019E+01	2.893E+01	2.709E+01	2.374E+01	1.400E+01	8.256E+00	2.205E+00	1.573E-01
PM148M	7.564E-01	5.980E-01	4.728E-01	1.635E-01	3.535E-02	1.652E-03	7.884E-09	3.762E-14	1.871E-27	0.000E+00
PM148	2.815E+00	4.888E-01	1.013E-01	9.240E-03	1.991E-03	9.307E-05	4.441E-10	2.119E-15	1.054E-28	0.000E+00
SM145	3.783E-02	3.677E-02	3.573E-02	3.141E-02	2.608E-02	1.798E-02	4.060E-03	9.168E-04	2.222E-05	1.305E-08
SM147	6.441E-08	6.441E-08	6.442E-08	6.445E-08	6.450E-08	6.458E-08	6.482E-08	6.496E-08	6.511E-08	6.516E-08
SM151	1.351E+00	1.350E+00	1.350E+00	1.348E+00	1.345E+00	1.340E+00	1.320E+00	1.299E+00	1.251E+00	1.158E+00
EU152	3.303E-02	3.296E-02	3.290E-02	3.261E-02	3.219E-02	3.138E-02	2.834E-02	2.560E-02	1.984E-02	1.193E-02
EU154	4.344E+00	4.331E+00	4.317E+00	4.258E+00	4.173E+00	4.008E+00	3.411E+00	2.904E+00	1.942E+00	8.676E-01
EU155	2.975E+00	2.959E+00	2.944E+00	2.873E+00	2.774E+00	2.587E+00	1.957E+00	1.480E+00	7.360E-01	1.821E-01
EU156	2.958E+00	1.567E+00	8.268E-01	4.608E-02	7.155E-04	1.725E-07	5.825E-22	1.967E-36	0.000E+00	0.000E+00
GD153	8.001E-03	7.686E-03	7.384E-03	6.160E-03	4.744E-03	2.813E-03	3.476E-04	4.296E-05	2.307E-07	6.653E-12
TB160	2.368E-03	2.071E-03	1.811E-03	9.874E-04	4.117E-04	7.157E-05	6.538E-08	5.973E-11	1.506E-18	9.579E-34
TL206	6.117E-06	9.215E-13	9.215E-13	9.215E-13	9.215E-13	9.215E-13	9.215E-13	9.215E-13	9.215E-13	9.215E-13
TL207	5.589E-10	5.594E-10	5.621E-10	5.963E-10	6.653E-10	8.283E-10	1.540E-09	2.365E-09	4.956E-09	1.205E-08
TL208	2.078E-08	2.110E-08	2.162E-08	2.426E-08	2.736E-08	3.276E-08	4.648E-08	5.276E-08	5.599E-08	5.212E-08
PB210	2.402E-15	2.464E-15	2.508E-15	2.628E-15	2.761E-15	3.072E-15	5.194E-15	9.028E-15	2.867E-14	1.301E-13
PB211	5.605E-10	5.610E-10	5.636E-10	5.980E-10	6.671E-10	8.306E-10	1.545E-09	2.371E-09	4.970E-09	1.209E-08

Table A.5 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	5.784E-08	5.873E-08	6.018E-08	6.751E-08	7.615E-08	9.118E-08	1.294E-07	1.468E-07	1.558E-07	1.451E-07
BI211	5.605E-10	5.610E-10	5.636E-10	5.980E-10	6.671E-10	8.306E-10	1.545E-09	2.371E-09	4.970E-09	1.209E-08
BI212	5.784E-08	5.873E-08	6.018E-08	6.751E-08	7.615E-08	9.118E-08	1.294E-07	1.468E-07	1.558E-07	1.451E-07
PO212	3.706E-08	3.763E-08	3.856E-08	4.325E-08	4.879E-08	5.842E-08	8.289E-08	9.408E-08	9.983E-08	9.294E-08
PO215	5.605E-10	5.610E-10	5.636E-10	5.980E-10	6.671E-10	8.306E-10	1.545E-09	2.371E-09	4.970E-09	1.209E-08
PO216	5.784E-08	5.873E-08	6.018E-08	6.751E-08	7.615E-08	9.118E-08	1.294E-07	1.468E-07	1.558E-07	1.451E-07
RN219	5.605E-10	5.610E-10	5.636E-10	5.980E-10	6.671E-10	8.306E-10	1.545E-09	2.371E-09	4.970E-09	1.209E-08
RN220	5.784E-08	5.873E-08	6.018E-08	6.751E-08	7.615E-08	9.118E-08	1.294E-07	1.468E-07	1.558E-07	1.451E-07
FR223	7.725E-12	7.870E-12	8.016E-12	8.684E-12	9.676E-12	1.176E-11	2.129E-11	3.268E-11	6.852E-11	1.667E-10
RA223	5.605E-10	5.610E-10	5.636E-10	5.980E-10	6.671E-10	8.306E-10	1.545E-09	2.371E-09	4.970E-09	1.209E-08
RA224	5.784E-08	5.873E-08	6.018E-08	6.751E-08	7.615E-08	9.118E-08	1.294E-07	1.468E-07	1.558E-07	1.451E-07
RA226	1.555E-14	1.590E-14	1.626E-14	1.790E-14	2.039E-14	2.573E-14	5.219E-14	8.687E-14	2.105E-13	6.236E-13
RA228	5.363E-10	5.405E-10	5.446E-10	5.631E-10	5.891E-10	6.392E-10	8.156E-10	9.591E-10	1.211E-09	1.451E-09
AC227	5.598E-10	5.703E-10	5.808E-10	6.293E-10	7.012E-10	8.519E-10	1.543E-09	2.368E-09	4.965E-09	1.208E-08
TH227	5.529E-10	5.548E-10	5.602E-10	6.009E-10	6.704E-10	8.177E-10	1.523E-09	2.339E-09	4.902E-09	1.192E-08
TH228	5.774E-08	5.925E-08	6.074E-08	6.721E-08	7.583E-08	9.085E-08	1.291E-07	1.465E-07	1.557E-07	1.450E-07
TH229	9.169E-11	9.347E-11	9.526E-11	1.034E-10	1.153E-10	1.391E-10	2.343E-10	3.295E-10	5.673E-10	1.043E-09
TH230	2.123E-11	2.140E-11	2.158E-11	2.239E-11	2.355E-11	2.588E-11	3.533E-11	4.495E-11	6.977E-11	1.225E-10
TH231	1.092E-04	6.779E-05	6.779E-05	6.778E-05	6.778E-05	6.778E-05	6.778E-05	6.778E-05	6.778E-05	6.778E-05
TH232	1.584E-09	1.584E-09	1.584E-09	1.584E-09	1.584E-09	1.584E-09	1.584E-09	1.584E-09	1.584E-09	1.584E-09
TH234	4.842E-05	4.837E-05	4.834E-05	4.829E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05
PA231	9.139E-09	9.204E-09	9.265E-09	9.519E-09	9.883E-09	1.061E-08	1.348E-08	1.635E-08	2.352E-08	3.784E-08
PA233	3.206E-02	2.240E-02	1.564E-02	3.086E-03	2.995E-04	5.973E-06	3.238E-06	3.239E-06	3.243E-06	3.255E-06
PA234M	6.116E-05	4.837E-05	4.834E-05	4.829E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05
PA234	2.728E-05	6.289E-08	6.284E-08	6.277E-08	6.276E-08	6.276E-08	6.276E-08	6.276E-08	6.276E-08	6.276E-08
U232	1.662E-07	1.666E-07	1.666E-07	1.664E-07	1.662E-07	1.657E-07	1.634E-07	1.608E-07	1.538E-07	1.400E-07
U233	4.894E-07	4.939E-07	4.971E-07	5.029E-07	5.042E-07	5.044E-07	5.044E-07	5.044E-07	5.045E-07	5.046E-07
U234	5.151E-07	5.153E-07	5.155E-07	5.163E-07	5.176E-07	5.201E-07	5.301E-07	5.399E-07	5.638E-07	6.089E-07
U235	6.778E-05	6.778E-05	6.778E-05	6.778E-05	6.778E-05	6.778E-05	6.778E-05	6.778E-05	6.778E-05	6.778E-05
U236	4.904E-05	4.904E-05	4.904E-05	4.904E-05	4.904E-05	4.904E-05	4.904E-05	4.904E-05	4.904E-05	4.904E-05
U237	4.794E+00	1.139E+00	2.704E-01	4.086E-04	8.587E-08	4.984E-08	4.527E-08	4.112E-08	3.233E-08	1.998E-08
U238	4.828E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05	4.828E-05
NP237	3.195E-06	3.227E-06	3.234E-06	3.237E-06	3.237E-06	3.237E-06	3.238E-06	3.239E-06	3.243E-06	3.255E-06
PU236	7.332E-08	7.288E-08	7.220E-08	6.923E-08	6.515E-08	5.770E-08	3.549E-08	2.183E-08	6.479E-09	5.710E-10
PU237	3.525E-07	2.849E-07	2.303E-07	8.805E-08	2.200E-08	1.373E-09	2.082E-14	3.157E-19	2.828E-31	0.000E+00
PU238	1.701E-03	1.712E-03	1.713E-03	1.717E-03	1.720E-03	1.720E-03	1.699E-03	1.673E-03	1.608E-03	1.486E-03

Table A.5 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	2.375E-02	2.382E-02	2.382E-02	2.382E-02	2.382E-02	2.382E-02	2.382E-02	2.382E-02	2.382E-02	2.381E-02
PU240	5.353E-03	5.353E-03	5.353E-03	5.353E-03	5.352E-03	5.352E-03	5.351E-03	5.350E-03	5.347E-03	5.341E-03
PU241	2.132E-01	2.128E-01	2.124E-01	2.106E-01	2.081E-01	2.032E-01	1.845E-01	1.676E-01	1.318E-01	8.145E-02
PU242	2.149E-07	2.149E-07	2.149E-07	2.149E-07	2.149E-07	2.149E-07	2.149E-07	2.149E-07	2.149E-07	2.149E-07
PU244	1.356E-16	1.356E-16	1.356E-16	1.356E-16	1.356E-16	1.356E-16	1.356E-16	1.356E-16	1.356E-16	1.356E-16
AM241	3.355E-04	3.486E-04	3.616E-04	4.202E-04	5.039E-04	6.682E-04	1.286E-03	1.845E-03	3.019E-03	4.633E-03
AM242M	1.834E-06	1.833E-06	1.833E-06	1.832E-06	1.829E-06	1.825E-06	1.809E-06	1.792E-06	1.752E-06	1.674E-06
AM242	1.141E-02	1.830E-06	1.824E-06	1.822E-06	1.820E-06	1.816E-06	1.800E-06	1.783E-06	1.743E-06	1.666E-06
AM243	8.890E-08	8.899E-08	8.899E-08	8.899E-08	8.898E-08	8.898E-08	8.896E-08	8.895E-08	8.891E-08	8.882E-08
CM242	5.549E-03	5.265E-03	4.962E-03	3.793E-03	2.575E-03	1.187E-03	5.486E-05	3.880E-06	1.443E-06	1.377E-06
CM243	1.201E-07	1.200E-07	1.199E-07	1.194E-07	1.186E-07	1.172E-07	1.116E-07	1.063E-07	9.418E-08	7.386E-08
CM244	7.755E-07	7.754E-07	7.742E-07	7.691E-07	7.618E-07	7.474E-07	6.923E-07	6.414E-07	5.297E-07	3.613E-07
CM245	4.129E-12	4.129E-12	4.129E-12	4.129E-12	4.129E-12	4.129E-12	4.128E-12	4.127E-12	4.126E-12	4.122E-12
CM246	6.922E-14	6.921E-14	6.921E-14	6.921E-14	6.921E-14	6.921E-14	6.918E-14	6.916E-14	6.911E-14	6.901E-14
CM247	9.378E-21	9.378E-21	9.378E-21	9.378E-21	9.378E-21	9.378E-21	9.378E-21	9.378E-21	9.378E-21	9.378E-21
Subtotal Ci**	1.812E+03	1.277E+03	1.006E+03	5.590E+02	3.390E+02	1.961E+02	8.408E+01	5.957E+01	4.316E+01	3.125E+01
Total Ci***	1.366E+04	1.308E+03	1.013E+03	5.627E+02	3.412E+02	1.968E+02	8.409E+01	5.957E+01	4.316E+01	3.125E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table A.6 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table A.6 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: alum.6

BURNUP (BU)

BU: U-235 5.0 g
 BU: % U-235 13.89%
 BU: MWd 4.75
 BU: MWd/MTU 26389
 U-235 DEPL 5.80 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	6.763E-02	6.749E-02	6.733E-02	6.669E-02	6.576E-02	6.394E-02	5.716E-02	5.109E-02	3.860E-02	2.203E-02
BE 10	1.084E-07	1.084E-07	1.084E-07	1.084E-07	1.084E-07	1.084E-07	1.084E-07	1.084E-07	1.084E-07	1.084E-07
C 14	1.996E-04	1.996E-04	1.996E-04	1.996E-04	1.996E-04	1.996E-04	1.996E-04	1.995E-04	1.994E-04	1.991E-04
CL 36	1.985E-07	1.985E-07	1.985E-07	1.985E-07	1.985E-07	1.985E-07	1.985E-07	1.985E-07	1.985E-07	1.985E-07
CR 51	6.358E-01	4.479E-01	3.156E-01	6.486E-02	6.616E-03	6.884E-05	8.072E-13	9.464E-21	1.409E-40	0.000E+00
MN 54	2.151E-02	2.085E-02	2.021E-02	1.757E-02	1.435E-02	9.572E-03	1.896E-03	3.755E-04	6.555E-06	1.998E-09
FE 55	1.507E-01	1.491E-01	1.476E-01	1.410E-01	1.319E-01	1.154E-01	6.775E-02	3.977E-02	1.050E-02	7.312E-04
FE 59	6.594E-03	5.315E-03	4.284E-03	1.617E-03	3.965E-04	2.385E-05	3.119E-10	4.080E-15	2.525E-27	0.000E+00
CO 60	2.754E-01	2.740E-01	2.726E-01	2.665E-01	2.579E-01	2.415E-01	1.857E-01	1.427E-01	7.398E-02	1.987E-02
NI 59	5.404E-06	5.404E-06	5.404E-06	5.404E-06	5.404E-06	5.404E-06	5.404E-06	5.404E-06	5.404E-06	5.403E-06
NI 63	7.394E-04	7.392E-04	7.390E-04	7.380E-04	7.366E-04	7.338E-04	7.229E-04	7.121E-04	6.858E-04	6.360E-04
ZN 65	4.864E-02	4.675E-02	4.492E-02	3.753E-02	2.896E-02	1.724E-02	2.164E-03	2.718E-04	1.519E-06	4.741E-11
SE 79	6.153E-05	6.153E-05	6.153E-05	6.153E-05	6.153E-05	6.153E-05	6.153E-05	6.152E-05	6.152E-05	6.152E-05
KR 85	1.661E+00	1.657E+00	1.653E+00	1.635E+00	1.609E+00	1.557E+00	1.369E+00	1.203E+00	8.707E-01	4.563E-01
RB 87	4.102E-09	4.103E-09	4.103E-09	4.103E-09	4.103E-09	4.103E-09	4.103E-09	4.103E-09	4.103E-09	4.103E-09
SR 89	1.261E+02	1.040E+02	8.587E+01	3.604E+01	1.030E+01	8.412E-01	3.743E-05	1.665E-09	2.198E-20	0.000E+00
SR 90	1.398E+01	1.396E+01	1.395E+01	1.389E+01	1.381E+01	1.365E+01	1.301E+01	1.241E+01	1.102E+01	8.685E+00
Y 90	1.466E+01	1.399E+01	1.395E+01	1.390E+01	1.381E+01	1.365E+01	1.302E+01	1.241E+01	1.102E+01	8.687E+00
Y 91	1.543E+02	1.316E+02	1.115E+02	5.273E+01	1.789E+01	2.059E+00	3.610E-04	6.333E-08	2.580E-17	4.281E-36
ZR 93	3.867E-04	3.869E-04	3.869E-04	3.869E-04	3.869E-04	3.869E-04	3.869E-04	3.869E-04	3.869E-04	3.869E-04
ZR 95	1.863E+02	1.601E+02	1.376E+02	6.931E+01	2.579E+01	3.571E+00	1.312E-03	4.826E-07	1.251E-15	8.394E-33
NB 93M	3.505E-05	3.570E-05	3.634E-05	3.926E-05	4.341E-05	5.156E-05	8.216E-05	1.098E-04	1.678E-04	2.475E-04

Table A.6 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	1.655E-05	1.655E-05	1.655E-05	1.655E-05	1.655E-05	1.655E-05	1.655E-05	1.655E-05	1.654E-05	1.654E-05
NB 95	1.907E+02	1.863E+02	1.770E+02	1.170E+02	5.115E+01	7.760E+00	2.914E-03	1.071E-06	2.776E-15	1.864E-32
NB 95M	1.309E+00	1.182E+00	1.020E+00	5.142E-01	1.914E-01	2.649E-02	9.740E-06	3.581E-09	9.276E-18	6.227E-35
MO 93	4.093E-07	4.093E-07	4.093E-07	4.092E-07	4.092E-07	4.092E-07	4.090E-07	4.089E-07	4.085E-07	4.076E-07
TC 99	2.098E-03	2.104E-03	2.104E-03	2.104E-03	2.104E-03	2.104E-03	2.104E-03	2.104E-03	2.104E-03	2.104E-03
RU103	8.784E+01	6.862E+01	5.360E+01	1.756E+01	3.509E+00	1.402E-01	3.568E-07	9.085E-13	9.396E-27	0.000E+00
RU106	1.296E+01	1.262E+01	1.229E+01	1.091E+01	9.191E+00	6.518E+00	1.649E+00	4.172E-01	1.343E-02	1.393E-05
RH103M	7.911E+01	6.186E+01	4.832E+01	1.583E+01	3.163E+00	1.264E-01	3.217E-07	8.190E-13	8.470E-27	0.000E+00
RH106	1.318E+01	1.262E+01	1.229E+01	1.091E+01	9.191E+00	6.518E+00	1.649E+00	4.172E-01	1.343E-02	1.393E-05
PD107	2.832E-06	2.832E-06	2.832E-06	2.832E-06	2.832E-06	2.832E-06	2.832E-06	2.832E-06	2.832E-06	2.832E-06
AG110	1.453E-01	6.681E-05	6.426E-05	5.392E-05	4.186E-05	2.523E-05	3.331E-06	4.396E-07	2.783E-09	1.116E-13
AG110M	5.222E-03	5.023E-03	4.831E-03	4.054E-03	3.148E-03	1.897E-03	2.505E-04	3.306E-05	2.092E-07	8.388E-12
AG111	9.752E-01	2.658E-01	7.226E-02	2.010E-04	4.133E-08	1.747E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.931E-03	1.928E-03	1.924E-03	1.908E-03	1.886E-03	1.841E-03	1.675E-03	1.523E-03	1.201E-03	7.471E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	4.498E-02	3.618E-02	2.911E-02	1.089E-02	2.637E-03	1.546E-04	1.826E-09	2.156E-14	1.033E-26	0.000E+00
IN114	2.558E-03	8.347E-04	6.862E-04	2.831E-04	7.892E-05	6.132E-06	2.235E-10	8.152E-15	6.543E-26	0.000E+00
IN114M	1.061E-03	8.723E-04	7.171E-04	2.958E-04	8.246E-05	6.407E-06	2.336E-10	8.517E-15	6.836E-26	0.000E+00
IN115M	4.541E-01	6.371E-03	8.379E-05	7.646E-07	1.851E-07	1.085E-08	1.282E-13	1.514E-18	7.256E-31	0.000E+00
SN119M	2.264E+00	2.177E+00	2.093E+00	1.750E+00	1.351E+00	8.065E-01	1.022E-01	1.297E-02	7.425E-05	2.435E-09
SN121M	3.316E-04	3.314E-04	3.312E-04	3.305E-04	3.294E-04	3.271E-04	3.181E-04	3.094E-04	2.887E-04	2.513E-04
SN123	2.722E-01	2.525E-01	2.343E-01	1.669E-01	1.023E-01	3.839E-02	7.639E-04	1.520E-05	8.482E-10	2.641E-18
SN125	1.177E+00	4.300E-01	1.571E-01	1.664E-03	2.354E-06	4.707E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	5.750E-05	5.750E-05	5.750E-05	5.750E-05	5.750E-05	5.750E-05	5.750E-05	5.750E-05	5.750E-05	5.750E-05
SB124	6.749E-03	5.744E-03	4.889E-03	2.360E-03	8.253E-04	1.009E-04	2.256E-08	5.044E-12	3.771E-21	2.107E-39
SB125	1.510E+00	1.503E+00	1.491E+00	1.429E+00	1.343E+00	1.185E+00	7.186E-01	4.357E-01	1.248E-01	1.024E-02
SB126	3.141E-02	1.436E-02	6.571E-03	1.990E-04	9.211E-06	8.051E-06	8.051E-06	8.050E-06	8.050E-06	8.050E-06
SB126M	1.572E-02	5.750E-05	5.750E-05	5.750E-05	5.750E-05	5.750E-05	5.750E-05	5.750E-05	5.750E-05	5.750E-05
TE123M	8.415E-06	7.760E-06	7.155E-06	4.960E-06	2.924E-06	1.016E-06	1.481E-08	2.160E-10	5.545E-15	3.654E-24
TE125M	3.345E-01	3.364E-01	3.376E-01	3.362E-01	3.234E-01	2.886E-01	1.754E-01	1.064E-01	3.045E-02	2.497E-03
TE127	4.595E+00	9.529E-01	5.727E-01	3.638E-01	2.036E-01	6.380E-02	6.150E-04	5.927E-06	5.406E-11	4.497E-21
TE127M	6.397E-01	6.051E-01	5.551E-01	3.714E-01	2.079E-01	6.514E-02	6.278E-04	6.051E-06	5.519E-11	4.592E-21
TE129	1.882E+01	1.387E+00	1.039E+00	2.817E-01	4.288E-02	9.936E-04	2.864E-10	8.252E-17	3.679E-33	0.000E+00
TE129M	2.830E+00	2.130E+00	1.596E+00	4.328E-01	6.588E-02	1.526E-03	4.399E-10	1.268E-16	5.652E-33	0.000E+00
I129	3.474E-06	3.479E-06	3.482E-06	3.489E-06	3.491E-06	3.492E-06	3.492E-06	3.492E-06	3.492E-06	3.492E-06
I131	7.771E+01	2.388E+01	7.144E+00	3.061E-02	1.174E-05	1.726E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A.6 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	8.626E-01	6.462E-01	3.650E-01	1.260E-02	6.513E-05	1.578E-09	5.356E-28	1.817E-46	0.000E+00	0.000E+00
XE133	1.800E+02	3.479E+01	5.481E+00	1.285E-03	7.451E-09	2.504E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.822E+00	1.798E+00	1.775E+00	1.675E+00	1.541E+00	1.302E+00	6.650E-01	3.397E-01	6.333E-02	2.202E-03
CS135	1.651E-04	1.652E-04	1.652E-04	1.652E-04	1.652E-04	1.652E-04	1.652E-04	1.652E-04	1.652E-04	1.652E-04
CS136	9.000E-01	4.291E-01	2.046E-01	7.206E-03	5.769E-05	3.698E-09	6.243E-26	1.054E-42	0.000E+00	0.000E+00
CS137	1.469E+01	1.468E+01	1.467E+01	1.461E+01	1.452E+01	1.436E+01	1.371E+01	1.309E+01	1.166E+01	9.259E+00
BA136M	1.483E-01	7.072E-02	3.372E-02	1.188E-03	9.508E-06	6.094E-10	1.029E-26	1.737E-43	0.000E+00	0.000E+00
BA137M	1.391E+01	1.389E+01	1.388E+01	1.382E+01	1.374E+01	1.358E+01	1.297E+01	1.238E+01	1.103E+01	8.759E+00
BA140	1.650E+02	7.727E+01	3.618E+01	1.174E+00	8.355E-03	4.230E-07	2.779E-24	1.826E-41	0.000E+00	0.000E+00
LA140	1.657E+02	8.885E+01	4.164E+01	1.351E+00	9.615E-03	4.868E-07	3.198E-24	2.101E-41	0.000E+00	0.000E+00
CE141	1.568E+02	1.170E+02	8.680E+01	2.254E+01	3.221E+00	6.579E-02	1.146E-08	1.994E-15	2.523E-32	0.000E+00
CE142	4.213E-09	4.213E-09	4.213E-09	4.213E-09	4.213E-09	4.213E-09	4.213E-09	4.213E-09	4.213E-09	4.213E-09
CE144	1.416E+02	1.369E+02	1.323E+02	1.134E+02	9.074E+01	5.815E+01	9.806E+00	1.654E+00	1.931E-02	2.633E-06
PR143	1.564E+02	8.518E+01	4.166E+01	1.645E+00	1.553E-02	1.384E-06	8.727E-23	5.505E-39	0.000E+00	0.000E+00
PR144	1.417E+02	1.369E+02	1.323E+02	1.134E+02	9.075E+01	5.815E+01	9.806E+00	1.654E+00	1.931E-02	2.633E-06
PR144M	1.700E+00	1.642E+00	1.587E+00	1.360E+00	1.089E+00	6.978E-01	1.177E-01	1.984E-02	2.317E-04	3.159E-08
ND144	1.499E-13	1.516E-13	1.533E-13	1.603E-13	1.687E-13	1.808E-13	1.987E-13	2.018E-13	2.024E-13	2.024E-13
ND147	6.068E+01	2.526E+01	1.050E+01	1.994E-01	6.550E-04	7.064E-09	9.557E-29	1.293E-48	0.000E+00	0.000E+00
PM145	4.896E-03	4.960E-03	5.022E-03	5.277E-03	5.581E-03	6.011E-03	6.448E-03	6.164E-03	5.120E-03	3.463E-03
PM147	3.737E+01	3.740E+01	3.719E+01	3.564E+01	3.337E+01	2.924E+01	1.725E+01	1.017E+01	2.717E+00	1.938E-01
PM148M	1.130E+00	8.937E-01	7.065E-01	2.444E-01	5.283E-02	2.469E-03	1.178E-08	5.622E-14	2.796E-27	0.000E+00
PM148	4.435E+00	7.680E-01	1.576E-01	1.381E-02	2.976E-03	1.391E-04	6.636E-10	3.166E-15	1.575E-28	0.000E+00
SM145	4.825E-02	4.689E-02	4.557E-02	4.006E-02	3.326E-02	2.293E-02	5.177E-03	1.169E-03	2.833E-05	1.664E-08
SM147	6.403E-08	6.404E-08	6.405E-08	6.409E-08	6.415E-08	6.425E-08	6.455E-08	6.472E-08	6.490E-08	6.496E-08
SM151	1.567E+00	1.568E+00	1.567E+00	1.565E+00	1.562E+00	1.556E+00	1.532E+00	1.509E+00	1.452E+00	1.345E+00
EU152	4.658E-02	4.649E-02	4.640E-02	4.599E-02	4.541E-02	4.426E-02	3.997E-02	3.611E-02	2.799E-02	1.682E-02
EU154	6.807E+00	6.786E+00	6.766E+00	6.672E+00	6.539E+00	6.281E+00	5.346E+00	4.551E+00	3.042E+00	1.360E+00
EU155	3.824E+00	3.803E+00	3.782E+00	3.692E+00	3.565E+00	3.325E+00	2.514E+00	1.902E+00	9.459E-01	2.340E-01
EU156	4.714E+00	2.495E+00	1.317E+00	7.339E-02	1.139E-03	2.747E-07	9.276E-22	3.132E-36	0.000E+00	0.000E+00
GD153	1.311E-02	1.258E-02	1.210E-02	1.009E-02	7.769E-03	4.606E-03	5.692E-04	7.036E-05	3.778E-07	1.089E-11
TB160	3.290E-03	2.877E-03	2.515E-03	1.372E-03	5.719E-04	9.944E-05	9.083E-08	8.297E-11	2.092E-18	1.331E-33
TL206	7.849E-06	1.169E-12	1.169E-12	1.169E-12	1.169E-12	1.169E-12	1.169E-12	1.169E-12	1.169E-12	1.169E-12
TL207	5.980E-10	5.986E-10	6.014E-10	6.380E-10	7.116E-10	8.846E-10	1.628E-09	2.475E-09	5.089E-09	1.211E-08
TL208	2.830E-08	2.874E-08	2.946E-08	3.307E-08	3.734E-08	4.477E-08	6.370E-08	7.242E-08	7.700E-08	7.174E-08
PB210	3.912E-15	4.011E-15	4.081E-15	4.247E-15	4.409E-15	4.785E-15	7.389E-15	1.215E-14	3.675E-14	1.654E-13
PB211	5.997E-10	6.002E-10	6.030E-10	6.398E-10	7.136E-10	8.871E-10	1.633E-09	2.482E-09	5.103E-09	1.214E-08

Table A.6 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	7.877E-08	8.000E-08	8.199E-08	9.204E-08	1.039E-07	1.246E-07	1.773E-07	2.016E-07	2.143E-07	1.997E-07
BI211	5.998E-10	6.002E-10	6.030E-10	6.398E-10	7.136E-10	8.871E-10	1.633E-09	2.482E-09	5.103E-09	1.214E-08
BI212	7.877E-08	8.000E-08	8.199E-08	9.204E-08	1.039E-07	1.246E-07	1.773E-07	2.016E-07	2.143E-07	1.997E-07
PO212	5.047E-08	5.125E-08	5.253E-08	5.897E-08	6.658E-08	7.983E-08	1.136E-07	1.291E-07	1.373E-07	1.279E-07
PO215	5.997E-10	6.002E-10	6.030E-10	6.398E-10	7.136E-10	8.871E-10	1.633E-09	2.482E-09	5.103E-09	1.214E-08
PO216	7.877E-08	8.000E-08	8.199E-08	9.204E-08	1.039E-07	1.246E-07	1.773E-07	2.016E-07	2.143E-07	1.997E-07
RN219	5.997E-10	6.002E-10	6.030E-10	6.398E-10	7.136E-10	8.871E-10	1.633E-09	2.482E-09	5.103E-09	1.214E-08
RN220	7.877E-08	8.000E-08	8.199E-08	9.204E-08	1.039E-07	1.246E-07	1.773E-07	2.016E-07	2.143E-07	1.997E-07
FR223	8.265E-12	8.420E-12	8.576E-12	9.291E-12	1.035E-11	1.255E-11	2.251E-11	3.420E-11	7.035E-11	1.675E-10
RA223	5.997E-10	6.002E-10	6.030E-10	6.398E-10	7.136E-10	8.871E-10	1.633E-09	2.482E-09	5.103E-09	1.214E-08
RA224	7.877E-08	8.000E-08	8.199E-08	9.204E-08	1.039E-07	1.246E-07	1.773E-07	2.016E-07	2.143E-07	1.997E-07
RA226	1.948E-14	1.993E-14	2.037E-14	2.244E-14	2.556E-14	3.226E-14	6.545E-14	1.091E-13	2.654E-13	7.956E-13
RA228	5.358E-10	5.399E-10	5.440E-10	5.625E-10	5.885E-10	6.385E-10	8.148E-10	9.581E-10	1.210E-09	1.450E-09
AC227	5.989E-10	6.101E-10	6.215E-10	6.733E-10	7.499E-10	9.095E-10	1.631E-09	2.478E-09	5.098E-09	1.213E-08
TH227	5.915E-10	5.936E-10	5.993E-10	6.429E-10	7.171E-10	8.732E-10	1.610E-09	2.448E-09	5.032E-09	1.198E-08
TH228	7.864E-08	8.071E-08	8.275E-08	9.163E-08	1.035E-07	1.241E-07	1.770E-07	2.011E-07	2.141E-07	1.996E-07
TH229	1.139E-10	1.161E-10	1.183E-10	1.285E-10	1.433E-10	1.730E-10	2.915E-10	4.100E-10	7.063E-10	1.299E-09
TH230	2.665E-11	2.687E-11	2.709E-11	2.809E-11	2.954E-11	3.246E-11	4.435E-11	5.658E-11	8.860E-11	1.586E-10
TH231	1.185E-04	6.532E-05	6.531E-05	6.530E-05	6.530E-05	6.530E-05	6.530E-05	6.530E-05	6.530E-05	6.530E-05
TH232	1.582E-09	1.582E-09	1.582E-09	1.582E-09	1.582E-09	1.582E-09	1.582E-09	1.582E-09	1.582E-09	1.582E-09
TH234	4.847E-05	4.839E-05	4.834E-05	4.825E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05
PA231	9.797E-09	9.860E-09	9.919E-09	1.016E-08	1.052E-08	1.121E-08	1.398E-08	1.674E-08	2.365E-08	3.745E-08
PA233	4.108E-02	2.870E-02	2.004E-02	3.955E-03	3.845E-04	8.466E-06	4.961E-06	4.963E-06	4.971E-06	4.995E-06
PA234M	6.942E-05	4.839E-05	4.834E-05	4.825E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05
PA234	4.481E-05	6.291E-08	6.284E-08	6.273E-08	6.270E-08	6.270E-08	6.270E-08	6.270E-08	6.270E-08	6.270E-08
U232	2.277E-07	2.283E-07	2.283E-07	2.281E-07	2.279E-07	2.273E-07	2.247E-07	2.214E-07	2.122E-07	1.931E-07
U233	6.090E-07	6.148E-07	6.189E-07	6.264E-07	6.280E-07	6.282E-07	6.283E-07	6.283E-07	6.284E-07	6.286E-07
U234	6.418E-07	6.422E-07	6.426E-07	6.442E-07	6.466E-07	6.514E-07	6.704E-07	6.891E-07	7.347E-07	8.207E-07
U235	6.530E-05	6.530E-05	6.530E-05	6.530E-05	6.530E-05	6.530E-05	6.530E-05	6.530E-05	6.530E-05	6.530E-05
U236	6.101E-05	6.101E-05	6.101E-05	6.101E-05	6.101E-05	6.101E-05	6.101E-05	6.101E-05	6.101E-05	6.102E-05
U237	7.528E+00	1.788E+00	4.246E-01	6.416E-04	1.521E-07	9.512E-08	8.639E-08	7.847E-08	6.169E-08	3.813E-08
U238	4.823E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05	4.823E-05
NP237	4.895E-06	4.944E-06	4.956E-06	4.960E-06	4.960E-06	4.960E-06	4.961E-06	4.963E-06	4.971E-06	4.995E-06
PU236	1.417E-07	1.409E-07	1.396E-07	1.338E-07	1.259E-07	1.115E-07	6.859E-08	4.219E-08	1.252E-08	1.104E-09
PU237	6.051E-07	4.891E-07	3.954E-07	1.512E-07	3.776E-08	2.357E-09	3.574E-14	5.421E-19	4.856E-31	0.000E+00
PU238	3.272E-03	3.296E-03	3.299E-03	3.309E-03	3.317E-03	3.321E-03	3.283E-03	3.232E-03	3.107E-03	2.872E-03

Table A.6 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	2.876E-02	2.885E-02	2.885E-02	2.885E-02	2.885E-02	2.885E-02	2.885E-02	2.885E-02	2.884E-02	2.883E-02
PU240	8.137E-03	8.137E-03	8.137E-03	8.137E-03	8.137E-03	8.136E-03	8.134E-03	8.133E-03	8.128E-03	8.120E-03
PU241	4.068E-01	4.061E-01	4.053E-01	4.020E-01	3.972E-01	3.877E-01	3.522E-01	3.199E-01	2.515E-01	1.554E-01
PU242	5.263E-07	5.263E-07	5.263E-07	5.263E-07	5.263E-07	5.263E-07	5.263E-07	5.263E-07	5.263E-07	5.263E-07
PU244	5.433E-16	5.434E-16	5.434E-16	5.434E-16	5.434E-16	5.434E-16	5.434E-16	5.434E-16	5.434E-16	5.434E-16
AM241	6.356E-04	6.606E-04	6.855E-04	7.973E-04	9.571E-04	1.271E-03	2.449E-03	3.516E-03	5.757E-03	8.837E-03
AM242M	4.134E-06	4.133E-06	4.133E-06	4.129E-06	4.125E-06	4.115E-06	4.078E-06	4.041E-06	3.950E-06	3.774E-06
AM242	2.773E-02	4.126E-06	4.112E-06	4.109E-06	4.104E-06	4.095E-06	4.058E-06	4.021E-06	3.930E-06	3.755E-06
AM243	2.767E-07	2.770E-07	2.770E-07	2.770E-07	2.770E-07	2.770E-07	2.769E-07	2.769E-07	2.767E-07	2.765E-07
CM242	1.352E-02	1.283E-02	1.209E-02	9.243E-03	6.274E-03	2.892E-03	1.334E-04	9.186E-06	3.254E-06	3.106E-06
CM243	3.719E-07	3.715E-07	3.712E-07	3.696E-07	3.674E-07	3.629E-07	3.457E-07	3.293E-07	2.916E-07	2.287E-07
CM244	3.085E-06	3.084E-06	3.080E-06	3.060E-06	3.030E-06	2.973E-06	2.754E-06	2.551E-06	2.107E-06	1.437E-06
CM245	2.067E-11	2.067E-11	2.067E-11	2.067E-11	2.067E-11	2.066E-11	2.066E-11	2.066E-11	2.065E-11	2.063E-11
CM246	4.422E-13	4.422E-13	4.422E-13	4.422E-13	4.422E-13	4.422E-13	4.420E-13	4.419E-13	4.416E-13	4.409E-13
CM247	7.625E-20	7.625E-20	7.625E-20	7.625E-20	7.625E-20	7.625E-20	7.625E-20	7.625E-20	7.625E-20	7.625E-20
Subtotal Ci**	2.265E+03	1.595E+03	1.257E+03	6.997E+02	4.250E+02	2.465E+02	1.062E+02	7.533E+01	5.450E+01	3.927E+01
Total Ci***	1.703E+04	1.634E+03	1.265E+03	7.042E+02	4.277E+02	2.474E+02	1.062E+02	7.533E+01	5.451E+01	3.927E+01

• Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table A.7 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table A.7 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: alum.7

BURNUP (BU)

BU: U-235 6.0 g
 BU: % U-235 16.67%
 BU: MWd 5.70
 BU: MWd/MTU 31667
 U-235 DEPL 6.94 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	8.134E-02	8.116E-02	8.099E-02	8.021E-02	7.909E-02	7.690E-02	6.874E-02	6.145E-02	4.642E-02	2.649E-02
BE 10	1.320E-07	1.320E-07	1.320E-07	1.320E-07	1.320E-07	1.320E-07	1.320E-07	1.320E-07	1.320E-07	1.320E-07
C 14	2.432E-04	2.432E-04	2.432E-04	2.432E-04	2.432E-04	2.432E-04	2.431E-04	2.431E-04	2.429E-04	2.426E-04
CL 36	2.416E-07	2.416E-07	2.416E-07	2.416E-07	2.416E-07	2.416E-07	2.416E-07	2.416E-07	2.416E-07	2.416E-07
CR 51	7.834E-01	5.519E-01	3.888E-01	7.991E-02	8.152E-03	8.482E-05	9.945E-13	1.166E-20	1.736E-40	0.000E+00
MN 54	2.638E-02	2.557E-02	2.479E-02	2.154E-02	1.760E-02	1.174E-02	2.325E-03	4.605E-04	8.039E-06	2.450E-09
FE 55	1.840E-01	1.822E-01	1.803E-01	1.722E-01	1.611E-01	1.410E-01	8.276E-02	4.857E-02	1.282E-02	8.931E-04
FE 59	8.132E-03	6.555E-03	5.283E-03	1.994E-03	4.891E-04	2.941E-05	3.847E-10	5.032E-15	3.114E-27	0.000E+00
CO 60	3.357E-01	3.340E-01	3.323E-01	3.248E-01	3.143E-01	2.943E-01	2.263E-01	1.740E-01	9.017E-02	2.422E-02
NI 59	6.571E-06	6.571E-06	6.571E-06	6.571E-06	6.571E-06	6.571E-06	6.571E-06	6.571E-06	6.571E-06	6.570E-06
NI 63	9.005E-04	9.002E-04	8.999E-04	8.988E-04	8.971E-04	8.937E-04	8.803E-04	8.672E-04	8.351E-04	7.746E-04
ZN 65	5.974E-02	5.741E-02	5.517E-02	4.609E-02	3.556E-02	2.117E-02	2.658E-03	3.338E-04	1.865E-06	5.822E-11
SE 79	7.379E-05	7.379E-05	7.379E-05	7.379E-05	7.379E-05	7.379E-05	7.379E-05	7.379E-05	7.379E-05	7.378E-05
KR 85	1.989E+00	1.985E+00	1.980E+00	1.958E+00	1.927E+00	1.865E+00	1.639E+00	1.441E+00	1.043E+00	5.465E-01
RB 87	4.910E-09	4.910E-09	4.910E-09	4.910E-09	4.910E-09	4.910E-09	4.910E-09	4.910E-09	4.910E-09	4.910E-09
SR 89	1.502E+02	1.240E+02	1.023E+02	4.295E+01	1.227E+01	1.002E+00	4.460E-05	1.984E-09	2.619E-20	0.000E+00
SR 90	1.673E+01	1.672E+01	1.670E+01	1.663E+01	1.654E+01	1.634E+01	1.558E+01	1.486E+01	1.319E+01	1.040E+01
Y 90	1.759E+01	1.675E+01	1.671E+01	1.664E+01	1.654E+01	1.634E+01	1.559E+01	1.486E+01	1.320E+01	1.040E+01
Y 91	1.841E+02	1.570E+02	1.330E+02	6.288E+01	2.133E+01	2.455E+00	4.305E-04	7.551E-08	3.076E-17	5.105E-36
ZR 93	4.648E-04	4.650E-04	4.650E-04	4.650E-04	4.650E-04	4.650E-04	4.650E-04	4.650E-04	4.650E-04	4.650E-04
ZR 95	2.231E+02	1.918E+02	1.648E+02	8.305E+01	3.091E+01	4.279E+00	1.573E-03	5.782E-07	1.498E-15	1.006E-32
NB 93M	4.212E-05	4.289E-05	4.368E-05	4.717E-05	5.216E-05	6.195E-05	9.874E-05	1.320E-04	2.016E-04	2.974E-04

Table A.7 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	2.016E-05	2.016E-05	2.016E-05	2.016E-05	2.016E-05	2.016E-05	2.016E-05	2.015E-05	2.015E-05	2.014E-05
NB 95	2.285E+02	2.231E+02	2.121E+02	1.402E+02	6.129E+01	9.297E+00	3.492E-03	1.284E-06	3.326E-15	2.233E-32
NB 95M	1.568E+00	1.417E+00	1.222E+00	6.160E-01	2.293E-01	3.174E-02	1.166E-05	4.290E-09	1.111E-17	7.461E-35
MO 93	4.986E-07	4.986E-07	4.986E-07	4.986E-07	4.986E-07	4.985E-07	4.983E-07	4.981E-07	4.977E-07	4.967E-07
TC 99	2.513E-03	2.520E-03	2.520E-03	2.520E-03	2.520E-03	2.520E-03	2.520E-03	2.520E-03	2.520E-03	2.520E-03
RU103	1.058E+02	8.265E+01	6.456E+01	2.115E+01	4.226E+00	1.688E-01	4.298E-07	1.094E-12	1.132E-26	0.000E+00
RU106	1.607E+01	1.565E+01	1.525E+01	1.353E+01	1.140E+01	8.083E+00	2.045E+00	5.174E-01	1.666E-02	1.727E-05
RH103M	9.529E+01	7.451E+01	5.820E+01	1.906E+01	3.810E+00	1.522E-01	3.875E-07	9.865E-13	1.020E-26	0.000E+00
RH106	1.640E+01	1.565E+01	1.525E+01	1.353E+01	1.140E+01	8.083E+00	2.045E+00	5.174E-01	1.666E-02	1.727E-05
PD107	3.529E-06	3.529E-06	3.529E-06	3.529E-06	3.529E-06	3.529E-06	3.529E-06	3.529E-06	3.529E-06	3.529E-06
AG110	2.250E-01	1.019E-04	9.807E-05	8.229E-05	6.389E-05	3.851E-05	5.084E-06	6.710E-07	4.248E-09	1.702E-13
AG110M	7.969E-03	7.665E-03	7.373E-03	6.187E-03	4.803E-03	2.895E-03	3.822E-04	5.045E-05	3.194E-07	1.280E-11
AG111	1.221E+00	3.329E-01	9.049E-02	2.517E-04	5.175E-08	2.187E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	2.342E-03	2.338E-03	2.334E-03	2.315E-03	2.287E-03	2.234E-03	2.031E-03	1.847E-03	1.457E-03	9.063E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	5.447E-02	4.382E-02	3.525E-02	1.319E-02	3.194E-03	1.872E-04	2.212E-09	2.611E-14	1.251E-26	0.000E+00
IN114	3.716E-03	1.214E-03	9.980E-04	4.117E-04	1.148E-04	8.919E-06	3.252E-10	1.186E-14	9.516E-26	0.000E+00
IN114M	1.544E-03	1.268E-03	1.042E-03	4.302E-04	1.199E-04	9.319E-06	3.397E-10	1.239E-14	9.943E-26	0.000E+00
IN115M	5.492E-01	7.705E-03	1.013E-04	9.259E-07	2.242E-07	1.314E-08	1.552E-13	1.833E-18	8.788E-31	0.000E+00
SN119M	2.781E+00	2.673E+00	2.569E+00	2.148E+00	1.659E+00	9.903E-01	1.256E-01	1.592E-02	9.117E-05	2.990E-09
SN121M	4.040E-04	4.038E-04	4.036E-04	4.027E-04	4.013E-04	3.985E-04	3.876E-04	3.770E-04	3.518E-04	3.063E-04
SN123	3.309E-01	3.070E-01	2.847E-01	2.028E-01	1.243E-01	4.667E-02	9.285E-04	1.847E-05	1.031E-09	3.212E-18
SN125	1.441E+00	5.265E-01	1.925E-01	2.038E-03	2.882E-06	5.764E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	6.939E-05	6.939E-05	6.939E-05	6.939E-05	6.939E-05	6.938E-05	6.938E-05	6.938E-05	6.938E-05	6.938E-05
SB124	9.656E-03	8.218E-03	6.995E-03	3.377E-03	1.181E-03	1.444E-04	3.228E-08	7.218E-12	5.395E-21	3.014E-39
SB125	1.836E+00	1.827E+00	1.813E+00	1.737E+00	1.632E+00	1.440E+00	8.734E-01	5.296E-01	1.517E-01	1.244E-02
SB126	3.852E-02	1.761E-02	8.056E-03	2.439E-04	1.114E-05	9.714E-06	9.714E-06	9.714E-06	9.713E-06	9.713E-06
SB126M	1.933E-02	6.939E-05	6.939E-05	6.939E-05	6.939E-05	6.938E-05	6.938E-05	6.938E-05	6.938E-05	6.938E-05
TE123M	1.450E-05	1.337E-05	1.233E-05	8.548E-06	5.039E-06	1.751E-06	2.553E-08	3.723E-10	9.556E-15	6.298E-24
TE125M	4.064E-01	4.086E-01	4.102E-01	4.086E-01	3.931E-01	3.508E-01	2.132E-01	1.293E-01	3.701E-02	3.036E-03
TE127	5.558E+00	1.153E+00	6.936E-01	4.406E-01	2.466E-01	7.728E-02	7.448E-04	7.179E-06	6.548E-11	5.447E-21
TE127M	7.748E-01	7.328E-01	6.724E-01	4.498E-01	2.518E-01	7.889E-02	7.604E-04	7.329E-06	6.685E-11	5.561E-21
TE129	2.263E+01	1.668E+00	1.249E+00	3.388E-01	5.157E-02	1.195E-03	3.444E-10	9.924E-17	4.425E-33	0.000E+00
TE129M	3.403E+00	2.562E+00	1.919E+00	5.205E-01	7.923E-02	1.836E-03	5.290E-10	1.525E-16	6.797E-33	0.000E+00
I129	4.178E-06	4.184E-06	4.188E-06	4.196E-06	4.198E-06	4.199E-06	4.199E-06	4.199E-06	4.199E-06	4.199E-06
I131	9.299E+01	2.858E+01	8.548E+00	3.663E-02	1.405E-05	2.065E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A.7 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	1.032E+00	7.733E-01	4.368E-01	1.508E-02	7.793E-05	1.889E-09	6.408E-28	2.174E-46	0.000E+00	0.000E+00
XE133	2.150E+02	4.155E+01	6.546E+00	1.535E-03	8.900E-09	2.991E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	2.669E+00	2.635E+00	2.602E+00	2.454E+00	2.257E+00	1.908E+00	9.743E-01	4.977E-01	9.277E-02	3.225E-03
CS135	1.886E-04	1.887E-04	1.887E-04	1.887E-04	1.887E-04	1.887E-04	1.887E-04	1.887E-04	1.887E-04	1.887E-04
CS136	1.228E+00	5.857E-01	2.792E-01	9.834E-03	7.873E-05	5.047E-09	8.520E-26	1.438E-42	0.000E+00	0.000E+00
CS137	1.763E+01	1.762E+01	1.760E+01	1.753E+01	1.743E+01	1.723E+01	1.645E+01	1.571E+01	1.400E+01	1.111E+01
BA136M	2.024E-01	9.652E-02	4.602E-02	1.621E-03	1.298E-05	8.317E-10	1.404E-26	2.370E-43	0.000E+00	0.000E+00
BA137M	1.669E+01	1.667E+01	1.665E+01	1.659E+01	1.649E+01	1.630E+01	1.556E+01	1.486E+01	1.324E+01	1.051E+01
BA140	1.969E+02	9.222E+01	4.318E+01	1.401E+00	9.971E-03	5.048E-07	3.317E-24	2.179E-41	0.000E+00	0.000E+00
LA140	1.979E+02	1.060E+02	4.969E+01	1.613E+00	1.147E-02	5.809E-07	3.817E-24	2.508E-41	0.000E+00	0.000E+00
CE141	1.872E+02	1.396E+02	1.036E+02	2.690E+01	3.844E+00	7.853E-02	1.367E-08	2.380E-15	3.011E-32	0.000E+00
CE142	5.053E-09	5.053E-09	5.053E-09	5.053E-09	5.053E-09	5.053E-09	5.053E-09	5.053E-09	5.053E-09	5.053E-09
CE144	1.695E+02	1.639E+02	1.584E+02	1.357E+02	1.086E+02	6.962E+01	1.174E+01	1.980E+00	2.312E-02	3.152E-06
PR143	1.865E+02	1.016E+02	4.967E+01	1.961E+00	1.851E-02	1.650E-06	1.041E-22	6.564E-39	0.000E+00	0.000E+00
PR144	1.696E+02	1.639E+02	1.584E+02	1.357E+02	1.087E+02	6.963E+01	1.174E+01	1.980E+00	2.312E-02	3.152E-06
PR144M	2.036E+00	1.966E+00	1.900E+00	1.629E+00	1.304E+00	8.355E-01	1.409E-01	2.376E-02	2.774E-04	3.783E-08
ND144	1.820E-13	1.841E-13	1.862E-13	1.946E-13	2.046E-13	2.191E-13	2.405E-13	2.442E-13	2.449E-13	2.449E-13
ND147	7.243E+01	3.015E+01	1.254E+01	2.381E-01	7.818E-04	8.432E-09	1.141E-28	1.543E-48	0.000E+00	0.000E+00
PM145	5.944E-03	6.023E-03	6.099E-03	6.411E-03	6.785E-03	7.312E-03	7.851E-03	7.506E-03	6.236E-03	4.218E-03
PM147	4.416E+01	4.420E+01	4.396E+01	4.213E+01	3.944E+01	3.456E+01	2.038E+01	1.202E+01	3.211E+00	2.291E-01
PM148M	1.557E+00	1.231E+00	9.733E-01	3.366E-01	7.278E-02	3.401E-03	1.623E-08	7.744E-14	3.851E-27	0.000E+00
PM148	6.441E+00	1.112E+00	2.260E-01	1.903E-02	4.099E-03	1.916E-04	9.142E-10	4.362E-15	2.169E-28	0.000E+00
SM145	5.910E-02	5.744E-02	5.582E-02	4.907E-02	4.074E-02	2.808E-02	6.342E-03	1.432E-03	3.470E-05	2.038E-08
SM147	6.366E-08	6.367E-08	6.368E-08	6.373E-08	6.380E-08	6.392E-08	6.426E-08	6.447E-08	6.469E-08	6.476E-08
SM151	1.742E+00	1.741E+00	1.741E+00	1.739E+00	1.736E+00	1.729E+00	1.702E+00	1.676E+00	1.613E+00	1.493E+00
EU152	6.025E-02	6.013E-02	6.001E-02	5.948E-02	5.874E-02	5.726E-02	5.171E-02	4.671E-02	3.620E-02	2.176E-02
EU154	9.831E+00	9.800E+00	9.770E+00	9.635E+00	9.443E+00	9.070E+00	7.721E+00	6.572E+00	4.394E+00	1.963E+00
EU155	4.777E+00	4.752E+00	4.726E+00	4.613E+00	4.455E+00	4.154E+00	3.141E+00	2.377E+00	1.182E+00	2.924E-01
EU156	7.068E+00	3.739E+00	1.973E+00	1.100E-01	1.708E-03	4.117E-07	1.391E-21	4.695E-36	0.000E+00	0.000E+00
GD153	1.986E-02	1.909E-02	1.833E-02	1.529E-02	1.178E-02	6.983E-03	8.630E-04	1.067E-04	5.727E-07	1.651E-11
TB160	4.384E-03	3.833E-03	3.352E-03	1.828E-03	7.621E-04	1.325E-04	1.210E-07	1.106E-10	2.788E-18	1.773E-33
TL206	9.675E-06	1.424E-12	1.424E-12	1.424E-12	1.424E-12	1.424E-12	1.424E-12	1.424E-12	1.424E-12	1.424E-12
TL207	6.368E-10	6.374E-10	6.404E-10	6.795E-10	7.578E-10	9.409E-10	1.717E-09	2.586E-09	5.223E-09	1.217E-08
TL208	3.685E-08	3.743E-08	3.837E-08	4.311E-08	4.872E-08	5.849E-08	8.350E-08	9.511E-08	1.014E-07	9.455E-08
PB210	5.983E-15	6.134E-15	6.236E-15	6.460E-15	6.649E-15	7.080E-15	1.014E-14	1.580E-14	4.543E-14	2.029E-13
PB211	6.386E-10	6.392E-10	6.422E-10	6.814E-10	7.599E-10	9.435E-10	1.722E-09	2.593E-09	5.238E-09	1.221E-08

Table A.7 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.026E-07	1.042E-07	1.068E-07	1.200E-07	1.356E-07	1.628E-07	2.324E-07	2.647E-07	2.822E-07	2.631E-07
BI211	6.387E-10	6.392E-10	6.422E-10	6.814E-10	7.599E-10	9.435E-10	1.722E-09	2.593E-09	5.238E-09	1.221E-08
BI212	1.026E-07	1.042E-07	1.068E-07	1.200E-07	1.356E-07	1.628E-07	2.324E-07	2.647E-07	2.822E-07	2.631E-07
PO212	6.571E-08	6.674E-08	6.841E-08	7.687E-08	8.688E-08	1.043E-07	1.489E-07	1.696E-07	1.808E-07	1.686E-07
PO215	6.386E-10	6.392E-10	6.422E-10	6.814E-10	7.599E-10	9.435E-10	1.722E-09	2.593E-09	5.238E-09	1.221E-08
PO216	1.026E-07	1.042E-07	1.068E-07	1.200E-07	1.356E-07	1.628E-07	2.324E-07	2.647E-07	2.822E-07	2.631E-07
RN219	6.386E-10	6.392E-10	6.422E-10	6.814E-10	7.599E-10	9.435E-10	1.722E-09	2.593E-09	5.238E-09	1.221E-08
RN220	1.026E-07	1.042E-07	1.068E-07	1.200E-07	1.356E-07	1.628E-07	2.324E-07	2.647E-07	2.822E-07	2.631E-07
FR223	8.801E-12	8.967E-12	9.133E-12	9.895E-12	1.102E-11	1.335E-11	2.373E-11	3.574E-11	7.221E-11	1.683E-10
RA223	6.386E-10	6.392E-10	6.422E-10	6.814E-10	7.599E-10	9.435E-10	1.722E-09	2.593E-09	5.238E-09	1.221E-08
RA224	1.026E-07	1.042E-07	1.068E-07	1.200E-07	1.356E-07	1.628E-07	2.324E-07	2.647E-07	2.822E-07	2.631E-07
RA226	2.345E-14	2.398E-14	2.452E-14	2.702E-14	3.077E-14	3.885E-14	7.888E-14	1.316E-13	3.222E-13	9.801E-13
RA228	5.352E-10	5.393E-10	5.434E-10	5.618E-10	5.878E-10	6.378E-10	8.139E-10	9.571E-10	1.209E-09	1.448E-09
AC227	6.377E-10	6.498E-10	6.618E-10	7.170E-10	7.984E-10	9.672E-10	1.720E-09	2.590E-09	5.233E-09	1.220E-08
TH227	6.299E-10	6.321E-10	6.382E-10	6.847E-10	7.635E-10	9.288E-10	1.698E-09	2.558E-09	5.166E-09	1.204E-08
TH228	1.024E-07	1.051E-07	1.078E-07	1.194E-07	1.350E-07	1.622E-07	2.320E-07	2.641E-07	2.820E-07	2.631E-07
TH229	1.358E-10	1.384E-10	1.411E-10	1.533E-10	1.710E-10	2.064E-10	3.481E-10	4.898E-10	8.441E-10	1.552E-09
TH230	3.213E-11	3.240E-11	3.266E-11	3.387E-11	3.561E-11	3.912E-11	5.354E-11	6.855E-11	1.086E-10	1.988E-10
TH231	1.283E-04	6.286E-05	6.285E-05	6.284E-05	6.284E-05	6.284E-05	6.284E-05	6.284E-05	6.284E-05	6.284E-05
TH232	1.580E-09	1.580E-09	1.580E-09	1.580E-09	1.580E-09	1.580E-09	1.580E-09	1.580E-09	1.580E-09	1.580E-09
TH234	4.855E-05	4.843E-05	4.835E-05	4.821E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05
PA231	1.046E-08	1.052E-08	1.058E-08	1.082E-08	1.115E-08	1.182E-08	1.449E-08	1.715E-08	2.379E-08	3.708E-08
PA233	5.057E-02	3.533E-02	2.467E-02	4.869E-03	4.743E-04	1.139E-05	7.075E-06	7.079E-06	7.091E-06	7.132E-06
PA234M	8.033E-05	4.843E-05	4.835E-05	4.822E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05
PA234	6.796E-05	6.296E-08	6.286E-08	6.268E-08	6.265E-08	6.265E-08	6.265E-08	6.265E-08	6.265E-08	6.265E-08
U232	2.983E-07	2.991E-07	2.991E-07	2.990E-07	2.988E-07	2.983E-07	2.956E-07	2.917E-07	2.800E-07	2.550E-07
U233	7.274E-07	7.346E-07	7.395E-07	7.488E-07	7.508E-07	7.511E-07	7.511E-07	7.512E-07	7.513E-07	7.516E-07
U234	7.688E-07	7.694E-07	7.701E-07	7.729E-07	7.770E-07	7.852E-07	8.179E-07	8.501E-07	9.286E-07	1.077E-06
U235	6.284E-05	6.284E-05	6.284E-05	6.284E-05	6.284E-05	6.284E-05	6.284E-05	6.284E-05	6.284E-05	6.284E-05
U236	7.286E-05	7.286E-05	7.286E-05	7.286E-05	7.286E-05	7.286E-05	7.286E-05	7.286E-05	7.286E-05	7.286E-05
U237	1.096E+01	2.602E+00	6.180E-01	9.340E-04	2.440E-07	1.605E-07	1.458E-07	1.324E-07	1.041E-07	6.434E-08
U238	4.819E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05	4.819E-05
NP237	6.978E-06	7.050E-06	7.067E-06	7.073E-06	7.073E-06	7.073E-06	7.075E-06	7.079E-06	7.091E-06	7.132E-06
PU236	2.455E-07	2.440E-07	2.418E-07	2.318E-07	2.182E-07	1.932E-07	1.188E-07	7.310E-08	2.170E-08	1.912E-09
PU237	9.741E-07	7.874E-07	6.365E-07	2.434E-07	6.079E-08	3.794E-09	5.754E-14	8.726E-19	7.817E-31	0.000E+00
PU238	5.646E-03	5.688E-03	5.694E-03	5.716E-03	5.736E-03	5.749E-03	5.688E-03	5.600E-03	5.384E-03	4.976E-03

Table A.7 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	3.342E-02	3.353E-02	3.353E-02	3.353E-02	3.353E-02	3.353E-02	3.353E-02	3.353E-02	3.352E-02	3.351E-02
PU240	1.139E-02	1.139E-02	1.139E-02	1.139E-02	1.139E-02	1.139E-02	1.139E-02	1.139E-02	1.138E-02	1.137E-02
PU241	6.864E-01	6.852E-01	6.839E-01	6.782E-01	6.701E-01	6.542E-01	5.942E-01	5.397E-01	4.243E-01	2.623E-01
PU242	1.095E-06	1.095E-06	1.095E-06	1.095E-06	1.095E-06	1.095E-06	1.095E-06	1.095E-06	1.095E-06	1.095E-06
PU244	1.706E-15	1.706E-15	1.706E-15	1.706E-15	1.706E-15	1.706E-15	1.706E-15	1.706E-15	1.706E-15	1.706E-15
AM241	1.064E-03	1.106E-03	1.148E-03	1.337E-03	1.607E-03	2.136E-03	4.125E-03	5.924E-03	9.705E-03	1.490E-02
AM242M	7.920E-06	7.918E-06	7.917E-06	7.911E-06	7.902E-06	7.884E-06	7.812E-06	7.741E-06	7.567E-06	7.230E-06
AM242	5.723E-02	7.906E-06	7.877E-06	7.871E-06	7.862E-06	7.844E-06	7.773E-06	7.703E-06	7.529E-06	7.194E-06
AM243	7.025E-07	7.033E-07	7.033E-07	7.032E-07	7.032E-07	7.032E-07	7.031E-07	7.029E-07	7.026E-07	7.019E-07
CM242	2.798E-02	2.655E-02	2.502E-02	1.912E-02	1.298E-02	5.983E-03	2.755E-04	1.850E-05	6.234E-06	5.949E-06
CM243	9.389E-07	9.381E-07	9.372E-07	9.332E-07	9.276E-07	9.164E-07	8.729E-07	8.315E-07	7.363E-07	5.775E-07
CM244	9.614E-06	9.613E-06	9.599E-06	9.535E-06	9.445E-06	9.266E-06	8.583E-06	7.951E-06	6.567E-06	4.480E-06
CM245	7.780E-11	7.780E-11	7.780E-11	7.780E-11	7.780E-11	7.780E-11	7.778E-11	7.777E-11	7.774E-11	7.768E-11
CM246	2.041E-12	2.041E-12	2.041E-12	2.041E-12	2.041E-12	2.041E-12	2.040E-12	2.040E-12	2.038E-12	2.035E-12
CM247	4.301E-19	4.301E-19	4.301E-19	4.301E-19	4.301E-19	4.301E-19	4.301E-19	4.301E-19	4.301E-19	4.301E-19
Subtotal Ci**	2.717E+03	1.913E+03	1.508E+03	8.405E+02	5.116E+02	2.976E+02	1.288E+02	9.151E+01	6.612E+01	4.737E+01
Total Ci***	2.037E+04	1.960E+03	1.518E+03	8.460E+02	5.148E+02	2.986E+02	1.288E+02	9.151E+01	6.611E+01	4.738E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table A.8 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table A.8 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: alum.8

BURNUP (BU)

BU: U-235 7.0 g
 BU: % U-235 19.44%
 BU: MWd 6.65
 BU: MWd/MTU 36944
 U-235 DEPL 8.07 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	9.511E-02	9.490E-02	9.470E-02	9.379E-02	9.248E-02	8.992E-02	8.038E-02	7.185E-02	5.427E-02	3.097E-02
BE 10	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07	1.565E-07
C 14	2.882E-04	2.882E-04	2.882E-04	2.882E-04	2.882E-04	2.882E-04	2.881E-04	2.880E-04	2.878E-04	2.875E-04
CL 36	2.861E-07	2.861E-07	2.861E-07	2.861E-07	2.861E-07	2.861E-07	2.861E-07	2.861E-07	2.861E-07	2.861E-07
CR 51	9.391E-01	6.616E-01	4.661E-01	9.580E-02	9.772E-03	1.017E-04	1.192E-12	1.398E-20	2.081E-40	0.000E+00
MN 54	3.147E-02	3.051E-02	2.957E-02	2.570E-02	2.099E-02	1.401E-02	2.774E-03	5.494E-04	9.591E-06	2.923E-09
FE 55	2.187E-01	2.164E-01	2.142E-01	2.046E-01	1.914E-01	1.675E-01	9.832E-02	5.771E-02	1.523E-02	1.061E-03
FE 59	9.759E-03	7.866E-03	6.340E-03	2.393E-03	5.869E-04	3.529E-05	4.617E-10	6.039E-15	3.737E-27	0.000E+00
CO 60	3.979E-01	3.959E-01	3.939E-01	3.851E-01	3.726E-01	3.489E-01	2.683E-01	2.062E-01	1.069E-01	2.872E-02
NI 59	7.771E-06	7.771E-06	7.771E-06	7.771E-06	7.771E-06	7.771E-06	7.771E-06	7.771E-06	7.770E-06	7.770E-06
NI 63	1.067E-03	1.066E-03	1.066E-03	1.065E-03	1.063E-03	1.059E-03	1.043E-03	1.027E-03	9.892E-04	9.174E-04
ZN 65	7.137E-02	6.858E-02	6.591E-02	5.506E-02	4.248E-02	2.529E-02	3.175E-03	3.987E-04	2.228E-06	6.955E-11
SE 79	8.604E-05	8.604E-05	8.604E-05	8.604E-05	8.604E-05	8.604E-05	8.604E-05	8.604E-05	8.603E-05	8.602E-05
KR 85	2.316E+00	2.311E+00	2.305E+00	2.280E+00	2.243E+00	2.172E+00	1.909E+00	1.677E+00	1.214E+00	6.363E-01
RB 87	5.714E-09	5.715E-09	5.715E-09	5.715E-09	5.715E-09	5.715E-09	5.715E-09	5.715E-09	5.715E-09	5.715E-09
SR 89	1.740E+02	1.436E+02	1.185E+02	4.974E+01	1.421E+01	1.161E+00	5.165E-05	2.298E-09	3.034E-20	0.000E+00
SR 90	1.948E+01	1.946E+01	1.944E+01	1.936E+01	1.925E+01	1.902E+01	1.814E+01	1.729E+01	1.536E+01	1.210E+01
Y 90	2.052E+01	1.949E+01	1.945E+01	1.937E+01	1.925E+01	1.903E+01	1.814E+01	1.730E+01	1.536E+01	1.211E+01
Y 91	2.133E+02	1.820E+02	1.541E+02	7.287E+01	2.472E+01	2.845E+00	4.990E-04	8.752E-08	3.565E-17	5.917E-36
ZR 93	5.431E-04	5.433E-04	5.433E-04	5.433E-04	5.433E-04	5.433E-04	5.433E-04	5.433E-04	5.433E-04	5.433E-04
ZR 95	2.599E+02	2.233E+02	1.919E+02	9.672E+01	3.599E+01	4.983E+00	1.832E-03	6.734E-07	1.745E-15	1.172E-32
NB 93M	4.920E-05	5.011E-05	5.102E-05	5.511E-05	6.094E-05	7.239E-05	1.154E-04	1.542E-04	2.355E-04	3.475E-04

Table A.8 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	2.387E-05	2.387E-05	2.387E-05	2.387E-05	2.387E-05	2.387E-05	2.386E-05	2.386E-05	2.386E-05	2.385E-05
NB 95	2.661E+02	2.599E+02	2.470E+02	1.633E+02	7.137E+01	1.083E+01	4.067E-03	1.495E-06	3.874E-15	2.600E-32
NB 95M	1.827E+00	1.650E+00	1.423E+00	7.175E-01	2.670E-01	3.697E-02	1.359E-05	4.996E-09	1.294E-17	8.690E-35
MO 93	5.909E-07	5.909E-07	5.909E-07	5.909E-07	5.908E-07	5.908E-07	5.905E-07	5.903E-07	5.897E-07	5.885E-07
TC 99	2.926E-03	2.934E-03	2.934E-03	2.934E-03	2.934E-03	2.934E-03	2.934E-03	2.934E-03	2.934E-03	2.934E-03
RU103	1.239E+02	9.677E+01	7.559E+01	2.476E+01	4.948E+00	1.977E-01	5.032E-07	1.281E-12	1.325E-26	0.000E+00
RU106	1.936E+01	1.886E+01	1.837E+01	1.631E+01	1.373E+01	9.739E+00	2.464E+00	6.234E-01	2.007E-02	2.081E-05
RH103M	1.116E+02	8.723E+01	6.814E+01	2.232E+01	4.461E+00	1.782E-01	4.537E-07	1.155E-12	1.195E-26	0.000E+00
RH106	1.984E+01	1.886E+01	1.837E+01	1.631E+01	1.373E+01	9.739E+00	2.464E+00	6.234E-01	2.007E-02	2.081E-05
PD107	4.271E-06	4.271E-06	4.271E-06	4.271E-06	4.271E-06	4.271E-06	4.271E-06	4.271E-06	4.271E-06	4.271E-06
AG110	3.297E-01	1.475E-04	1.419E-04	1.191E-04	9.243E-05	5.571E-05	7.354E-06	9.707E-07	6.146E-09	2.463E-13
AG110M	1.153E-02	1.109E-02	1.067E-02	8.951E-03	6.949E-03	4.188E-03	5.529E-04	7.299E-05	4.621E-07	1.852E-11
AG111	1.486E+00	4.049E-01	1.101E-01	3.062E-04	6.296E-08	2.661E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	2.762E-03	2.758E-03	2.753E-03	2.730E-03	2.698E-03	2.635E-03	2.396E-03	2.179E-03	1.718E-03	1.069E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	6.415E-02	5.160E-02	4.151E-02	1.553E-02	3.760E-03	2.205E-04	2.604E-09	3.075E-14	1.474E-26	0.000E+00
IN114	5.151E-03	1.684E-03	1.384E-03	5.710E-04	1.592E-04	1.237E-05	4.510E-10	1.644E-14	1.320E-25	0.000E+00
IN114M	2.140E-03	1.760E-03	1.446E-03	5.968E-04	1.663E-04	1.293E-05	4.712E-10	1.718E-14	1.379E-25	0.000E+00
IN115M	6.457E-01	9.059E-03	1.191E-04	1.090E-06	2.640E-07	1.548E-08	1.828E-13	2.159E-18	1.035E-30	0.000E+00
SN119M	3.322E+00	3.193E+00	3.069E+00	2.566E+00	1.982E+00	1.183E+00	1.500E-01	1.902E-02	1.089E-04	3.570E-09
SN121M	4.787E-04	4.785E-04	4.783E-04	4.772E-04	4.755E-04	4.722E-04	4.592E-04	4.467E-04	4.168E-04	3.629E-04
SN123	3.913E-01	3.629E-01	3.367E-01	2.397E-01	1.469E-01	5.518E-02	1.098E-03	2.183E-05	1.219E-09	3.797E-18
SN125	1.716E+00	6.270E-01	2.291E-01	2.426E-03	3.432E-06	6.864E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	8.139E-05	8.139E-05	8.139E-05	8.139E-05	8.139E-05	8.139E-05	8.139E-05	8.139E-05	8.138E-05	8.138E-05
SB124	1.320E-02	1.123E-02	9.558E-03	4.613E-03	1.613E-03	1.973E-04	4.411E-08	9.863E-12	7.372E-21	4.119E-39
SB125	2.170E+00	2.159E+00	2.142E+00	2.054E+00	1.929E+00	1.702E+00	1.032E+00	6.261E-01	1.793E-01	1.471E-02
SB126	4.592E-02	2.099E-02	9.605E-03	2.906E-04	1.309E-05	1.139E-05	1.139E-05	1.139E-05	1.139E-05	1.139E-05
SB126M	2.308E-02	8.139E-05	8.139E-05	8.139E-05	8.139E-05	8.139E-05	8.139E-05	8.139E-05	8.138E-05	8.138E-05
TE123M	2.330E-05	2.149E-05	1.982E-05	1.374E-05	8.098E-06	2.814E-06	4.103E-08	5.982E-10	1.536E-14	1.012E-23
TE125M	4.800E-01	4.828E-01	4.846E-01	4.829E-01	4.646E-01	4.147E-01	2.519E-01	1.528E-01	4.375E-02	3.588E-03
TE127	6.534E+00	1.357E+00	8.165E-01	5.187E-01	2.904E-01	9.098E-02	8.769E-04	8.452E-06	7.709E-11	6.413E-21
TE127M	9.123E-01	8.628E-01	7.916E-01	5.296E-01	2.964E-01	9.289E-02	8.953E-04	8.629E-06	7.871E-11	6.547E-21
TE129	2.644E+01	1.949E+00	1.460E+00	3.960E-01	6.028E-02	1.397E-03	4.025E-10	1.160E-16	5.172E-33	0.000E+00
TE129M	3.978E+00	2.994E+00	2.243E+00	6.084E-01	9.261E-02	2.146E-03	6.183E-10	1.782E-16	7.945E-33	0.000E+00
I129	4.884E-06	4.891E-06	4.895E-06	4.905E-06	4.908E-06	4.908E-06	4.908E-06	4.908E-06	4.908E-06	4.908E-06
I131	1.081E+02	3.324E+01	9.942E+00	4.260E-02	1.633E-05	2.401E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table A.8 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	1.200E+00	8.993E-01	5.080E-01	1.754E-02	9.064E-05	2.197E-09	7.453E-28	2.529E-46	0.000E+00	0.000E+00
XE133	2.496E+02	4.824E+01	7.600E+00	1.782E-03	1.033E-08	3.472E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	3.698E+00	3.650E+00	3.604E+00	3.399E+00	3.126E+00	2.643E+00	1.350E+00	6.894E-01	1.285E-01	4.468E-03
CS135	2.097E-04	2.098E-04	2.098E-04	2.098E-04	2.098E-04	2.098E-04	2.098E-04	2.098E-04	2.098E-04	2.098E-04
CS136	1.601E+00	7.632E-01	3.639E-01	1.281E-02	1.026E-04	6.576E-09	1.110E-25	1.874E-42	0.000E+00	0.000E+00
CS137	2.057E+01	2.055E+01	2.054E+01	2.045E+01	2.034E+01	2.010E+01	1.920E+01	1.833E+01	1.633E+01	1.296E+01
BA136M	2.638E-01	1.258E-01	5.997E-02	2.112E-03	1.691E-05	1.084E-09	1.830E-26	3.089E-43	0.000E+00	0.000E+00
BA137M	1.947E+01	1.944E+01	1.943E+01	1.935E+01	1.924E+01	1.902E+01	1.816E+01	1.734E+01	1.545E+01	1.226E+01
BA140	2.284E+02	1.070E+02	5.009E+01	1.625E+00	1.157E-02	5.855E-07	3.847E-24	2.528E-41	0.000E+00	0.000E+00
LA140	2.297E+02	1.230E+02	5.764E+01	1.871E+00	1.331E-02	6.738E-07	4.427E-24	2.909E-41	0.000E+00	0.000E+00
CE141	2.171E+02	1.620E+02	1.202E+02	3.120E+01	4.459E+00	9.109E-02	1.586E-08	2.761E-15	3.492E-32	0.000E+00
CE142	5.891E-09	5.891E-09	5.891E-09	5.891E-09	5.891E-09	5.891E-09	5.891E-09	5.891E-09	5.891E-09	5.891E-09
CE144	1.973E+02	1.907E+02	1.843E+02	1.580E+02	1.265E+02	8.104E+01	1.366E+01	2.304E+00	2.691E-02	3.669E-06
PR143	2.162E+02	1.177E+02	5.756E+01	2.273E+00	2.145E-02	1.912E-06	1.206E-22	7.606E-39	0.000E+00	0.000E+00
PR144	1.975E+02	1.907E+02	1.843E+02	1.580E+02	1.265E+02	8.104E+01	1.367E+01	2.304E+00	2.691E-02	3.669E-06
PR144M	2.369E+00	2.289E+00	2.212E+00	1.896E+00	1.518E+00	9.724E-01	1.640E-01	2.765E-02	3.229E-04	4.403E-08
ND144	2.150E-13	2.174E-13	2.198E-13	2.296E-13	2.413E-13	2.581E-13	2.831E-13	2.873E-13	2.882E-13	2.882E-13
ND147	8.403E+01	3.497E+01	1.454E+01	2.762E-01	9.070E-04	9.782E-09	1.323E-28	1.790E-48	0.000E+00	0.000E+00
PM145	7.018E-03	7.112E-03	7.202E-03	7.575E-03	8.021E-03	8.651E-03	9.298E-03	8.891E-03	7.387E-03	4.996E-03
PM147	5.071E+01	5.076E+01	5.049E+01	4.839E+01	4.530E+01	3.970E+01	2.341E+01	1.381E+01	3.688E+00	2.631E-01
PM148M	2.028E+00	1.603E+00	1.268E+00	4.384E-01	9.479E-02	4.430E-03	2.114E-08	1.009E-13	5.016E-27	0.000E+00
PM148	8.840E+00	1.523E+00	3.065E-01	2.478E-02	5.339E-03	2.495E-04	1.191E-09	5.681E-15	2.825E-28	0.000E+00
SM145	7.042E-02	6.844E-02	6.651E-02	5.847E-02	4.854E-02	3.346E-02	7.557E-03	1.706E-03	4.135E-05	2.428E-08
SM147	6.326E-08	6.328E-08	6.329E-08	6.334E-08	6.342E-08	6.356E-08	6.396E-08	6.419E-08	6.444E-08	6.452E-08
SM151	1.880E+00	1.880E+00	1.879E+00	1.877E+00	1.874E+00	1.866E+00	1.838E+00	1.810E+00	1.742E+00	1.612E+00
EU152	7.343E-02	7.329E-02	7.315E-02	7.251E-02	7.159E-02	6.979E-02	6.303E-02	5.693E-02	4.413E-02	2.652E-02
EU154	1.342E+01	1.338E+01	1.334E+01	1.315E+01	1.289E+01	1.238E+01	1.054E+01	8.971E+00	5.997E+00	2.680E+00
EU155	5.867E+00	5.836E+00	5.805E+00	5.666E+00	5.471E+00	5.102E+00	3.859E+00	2.919E+00	1.451E+00	3.591E-01
EU156	1.019E+01	5.386E+00	2.843E+00	1.584E-01	2.460E-03	5.930E-07	2.003E-21	6.763E-36	0.000E+00	0.000E+00
GD153	2.834E-02	2.722E-02	2.616E-02	2.182E-02	1.681E-02	9.963E-03	1.232E-03	1.521E-04	8.172E-07	2.356E-11
TB160	5.674E-03	4.961E-03	4.338E-03	2.366E-03	9.865E-04	1.715E-04	1.567E-07	1.431E-10	3.609E-18	2.295E-33
TL206	1.160E-05	1.688E-12	1.688E-12	1.688E-12	1.688E-12	1.688E-12	1.688E-12	1.688E-12	1.688E-12	1.688E-12
TL207	6.753E-10	6.760E-10	6.791E-10	7.207E-10	8.037E-10	9.971E-10	1.806E-09	2.698E-09	5.360E-09	1.224E-08
TL208	4.647E-08	4.720E-08	4.840E-08	5.444E-08	6.158E-08	7.405E-08	1.061E-07	1.211E-07	1.294E-07	1.209E-07
PB210	8.737E-15	8.957E-15	9.104E-15	9.399E-15	9.610E-15	1.009E-14	1.356E-14	2.011E-14	5.485E-14	2.431E-13
PB211	6.772E-10	6.779E-10	6.810E-10	7.227E-10	8.060E-10	9.999E-10	1.811E-09	2.706E-09	5.375E-09	1.227E-08

Table A.8 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.293E-07	1.314E-07	1.347E-07	1.515E-07	1.714E-07	2.061E-07	2.953E-07	3.370E-07	3.603E-07	3.364E-07
BI211	6.774E-10	6.779E-10	6.810E-10	7.227E-10	8.060E-10	9.999E-10	1.811E-09	2.706E-09	5.375E-09	1.227E-08
BI212	1.293E-07	1.314E-07	1.347E-07	1.515E-07	1.714E-07	2.061E-07	2.953E-07	3.370E-07	3.603E-07	3.364E-07
PO212	8.286E-08	8.417E-08	8.631E-08	9.707E-08	1.098E-07	1.320E-07	1.892E-07	2.159E-07	2.308E-07	2.155E-07
PO215	6.772E-10	6.779E-10	6.810E-10	7.227E-10	8.060E-10	9.999E-10	1.811E-09	2.706E-09	5.375E-09	1.227E-08
PO216	1.293E-07	1.314E-07	1.347E-07	1.515E-07	1.714E-07	2.061E-07	2.953E-07	3.370E-07	3.603E-07	3.364E-07
RN219	6.772E-10	6.779E-10	6.810E-10	7.227E-10	8.060E-10	9.999E-10	1.811E-09	2.706E-09	5.375E-09	1.227E-08
RN220	1.293E-07	1.314E-07	1.347E-07	1.515E-07	1.714E-07	2.061E-07	2.953E-07	3.370E-07	3.603E-07	3.364E-07
FR223	9.333E-12	9.509E-12	9.687E-12	1.050E-11	1.169E-11	1.414E-11	2.496E-11	3.729E-11	7.410E-11	1.693E-10
RA223	6.772E-10	6.778E-10	6.810E-10	7.227E-10	8.060E-10	9.999E-10	1.811E-09	2.706E-09	5.375E-09	1.227E-08
RA224	1.293E-07	1.314E-07	1.347E-07	1.515E-07	1.714E-07	2.061E-07	2.953E-07	3.370E-07	3.603E-07	3.364E-07
RA226	2.745E-14	2.807E-14	2.871E-14	3.163E-14	3.604E-14	4.551E-14	9.249E-14	1.546E-13	3.813E-13	1.181E-12
RA228	5.346E-10	5.387E-10	5.428E-10	5.612E-10	5.872E-10	6.371E-10	8.130E-10	9.560E-10	1.207E-09	1.447E-09
AC227	6.763E-10	6.891E-10	7.019E-10	7.606E-10	8.468E-10	1.025E-09	1.809E-09	2.702E-09	5.370E-09	1.227E-08
TH227	6.680E-10	6.704E-10	6.769E-10	7.262E-10	8.098E-10	9.843E-10	1.786E-09	2.669E-09	5.301E-09	1.211E-08
TH228	1.291E-07	1.326E-07	1.360E-07	1.508E-07	1.707E-07	2.053E-07	2.947E-07	3.363E-07	3.600E-07	3.364E-07
TH229	1.573E-10	1.604E-10	1.635E-10	1.777E-10	1.982E-10	2.394E-10	4.041E-10	5.688E-10	9.805E-10	1.804E-09
TH230	3.769E-11	3.800E-11	3.831E-11	3.971E-11	4.175E-11	4.587E-11	6.294E-11	8.094E-11	1.299E-10	2.443E-10
TH231	1.388E-04	6.042E-05	6.041E-05	6.040E-05	6.040E-05	6.040E-05	6.040E-05	6.040E-05	6.040E-05	6.040E-05
TH232	1.579E-09	1.579E-09	1.579E-09	1.579E-09	1.579E-09	1.579E-09	1.579E-09	1.579E-09	1.579E-09	1.579E-09
TH234	4.866E-05	4.849E-05	4.838E-05	4.818E-05	4.815E-05	4.814E-05	4.814E-05	4.814E-05	4.814E-05	4.814E-05
PA231	1.113E-08	1.120E-08	1.125E-08	1.148E-08	1.180E-08	1.244E-08	1.500E-08	1.756E-08	2.395E-08	3.672E-08
PA233	6.057E-02	4.231E-02	2.954E-02	5.832E-03	5.691E-04	1.476E-05	9.593E-06	9.598E-06	9.618E-06	9.681E-06
PA234M	9.431E-05	4.849E-05	4.838E-05	4.818E-05	4.815E-05	4.814E-05	4.814E-05	4.814E-05	4.814E-05	4.814E-05
PA234	9.758E-05	6.304E-08	6.289E-08	6.264E-08	6.259E-08	6.259E-08	6.259E-08	6.259E-08	6.259E-08	6.259E-08
U232	3.786E-07	3.796E-07	3.796E-07	3.796E-07	3.795E-07	3.793E-07	3.768E-07	3.725E-07	3.581E-07	3.265E-07
U233	8.446E-07	8.532E-07	8.591E-07	8.702E-07	8.726E-07	8.729E-07	8.730E-07	8.731E-07	8.733E-07	8.737E-07
U234	8.964E-07	8.974E-07	8.984E-07	9.029E-07	9.095E-07	9.226E-07	9.749E-07	1.026E-06	1.152E-06	1.389E-06
U235	6.040E-05	6.040E-05	6.040E-05	6.040E-05	6.040E-05	6.040E-05	6.040E-05	6.040E-05	6.040E-05	6.040E-05
U236	8.457E-05	8.457E-05	8.457E-05	8.457E-05	8.457E-05	8.457E-05	8.457E-05	8.457E-05	8.457E-05	8.458E-05
U237	1.513E+01	3.593E+00	8.534E-01	1.290E-03	3.646E-07	2.487E-07	2.259E-07	2.051E-07	1.613E-07	9.969E-08
U238	4.814E-05	4.814E-05	4.814E-05	4.814E-05	4.814E-05	4.814E-05	4.814E-05	4.814E-05	4.814E-05	4.814E-05
NP237	9.459E-06	9.558E-06	9.582E-06	9.590E-06	9.590E-06	9.590E-06	9.593E-06	9.598E-06	9.618E-06	9.681E-06
PU236	3.940E-07	3.917E-07	3.881E-07	3.721E-07	3.502E-07	3.101E-07	1.908E-07	1.173E-07	3.483E-08	3.069E-09
PU237	1.503E-06	1.215E-06	9.821E-07	3.755E-07	9.380E-08	5.854E-09	8.878E-14	1.346E-18	1.206E-30	0.000E+00
PU238	9.024E-03	9.094E-03	9.106E-03	9.149E-03	9.189E-03	9.219E-03	9.127E-03	8.987E-03	8.640E-03	7.985E-03

Table A.8 Aluminum-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	3.774E-02	3.787E-02	3.787E-02	3.787E-02	3.787E-02	3.787E-02	3.787E-02	3.787E-02	3.786E-02	3.785E-02
PU240	1.507E-02	1.507E-02	1.507E-02	1.507E-02	1.507E-02	1.507E-02	1.506E-02	1.506E-02	1.505E-02	1.504E-02
PU241	1.064E+00	1.062E+00	1.060E+00	1.051E+00	1.038E+00	1.014E+00	9.207E-01	8.362E-01	6.574E-01	4.064E-01
PU242	2.035E-06	2.035E-06	2.035E-06	2.035E-06	2.035E-06	2.035E-06	2.035E-06	2.035E-06	2.035E-06	2.035E-06
PU244	4.531E-15	4.531E-15	4.531E-15	4.531E-15	4.531E-15	4.531E-15	4.531E-15	4.531E-15	4.531E-15	4.531E-15
AM241	1.636E-03	1.701E-03	1.766E-03	2.058E-03	2.476E-03	3.296E-03	6.378E-03	9.166E-03	1.502E-02	2.308E-02
AM242M	1.356E-05	1.356E-05	1.355E-05	1.354E-05	1.353E-05	1.350E-05	1.338E-05	1.325E-05	1.296E-05	1.238E-05
AM242	1.055E-01	1.354E-05	1.349E-05	1.348E-05	1.346E-05	1.343E-05	1.331E-05	1.319E-05	1.289E-05	1.232E-05
AM243	1.550E-06	1.552E-06	1.552E-06	1.552E-06	1.552E-06	1.552E-06	1.551E-06	1.551E-06	1.550E-06	1.549E-06
CM242	5.171E-02	4.906E-02	4.623E-02	3.534E-02	2.399E-02	1.106E-02	5.083E-04	3.332E-05	1.067E-05	1.019E-05
CM243	2.060E-06	2.058E-06	2.056E-06	2.047E-06	2.035E-06	2.010E-06	1.915E-06	1.824E-06	1.615E-06	1.267E-06
CM244	2.533E-05	2.533E-05	2.529E-05	2.512E-05	2.488E-05	2.441E-05	2.261E-05	2.095E-05	1.730E-05	1.180E-05
CM245	2.408E-10	2.408E-10	2.408E-10	2.408E-10	2.407E-10	2.407E-10	2.407E-10	2.407E-10	2.406E-10	2.404E-10
CM246	7.533E-12	7.533E-12	7.533E-12	7.533E-12	7.533E-12	7.532E-12	7.530E-12	7.528E-12	7.522E-12	7.511E-12
CM247	1.887E-18	1.887E-18	1.887E-18	1.887E-18	1.887E-18	1.887E-18	1.887E-18	1.887E-18	1.887E-18	1.887E-18
Subtotal Ci**	3.169E+03	2.230E+03	1.759E+03	9.818E+02	5.988E+02	3.493E+02	1.519E+02	1.081E+02	7.801E+01	5.559E+01
Total Ci***	2.369E+04	2.286E+03	1.770E+03	9.881E+02	6.024E+02	3.505E+02	1.520E+02	1.081E+02	7.800E+01	5.560E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

APPENDIX S

Stainless Steel-clad Standard TRIGA fuel element

Activity
vs
Burnup/Decay Time

Table S.1 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table S.1 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: ss.1

BURNUP (BU)

BU: U-235 0.5 g
 BU: % U-235 1.28%
 BU: MWd 0.48
 BU: MWd/MTU 2462
 U-235 DEPL 0.59 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	.3-years	5-years	10-years	20-years
H 3	6.960E-03	6.945E-03	6.930E-03	6.863E-03	6.767E-03	6.580E-03	5.882E-03	5.258E-03	3.972E-03	2.266E-03
BE 10	8.836E-09	8.836E-09	8.836E-09	8.836E-09	8.836E-09	8.836E-09	8.836E-09	8.836E-09	8.836E-09	8.836E-09
C 14	5.672E-05	5.672E-05	5.672E-05	5.672E-05	5.671E-05	5.671E-05	5.670E-05	5.668E-05	5.665E-05	5.658E-05
CL 36	1.243E-06	1.243E-06	1.243E-06	1.243E-06	1.243E-06	1.243E-06	1.243E-06	1.243E-06	1.243E-06	1.243E-06
CR 51	2.859E+00	2.015E+00	1.419E+00	2.917E-01	2.975E-02	3.096E-04	3.630E-12	4.256E-20	6.336E-40	0.000E+00
MN 54	1.767E-01	1.713E-01	1.660E-01	1.443E-01	1.179E-01	7.862E-02	1.557E-02	3.084E-03	5.384E-05	1.641E-08
FE 55	1.269E+00	1.256E+00	1.243E+00	1.187E+00	1.111E+00	9.723E-01	5.707E-01	3.350E-01	8.841E-02	6.159E-03
FE 59	5.286E-02	4.261E-02	3.434E-02	1.296E-02	3.179E-03	1.912E-04	2.501E-09	3.271E-14	2.024E-26	0.000E+00
CO 60	1.088E+00	1.082E+00	1.077E+00	1.053E+00	1.019E+00	9.539E-01	7.334E-01	5.639E-01	2.922E-01	7.850E-02
NI 59	2.417E-04	2.417E-04	2.417E-04	2.417E-04	2.417E-04	2.417E-04	2.417E-04	2.417E-04	2.417E-04	2.416E-04
NI 63	2.950E-02	2.949E-02	2.948E-02	2.945E-02	2.939E-02	2.928E-02	2.884E-02	2.841E-02	2.736E-02	2.538E-02
ZN 65	2.196E-02	2.110E-02	2.028E-02	1.694E-02	1.307E-02	7.782E-03	9.771E-04	1.227E-04	6.855E-07	2.140E-11
SE 79	6.268E-06	6.268E-06	6.268E-06	6.268E-06	6.268E-06	6.268E-06	6.268E-06	6.268E-06	6.267E-06	6.267E-06
KR 85	1.694E-01	1.690E-01	1.686E-01	1.667E-01	1.640E-01	1.588E-01	1.396E-01	1.226E-01	8.879E-02	4.653E-02
RB 87	6.270E-10	6.270E-10	6.270E-10	6.270E-10	6.270E-10	6.270E-10	6.270E-10	6.270E-10	6.270E-10	6.270E-10
SR 89	1.313E+01	1.083E+01	8.941E+00	3.752E+00	1.072E+00	8.759E-02	3.897E-06	1.734E-10	2.289E-21	0.000E+00
SR 90	1.427E+00	1.426E+00	1.425E+00	1.419E+00	1.410E+00	1.394E+00	1.329E+00	1.267E+00	1.125E+00	8.869E-01
Y 90	1.477E+00	1.427E+00	1.425E+00	1.419E+00	1.411E+00	1.394E+00	1.329E+00	1.267E+00	1.125E+00	8.871E-01
Y 91	1.602E+01	1.367E+01	1.158E+01	5.474E+00	1.857E+00	2.137E-01	3.748E-05	6.573E-09	2.678E-18	4.445E-37
ZR 93	3.797E-05	3.799E-05	3.799E-05	3.799E-05	3.799E-05	3.799E-05	3.799E-05	3.799E-05	3.799E-05	3.799E-05
ZR 95	1.878E+01	1.614E+01	1.386E+01	6.990E+00	2.601E+00	3.601E-01	1.323E-04	4.866E-08	1.261E-16	8.464E-34
NB 93M	3.442E-06	3.506E-06	3.570E-06	3.855E-06	4.263E-06	5.063E-06	8.068E-06	1.078E-05	1.647E-05	2.430E-05

Table S.1 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	3.593E-06	3.593E-06	3.593E-06	3.593E-06	3.593E-06	3.593E-06	3.592E-06	3.592E-06	3.591E-06	3.590E-06
NB 95	1.923E+01	1.878E+01	1.785E+01	1.180E+01	5.157E+00	7.825E-01	2.939E-04	1.080E-07	2.799E-16	1.879E-33
NB 95M	1.320E-01	1.192E-01	1.028E-01	5.185E-02	1.929E-02	2.672E-03	9.821E-07	3.610E-10	9.354E-19	6.279E-36
MO 93	4.122E-06	4.122E-06	4.122E-06	4.122E-06	4.122E-06	4.122E-06	4.120E-06	4.118E-06	4.114E-06	4.106E-06
TC 99	2.140E-04	2.146E-04	2.146E-04	2.146E-04	2.146E-04	2.146E-04	2.146E-04	2.146E-04	2.146E-04	2.146E-04
RU103	8.711E+00	6.804E+00	5.315E+00	1.741E+00	3.480E-01	1.390E-02	3.539E-08	9.009E-14	9.317E-28	0.000E+00
RU106	1.112E+00	1.084E+00	1.055E+00	9.369E-01	7.890E-01	5.596E-01	1.416E-01	3.582E-02	1.153E-03	1.195E-06
RH103M	7.845E+00	6.134E+00	4.791E+00	1.570E+00	3.137E-01	1.253E-02	3.190E-08	8.122E-14	8.400E-28	0.000E+00
RH106	1.114E+00	1.084E+00	1.055E+00	9.369E-01	7.890E-01	5.596E-01	1.416E-01	3.582E-02	1.153E-03	1.195E-06
PD107	2.364E-07	2.364E-07	2.364E-07	2.364E-07	2.364E-07	2.364E-07	2.364E-07	2.364E-07	2.364E-07	2.364E-07
AG110	5.687E-03	3.651E-06	3.512E-06	2.947E-06	2.288E-06	1.379E-06	1.821E-07	2.404E-08	1.521E-10	6.098E-15
AG110M	2.854E-04	2.746E-04	2.641E-04	2.216E-04	1.721E-04	1.037E-04	1.369E-05	1.807E-06	1.144E-08	4.585E-13
AG111	7.907E-02	2.155E-02	5.858E-03	1.630E-05	3.351E-09	1.416E-16	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.850E-04	1.847E-04	1.843E-04	1.828E-04	1.807E-04	1.764E-04	1.604E-04	1.459E-04	1.151E-04	7.158E-05
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	4.324E-03	3.479E-03	2.799E-03	1.047E-03	2.535E-04	1.486E-05	1.755E-10	2.074E-15	9.937E-28	0.000E+00
IN114	4.744E-05	1.509E-05	1.240E-05	5.117E-06	1.426E-06	1.109E-07	4.041E-12	1.474E-16	1.183E-27	0.000E+00
IN114M	1.918E-05	1.577E-05	1.296E-05	5.347E-06	1.491E-06	1.158E-07	4.223E-12	1.540E-16	1.236E-27	0.000E+00
IN115M	4.394E-02	6.165E-04	8.106E-06	7.354E-08	1.781E-08	1.044E-09	1.233E-14	1.456E-19	6.979E-32	0.000E+00
SN119M	1.799E-01	1.730E-01	1.663E-01	1.391E-01	1.074E-01	6.409E-02	8.126E-03	1.030E-03	5.900E-06	1.935E-10
SN121M	2.737E-05	2.735E-05	2.734E-05	2.728E-05	2.718E-05	2.699E-05	2.626E-05	2.553E-05	2.382E-05	2.074E-05
SN123	2.469E-02	2.291E-02	2.125E-02	1.513E-02	9.274E-03	3.483E-03	6.928E-05	1.378E-06	7.692E-11	2.396E-19
SN125	1.002E-01	3.662E-02	1.338E-02	1.417E-04	2.005E-07	4.009E-13	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	5.656E-06	5.656E-06	5.656E-06	5.656E-06	5.656E-06	5.656E-06	5.656E-06	5.655E-06	5.655E-06	5.655E-06
SB124	2.617E-03	2.227E-03	1.896E-03	9.152E-04	3.200E-04	3.914E-05	8.750E-09	1.956E-12	1.462E-21	8.170E-40
SB125	1.344E-01	1.337E-01	1.327E-01	1.272E-01	1.195E-01	1.054E-01	6.394E-02	3.877E-02	1.110E-02	9.108E-04
SB126	2.877E-03	1.315E-03	6.019E-04	1.829E-05	8.980E-07	7.918E-07	7.918E-07	7.918E-07	7.917E-07	7.917E-07
SB126M	1.408E-03	5.656E-06	5.656E-06	5.656E-06	5.656E-06	5.656E-06	5.656E-06	5.655E-06	5.655E-06	5.655E-06
TE123M	5.001E-07	4.612E-07	4.252E-07	2.948E-07	1.737E-07	6.039E-08	8.805E-10	1.284E-11	3.295E-16	2.172E-25
TE125M	2.985E-02	3.000E-02	3.010E-02	2.995E-02	2.878E-02	2.568E-02	1.560E-02	9.463E-03	2.710E-03	2.223E-04
TE127	4.457E-01	9.220E-02	5.532E-02	3.513E-02	1.966E-02	6.161E-03	5.938E-05	5.724E-07	5.220E-12	4.343E-22
TE127M	6.176E-02	5.843E-02	5.360E-02	3.586E-02	2.007E-02	6.290E-03	6.063E-05	5.844E-07	5.330E-12	4.434E-22
TE129	1.881E+00	1.383E-01	1.036E-01	2.810E-02	4.277E-03	9.910E-05	2.856E-11	8.231E-18	3.670E-34	0.000E+00
TE129M	2.822E-01	2.125E-01	1.592E-01	4.317E-02	6.571E-03	1.522E-04	4.388E-11	1.264E-17	5.638E-34	0.000E+00
I129	3.476E-07	3.481E-07	3.484E-07	3.490E-07	3.493E-07	3.493E-07	3.493E-07	3.493E-07	3.493E-07	3.493E-07
I131	7.936E+00	2.438E+00	7.293E-01	3.125E-03	1.198E-06	1.762E-13	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table S.1 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	8.809E-02	6.598E-02	3.727E-02	1.287E-03	6.649E-06	1.611E-10	5.468E-29	1.855E-47	0.000E+00	0.000E+00
XE133	1.853E+01	3.581E+00	5.642E-01	1.323E-04	7.670E-10	2.577E-20	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.594E-02	1.573E-02	1.553E-02	1.465E-02	1.347E-02	1.139E-02	5.816E-03	2.971E-03	5.538E-04	1.925E-05
CS135	2.113E-05	2.114E-05	2.114E-05	2.114E-05	2.114E-05	2.114E-05	2.114E-05	2.114E-05	2.114E-05	2.114E-05
CS136	2.718E-02	1.296E-02	6.179E-03	2.176E-04	1.742E-06	1.117E-10	1.885E-27	3.183E-44	0.000E+00	0.000E+00
CS137	1.485E+00	1.484E+00	1.482E+00	1.477E+00	1.468E+00	1.451E+00	1.386E+00	1.323E+00	1.179E+00	9.358E-01
BA136M	4.500E-03	2.136E-03	1.018E-03	3.586E-05	2.871E-07	1.840E-11	3.107E-28	5.245E-45	0.000E+00	0.000E+00
BA137M	1.406E+00	1.404E+00	1.402E+00	1.397E+00	1.389E+00	1.373E+00	1.311E+00	1.252E+00	1.115E+00	8.853E-01
BA140	1.705E+01	7.984E+00	3.739E+00	1.213E-01	8.633E-04	4.371E-08	2.872E-25	1.887E-42	0.000E+00	0.000E+00
LA140	1.707E+01	9.181E+00	4.302E+00	1.396E-01	9.935E-04	5.030E-08	3.305E-25	2.171E-42	0.000E+00	0.000E+00
CE141	1.620E+01	1.208E+01	8.967E+00	2.328E+00	3.328E-01	6.797E-03	1.183E-09	2.060E-16	2.606E-33	0.000E+00
CE142	1.618E-09	1.618E-09	1.618E-09	1.618E-09	1.618E-09	1.618E-09	1.618E-09	1.618E-09	1.618E-09	1.618E-09
CE144	1.446E+01	1.397E+01	1.350E+01	1.157E+01	9.264E+00	5.937E+00	1.001E+00	1.688E-01	1.971E-03	2.688E-07
PR143	1.623E+01	8.835E+00	4.321E+00	1.706E-01	1.610E-03	1.435E-07	9.052E-24	5.710E-40	0.000E+00	0.000E+00
PR144	1.446E+01	1.397E+01	1.350E+01	1.157E+01	9.265E+00	5.937E+00	1.001E+00	1.688E-01	1.971E-03	2.688E-07
PR144M	1.736E-01	1.677E-01	1.620E-01	1.389E-01	1.112E-01	7.124E-02	1.201E-02	2.026E-03	2.366E-05	3.225E-09
ND144	1.443E-14	1.461E-14	1.478E-14	1.550E-14	1.635E-14	1.759E-14	1.942E-14	1.973E-14	1.979E-14	1.979E-14
ND147	6.266E+00	2.608E+00	1.085E+00	2.060E-02	6.763E-05	7.294E-10	9.868E-30	1.335E-49	0.000E+00	0.000E+00
PM145	4.354E-07	4.409E-07	4.462E-07	4.679E-07	4.939E-07	5.304E-07	5.667E-07	5.413E-07	4.495E-07	3.040E-07
PM147	4.025E+00	4.027E+00	4.004E+00	3.836E+00	3.592E+00	3.147E+00	1.856E+00	1.095E+00	2.924E-01	2.086E-02
PM148M	1.158E-02	9.152E-03	7.235E-03	2.503E-03	5.410E-04	2.529E-05	1.207E-10	5.757E-16	2.863E-29	0.000E+00
PM148	3.863E-02	6.750E-03	1.431E-03	1.414E-04	3.048E-05	1.424E-06	6.796E-12	3.243E-17	1.613E-30	0.000E+00
SM145	4.136E-06	4.020E-06	3.907E-06	3.434E-06	2.851E-06	1.965E-06	4.438E-07	1.002E-07	2.429E-09	1.426E-12
SM147	1.320E-10	1.330E-10	1.340E-10	1.384E-10	1.444E-10	1.553E-10	1.869E-10	2.056E-10	2.253E-10	2.319E-10
SM151	3.195E-02	3.198E-02	3.197E-02	3.193E-02	3.187E-02	3.175E-02	3.125E-02	3.078E-02	2.962E-02	2.742E-02
EU152	4.774E-04	4.764E-04	4.755E-04	4.714E-04	4.653E-04	4.537E-04	4.097E-04	3.700E-04	2.869E-04	1.724E-04
EU154	7.504E-04	7.481E-04	7.458E-04	7.355E-04	7.209E-04	6.923E-04	5.893E-04	5.016E-04	3.354E-04	1.499E-04
EU155	4.180E-02	4.156E-02	4.134E-02	4.036E-02	3.897E-02	3.635E-02	2.749E-02	2.079E-02	1.034E-02	2.558E-03
EU156	4.979E-02	2.687E-02	1.419E-02	7.906E-04	1.228E-05	2.959E-09	9.993E-24	3.375E-38	0.000E+00	0.000E+00
GD153	3.337E-04	3.206E-04	3.080E-04	2.570E-04	1.979E-04	1.173E-04	1.450E-05	1.792E-06	9.622E-09	2.775E-13
TB160	9.958E-04	8.708E-04	7.614E-04	4.152E-04	1.732E-04	3.010E-05	2.750E-08	2.512E-11	6.334E-19	4.028E-34
TL206	6.080E-07	9.507E-14	9.507E-14	9.507E-14	9.507E-14	9.507E-14	9.507E-14	9.507E-14	9.507E-14	9.507E-14
TL207	4.532E-10	4.536E-10	4.557E-10	4.838E-10	5.411E-10	6.804E-10	1.333E-09	2.145E-09	4.877E-09	1.287E-08
TL208	1.800E-09	1.826E-09	1.869E-09	2.088E-09	2.347E-09	2.797E-09	3.956E-09	4.507E-09	4.857E-09	4.652E-09
PB210	8.128E-17	8.373E-17	8.609E-17	9.665E-17	1.132E-16	1.530E-16	4.172E-16	8.891E-16	3.302E-15	1.571E-14
PB211	4.545E-10	4.549E-10	4.570E-10	4.852E-10	5.426E-10	6.823E-10	1.337E-09	2.151E-09	4.891E-09	1.291E-08

Table S.1 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	5.009E-09	5.082E-09	5.203E-09	5.812E-09	6.532E-09	7.786E-09	1.101E-08	1.254E-08	1.352E-08	1.295E-08
BI211	4.545E-10	4.549E-10	4.570E-10	4.852E-10	5.426E-10	6.823E-10	1.337E-09	2.151E-09	4.891E-09	1.291E-08
BI212	5.009E-09	5.082E-09	5.203E-09	5.812E-09	6.532E-09	7.786E-09	1.101E-08	1.254E-08	1.352E-08	1.295E-08
PO212	3.209E-09	3.256E-09	3.333E-09	3.724E-09	4.185E-09	4.988E-09	7.055E-09	8.038E-09	8.661E-09	8.296E-09
PO215	4.545E-10	4.549E-10	4.570E-10	4.852E-10	5.426E-10	6.823E-10	1.337E-09	2.151E-09	4.891E-09	1.291E-08
PO216	5.009E-09	5.082E-09	5.203E-09	5.812E-09	6.532E-09	7.786E-09	1.101E-08	1.254E-08	1.352E-08	1.295E-08
RN219	4.545E-10	4.549E-10	4.570E-10	4.852E-10	5.426E-10	6.823E-10	1.337E-09	2.151E-09	4.891E-09	1.291E-08
RN220	5.009E-09	5.082E-09	5.203E-09	5.812E-09	6.532E-09	7.786E-09	1.101E-08	1.254E-08	1.352E-08	1.295E-08
FR223	6.264E-12	6.382E-12	6.501E-12	7.052E-12	7.883E-12	9.671E-12	1.843E-11	2.965E-11	6.743E-11	1.780E-10
RA223	4.545E-10	4.549E-10	4.570E-10	4.852E-10	5.426E-10	6.823E-10	1.337E-09	2.151E-09	4.891E-09	1.291E-08
RA224	5.009E-09	5.082E-09	5.203E-09	5.812E-09	6.532E-09	7.786E-09	1.101E-08	1.254E-08	1.352E-08	1.295E-08
RA226	1.821E-15	1.862E-15	1.904E-15	2.098E-15	2.391E-15	3.027E-15	6.219E-15	1.045E-14	2.564E-14	7.591E-14
RA228	5.726E-10	5.771E-10	5.815E-10	6.012E-10	6.290E-10	6.824E-10	8.708E-10	1.024E-09	1.293E-09	1.549E-09
AC227	4.539E-10	4.624E-10	4.711E-10	5.110E-10	5.712E-10	7.008E-10	1.336E-09	2.148E-09	4.886E-09	1.290E-08
TH227	4.482E-10	4.498E-10	4.542E-10	4.877E-10	5.456E-10	6.716E-10	1.319E-09	2.122E-09	4.823E-09	1.273E-08
TH228	5.000E-09	5.125E-09	5.249E-09	5.786E-09	6.504E-09	7.757E-09	1.099E-08	1.252E-08	1.351E-08	1.295E-08
TH229	1.097E-11	1.119E-11	1.140E-11	1.237E-11	1.378E-11	1.660E-11	2.788E-11	3.917E-11	6.736E-11	1.237E-10
TH230	2.488E-12	2.511E-12	2.534E-12	2.638E-12	2.788E-12	3.089E-12	4.295E-12	5.507E-12	8.562E-12	1.478E-11
TH231	8.765E-05	8.306E-05	8.306E-05	8.305E-05	8.305E-05	8.305E-05	8.305E-05	8.305E-05	8.305E-05	8.305E-05
TH232	1.691E-09	1.691E-09	1.691E-09	1.691E-09	1.691E-09	1.691E-09	1.691E-09	1.691E-09	1.691E-09	1.691E-09
TH234	5.246E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05
PA231	7.426E-09	7.501E-09	7.576E-09	7.887E-09	8.334E-09	9.219E-09	1.274E-08	1.626E-08	2.504E-08	4.260E-08
PA233	3.458E-03	2.416E-03	1.686E-03	3.326E-04	3.205E-05	3.886E-07	9.348E-08	9.348E-08	9.349E-08	9.351E-08
PA234M	5.259E-05	5.246E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05
PA234	3.606E-07	6.819E-08	6.819E-08	6.819E-08	6.819E-08	6.819E-08	6.819E-08	6.819E-08	6.819E-08	6.819E-08
U232	1.348E-08	1.351E-08	1.350E-08	1.348E-08	1.345E-08	1.338E-08	1.313E-08	1.288E-08	1.228E-08	1.116E-08
U233	5.818E-08	5.867E-08	5.901E-08	5.964E-08	5.978E-08	5.980E-08	5.980E-08	5.980E-08	5.980E-08	5.980E-08
U234	6.669E-08	6.670E-08	6.670E-08	6.673E-08	6.677E-08	6.686E-08	6.719E-08	6.752E-08	6.835E-08	7.000E-08
U235	8.305E-05	8.305E-05	8.305E-05	8.305E-05	8.305E-05	8.305E-05	8.305E-05	8.305E-05	8.305E-05	8.305E-05
U236	6.264E-06	6.264E-06	6.264E-06	6.264E-06	6.264E-06	6.264E-06	6.264E-06	6.264E-06	6.264E-06	6.264E-06
U237	1.004E-01	2.384E-02	5.663E-03	8.556E-06	8.183E-10	8.708E-11	7.910E-11	7.184E-11	5.648E-11	3.491E-11
U238	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05	5.245E-05
NP237	9.261E-08	9.328E-08	9.343E-08	9.348E-08	9.348E-08	9.348E-08	9.348E-08	9.348E-08	9.349E-08	9.351E-08
PU236	2.656E-10	2.639E-10	2.615E-10	2.507E-10	2.359E-10	2.089E-10	1.285E-10	7.906E-11	2.346E-11	2.068E-12
PU237	3.519E-09	2.845E-09	2.299E-09	8.792E-10	2.196E-10	1.371E-11	2.079E-16	3.152E-21	2.824E-33	0.000E+00
PU238	6.437E-06	6.466E-06	6.465E-06	6.457E-06	6.446E-06	6.422E-06	6.322E-06	6.223E-06	5.982E-06	5.528E-06

Table S.1 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	3.227E-03	3.235E-03	3.235E-03	3.235E-03	3.235E-03	3.235E-03	3.234E-03	3.234E-03	3.234E-03	3.233E-03
PU240	8.656E-05	8.656E-05	8.656E-05	8.656E-05	8.656E-05	8.655E-05	8.654E-05	8.652E-05	8.647E-05	8.638E-05
PU241	3.725E-04	3.718E-04	3.711E-04	3.680E-04	3.636E-04	3.550E-04	3.224E-04	2.929E-04	2.302E-04	1.423E-04
PU242	4.107E-11	4.107E-11	4.107E-11	4.107E-11	4.107E-11	4.107E-11	4.107E-11	4.107E-11	4.107E-11	4.107E-11
PU244	2.714E-22	2.714E-22	2.714E-22	2.714E-22	2.714E-22	2.714E-22	2.714E-22	2.714E-22	2.714E-22	2.714E-22
AM241	5.998E-07	6.226E-07	6.454E-07	7.479E-07	8.941E-07	1.181E-06	2.260E-06	3.237E-06	5.288E-06	8.108E-06
AM242M	4.281E-10	4.280E-10	4.280E-10	4.276E-10	4.271E-10	4.262E-10	4.223E-10	4.185E-10	4.090E-10	3.908E-10
AM242	2.189E-06	4.270E-10	4.258E-10	4.255E-10	4.250E-10	4.240E-10	4.202E-10	4.164E-10	4.070E-10	3.889E-10
AM243	1.719E-12	1.720E-12	1.720E-12	1.720E-12	1.720E-12	1.720E-12	1.720E-12	1.720E-12	1.719E-12	1.717E-12
CM242	1.057E-06	1.003E-06	9.448E-07	7.223E-07	4.903E-07	2.261E-07	1.051E-08	8.025E-10	3.369E-10	3.216E-10
CM243	2.433E-12	2.430E-12	2.428E-12	2.418E-12	2.403E-12	2.374E-12	2.262E-12	2.154E-12	1.908E-12	1.496E-12
CM244	1.514E-12	1.514E-12	1.511E-12	1.501E-12	1.487E-12	1.459E-12	1.351E-12	1.252E-12	1.034E-12	7.054E-13
CM245	8.496E-19	8.496E-19	8.496E-19	8.495E-19	8.495E-19	8.495E-19	8.494E-19	8.492E-19	8.489E-19	8.482E-19
CM246	1.549E-21	1.549E-21	1.549E-21	1.549E-21	1.549E-21	1.549E-21	1.549E-21	1.548E-21	1.547E-21	1.545E-21
CM247	2.115E-29	2.115E-29	2.115E-29	2.115E-29	2.115E-29	2.115E-29	2.115E-29	2.115E-29	2.115E-29	2.115E-29
Subtotal Ci**	2.336E+02	1.652E+02	1.302E+02	7.233E+01	4.409E+01	2.581E+01	1.116E+01	7.783E+00	5.403E+00	3.811E+00
Total Ci***	1.701E+03	1.690E+02	1.312E+02	7.287E+01	4.438E+01	2.589E+01	1.116E+01	7.783E+00	5.403E+00	3.811E+00

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table S.2 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table S.2 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: ss.2

BURNUP (BU)

BU: U-235 1.0 g
 BU: % U-235 2.56%
 BU: MWd 0.95
 BU: MWd/MTU 4872
 U-235 DEPL 1.18 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	1.379E-02	1.376E-02	1.373E-02	1.360E-02	1.341E-02	1.304E-02	1.165E-02	1.042E-02	7.869E-03	4.491E-03
BE 10	1.759E-08	1.759E-08	1.759E-08	1.759E-08	1.759E-08	1.759E-08	1.759E-08	1.759E-08	1.759E-08	1.759E-08
C 14	1.129E-04	1.129E-04	1.129E-04	1.129E-04	1.129E-04	1.129E-04	1.129E-04	1.129E-04	1.128E-04	1.127E-04
CL 36	2.475E-06	2.475E-06	2.475E-06	2.475E-06	2.475E-06	2.475E-06	2.475E-06	2.475E-06	2.475E-06	2.475E-06
CR 51	5.719E+00	4.029E+00	2.839E+00	5.834E-01	5.951E-02	6.192E-04	7.260E-12	8.513E-20	1.267E-39	0.000E+00
MN 54	3.527E-01	3.419E-01	3.314E-01	2.881E-01	2.353E-01	1.570E-01	3.109E-02	6.157E-03	1.075E-04	3.276E-08
FE 55	2.530E+00	2.504E+00	2.478E+00	2.367E+00	2.214E+00	1.938E+00	1.137E+00	6.676E-01	1.762E-01	1.227E-02
FE 59	1.058E-01	8.525E-02	6.871E-02	2.594E-02	6.361E-03	3.825E-04	5.004E-09	6.545E-14	4.050E-26	0.000E+00
CO 60	2.167E+00	2.156E+00	2.145E+00	2.097E+00	2.029E+00	1.900E+00	1.461E+00	1.123E+00	5.820E-01	1.563E-01
NI 59	4.809E-04	4.809E-04	4.809E-04	4.809E-04	4.809E-04	4.809E-04	4.809E-04	4.809E-04	4.808E-04	4.808E-04
NI 63	5.873E-02	5.871E-02	5.870E-02	5.862E-02	5.851E-02	5.829E-02	5.742E-02	5.656E-02	5.447E-02	5.052E-02
ZN 65	4.386E-02	4.215E-02	4.051E-02	3.384E-02	2.611E-02	1.554E-02	1.952E-03	2.451E-04	1.369E-06	4.275E-11
SE 79	1.240E-05	1.240E-05	1.240E-05	1.240E-05	1.240E-05	1.240E-05	1.240E-05	1.240E-05	1.240E-05	1.240E-05
KR 85	3.349E-01	3.342E-01	3.333E-01	3.296E-01	3.244E-01	3.140E-01	2.760E-01	2.425E-01	1.756E-01	9.201E-02
RB 87	1.035E-09	1.035E-09	1.035E-09	1.035E-09	1.035E-09	1.035E-09	1.035E-09	1.035E-09	1.035E-09	1.035E-09
SR 89	2.591E+01	2.138E+01	1.764E+01	7.406E+00	2.116E+00	1.728E-01	7.691E-06	3.421E-10	4.517E-21	0.000E+00
SR 90	2.822E+00	2.819E+00	2.816E+00	2.805E+00	2.788E+00	2.755E+00	2.627E+00	2.505E+00	2.224E+00	1.753E+00
Y 90	2.924E+00	2.823E+00	2.817E+00	2.805E+00	2.789E+00	2.756E+00	2.628E+00	2.506E+00	2.225E+00	1.754E+00
Y 91	3.163E+01	2.699E+01	2.286E+01	1.080E+01	3.666E+00	4.219E-01	7.399E-05	1.297E-08	5.286E-18	8.774E-37
ZR 93	7.518E-05	7.521E-05	7.521E-05	7.521E-05	7.521E-05	7.521E-05	7.521E-05	7.521E-05	7.521E-05	7.521E-05
ZR 95	3.714E+01	3.191E+01	2.742E+01	1.382E+01	5.143E+00	7.121E-01	2.618E-04	9.624E-08	2.493E-16	1.674E-33
NB 93M	6.815E-06	6.942E-06	7.067E-06	7.633E-06	8.441E-06	1.002E-05	1.598E-05	2.135E-05	3.261E-05	4.811E-05

Table S.2 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	7.152E-06	7.152E-06	7.152E-06	7.152E-06	7.152E-06	7.152E-06	7.152E-06	7.151E-06	7.150E-06	7.147E-06
NB 95	3.803E+01	3.714E+01	3.531E+01	2.333E+01	1.020E+01	1.548E+00	5.811E-04	2.137E-07	5.535E-16	3.716E-33
NB 95M	2.610E-01	2.358E-01	2.034E-01	1.025E-01	3.815E-02	5.283E-03	1.942E-06	7.139E-10	1.850E-18	1.241E-35
MO 93	8.208E-06	8.208E-06	8.208E-06	8.207E-06	8.207E-06	8.206E-06	8.203E-06	8.200E-06	8.192E-06	8.175E-06
TC 99	4.232E-04	4.244E-04	4.244E-04	4.244E-04	4.244E-04	4.244E-04	4.244E-04	4.244E-04	4.244E-04	4.244E-04
RU103	1.727E+01	1.349E+01	1.054E+01	3.453E+00	6.900E-01	2.756E-02	7.017E-08	1.787E-13	1.848E-27	0.000E+00
RU106	2.240E+00	2.182E+00	2.125E+00	1.887E+00	1.589E+00	1.127E+00	2.851E-01	7.212E-02	2.322E-03	2.407E-06
RH103M	1.556E+01	1.216E+01	9.502E+00	3.112E+00	6.221E-01	2.485E-02	6.326E-08	1.611E-13	1.666E-27	0.000E+00
RH106	2.247E+00	2.182E+00	2.125E+00	1.887E+00	1.589E+00	1.127E+00	2.851E-01	7.212E-02	2.322E-03	2.407E-06
PD107	4.776E-07	4.776E-07	4.776E-07	4.776E-07	4.776E-07	4.776E-07	4.776E-07	4.776E-07	4.776E-07	4.776E-07
AG110	1.303E-02	8.042E-06	7.736E-06	6.491E-06	5.040E-06	3.038E-06	4.010E-07	5.293E-08	3.351E-10	1.343E-14
AG110M	6.287E-04	6.047E-04	5.817E-04	4.881E-04	3.789E-04	2.284E-04	3.015E-05	3.980E-06	2.520E-08	1.010E-12
AG111	1.602E-01	4.367E-02	1.187E-02	3.303E-05	6.790E-09	2.870E-16	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	3.678E-04	3.672E-04	3.665E-04	3.635E-04	3.592E-04	3.508E-04	3.190E-04	2.901E-04	2.288E-04	1.423E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	8.594E-03	6.914E-03	5.562E-03	2.081E-03	5.038E-04	2.953E-05	3.489E-10	4.120E-15	1.975E-27	0.000E+00
IN114	1.218E-04	3.906E-05	3.211E-05	1.325E-05	3.693E-06	2.870E-07	1.046E-11	3.814E-16	3.062E-27	0.000E+00
IN114M	4.966E-05	4.082E-05	3.356E-05	1.385E-05	3.858E-06	2.998E-07	1.093E-11	3.986E-16	3.199E-27	0.000E+00
IN115M	8.726E-02	1.224E-03	1.610E-05	1.461E-07	3.538E-08	2.074E-09	2.450E-14	2.893E-19	1.387E-31	0.000E+00
SN119M	3.594E-01	3.455E-01	3.320E-01	2.776E-01	2.144E-01	1.280E-01	1.623E-02	2.058E-03	1.179E-05	3.863E-10
SN121M	5.450E-05	5.447E-05	5.444E-05	5.431E-05	5.412E-05	5.374E-05	5.227E-05	5.084E-05	4.744E-05	4.130E-05
SN123	4.910E-02	4.556E-02	4.226E-02	3.009E-02	1.844E-02	6.926E-03	1.378E-04	2.741E-06	1.530E-10	4.765E-19
SN125	2.000E-01	7.307E-02	2.671E-02	2.828E-04	4.000E-07	8.000E-13	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	1.122E-05	1.122E-05	1.122E-05	1.122E-05	1.122E-05	1.122E-05	1.122E-05	1.122E-05	1.122E-05	1.122E-05
SB124	5.312E-03	4.521E-03	3.848E-03	1.857E-03	6.496E-04	7.943E-05	1.776E-08	3.971E-12	2.968E-21	1.658E-39
SB125	2.675E-01	2.660E-01	2.640E-01	2.530E-01	2.377E-01	2.097E-01	1.272E-01	7.714E-02	2.209E-02	1.812E-03
SB126	5.747E-03	2.628E-03	1.202E-03	3.651E-05	1.783E-06	1.571E-06	1.571E-06	1.571E-06	1.571E-06	1.571E-06
SB126M	2.821E-03	1.122E-05	1.122E-05	1.122E-05	1.122E-05	1.122E-05	1.122E-05	1.122E-05	1.122E-05	1.122E-05
TE123M	2.001E-06	1.845E-06	1.701E-06	1.180E-06	6.954E-07	2.417E-07	3.523E-09	5.137E-11	1.319E-15	8.691E-25
TE125M	5.937E-02	5.968E-02	5.988E-02	5.957E-02	5.726E-02	5.109E-02	3.104E-02	1.883E-02	5.390E-03	4.421E-04
TE127	8.859E-01	1.833E-01	1.100E-01	6.984E-02	3.909E-02	1.225E-02	1.181E-04	1.138E-06	1.038E-11	8.634E-22
TE127M	1.228E-01	1.162E-01	1.066E-01	7.130E-02	3.991E-02	1.251E-02	1.205E-04	1.162E-06	1.060E-11	8.815E-22
TE129	3.727E+00	2.741E-01	2.054E-01	5.570E-02	8.478E-03	1.964E-04	5.661E-11	1.631E-17	7.273E-34	0.000E+00
TE129M	5.594E-01	4.211E-01	3.155E-01	8.556E-02	1.302E-02	3.018E-04	8.696E-11	2.506E-17	1.117E-33	0.000E+00
I129	6.886E-07	6.895E-07	6.902E-07	6.915E-07	6.919E-07	6.920E-07	6.920E-07	6.920E-07	6.920E-07	6.920E-07
I131	1.569E+01	4.821E+00	1.442E+00	6.180E-03	2.369E-06	3.483E-13	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table S.2 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	1.742E-01	1.305E-01	7.370E-02	2.545E-03	1.315E-05	3.187E-10	1.081E-28	3.668E-47	0.000E+00	0.000E+00
XE133	3.661E+01	7.076E+00	1.115E+00	2.614E-04	1.515E-09	5.093E-20	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	6.133E-02	6.054E-02	5.977E-02	5.639E-02	5.184E-02	4.383E-02	2.239E-02	1.144E-02	2.131E-03	7.410E-05
CS135	4.075E-05	4.078E-05	4.078E-05	4.078E-05	4.078E-05	4.078E-05	4.078E-05	4.078E-05	4.078E-05	4.078E-05
CS136	6.728E-02	3.208E-02	1.529E-02	5.386E-04	4.312E-06	2.764E-10	4.666E-27	7.878E-44	0.000E+00	0.000E+00
CS137	2.939E+00	2.936E+00	2.934E+00	2.922E+00	2.905E+00	2.872E+00	2.742E+00	2.619E+00	2.333E+00	1.852E+00
BA136M	1.113E-02	5.286E-03	2.520E-03	8.877E-05	7.107E-07	4.555E-11	7.690E-28	1.298E-44	0.000E+00	0.000E+00
BA137M	2.782E+00	2.778E+00	2.775E+00	2.764E+00	2.748E+00	2.717E+00	2.594E+00	2.477E+00	2.207E+00	1.752E+00
BA140	3.368E+01	1.577E+01	7.384E+00	2.396E-01	1.705E-03	8.632E-08	5.672E-25	3.727E-42	0.000E+00	0.000E+00
LA140	3.373E+01	1.813E+01	8.497E+00	2.758E-01	1.962E-03	9.934E-08	6.527E-25	4.289E-42	0.000E+00	0.000E+00
CE141	3.201E+01	2.387E+01	1.771E+01	4.599E+00	6.572E-01	1.342E-02	2.337E-09	4.070E-16	5.147E-33	0.000E+00
CE142	2.036E-09	2.036E-09	2.036E-09	2.036E-09	2.036E-09	2.036E-09	2.036E-09	2.036E-09	2.036E-09	2.036E-09
CE144	2.858E+01	2.762E+01	2.670E+01	2.288E+01	1.832E+01	1.174E+01	1.979E+00	3.338E-01	3.897E-03	5.314E-07
PR143	3.204E+01	1.744E+01	8.531E+00	3.368E-01	3.179E-03	2.833E-07	1.787E-23	1.127E-39	0.000E+00	0.000E+00
PR144	2.859E+01	2.763E+01	2.670E+01	2.288E+01	1.832E+01	1.174E+01	1.979E+00	3.338E-01	3.898E-03	5.314E-07
PR144M	3.432E-01	3.315E-01	3.204E-01	2.746E-01	2.198E-01	1.409E-01	2.375E-02	4.005E-03	4.677E-05	6.377E-09
ND144	2.865E-14	2.900E-14	2.935E-14	3.076E-14	3.246E-14	3.490E-14	3.851E-14	3.912E-14	3.925E-14	3.925E-14
ND147	1.238E+01	5.151E+00	2.142E+00	4.068E-02	1.336E-04	1.441E-09	1.949E-29	2.637E-49	0.000E+00	0.000E+00
PM145	8.658E-07	8.767E-07	8.873E-07	9.307E-07	9.825E-07	1.055E-06	1.128E-06	1.078E-06	8.950E-07	6.053E-07
PM147	7.921E+00	7.924E+00	7.879E+00	7.550E+00	7.068E+00	6.194E+00	3.653E+00	2.154E+00	5.754E-01	4.105E-02
PM148M	4.438E-02	3.509E-02	2.774E-02	9.595E-03	2.074E-03	9.695E-05	4.626E-10	2.207E-15	1.098E-28	0.000E+00
PM148	1.519E-01	2.649E-02	5.587E-03	5.420E-04	1.168E-04	5.461E-06	2.606E-11	1.243E-16	6.183E-30	0.000E+00
SM145	8.253E-06	8.021E-06	7.795E-06	6.852E-06	5.689E-06	3.922E-06	8.856E-07	2.000E-07	4.846E-09	2.846E-12
SM147	1.912E-10	1.932E-10	1.951E-10	2.038E-10	2.156E-10	2.370E-10	2.993E-10	3.361E-10	3.748E-10	3.879E-10
SM151	5.753E-02	5.759E-02	5.758E-02	5.750E-02	5.739E-02	5.717E-02	5.630E-02	5.543E-02	5.334E-02	4.939E-02
EU152	1.201E-03	1.199E-03	1.196E-03	1.186E-03	1.171E-03	1.141E-03	1.031E-03	9.311E-04	7.218E-04	4.337E-04
EU154	2.857E-03	2.848E-03	2.839E-03	2.800E-03	2.744E-03	2.636E-03	2.243E-03	1.910E-03	1.276E-03	5.706E-04
EU155	7.987E-02	7.945E-02	7.902E-02	7.714E-02	7.449E-02	6.946E-02	5.254E-02	3.973E-02	1.976E-02	4.889E-03
EU156	1.133E-01	6.097E-02	3.218E-02	1.794E-03	2.784E-05	6.713E-09	2.267E-23	7.656E-38	0.000E+00	0.000E+00
GD153	6.763E-04	6.497E-04	6.241E-04	5.207E-04	4.010E-04	2.377E-04	2.938E-05	3.631E-06	1.950E-08	5.623E-13
TB160	2.002E-03	1.751E-03	1.531E-03	8.350E-04	3.482E-04	6.053E-05	5.529E-08	5.051E-11	1.274E-18	8.101E-34
TL206	1.216E-06	1.893E-13	1.893E-13	1.893E-13	1.893E-13	1.893E-13	1.893E-13	1.893E-13	1.893E-13	1.893E-13
TL207	4.720E-10	4.724E-10	4.746E-10	5.038E-10	5.632E-10	7.069E-10	1.374E-09	2.195E-09	4.933E-09	1.288E-08
TL208	3.632E-09	3.686E-09	3.775E-09	4.223E-09	4.751E-09	5.669E-09	8.004E-09	9.082E-09	9.677E-09	9.113E-09
PB210	1.900E-16	1.955E-16	2.006E-16	2.215E-16	2.533E-16	3.295E-16	8.375E-16	1.746E-15	6.392E-15	3.024E-14
PB211	4.733E-10	4.737E-10	4.759E-10	5.052E-10	5.647E-10	7.089E-10	1.378E-09	2.201E-09	4.947E-09	1.292E-08

Table S.2 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.011E-08	1.026E-08	1.051E-08	1.175E-08	1.322E-08	1.578E-08	2.228E-08	2.528E-08	2.693E-08	2.536E-08
BI211	4.733E-10	4.737E-10	4.759E-10	5.052E-10	5.647E-10	7.089E-10	1.378E-09	2.201E-09	4.947E-09	1.292E-08
BI212	1.011E-08	1.026E-08	1.051E-08	1.175E-08	1.322E-08	1.578E-08	2.228E-08	2.528E-08	2.693E-08	2.536E-08
PO212	6.476E-09	6.573E-09	6.731E-09	7.530E-09	8.471E-09	1.011E-08	1.427E-08	1.619E-08	1.726E-08	1.625E-08
PO215	4.733E-10	4.737E-10	4.759E-10	5.052E-10	5.647E-10	7.089E-10	1.378E-09	2.201E-09	4.947E-09	1.292E-08
PO216	1.011E-08	1.026E-08	1.051E-08	1.175E-08	1.322E-08	1.578E-08	2.228E-08	2.528E-08	2.693E-08	2.536E-08
RN219	4.733E-10	4.737E-10	4.759E-10	5.052E-10	5.647E-10	7.089E-10	1.378E-09	2.201E-09	4.947E-09	1.292E-08
RN220	1.011E-08	1.026E-08	1.051E-08	1.175E-08	1.322E-08	1.578E-08	2.228E-08	2.528E-08	2.693E-08	2.536E-08
FR223	6.523E-12	6.646E-12	6.770E-12	7.342E-12	8.202E-12	1.005E-11	1.899E-11	3.033E-11	6.821E-11	1.781E-10
RA223	4.733E-10	4.737E-10	4.759E-10	5.052E-10	5.647E-10	7.089E-10	1.378E-09	2.201E-09	4.947E-09	1.292E-08
RA224	1.011E-08	1.026E-08	1.051E-08	1.175E-08	1.322E-08	1.578E-08	2.228E-08	2.528E-08	2.693E-08	2.536E-08
RA226	3.510E-15	3.591E-15	3.672E-15	4.047E-15	4.614E-15	5.843E-15	1.201E-14	2.017E-14	4.937E-14	1.458E-13
RA228	5.724E-10	5.768E-10	5.812E-10	6.009E-10	6.287E-10	6.822E-10	8.704E-10	1.024E-09	1.293E-09	1.549E-09
AC227	4.727E-10	4.816E-10	4.906E-10	5.320E-10	5.943E-10	7.279E-10	1.376E-09	2.198E-09	4.943E-09	1.291E-08
TH227	4.668E-10	4.685E-10	4.730E-10	5.078E-10	5.678E-10	6.978E-10	1.359E-09	2.171E-09	4.879E-09	1.274E-08
TH228	1.009E-08	1.035E-08	1.060E-08	1.170E-08	1.317E-08	1.572E-08	2.224E-08	2.522E-08	2.691E-08	2.536E-08
TH229	2.166E-11	2.208E-11	2.250E-11	2.442E-11	2.720E-11	3.278E-11	5.507E-11	7.737E-11	1.331E-10	2.444E-10
TH230	4.815E-12	4.860E-12	4.904E-12	5.104E-12	5.392E-12	5.969E-12	8.284E-12	1.061E-11	1.645E-11	2.830E-11
TH231	9.099E-05	8.180E-05	8.180E-05	8.179E-05	8.179E-05	8.179E-05	8.179E-05	8.179E-05	8.179E-05	8.179E-05
TH232	1.690E-09	1.690E-09	1.690E-09	1.690E-09	1.690E-09	1.690E-09	1.690E-09	1.690E-09	1.690E-09	1.690E-09
TH234	5.244E-05	5.244E-05	5.244E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05
PA231	7.723E-09	7.798E-09	7.871E-09	8.178E-09	8.618E-09	9.489E-09	1.295E-08	1.642E-08	2.507E-08	4.236E-08
PA233	6.914E-03	4.830E-03	3.372E-03	6.650E-04	6.414E-05	8.462E-07	2.562E-07	2.562E-07	2.563E-07	2.564E-07
PA234M	5.299E-05	5.244E-05	5.244E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05
PA234	1.238E-06	6.817E-08	6.817E-08	6.817E-08	6.816E-08	6.816E-08	6.816E-08	6.816E-08	6.816E-08	6.816E-08
U232	2.805E-08	2.812E-08	2.811E-08	2.806E-08	2.800E-08	2.787E-08	2.735E-08	2.684E-08	2.559E-08	2.325E-08
U233	1.149E-07	1.159E-07	1.166E-07	1.178E-07	1.181E-07	1.182E-07	1.182E-07	1.182E-07	1.182E-07	1.182E-07
U234	1.282E-07	1.282E-07	1.282E-07	1.282E-07	1.283E-07	1.284E-07	1.289E-07	1.294E-07	1.305E-07	1.329E-07
U235	8.179E-05	8.179E-05	8.179E-05	8.179E-05	8.179E-05	8.179E-05	8.179E-05	8.179E-05	8.179E-05	8.179E-05
U236	1.237E-05	1.237E-05	1.237E-05	1.237E-05	1.237E-05	1.237E-05	1.237E-05	1.237E-05	1.237E-05	1.237E-05
U237	3.097E-01	7.355E-02	1.747E-02	2.639E-05	2.934E-09	6.684E-10	6.071E-10	5.514E-10	4.335E-10	2.680E-10
U238	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05	5.243E-05
NP237	2.535E-07	2.555E-07	2.560E-07	2.562E-07	2.562E-07	2.562E-07	2.562E-07	2.562E-07	2.563E-07	2.564E-07
PU236	1.373E-09	1.364E-09	1.352E-09	1.296E-09	1.220E-09	1.080E-09	6.644E-10	4.087E-10	1.213E-10	1.069E-11
PU237	1.386E-08	1.120E-08	9.053E-09	3.461E-09	8.647E-10	5.396E-11	8.184E-16	1.241E-20	1.112E-32	0.000E+00
PU238	3.280E-05	3.297E-05	3.296E-05	3.294E-05	3.289E-05	3.278E-05	3.228E-05	3.178E-05	3.055E-05	2.823E-05

Table S.2 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	6.292E-03	6.307E-03	6.307E-03	6.307E-03	6.307E-03	6.307E-03	6.307E-03	6.307E-03	6.306E-03	6.304E-03
PU240	3.351E-04	3.351E-04	3.351E-04	3.351E-04	3.351E-04	3.351E-04	3.351E-04	3.350E-04	3.349E-04	3.344E-04
PU241	2.859E-03	2.854E-03	2.848E-03	2.825E-03	2.791E-03	2.725E-03	2.475E-03	2.248E-03	1.767E-03	1.092E-03
PU242	6.307E-10	6.307E-10	6.307E-10	6.307E-10	6.307E-10	6.307E-10	6.307E-10	6.307E-10	6.308E-10	6.308E-10
PU244	1.664E-20	1.664E-20	1.664E-20	1.664E-20	1.664E-20	1.664E-20	1.664E-20	1.664E-20	1.664E-20	1.664E-20
AM241	4.591E-06	4.766E-06	4.941E-06	5.727E-06	6.850E-06	9.053E-06	1.734E-05	2.483E-05	4.057E-05	6.221E-05
AM242M	6.317E-09	6.316E-09	6.315E-09	6.310E-09	6.303E-09	6.288E-09	6.231E-09	6.175E-09	6.036E-09	5.767E-09
AM242	3.351E-05	6.301E-09	6.283E-09	6.278E-09	6.271E-09	6.257E-09	6.200E-09	6.144E-09	6.005E-09	5.738E-09
AM243	5.258E-11	5.263E-11	5.263E-11	5.263E-11	5.263E-11	5.263E-11	5.262E-11	5.261E-11	5.258E-11	5.254E-11
CM242	1.619E-05	1.537E-05	1.448E-05	1.107E-05	7.514E-06	3.464E-06	1.609E-07	1.210E-08	4.972E-09	4.745E-09
CM243	7.429E-11	7.422E-11	7.415E-11	7.384E-11	7.339E-11	7.251E-11	6.907E-11	6.579E-11	5.826E-11	4.569E-11
CM244	9.251E-11	9.250E-11	9.237E-11	9.176E-11	9.088E-11	8.916E-11	8.259E-11	7.651E-11	6.319E-11	4.311E-11
CM245	1.030E-16	1.030E-16	1.030E-16	1.030E-16	1.030E-16	1.030E-16	1.030E-16	1.030E-16	1.030E-16	1.029E-16
CM246	3.752E-19	3.752E-19	3.752E-19	3.752E-19	3.751E-19	3.751E-19	3.750E-19	3.749E-19	3.746E-19	3.741E-19
CM247	1.021E-26	1.021E-26	1.021E-26	1.021E-26	1.021E-26	1.021E-26	1.021E-26	1.021E-26	1.021E-26	1.021E-26
Subtotal Ci**	4.623E+02	3.268E+02	2.577E+02	1.431E+02	8.727E+01	5.110E+01	2.209E+01	1.540E+01	1.069E+01	7.535E+00
Total Ci***	3.362E+03	3.343E+02	2.596E+02	1.442E+02	8.784E+01	5.126E+01	2.210E+01	1.540E+01	1.069E+01	7.535E+00

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table S.3 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table S.3 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: ss.3

BURNUP (BU)

BU: U-235 2.0 g
 BU: % U-235 5.13%
 BU: MWd 1.90
 BU: MWd/MTU 9744
 U-235 DEPL 2.34 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	2.763E-02	2.758E-02	2.751E-02	2.725E-02	2.687E-02	2.613E-02	2.336E-02	2.087E-02	1.577E-02	8.999E-03
BE 10	3.562E-08	3.562E-08	3.562E-08	3.562E-08	3.562E-08	3.562E-08	3.562E-08	3.562E-08	3.562E-08	3.562E-08
C 14	2.286E-04	2.286E-04	2.286E-04	2.286E-04	2.286E-04	2.286E-04	2.286E-04	2.285E-04	2.284E-04	2.281E-04
CL 36	5.008E-06	5.008E-06	5.008E-06	5.008E-06	5.008E-06	5.008E-06	5.008E-06	5.008E-06	5.008E-06	5.008E-06
CR 51	1.169E+01	8.233E+00	5.800E+00	1.192E+00	1.216E-01	1.265E-03	1.484E-11	1.739E-19	2.589E-39	0.000E+00
MN 54	7.179E-01	6.959E-01	6.747E-01	5.864E-01	4.789E-01	3.195E-01	6.328E-02	1.253E-02	2.188E-04	6.668E-08
FE 55	5.132E+00	5.080E+00	5.028E+00	4.801E+00	4.492E+00	3.932E+00	2.308E+00	1.354E+00	3.575E-01	2.490E-02
FE 59	2.163E-01	1.743E-01	1.405E-01	5.304E-02	1.301E-02	7.823E-04	1.023E-08	1.338E-13	8.283E-26	0.000E+00
CO 60	4.388E+00	4.366E+00	4.344E+00	4.246E+00	4.109E+00	3.848E+00	2.958E+00	2.274E+00	1.179E+00	3.167E-01
NI 59	9.721E-04	9.721E-04	9.721E-04	9.721E-04	9.721E-04	9.721E-04	9.721E-04	9.721E-04	9.720E-04	9.720E-04
NI 63	1.189E-01	1.188E-01	1.188E-01	1.186E-01	1.184E-01	1.180E-01	1.162E-01	1.145E-01	1.102E-01	1.022E-01
ZN 65	8.938E-02	8.590E-02	8.255E-02	6.896E-02	5.321E-02	3.167E-02	3.977E-03	4.994E-04	2.790E-06	8.711E-11
SE 79	2.479E-05	2.479E-05	2.479E-05	2.479E-05	2.479E-05	2.479E-05	2.479E-05	2.479E-05	2.479E-05	2.478E-05
KR 85	6.685E-01	6.670E-01	6.653E-01	6.579E-01	6.474E-01	6.268E-01	5.508E-01	4.840E-01	3.504E-01	1.836E-01
RB 87	1.857E-09	1.857E-09	1.857E-09	1.857E-09	1.857E-09	1.857E-09	1.857E-09	1.857E-09	1.857E-09	1.857E-09
SR 89	5.151E+01	4.251E+01	3.507E+01	1.472E+01	4.207E+00	3.436E-01	1.529E-05	6.802E-10	8.981E-21	0.000E+00
SR 90	5.630E+00	5.625E+00	5.620E+00	5.597E+00	5.564E+00	5.498E+00	5.242E+00	4.999E+00	4.438E+00	3.499E+00
Y 90	5.842E+00	5.632E+00	5.621E+00	5.598E+00	5.565E+00	5.499E+00	5.244E+00	5.000E+00	4.439E+00	3.500E+00
Y 91	6.291E+01	5.367E+01	4.547E+01	2.149E+01	7.292E+00	8.391E-01	1.471E-04	2.582E-08	1.051E-17	1.745E-36
ZR 93	1.505E-04	1.505E-04	1.505E-04	1.505E-04	1.505E-04	1.505E-04	1.505E-04	1.505E-04	1.505E-04	1.505E-04
ZR 95	7.412E+01	6.370E+01	5.474E+01	2.759E+01	1.027E+01	1.422E+00	5.225E-04	1.921E-07	4.977E-16	3.341E-33
NB 93M	1.364E-05	1.389E-05	1.415E-05	1.527E-05	1.689E-05	2.006E-05	3.196E-05	4.272E-05	6.524E-05	9.626E-05

Table S.3 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	1.447E-05	1.447E-05	1.447E-05	1.447E-05	1.447E-05	1.447E-05	1.447E-05	1.447E-05	1.447E-05	1.446E-05
NB 95	7.591E+01	7.413E+01	7.047E+01	4.657E+01	2.035E+01	3.088E+00	1.160E-03	4.264E-07	1.105E-15	7.418E-33
NB 95M	5.209E-01	4.706E-01	4.059E-01	2.046E-01	7.616E-02	1.054E-02	3.876E-06	1.425E-09	3.692E-18	2.478E-35
MO 93	1.662E-05	1.662E-05	1.662E-05	1.662E-05	1.662E-05	1.661E-05	1.661E-05	1.660E-05	1.659E-05	1.655E-05
TC 99	8.449E-04	8.473E-04	8.474E-04	8.474E-04	8.474E-04	8.474E-04	8.474E-04	8.474E-04	8.474E-04	8.473E-04
RU103	3.468E+01	2.709E+01	2.116E+01	6.931E+00	1.385E+00	5.533E-02	1.409E-07	3.586E-13	3.709E-27	0.000E+00
RU106	4.634E+00	4.513E+00	4.396E+00	3.902E+00	3.286E+00	2.331E+00	5.897E-01	1.492E-01	4.804E-03	4.979E-06
RH103M	3.123E+01	2.442E+01	1.907E+01	6.248E+00	1.249E+00	4.988E-02	1.270E-07	3.233E-13	3.344E-27	0.000E+00
RH106	4.662E+00	4.513E+00	4.396E+00	3.902E+00	3.286E+00	2.331E+00	5.897E-01	1.492E-01	4.804E-03	4.980E-06
PD107	9.940E-07	9.940E-07	9.940E-07	9.940E-07	9.940E-07	9.940E-07	9.940E-07	9.940E-07	9.940E-07	9.940E-07
AG110	3.420E-02	1.975E-05	1.900E-05	1.594E-05	1.238E-05	7.463E-06	9.850E-07	1.300E-07	8.232E-10	3.299E-14
AG110M	1.545E-03	1.485E-03	1.429E-03	1.199E-03	9.308E-04	5.611E-04	7.406E-05	9.777E-06	6.189E-08	2.481E-12
AG111	3.354E-01	9.141E-02	2.485E-02	6.913E-05	1.421E-08	6.008E-16	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	7.422E-04	7.410E-04	7.396E-04	7.336E-04	7.249E-04	7.079E-04	6.438E-04	5.855E-04	4.617E-04	2.872E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	1.733E-02	1.394E-02	1.121E-02	4.196E-03	1.016E-03	5.955E-05	7.033E-10	8.306E-15	3.982E-27	0.000E+00
IN114	3.622E-04	1.171E-04	9.625E-05	3.970E-05	1.107E-05	8.601E-07	3.136E-11	1.143E-15	9.177E-27	0.000E+00
IN114M	1.488E-04	1.223E-04	1.006E-04	4.149E-05	1.156E-05	8.988E-07	3.277E-11	1.194E-15	9.590E-27	0.000E+00
IN115M	1.757E-01	2.465E-03	3.242E-05	2.946E-07	7.133E-08	4.182E-09	4.939E-14	5.833E-19	2.796E-31	0.000E+00
SN119M	7.323E-01	7.039E-01	6.765E-01	5.657E-01	4.370E-01	2.608E-01	3.307E-02	4.193E-03	2.401E-05	7.872E-10
SN121M	1.104E-04	1.103E-04	1.103E-04	1.100E-04	1.095E-04	1.088E-04	1.059E-04	1.030E-04	9.606E-05	8.362E-05
SN123	9.917E-02	9.199E-02	8.534E-02	6.077E-02	3.724E-02	1.399E-02	2.782E-04	5.535E-06	3.089E-10	9.623E-19
SN125	4.065E-01	1.486E-01	5.430E-02	5.749E-04	8.131E-07	1.627E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	2.255E-05	2.255E-05	2.255E-05	2.255E-05	2.255E-05	2.255E-05	2.255E-05	2.255E-05	2.255E-05	2.255E-05
SB124	1.118E-02	9.514E-03	8.098E-03	3.909E-03	1.367E-03	1.671E-04	3.737E-08	8.356E-12	6.246E-21	3.490E-39
SB125	5.404E-01	5.377E-01	5.335E-01	5.114E-01	4.804E-01	4.239E-01	2.570E-01	1.559E-01	4.465E-02	3.662E-03
SB126	1.170E-02	5.351E-03	2.447E-03	7.430E-05	3.589E-06	3.157E-06	3.157E-06	3.157E-06	3.157E-06	3.156E-06
SB126M	5.787E-03	2.255E-05	2.255E-05	2.255E-05	2.255E-05	2.255E-05	2.255E-05	2.255E-05	2.255E-05	2.255E-05
TE123M	8.367E-06	7.715E-06	7.115E-06	4.932E-06	2.907E-06	1.010E-06	1.473E-08	2.148E-10	5.514E-15	3.633E-24
TE125M	1.199E-01	1.206E-01	1.210E-01	1.204E-01	1.157E-01	1.033E-01	6.274E-02	3.805E-02	1.089E-02	8.936E-04
TE127	1.786E+00	3.697E-01	2.219E-01	1.409E-01	7.888E-02	2.471E-02	2.382E-04	2.296E-06	2.094E-11	1.742E-21
TE127M	2.477E-01	2.344E-01	2.150E-01	1.439E-01	8.053E-02	2.523E-02	2.432E-04	2.344E-06	2.138E-11	1.779E-21
TE129	7.470E+00	5.496E-01	4.118E-01	1.117E-01	1.700E-02	3.939E-04	1.135E-10	3.271E-17	1.458E-33	0.000E+00
TE129M	1.122E+00	8.444E-01	6.326E-01	1.716E-01	2.612E-02	6.051E-04	1.744E-10	5.025E-17	2.241E-33	0.000E+00
I129	1.380E-06	1.381E-06	1.383E-06	1.385E-06	1.386E-06	1.386E-06	1.386E-06	1.386E-06	1.386E-06	1.386E-06
I131	3.132E+01	9.622E+00	2.878E+00	1.233E-02	4.729E-06	6.952E-13	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table S.3 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	3.476E-01	2.604E-01	1.471E-01	5.079E-03	2.624E-05	6.360E-10	2.158E-28	7.322E-47	0.000E+00	0.000E+00
XE133	7.294E+01	1.410E+01	2.221E+00	5.209E-04	3.020E-09	1.015E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	2.456E-01	2.425E-01	2.394E-01	2.259E-01	2.077E-01	1.756E-01	8.966E-02	4.580E-02	8.538E-03	2.968E-04
CS135	7.747E-05	7.752E-05	7.752E-05	7.752E-05	7.752E-05	7.752E-05	7.752E-05	7.752E-05	7.752E-05	7.752E-05
CS136	1.869E-01	8.911E-02	4.249E-02	1.496E-03	1.198E-05	7.679E-10	1.296E-26	2.188E-43	0.000E+00	0.000E+00
CS137	5.876E+00	5.871E+00	5.866E+00	5.843E+00	5.809E+00	5.742E+00	5.483E+00	5.236E+00	4.665E+00	3.703E+00
BA136M	3.089E-02	1.469E-02	7.002E-03	2.466E-04	1.974E-06	1.266E-10	2.136E-27	3.607E-44	0.000E+00	0.000E+00
BA137M	5.562E+00	5.554E+00	5.549E+00	5.527E+00	5.495E+00	5.432E+00	5.187E+00	4.953E+00	4.413E+00	3.503E+00
BA140	6.705E+01	3.140E+01	1.470E+01	4.771E-01	3.395E-03	1.719E-07	1.129E-24	7.420E-42	0.000E+00	0.000E+00
LA140	6.718E+01	3.610E+01	1.692E+01	5.491E-01	3.907E-03	1.978E-07	1.300E-24	8.539E-42	0.000E+00	0.000E+00
CE141	6.372E+01	4.754E+01	3.527E+01	9.157E+00	1.308E+00	2.673E-02	4.655E-09	8.103E-16	1.025E-32	0.000E+00
CE142	2.879E-09	2.879E-09	2.879E-09	2.879E-09	2.879E-09	2.879E-09	2.879E-09	2.879E-09	2.879E-09	2.879E-09
CE144	5.704E+01	5.513E+01	5.328E+01	4.566E+01	3.655E+01	2.342E+01	3.950E+00	6.660E-01	7.777E-03	1.060E-06
PR143	6.374E+01	3.470E+01	1.697E+01	6.701E-01	6.326E-03	5.637E-07	3.556E-23	2.243E-39	0.000E+00	0.000E+00
PR144	5.705E+01	5.513E+01	5.328E+01	4.566E+01	3.655E+01	2.342E+01	3.950E+00	6.661E-01	7.778E-03	1.060E-06
PR144M	6.849E-01	6.615E-01	6.393E-01	5.479E-01	4.386E-01	2.811E-01	4.740E-02	7.993E-03	9.333E-05	1.273E-08
ND144	5.783E-14	5.854E-14	5.923E-14	6.205E-14	6.543E-14	7.030E-14	7.752E-14	7.874E-14	7.898E-14	7.899E-14
ND147	2.465E+01	1.026E+01	4.266E+00	8.100E-02	2.660E-04	2.869E-09	3.881E-29	5.251E-49	0.000E+00	0.000E+00
PM145	1.748E-06	1.770E-06	1.792E-06	1.880E-06	1.986E-06	2.134E-06	2.283E-06	2.181E-06	1.811E-06	1.225E-06
PM147	1.565E+01	1.566E+01	1.557E+01	1.492E+01	1.397E+01	1.224E+01	7.220E+00	4.258E+00	1.137E+00	8.113E-02
PM148M	1.701E-01	1.345E-01	1.063E-01	3.677E-02	7.949E-03	3.715E-04	1.773E-09	8.458E-15	4.206E-28	0.000E+00
PM148	6.118E-01	1.064E-01	2.221E-02	2.077E-03	4.477E-04	2.093E-05	9.984E-11	4.764E-16	2.369E-29	0.000E+00
SM145	1.678E-05	1.631E-05	1.585E-05	1.394E-05	1.157E-05	7.976E-06	1.801E-06	4.067E-07	9.856E-09	5.787E-12
SM147	3.090E-10	3.129E-10	3.168E-10	3.339E-10	3.573E-10	3.996E-10	5.227E-10	5.953E-10	6.718E-10	6.977E-10
SM151	9.580E-02	9.594E-02	9.591E-02	9.579E-02	9.560E-02	9.523E-02	9.377E-02	9.235E-02	8.885E-02	8.227E-02
EU152	3.128E-03	3.123E-03	3.117E-03	3.089E-03	3.050E-03	2.973E-03	2.685E-03	2.425E-03	1.880E-03	1.130E-03
EU154	1.138E-02	1.134E-02	1.131E-02	1.115E-02	1.093E-02	1.050E-02	8.935E-03	7.606E-03	5.085E-03	2.272E-03
EU155	1.491E-01	1.483E-01	1.475E-01	1.440E-01	1.391E-01	1.297E-01	9.809E-02	7.418E-02	3.690E-02	9.129E-03
EU156	2.822E-01	1.514E-01	7.992E-02	4.454E-03	6.917E-05	1.667E-08	5.630E-23	1.902E-37	0.000E+00	0.000E+00
GD153	1.427E-03	1.370E-03	1.317E-03	1.099E-03	8.462E-04	5.017E-04	6.200E-05	7.663E-06	4.114E-08	1.187E-12
TB160	4.141E-03	3.621E-03	3.167E-03	1.727E-03	7.199E-04	1.251E-04	1.144E-07	1.044E-10	2.633E-18	1.675E-33
TL206	2.486E-06	3.833E-13	3.833E-13	3.833E-13	3.833E-13	3.833E-13	3.833E-13	3.833E-13	3.833E-13	3.833E-13
TL207	5.099E-10	5.103E-10	5.127E-10	5.441E-10	6.077E-10	7.605E-10	1.456E-09	2.296E-09	5.049E-09	1.291E-08
TL208	7.863E-09	7.982E-09	8.176E-09	9.155E-09	1.031E-08	1.232E-08	1.740E-08	1.971E-08	2.089E-08	1.951E-08
PB210	5.326E-16	5.472E-16	5.593E-16	6.034E-16	6.655E-16	8.137E-16	1.808E-15	3.595E-15	1.275E-14	5.982E-14
PB211	5.113E-10	5.117E-10	5.141E-10	5.456E-10	6.094E-10	7.627E-10	1.460E-09	2.302E-09	5.063E-09	1.294E-08

Table S.3 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	2.188E-08	2.222E-08	2.276E-08	2.548E-08	2.870E-08	3.428E-08	4.842E-08	5.485E-08	5.815E-08	5.429E-08
BI211	5.113E-10	5.117E-10	5.141E-10	5.456E-10	6.094E-10	7.627E-10	1.460E-09	2.302E-09	5.063E-09	1.294E-08
BI212	2.188E-08	2.222E-08	2.276E-08	2.548E-08	2.870E-08	3.428E-08	4.842E-08	5.485E-08	5.815E-08	5.429E-08
PO212	1.402E-08	1.423E-08	1.458E-08	1.633E-08	1.839E-08	2.196E-08	3.102E-08	3.514E-08	3.726E-08	3.479E-08
PO215	5.113E-10	5.117E-10	5.141E-10	5.456E-10	6.094E-10	7.627E-10	1.460E-09	2.302E-09	5.063E-09	1.294E-08
PO216	2.188E-08	2.222E-08	2.276E-08	2.548E-08	2.870E-08	3.428E-08	4.842E-08	5.485E-08	5.815E-08	5.429E-08
RN219	5.113E-10	5.117E-10	5.141E-10	5.456E-10	6.094E-10	7.627E-10	1.460E-09	2.302E-09	5.063E-09	1.294E-08
RN220	2.188E-08	2.222E-08	2.276E-08	2.548E-08	2.870E-08	3.428E-08	4.842E-08	5.485E-08	5.815E-08	5.429E-08
FR223	7.047E-12	7.179E-12	7.312E-12	7.926E-12	8.846E-12	1.080E-11	2.013E-11	3.173E-11	6.981E-11	1.785E-10
RA223	5.113E-10	5.117E-10	5.141E-10	5.456E-10	6.094E-10	7.627E-10	1.460E-09	2.302E-09	5.063E-09	1.294E-08
RA224	2.188E-08	2.222E-08	2.276E-08	2.548E-08	2.870E-08	3.428E-08	4.842E-08	5.485E-08	5.815E-08	5.429E-08
RA226	6.937E-15	7.096E-15	7.257E-15	8.000E-15	9.124E-15	1.155E-14	2.373E-14	3.985E-14	9.749E-14	2.880E-13
RA228	5.719E-10	5.763E-10	5.807E-10	6.004E-10	6.282E-10	6.816E-10	8.697E-10	1.023E-09	1.292E-09	1.547E-09
AC227	5.106E-10	5.202E-10	5.299E-10	5.744E-10	6.410E-10	7.828E-10	1.458E-09	2.299E-09	5.059E-09	1.294E-08
TH227	5.043E-10	5.061E-10	5.110E-10	5.483E-10	6.126E-10	7.507E-10	1.440E-09	2.271E-09	4.994E-09	1.277E-08
TH228	2.185E-08	2.241E-08	2.296E-08	2.537E-08	2.857E-08	3.415E-08	4.833E-08	5.473E-08	5.810E-08	5.428E-08
TH229	4.308E-11	4.391E-11	4.475E-11	4.857E-11	5.412E-11	6.523E-11	1.097E-10	1.541E-10	2.651E-10	4.871E-10
TH230	9.542E-12	9.629E-12	9.716E-12	1.011E-11	1.067E-11	1.181E-11	1.636E-11	2.093E-11	3.248E-11	5.601E-11
TH231	9.805E-05	7.928E-05	7.928E-05	7.927E-05	7.927E-05	7.927E-05	7.927E-05	7.927E-05	7.927E-05	7.927E-05
TH232	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09	1.689E-09
TH234	5.243E-05	5.242E-05	5.241E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05
PA231	8.329E-09	8.402E-09	8.473E-09	8.771E-09	9.197E-09	1.004E-08	1.340E-08	1.676E-08	2.514E-08	4.190E-08
PA233	1.412E-02	9.861E-03	6.884E-03	1.358E-03	1.312E-04	2.008E-06	8.039E-07	8.040E-07	8.044E-07	8.057E-07
PA234M	5.471E-05	5.242E-05	5.241E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05
PA234	4.949E-06	6.814E-08	6.813E-08	6.812E-08	6.812E-08	6.812E-08	6.812E-08	6.812E-08	6.812E-08	6.812E-08
U232	6.183E-08	6.198E-08	6.196E-08	6.187E-08	6.174E-08	6.147E-08	6.040E-08	5.931E-08	5.659E-08	5.142E-08
U233	2.289E-07	2.309E-07	2.323E-07	2.349E-07	2.354E-07	2.355E-07	2.355E-07	2.355E-07	2.355E-07	2.355E-07
U234	2.515E-07	2.516E-07	2.516E-07	2.517E-07	2.519E-07	2.522E-07	2.536E-07	2.550E-07	2.584E-07	2.648E-07
U235	7.927E-05	7.927E-05	7.927E-05	7.927E-05	7.927E-05	7.927E-05	7.927E-05	7.927E-05	7.927E-05	7.927E-05
U236	2.463E-05	2.463E-05	2.463E-05	2.463E-05	2.463E-05	2.463E-05	2.463E-05	2.463E-05	2.464E-05	2.464E-05
U237	1.080E+00	2.564E-01	6.090E-02	9.202E-05	1.320E-08	5.234E-09	4.754E-09	4.318E-09	3.395E-09	2.098E-09
U238	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05	5.240E-05
NP237	7.944E-07	8.016E-07	8.032E-07	8.038E-07	8.038E-07	8.038E-07	8.039E-07	8.040E-07	8.044E-07	8.057E-07
PU236	8.278E-09	8.227E-09	8.151E-09	7.815E-09	7.354E-09	6.513E-09	4.006E-09	2.464E-09	7.314E-10	6.446E-11
PU237	5.687E-08	4.597E-08	3.716E-08	1.421E-08	3.549E-09	2.215E-10	3.359E-15	5.095E-20	4.564E-32	0.000E+00
PU238	1.948E-04	1.959E-04	1.959E-04	1.960E-04	1.959E-04	1.954E-04	1.926E-04	1.896E-04	1.823E-04	1.684E-04

Table S.3 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	1.221E-02	1.224E-02	1.224E-02	1.224E-02	1.224E-02	1.224E-02	1.224E-02	1.224E-02	1.223E-02	1.223E-02
PU240	1.308E-03	1.308E-03	1.308E-03	1.308E-03	1.308E-03	1.308E-03	1.308E-03	1.307E-03	1.307E-03	1.305E-03
PU241	2.239E-02	2.235E-02	2.230E-02	2.212E-02	2.185E-02	2.134E-02	1.938E-02	1.760E-02	1.384E-02	8.554E-03
PU242	1.010E-08	1.010E-08	1.010E-08	1.010E-08	1.010E-08	1.010E-08	1.010E-08	1.010E-08	1.010E-08	1.010E-08
PU244	1.107E-18	1.107E-18	1.107E-18	1.107E-18	1.107E-18	1.107E-18	1.107E-18	1.107E-18	1.107E-18	1.107E-18
AM241	3.575E-05	3.712E-05	3.849E-05	4.464E-05	5.343E-05	7.069E-05	1.356E-04	1.942E-04	3.175E-04	4.870E-04
AM242M	9.336E-08	9.334E-08	9.333E-08	9.325E-08	9.315E-08	9.294E-08	9.209E-08	9.126E-08	8.920E-08	8.523E-08
AM242	5.333E-04	9.314E-08	9.286E-08	9.279E-08	9.268E-08	9.247E-08	9.163E-08	9.080E-08	8.876E-08	8.480E-08
AM243	1.707E-09	1.709E-09	1.709E-09	1.708E-09	1.708E-09	1.708E-09	1.708E-09	1.708E-09	1.707E-09	1.705E-09
CM242	2.582E-04	2.450E-04	2.309E-04	1.765E-04	1.198E-04	5.523E-05	2.559E-06	1.870E-07	7.348E-08	7.013E-08
CM243	2.402E-09	2.400E-09	2.398E-09	2.388E-09	2.373E-09	2.344E-09	2.233E-09	2.127E-09	1.884E-09	1.477E-09
CM244	6.119E-09	6.118E-09	6.109E-09	6.069E-09	6.011E-09	5.897E-09	5.463E-09	5.061E-09	4.180E-09	2.851E-09
CM245	1.370E-14	1.370E-14	1.370E-14	1.370E-14	1.370E-14	1.370E-14	1.370E-14	1.370E-14	1.369E-14	1.368E-14
CM246	1.016E-16	1.016E-16	1.016E-16	1.016E-16	1.016E-16	1.015E-16	1.015E-16	1.015E-16	1.014E-16	1.013E-16
CM247	5.612E-24	5.612E-24	5.612E-24	5.612E-24	5.612E-24	5.612E-24	5.612E-24	5.612E-24	5.612E-24	5.612E-24
Subtotal Ci**	9.236E+02	6.527E+02	5.147E+02	2.860E+02	1.745E+02	1.022E+02	4.421E+01	3.080E+01	2.136E+01	1.505E+01
Total Ci***	6.703E+03	6.677E+02	5.186E+02	2.882E+02	1.757E+02	1.026E+02	4.422E+01	3.080E+01	2.136E+01	1.505E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table S.4 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table S.4 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: ss.4

BURNUP (BU)

BU: U-235 3.0 g
 BU: % U-235 7.69%
 BU: MWd 2.85
 BU: MWd/MTU 14615
 U-235 DEPL 3.51 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	4.155E-02	4.146E-02	4.137E-02	4.097E-02	4.040E-02	3.928E-02	3.512E-02	3.138E-02	2.371E-02	1.354E-02
BE 10	5.412E-08	5.412E-08	5.412E-08	5.412E-08	5.412E-08	5.412E-08	5.412E-08	5.412E-08	5.412E-08	5.412E-08
C 14	3.475E-04	3.475E-04	3.475E-04	3.475E-04	3.475E-04	3.474E-04	3.474E-04	3.473E-04	3.471E-04	3.466E-04
CL 36	7.607E-06	7.607E-06	7.607E-06	7.607E-06	7.607E-06	7.607E-06	7.607E-06	7.607E-06	7.607E-06	7.607E-06
CR 51	1.793E+01	1.263E+01	8.899E+00	1.829E+00	1.866E-01	1.941E-03	2.276E-11	2.669E-19	3.972E-39	0.000E+00
MN 54	1.097E+00	1.064E+00	1.031E+00	8.961E-01	7.319E-01	4.883E-01	9.670E-02	1.915E-02	3.344E-04	1.019E-07
FE 55	7.816E+00	7.737E+00	7.658E+00	7.312E+00	6.841E+00	5.988E+00	3.515E+00	2.063E+00	5.445E-01	3.793E-02
FE 59	3.321E-01	2.677E-01	2.158E-01	8.145E-02	1.997E-02	1.201E-03	1.571E-08	2.055E-13	1.272E-25	0.000E+00
CO 60	6.672E+00	6.638E+00	6.605E+00	6.456E+00	6.248E+00	5.850E+00	4.498E+00	3.458E+00	1.792E+00	4.814E-01
NI 59	1.475E-03	1.475E-03	1.475E-03	1.475E-03	1.475E-03	1.475E-03	1.475E-03	1.475E-03	1.475E-03	1.475E-03
NI 63	1.806E-01	1.805E-01	1.805E-01	1.803E-01	1.799E-01	1.792E-01	1.766E-01	1.739E-01	1.675E-01	1.553E-01
ZN 65	1.368E-01	1.314E-01	1.263E-01	1.055E-01	8.141E-02	4.846E-02	6.085E-03	7.641E-04	4.269E-06	1.333E-10
SE 79	3.717E-05	3.717E-05	3.717E-05	3.717E-05	3.717E-05	3.717E-05	3.717E-05	3.717E-05	3.717E-05	3.717E-05
KR 85	1.001E+00	9.990E-01	9.965E-01	9.854E-01	9.696E-01	9.388E-01	8.250E-01	7.250E-01	5.248E-01	2.750E-01
RB 87	2.676E-09	2.677E-09	2.677E-09	2.677E-09	2.677E-09	2.677E-09	2.677E-09	2.677E-09	2.677E-09	2.677E-09
SR 89	7.682E+01	6.341E+01	5.233E+01	2.196E+01	6.276E+00	5.126E-01	2.280E-05	1.014E-09	1.339E-20	0.000E+00
SR 90	8.430E+00	8.423E+00	8.415E+00	8.380E+00	8.331E+00	8.232E+00	7.850E+00	7.485E+00	6.646E+00	5.239E+00
Y 90	8.760E+00	8.433E+00	8.417E+00	8.383E+00	8.333E+00	8.234E+00	7.852E+00	7.487E+00	6.648E+00	5.240E+00
Y 91	9.389E+01	8.011E+01	6.787E+01	3.208E+01	1.088E+01	1.252E+00	2.197E-04	3.852E-08	1.569E-17	2.605E-36
ZR 93	2.259E-04	2.260E-04	2.260E-04	2.260E-04	2.260E-04	2.260E-04	2.260E-04	2.260E-04	2.260E-04	2.260E-04
ZR 95	1.110E+02	9.542E+01	8.199E+01	4.132E+01	1.538E+01	2.129E+00	7.827E-04	2.877E-07	7.455E-16	5.004E-33
NB 93M	2.048E-05	2.086E-05	2.124E-05	2.294E-05	2.536E-05	3.012E-05	4.800E-05	6.414E-05	9.798E-05	1.445E-04

Table S.4 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	2.198E-05	2.198E-05	2.198E-05	2.198E-05	2.198E-05	2.198E-05	2.198E-05	2.198E-05	2.197E-05	2.196E-05
NB 95	1.137E+02	1.110E+02	1.055E+02	6.975E+01	3.050E+01	4.626E+00	1.738E-03	6.387E-07	1.655E-15	1.111E-32
NB 95M	7.804E-01	7.049E-01	6.080E-01	3.066E-01	1.140E-01	1.579E-02	5.806E-06	2.134E-09	5.530E-18	3.713E-35
MO 93	2.526E-05	2.526E-05	2.526E-05	2.526E-05	2.525E-05	2.525E-05	2.524E-05	2.523E-05	2.521E-05	2.516E-05
TC 99	1.266E-03	1.269E-03	1.269E-03	1.269E-03	1.269E-03	1.269E-03	1.269E-03	1.269E-03	1.269E-03	1.269E-03
RU103	5.222E+01	4.079E+01	3.186E+01	1.044E+01	2.086E+00	8.333E-02	2.122E-07	5.401E-13	5.586E-27	0.000E+00
RU106	7.184E+00	6.997E+00	6.815E+00	6.050E+00	5.095E+00	3.614E+00	9.142E-01	2.313E-01	7.447E-03	7.720E-06
RH103M	4.703E+01	3.678E+01	2.873E+01	9.410E+00	1.881E+00	7.512E-02	1.913E-07	4.869E-13	5.036E-27	0.000E+00
RH106	7.251E+00	6.997E+00	6.815E+00	6.050E+00	5.095E+00	3.614E+00	9.142E-01	2.313E-01	7.447E-03	7.720E-06
PD107	1.550E-06	1.550E-06	1.550E-06	1.550E-06	1.550E-06	1.550E-06	1.550E-06	1.550E-06	1.550E-06	1.550E-06
AG110	6.559E-02	3.597E-05	3.460E-05	2.902E-05	2.254E-05	1.358E-05	1.793E-06	2.367E-07	1.499E-09	6.006E-14
AG110M	2.811E-03	2.704E-03	2.601E-03	2.182E-03	1.694E-03	1.021E-03	1.348E-04	1.780E-05	1.127E-07	4.515E-12
AG111	5.256E-01	1.433E-01	3.894E-02	1.083E-04	2.227E-08	9.415E-16	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.124E-03	1.122E-03	1.120E-03	1.111E-03	1.098E-03	1.072E-03	9.750E-04	8.867E-04	6.993E-04	4.350E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	2.621E-02	2.109E-02	1.697E-02	6.347E-03	1.536E-03	9.008E-05	1.064E-09	1.256E-14	6.024E-27	0.000E+00
IN114	7.336E-04	2.382E-04	1.958E-04	8.077E-05	2.251E-05	1.749E-06	6.379E-11	2.326E-15	1.867E-26	0.000E+00
IN114M	3.028E-04	2.489E-04	2.045E-04	8.440E-05	2.353E-05	1.829E-06	6.666E-11	2.430E-15	1.951E-26	0.000E+00
IN115M	2.654E-01	3.724E-03	4.897E-05	4.456E-07	1.079E-07	6.325E-09	7.470E-14	8.823E-19	4.229E-31	0.000E+00
SN119M	1.120E+00	1.077E+00	1.035E+00	8.654E-01	6.685E-01	3.989E-01	5.059E-02	6.415E-03	3.673E-05	1.205E-09
SN121M	1.677E-04	1.676E-04	1.675E-04	1.671E-04	1.666E-04	1.654E-04	1.609E-04	1.565E-04	1.460E-04	1.271E-04
SN123	1.503E-01	1.394E-01	1.294E-01	9.212E-02	5.645E-02	2.121E-02	4.217E-04	8.390E-06	4.682E-10	1.459E-18
SN125	6.205E-01	2.268E-01	8.286E-02	8.774E-04	1.241E-06	2.482E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	3.400E-05	3.400E-05	3.400E-05	3.400E-05	3.400E-05	3.400E-05	3.400E-05	3.400E-05	3.400E-05	3.400E-05
SB124	1.765E-02	1.503E-02	1.279E-02	6.173E-03	2.158E-03	2.639E-04	5.901E-08	1.320E-11	9.862E-21	5.510E-39
SB125	8.197E-01	8.156E-01	8.092E-01	7.756E-01	7.286E-01	6.429E-01	3.899E-01	2.364E-01	6.772E-02	5.554E-03
SB126	1.787E-02	8.175E-03	3.739E-03	1.134E-04	5.421E-06	4.760E-06	4.760E-06	4.760E-06	4.760E-06	4.760E-06
SB126M	8.896E-03	3.400E-05	3.400E-05	3.400E-05	3.400E-05	3.400E-05	3.400E-05	3.400E-05	3.400E-05	3.400E-05
TE123M	1.972E-05	1.818E-05	1.676E-05	1.163E-05	6.853E-06	2.381E-06	3.472E-08	5.063E-10	1.299E-14	8.565E-24
TE125M	1.818E-01	1.828E-01	1.834E-01	1.826E-01	1.755E-01	1.566E-01	9.516E-02	5.771E-02	1.652E-02	1.355E-03
TE127	2.701E+00	5.594E-01	3.359E-01	2.133E-01	1.194E-01	3.741E-02	3.606E-04	3.476E-06	3.170E-11	2.637E-21
TE127M	3.751E-01	3.548E-01	3.255E-01	2.178E-01	1.219E-01	3.820E-02	3.682E-04	3.548E-06	3.236E-11	2.692E-21
TE129	1.123E+01	8.268E-01	6.194E-01	1.680E-01	2.557E-02	5.925E-04	1.708E-10	4.921E-17	2.194E-33	0.000E+00
TE129M	1.687E+00	1.270E+00	9.516E-01	2.581E-01	3.929E-02	9.102E-04	2.623E-10	7.560E-17	3.370E-33	0.000E+00
I129	2.074E-06	2.077E-06	2.079E-06	2.083E-06	2.084E-06	2.084E-06	2.084E-06	2.084E-06	2.084E-06	2.084E-06
I131	4.689E+01	1.441E+01	4.310E+00	1.847E-02	7.081E-06	1.041E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table S.4 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	5.205E-01	3.899E-01	2.202E-01	7.604E-03	3.929E-05	9.523E-10	3.231E-28	1.096E-46	0.000E+00	0.000E+00
XE133	1.090E+02	2.108E+01	3.321E+00	7.787E-04	4.514E-09	1.517E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	5.591E-01	5.519E-01	5.448E-01	5.140E-01	4.726E-01	3.995E-01	2.041E-01	1.042E-01	1.943E-02	6.754E-04
CS135	1.106E-04	1.107E-04	1.107E-04	1.107E-04	1.107E-04	1.107E-04	1.107E-04	1.107E-04	1.107E-04	1.107E-04
CS136	3.554E-01	1.694E-01	8.079E-02	2.845E-03	2.278E-05	1.460E-09	2.465E-26	4.161E-43	0.000E+00	0.000E+00
CS137	8.817E+00	8.809E+00	8.802E+00	8.767E+00	8.716E+00	8.616E+00	8.227E+00	7.856E+00	6.999E+00	5.556E+00
BA136M	5.869E-02	2.792E-02	1.331E-02	4.689E-04	3.754E-06	2.406E-10	4.062E-27	6.858E-44	0.000E+00	0.000E+00
BA137M	8.346E+00	8.334E+00	8.326E+00	8.293E+00	8.245E+00	8.151E+00	7.783E+00	7.432E+00	6.621E+00	5.256E+00
BA140	1.002E+02	4.690E+01	2.196E+01	7.127E-01	5.071E-03	2.568E-07	1.687E-24	1.108E-41	0.000E+00	0.000E+00
LA140	1.004E+02	5.393E+01	2.527E+01	8.202E-01	5.836E-03	2.955E-07	1.941E-24	1.276E-41	0.000E+00	0.000E+00
CE141	9.520E+01	7.101E+01	5.269E+01	1.368E+01	1.955E+00	3.994E-02	6.953E-09	1.210E-15	1.531E-32	0.000E+00
CE142	3.722E-09	3.723E-09	3.723E-09	3.723E-09	3.723E-09	3.723E-09	3.723E-09	3.723E-09	3.723E-09	3.723E-09
CE144	8.541E+01	8.255E+01	7.978E+01	6.837E+01	5.473E+01	3.507E+01	5.915E+00	9.974E-01	1.165E-02	1.588E-06
PR143	9.514E+01	5.180E+01	2.534E+01	1.000E+00	9.443E-03	8.415E-07	5.308E-23	3.348E-39	0.000E+00	0.000E+00
PR144	8.544E+01	8.255E+01	7.978E+01	6.838E+01	5.474E+01	3.508E+01	5.915E+00	9.974E-01	1.165E-02	1.588E-06
PR144M	1.026E+00	9.906E-01	9.573E-01	8.205E-01	6.568E-01	4.209E-01	7.098E-02	1.197E-02	1.398E-04	1.906E-08
ND144	8.768E-14	8.874E-14	8.977E-14	9.399E-14	9.905E-14	1.063E-13	1.171E-13	1.189E-13	1.193E-13	1.193E-13
ND147	3.682E+01	1.532E+01	6.373E+00	1.210E-01	3.974E-04	4.286E-09	5.799E-29	7.845E-49	0.000E+00	0.000E+00
PM145	2.649E-06	2.683E-06	2.716E-06	2.851E-06	3.012E-06	3.240E-06	3.468E-06	3.314E-06	2.752E-06	1.862E-06
PM147	2.320E+01	2.322E+01	2.308E+01	2.212E+01	2.071E+01	1.815E+01	1.070E+01	6.312E+00	1.686E+00	1.203E-01
PM148M	3.837E-01	3.034E-01	2.398E-01	8.296E-02	1.793E-02	8.382E-04	4.000E-09	1.908E-14	9.491E-28	0.000E+00
PM148	1.389E+00	2.416E-01	5.036E-02	4.687E-03	1.010E-03	4.721E-05	2.253E-10	1.075E-15	5.346E-29	0.000E+00
SM145	2.562E-05	2.490E-05	2.420E-05	2.128E-05	1.766E-05	1.218E-05	2.750E-06	6.210E-07	1.505E-08	8.836E-12
SM147	4.245E-10	4.302E-10	4.360E-10	4.614E-10	4.960E-10	5.588E-10	7.413E-10	8.490E-10	9.624E-10	1.001E-09
SM151	1.209E-01	1.211E-01	1.211E-01	1.209E-01	1.207E-01	1.202E-01	1.184E-01	1.166E-01	1.122E-01	1.039E-01
EU152	5.318E-03	5.307E-03	5.297E-03	5.250E-03	5.183E-03	5.054E-03	4.564E-03	4.122E-03	3.195E-03	1.920E-03
EU154	2.590E-02	2.581E-02	2.573E-02	2.538E-02	2.487E-02	2.390E-02	2.033E-02	1.731E-02	1.157E-02	5.172E-03
EU155	2.096E-01	2.085E-01	2.073E-01	2.024E-01	1.954E-01	1.823E-01	1.378E-01	1.042E-01	5.186E-02	1.283E-02
EU156	5.010E-01	2.683E-01	1.416E-01	7.892E-03	1.225E-04	2.953E-08	9.975E-23	3.369E-37	0.000E+00	0.000E+00
GD153	2.265E-03	2.176E-03	2.091E-03	1.744E-03	1.343E-03	7.962E-04	9.840E-05	1.217E-05	6.531E-08	1.884E-12
TB160	6.435E-03	5.627E-03	4.920E-03	2.683E-03	1.119E-03	1.945E-04	1.777E-07	1.622E-10	4.092E-18	2.602E-33
TL206	3.815E-06	5.825E-13	5.825E-13	5.825E-13	5.825E-13	5.825E-13	5.825E-13	5.825E-13	5.825E-13	5.825E-13
TL207	5.477E-10	5.482E-10	5.507E-10	5.844E-10	6.523E-10	8.143E-10	1.539E-09	2.398E-09	5.167E-09	1.294E-08
TL208	1.283E-08	1.303E-08	1.335E-08	1.496E-08	1.686E-08	2.016E-08	2.851E-08	3.232E-08	3.424E-08	3.190E-08
PB210	1.083E-15	1.111E-15	1.134E-15	1.205E-15	1.296E-15	1.514E-15	2.985E-15	5.643E-15	1.932E-14	8.999E-14
PB211	5.492E-10	5.497E-10	5.523E-10	5.860E-10	6.541E-10	8.166E-10	1.543E-09	2.405E-09	5.182E-09	1.298E-08

Table S.4 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	3.572E-08	3.627E-08	3.715E-08	4.163E-08	4.692E-08	5.610E-08	7.936E-08	8.994E-08	9.531E-08	8.878E-08
BI211	5.492E-10	5.497E-10	5.523E-10	5.860E-10	6.541E-10	8.166E-10	1.543E-09	2.405E-09	5.182E-09	1.298E-08
BI212	3.572E-08	3.627E-08	3.715E-08	4.163E-08	4.692E-08	5.610E-08	7.936E-08	8.994E-08	9.531E-08	8.878E-08
PO212	2.289E-08	2.324E-08	2.380E-08	2.667E-08	3.006E-08	3.594E-08	5.084E-08	5.762E-08	6.106E-08	5.688E-08
PO215	5.492E-10	5.497E-10	5.523E-10	5.860E-10	6.541E-10	8.166E-10	1.543E-09	2.405E-09	5.182E-09	1.298E-08
PO216	3.572E-08	3.627E-08	3.715E-08	4.163E-08	4.692E-08	5.610E-08	7.936E-08	8.994E-08	9.531E-08	8.878E-08
RN219	5.492E-10	5.497E-10	5.523E-10	5.860E-10	6.541E-10	8.166E-10	1.543E-09	2.405E-09	5.182E-09	1.298E-08
RN220	3.572E-08	3.627E-08	3.715E-08	4.163E-08	4.692E-08	5.610E-08	7.936E-08	8.994E-08	9.531E-08	8.878E-08
FR223	7.569E-12	7.711E-12	7.854E-12	8.511E-12	9.491E-12	1.156E-11	2.127E-11	3.314E-11	7.144E-11	1.790E-10
RA223	5.492E-10	5.497E-10	5.523E-10	5.860E-10	6.541E-10	8.166E-10	1.543E-09	2.405E-09	5.182E-09	1.298E-08
RA224	3.572E-08	3.627E-08	3.715E-08	4.163E-08	4.692E-08	5.610E-08	7.936E-08	8.994E-08	9.531E-08	8.878E-08
RA226	1.039E-14	1.063E-14	1.087E-14	1.198E-14	1.367E-14	1.731E-14	3.554E-14	5.966E-14	1.461E-13	4.335E-13
RA228	5.714E-10	5.758E-10	5.802E-10	5.999E-10	6.276E-10	6.810E-10	8.690E-10	1.022E-09	1.290E-09	1.546E-09
AC227	5.485E-10	5.588E-10	5.691E-10	6.168E-10	6.878E-10	8.378E-10	1.541E-09	2.402E-09	5.177E-09	1.297E-08
TH227	5.417E-10	5.436E-10	5.489E-10	5.888E-10	6.574E-10	8.038E-10	1.522E-09	2.372E-09	5.110E-09	1.280E-08
TH228	3.566E-08	3.658E-08	3.749E-08	4.145E-08	4.672E-08	5.589E-08	7.921E-08	8.974E-08	9.523E-08	8.877E-08
TH229	6.428E-11	6.552E-11	6.678E-11	7.250E-11	8.080E-11	9.741E-11	1.639E-10	2.303E-10	3.964E-10	7.284E-10
TH230	1.431E-11	1.444E-11	1.457E-11	1.515E-11	1.600E-11	1.769E-11	2.448E-11	3.135E-11	4.878E-11	8.479E-11
TH231	1.056E-04	7.677E-05	7.676E-05	7.675E-05	7.675E-05	7.675E-05	7.675E-05	7.675E-05	7.675E-05	7.675E-05
TH232	1.687E-09	1.687E-09	1.687E-09	1.687E-09	1.687E-09	1.687E-09	1.687E-09	1.687E-09	1.687E-09	1.687E-09
TH234	5.243E-05	5.240E-05	5.239E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05
PA231	8.942E-09	9.013E-09	9.082E-09	9.370E-09	9.783E-09	1.060E-08	1.385E-08	1.710E-08	2.522E-08	4.145E-08
PA233	2.164E-02	1.512E-02	1.055E-02	2.083E-03	2.016E-04	3.499E-06	1.653E-06	1.653E-06	1.654E-06	1.659E-06
PA234M	5.779E-05	5.241E-05	5.239E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05
PA234	1.155E-05	6.813E-08	6.811E-08	6.807E-08	6.807E-08	6.807E-08	6.807E-08	6.807E-08	6.807E-08	6.807E-08
U232	1.018E-07	1.020E-07	1.020E-07	1.018E-07	1.017E-07	1.013E-07	9.964E-08	9.792E-08	9.353E-08	8.502E-08
U233	3.421E-07	3.452E-07	3.473E-07	3.512E-07	3.521E-07	3.522E-07	3.522E-07	3.522E-07	3.523E-07	3.523E-07
U234	3.742E-07	3.743E-07	3.743E-07	3.747E-07	3.751E-07	3.760E-07	3.797E-07	3.833E-07	3.920E-07	4.086E-07
U235	7.675E-05	7.675E-05	7.675E-05	7.675E-05	7.675E-05	7.675E-05	7.675E-05	7.675E-05	7.675E-05	7.675E-05
U236	3.681E-05	3.681E-05	3.681E-05	3.681E-05	3.681E-05	3.681E-05	3.681E-05	3.681E-05	3.681E-05	3.681E-05
U237	2.338E+00	5.552E-01	1.318E-01	1.992E-04	3.471E-08	1.731E-08	1.573E-08	1.428E-08	1.123E-08	6.941E-09
U238	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05	5.236E-05
NP237	1.632E-06	1.648E-06	1.651E-06	1.652E-06	1.652E-06	1.652E-06	1.653E-06	1.653E-06	1.654E-06	1.659E-06
PU236	2.525E-08	2.510E-08	2.487E-08	2.384E-08	2.244E-08	1.987E-08	1.222E-08	7.518E-09	2.231E-09	1.966E-10
PU237	1.343E-07	1.086E-07	8.777E-08	3.356E-08	8.384E-09	5.232E-10	7.935E-15	1.203E-19	1.078E-31	0.000E+00
PU238	5.895E-04	5.931E-04	5.933E-04	5.939E-04	5.942E-04	5.935E-04	5.856E-04	5.765E-04	5.542E-04	5.121E-04

Table S.4 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	1.777E-02	1.781E-02	1.782E-02	1.782E-02	1.781E-02	1.781E-02	1.781E-02	1.781E-02	1.781E-02	1.780E-02
PU240	2.874E-03	2.874E-03	2.874E-03	2.874E-03	2.874E-03	2.874E-03	2.874E-03	2.873E-03	2.871E-03	2.868E-03
PU241	7.406E-02	7.392E-02	7.378E-02	7.317E-02	7.230E-02	7.058E-02	6.410E-02	5.822E-02	4.578E-02	2.830E-02
PU242	5.130E-08	5.130E-08	5.130E-08	5.130E-08	5.130E-08	5.130E-08	5.130E-08	5.130E-08	5.130E-08	5.130E-08
PU244	1.318E-17	1.318E-17	1.318E-17	1.318E-17	1.318E-17	1.318E-17	1.318E-17	1.318E-17	1.318E-17	1.318E-17
AM241	1.175E-04	1.221E-04	1.266E-04	1.470E-04	1.761E-04	2.331E-04	4.477E-04	6.418E-04	1.050E-03	1.610E-03
AM242M	4.380E-07	4.379E-07	4.378E-07	4.375E-07	4.370E-07	4.360E-07	4.320E-07	4.281E-07	4.185E-07	3.998E-07
AM242	2.691E-03	4.370E-07	4.356E-07	4.353E-07	4.348E-07	4.338E-07	4.299E-07	4.260E-07	4.164E-07	3.978E-07
AM243	1.319E-08	1.321E-08	1.321E-08	1.321E-08	1.321E-08	1.321E-08	1.320E-08	1.320E-08	1.320E-08	1.318E-08
CM242	1.306E-03	1.239E-03	1.167E-03	8.925E-04	6.059E-04	2.793E-04	1.291E-05	9.183E-07	3.447E-07	3.290E-07
CM243	1.849E-08	1.847E-08	1.845E-08	1.838E-08	1.827E-08	1.805E-08	1.719E-08	1.637E-08	1.450E-08	1.137E-08
CM244	7.236E-08	7.235E-08	7.225E-08	7.177E-08	7.109E-08	6.974E-08	6.460E-08	5.985E-08	4.943E-08	3.372E-08
CM245	2.446E-13	2.446E-13	2.446E-13	2.446E-13	2.445E-13	2.445E-13	2.445E-13	2.445E-13	2.444E-13	2.442E-13
CM246	2.769E-15	2.769E-15	2.769E-15	2.769E-15	2.769E-15	2.769E-15	2.768E-15	2.767E-15	2.765E-15	2.761E-15
CM247	2.332E-22	2.332E-22	2.332E-22	2.332E-22	2.332E-22	2.332E-22	2.332E-22	2.332E-22	2.332E-22	2.332E-22
Subtotal Ci**	1.385E+03	9.783E+02	7.715E+02	4.290E+02	2.619E+02	1.536E+02	6.641E+01	4.624E+01	3.205E+01	2.256E+01
Total Ci***	1.003E+04	1.001E+03	7.775E+02	4.322E+02	2.636E+02	1.541E+02	6.642E+01	4.624E+01	3.205E+01	2.256E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table S.5 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table S.5 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: ss.5

BURNUP (BU)

BU: U-235 4.0 g
 BU: % U-235 10.26%
 BU: MWd 3.80
 BU: MWd/MTU 19487
 U-235 DEPL 4.66 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	5.551E-02	5.539E-02	5.527E-02	5.473E-02	5.397E-02	5.248E-02	4.691E-02	4.193E-02	3.168E-02	1.808E-02
BE 10	7.310E-08	7.310E-08	7.310E-08	7.310E-08	7.310E-08	7.310E-08	7.310E-08	7.310E-08	7.310E-08	7.310E-08
C 14	4.693E-04	4.693E-04	4.693E-04	4.693E-04	4.693E-04	4.693E-04	4.692E-04	4.690E-04	4.688E-04	4.682E-04
CL 36	1.027E-05	1.027E-05	1.027E-05	1.027E-05	1.027E-05	1.027E-05	1.027E-05	1.027E-05	1.027E-05	1.027E-05
CR 51	2.445E+01	1.723E+01	1.214E+01	2.494E+00	2.544E-01	2.648E-03	3.104E-11	3.640E-19	5.418E-39	0.000E+00
MN 54	1.490E+00	1.445E+00	1.401E+00	1.217E+00	9.942E-01	6.632E-01	1.314E-01	2.602E-02	4.542E-04	1.384E-07
FE 55	1.058E+01	1.047E+01	1.037E+01	9.898E+00	9.260E+00	8.105E+00	4.757E+00	2.792E+00	7.370E-01	5.134E-02
FE 59	4.534E-01	3.655E-01	2.946E-01	1.112E-01	2.727E-02	1.640E-03	2.145E-08	2.806E-13	1.736E-25	0.000E+00
CO 60	9.015E+00	8.970E+00	8.925E+00	8.724E+00	8.442E+00	7.905E+00	6.077E+00	4.672E+00	2.422E+00	6.505E-01
NI 59	1.989E-03	1.989E-03	1.989E-03	1.989E-03	1.989E-03	1.989E-03	1.989E-03	1.989E-03	1.989E-03	1.989E-03
NI 63	2.438E-01	2.438E-01	2.437E-01	2.434E-01	2.429E-01	2.420E-01	2.384E-01	2.348E-01	2.261E-01	2.097E-01
ZN 65	1.860E-01	1.787E-01	1.718E-01	1.435E-01	1.107E-01	6.591E-02	8.276E-03	1.039E-03	5.806E-06	1.813E-10
SE 79	4.953E-05	4.953E-05	4.953E-05	4.953E-05	4.953E-05	4.953E-05	4.953E-05	4.952E-05	4.952E-05	4.952E-05
KR 85	1.332E+00	1.329E+00	1.326E+00	1.311E+00	1.290E+00	1.249E+00	1.098E+00	9.647E-01	6.984E-01	3.660E-01
RB 87	3.492E-09	3.492E-09	3.492E-09	3.492E-09	3.492E-09	3.492E-09	3.492E-09	3.492E-09	3.492E-09	3.492E-09
SR 89	1.018E+02	8.401E+01	6.933E+01	2.909E+01	8.315E+00	6.791E-01	3.021E-05	1.344E-09	1.775E-20	0.000E+00
SR 90	1.122E+01	1.120E+01	1.119E+01	1.115E+01	1.108E+01	1.095E+01	1.044E+01	9.958E+00	8.841E+00	6.970E+00
Y 90	1.167E+01	1.122E+01	1.120E+01	1.115E+01	1.109E+01	1.095E+01	1.045E+01	9.960E+00	8.843E+00	6.971E+00
Y 91	1.245E+02	1.062E+02	8.998E+01	4.253E+01	1.442E+01	1.660E+00	2.912E-04	5.107E-08	2.080E-17	3.453E-36
ZR 93	3.014E-04	3.015E-04	3.015E-04	3.015E-04	3.015E-04	3.015E-04	3.015E-04	3.015E-04	3.015E-04	3.015E-04
ZR 95	1.477E+02	1.270E+02	1.091E+02	5.499E+01	2.046E+01	2.833E+00	1.041E-03	3.829E-07	9.919E-16	6.659E-33
NB 93M	2.732E-05	2.783E-05	2.833E-05	3.061E-05	3.383E-05	4.019E-05	6.404E-05	8.557E-05	1.307E-04	1.929E-04

Table S.5 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	2.967E-05	2.967E-05	2.967E-05	2.967E-05	2.967E-05	2.967E-05	2.967E-05	2.966E-05	2.966E-05	2.965E-05
NB 95	1.513E+02	1.478E+02	1.404E+02	9.282E+01	4.058E+01	6.155E+00	2.312E-03	8.500E-07	2.202E-15	1.478E-32
NB 95M	1.038E+00	9.381E-01	8.091E-01	4.080E-01	1.518E-01	2.102E-02	7.727E-06	2.841E-09	7.359E-18	4.940E-35
MO 93	3.411E-05	3.411E-05	3.411E-05	3.411E-05	3.411E-05	3.411E-05	3.409E-05	3.408E-05	3.405E-05	3.398E-05
TC 99	1.685E-03	1.690E-03	1.690E-03	1.690E-03	1.690E-03	1.690E-03	1.690E-03	1.690E-03	1.690E-03	1.690E-03
RU103	6.986E+01	5.457E+01	4.263E+01	1.396E+01	2.791E+00	1.115E-01	2.838E-07	7.226E-13	7.473E-27	0.000E+00
RU106	9.884E+00	9.627E+00	9.377E+00	8.324E+00	7.010E+00	4.972E+00	1.258E+00	3.182E-01	1.025E-02	1.062E-05
RH103M	6.292E+01	4.920E+01	3.843E+01	1.259E+01	2.516E+00	1.005E-01	2.559E-07	6.514E-13	6.737E-27	0.000E+00
RH106	1.001E+01	9.627E+00	9.377E+00	8.324E+00	7.010E+00	4.972E+00	1.258E+00	3.182E-01	1.025E-02	1.062E-05
PD107	2.144E-06	2.144E-06	2.144E-06	2.144E-06	2.144E-06	2.144E-06	2.144E-06	2.144E-06	2.144E-06	2.144E-06
AG110	1.093E-01	5.747E-05	5.529E-05	4.639E-05	3.602E-05	2.171E-05	2.865E-06	3.783E-07	2.395E-09	9.598E-14
AG110M	4.492E-03	4.321E-03	4.157E-03	3.488E-03	2.707E-03	1.632E-03	2.154E-04	2.844E-05	1.801E-07	7.216E-12
AG111	7.304E-01	1.991E-01	5.411E-02	1.505E-04	3.095E-08	1.308E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.512E-03	1.510E-03	1.507E-03	1.495E-03	1.477E-03	1.443E-03	1.312E-03	1.193E-03	9.409E-04	5.853E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	3.522E-02	2.834E-02	2.279E-02	8.528E-03	2.065E-03	1.210E-04	1.429E-09	1.689E-14	8.094E-27	0.000E+00
IN114	1.249E-03	4.064E-04	3.341E-04	1.378E-04	3.842E-05	2.985E-06	1.089E-10	3.969E-15	3.185E-26	0.000E+00
IN114M	5.166E-04	4.247E-04	3.490E-04	1.440E-04	4.015E-05	3.120E-06	1.137E-10	4.146E-15	3.329E-26	0.000E+00
IN115M	3.562E-01	4.998E-03	6.573E-05	5.988E-07	1.450E-07	8.500E-09	1.004E-13	1.186E-18	5.683E-31	0.000E+00
SN119M	1.523E+00	1.465E+00	1.407E+00	1.176E+00	9.090E-01	5.425E-01	6.878E-02	8.722E-03	4.994E-05	1.637E-09
SN121M	2.265E-04	2.264E-04	2.263E-04	2.258E-04	2.249E-04	2.235E-04	2.173E-04	2.114E-04	1.972E-04	1.717E-04
SN123	2.024E-01	1.878E-01	1.742E-01	1.241E-01	7.604E-02	2.856E-02	5.681E-04	1.130E-05	6.307E-10	1.965E-18
SN125	8.413E-01	3.074E-01	1.124E-01	1.190E-03	1.683E-06	3.366E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	4.555E-05	4.555E-05	4.555E-05	4.555E-05	4.555E-05	4.555E-05	4.555E-05	4.555E-05	4.555E-05	4.554E-05
SB124	2.476E-02	2.107E-02	1.794E-02	8.659E-03	3.028E-03	3.703E-04	8.278E-08	1.850E-11	1.383E-20	7.729E-39
SB125	1.105E+00	1.099E+00	1.091E+00	1.045E+00	9.819E-01	8.666E-01	5.256E-01	3.187E-01	9.128E-02	7.486E-03
SB126	2.426E-02	1.109E-02	5.075E-03	1.539E-04	7.273E-06	6.377E-06	6.377E-06	6.377E-06	6.376E-06	6.376E-06
SB126M	1.214E-02	4.555E-05	4.555E-05	4.555E-05	4.555E-05	4.555E-05	4.555E-05	4.555E-05	4.555E-05	4.554E-05
TE123M	3.673E-05	3.387E-05	3.122E-05	2.165E-05	1.276E-05	4.434E-06	6.465E-08	9.427E-10	2.420E-14	1.595E-23
TE125M	2.449E-01	2.462E-01	2.471E-01	2.460E-01	2.366E-01	2.111E-01	1.283E-01	7.778E-02	2.227E-02	1.827E-03
TE127	3.629E+00	7.518E-01	4.516E-01	2.868E-01	1.605E-01	5.030E-02	4.849E-04	4.673E-06	4.263E-11	3.546E-21
TE127M	5.043E-01	4.770E-01	4.377E-01	2.928E-01	1.639E-01	5.136E-02	4.950E-04	4.771E-06	4.352E-11	3.620E-21
TE129	1.500E+01	1.105E+00	8.276E-01	2.245E-01	3.417E-02	7.917E-04	2.281E-10	6.575E-17	2.931E-33	0.000E+00
TE129M	2.255E+00	1.697E+00	1.271E+00	3.448E-01	5.249E-02	1.216E-03	3.505E-10	1.010E-16	4.503E-33	0.000E+00
I129	2.770E-06	2.774E-06	2.776E-06	2.782E-06	2.784E-06	2.784E-06	2.784E-06	2.784E-06	2.784E-06	2.784E-06
I131	6.236E+01	1.916E+01	5.732E+00	2.456E-02	9.418E-06	1.385E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table S.5 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	6.923E-01	5.186E-01	2.929E-01	1.011E-02	5.226E-05	1.267E-09	4.298E-28	1.458E-46	0.000E+00	0.000E+00
XE133	1.448E+02	2.799E+01	4.409E+00	1.034E-03	5.994E-09	2.014E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.007E+00	9.938E-01	9.810E-01	9.256E-01	8.510E-01	7.194E-01	3.675E-01	1.877E-01	3.499E-02	1.216E-03
CS135	1.405E-04	1.406E-04	1.406E-04	1.406E-04	1.406E-04	1.406E-04	1.406E-04	1.406E-04	1.406E-04	1.406E-04
CS136	5.691E-01	2.714E-01	1.294E-01	4.556E-03	3.648E-05	2.338E-09	3.948E-26	6.664E-43	0.000E+00	0.000E+00
CS137	1.175E+01	1.174E+01	1.173E+01	1.169E+01	1.162E+01	1.149E+01	1.097E+01	1.047E+01	9.330E+00	7.406E+00
BA136M	9.397E-02	4.472E-02	2.132E-02	7.509E-04	6.012E-06	3.854E-10	6.506E-27	1.098E-43	0.000E+00	0.000E+00
BA137M	1.112E+01	1.111E+01	1.110E+01	1.105E+01	1.099E+01	1.086E+01	1.037E+01	9.906E+00	8.826E+00	7.007E+00
BA140	1.329E+02	6.224E+01	2.914E+01	9.457E-01	6.729E-03	3.407E-07	2.238E-24	1.471E-41	0.000E+00	0.000E+00
LA140	1.333E+02	7.156E+01	3.354E+01	1.088E+00	7.744E-03	3.921E-07	2.576E-24	1.693E-41	0.000E+00	0.000E+00
CE141	1.263E+02	9.424E+01	6.992E+01	1.815E+01	2.594E+00	5.300E-02	9.227E-09	1.606E-15	2.032E-32	0.000E+00
CE142	4.563E-09	4.564E-09	4.564E-09	4.564E-09	4.564E-09	4.564E-09	4.564E-09	4.564E-09	4.564E-09	4.564E-09
CE144	1.136E+02	1.098E+02	1.061E+02	9.096E+01	7.281E+01	4.666E+01	7.868E+00	1.327E+00	1.549E-02	2.112E-06
PR143	1.261E+02	6.869E+01	3.359E+01	1.326E+00	1.252E-02	1.116E-06	7.038E-23	4.439E-39	0.000E+00	0.000E+00
PR144	1.137E+02	1.098E+02	1.061E+02	9.096E+01	7.282E+01	4.666E+01	7.868E+00	1.327E+00	1.549E-02	2.113E-06
PR144M	1.364E+00	1.318E+00	1.274E+00	1.092E+00	8.738E-01	5.599E-01	9.442E-02	1.592E-02	1.859E-04	2.535E-08
ND144	1.181E-13	1.195E-13	1.209E-13	1.265E-13	1.332E-13	1.429E-13	1.573E-13	1.597E-13	1.602E-13	1.602E-13
ND147	4.886E+01	2.034E+01	8.457E+00	1.606E-01	5.274E-04	5.688E-09	7.695E-29	1.041E-48	0.000E+00	0.000E+00
PM145	3.568E-06	3.614E-06	3.658E-06	3.842E-06	4.061E-06	4.370E-06	4.682E-06	4.474E-06	3.717E-06	2.514E-06
PM147	3.055E+01	3.057E+01	3.039E+01	2.913E+01	2.727E+01	2.390E+01	1.409E+01	8.311E+00	2.220E+00	1.584E-01
PM148M	6.528E-01	5.161E-01	4.080E-01	1.411E-01	3.051E-02	1.426E-03	6.804E-09	3.246E-14	1.614E-27	0.000E+00
PM148	2.488E+00	4.315E-01	8.904E-02	7.974E-03	1.718E-03	8.031E-05	3.832E-10	1.828E-15	9.093E-29	0.000E+00
SM145	3.477E-05	3.379E-05	3.284E-05	2.887E-05	2.397E-05	1.652E-05	3.731E-06	8.426E-07	2.042E-08	1.199E-11
SM147	5.371E-10	5.447E-10	5.523E-10	5.857E-10	6.313E-10	7.140E-10	9.543E-10	1.096E-09	1.245E-09	1.296E-09
SM151	1.371E-01	1.374E-01	1.374E-01	1.372E-01	1.369E-01	1.364E-01	1.342E-01	1.322E-01	1.273E-01	1.178E-01
EU152	7.477E-03	7.462E-03	7.448E-03	7.382E-03	7.289E-03	7.105E-03	6.418E-03	5.796E-03	4.492E-03	2.700E-03
EU154	4.677E-02	4.663E-02	4.648E-02	4.584E-02	4.493E-02	4.315E-02	3.674E-02	3.127E-02	2.090E-02	9.341E-03
EU155	2.626E-01	2.612E-01	2.598E-01	2.536E-01	2.450E-01	2.284E-01	1.728E-01	1.307E-01	6.497E-02	1.607E-02
EU156	7.646E-01	4.088E-01	2.158E-01	1.203E-02	1.867E-04	4.502E-08	1.520E-22	5.133E-37	0.000E+00	0.000E+00
GD153	3.186E-03	3.061E-03	2.941E-03	2.454E-03	1.889E-03	1.120E-03	1.384E-04	1.711E-05	9.188E-08	2.649E-12
TB160	8.895E-03	7.778E-03	6.801E-03	3.709E-03	1.546E-03	2.689E-04	2.456E-07	2.243E-10	5.658E-18	3.598E-33
TL206	5.205E-06	7.868E-13	7.868E-13	7.868E-13	7.868E-13	7.868E-13	7.868E-13	7.868E-13	7.868E-13	7.868E-13
TL207	5.853E-10	5.859E-10	5.886E-10	6.245E-10	6.967E-10	8.681E-10	1.622E-09	2.501E-09	5.287E-09	1.298E-08
TL208	1.856E-08	1.885E-08	1.931E-08	2.166E-08	2.442E-08	2.923E-08	4.144E-08	4.702E-08	4.987E-08	4.643E-08
PB210	1.896E-15	1.945E-15	1.981E-15	2.084E-15	2.203E-15	2.486E-15	4.421E-15	7.941E-15	2.615E-14	1.210E-13
PB211	5.870E-10	5.875E-10	5.902E-10	6.262E-10	6.987E-10	8.705E-10	1.626E-09	2.508E-09	5.302E-09	1.301E-08

Table S.5 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	5.167E-08	5.246E-08	5.375E-08	6.028E-08	6.798E-08	8.136E-08	1.153E-07	1.309E-07	1.388E-07	1.292E-07
BI211	5.870E-10	5.875E-10	5.902E-10	6.262E-10	6.987E-10	8.705E-10	1.626E-09	2.508E-09	5.302E-09	1.301E-08
BI212	5.167E-08	5.246E-08	5.375E-08	6.028E-08	6.798E-08	8.136E-08	1.153E-07	1.309E-07	1.388E-07	1.292E-07
PO212	3.310E-08	3.361E-08	3.444E-08	3.862E-08	4.355E-08	5.213E-08	7.390E-08	8.384E-08	8.893E-08	8.280E-08
PO215	5.870E-10	5.875E-10	5.902E-10	6.262E-10	6.987E-10	8.705E-10	1.626E-09	2.508E-09	5.302E-09	1.301E-08
PO216	5.167E-08	5.246E-08	5.375E-08	6.028E-08	6.798E-08	8.136E-08	1.153E-07	1.309E-07	1.388E-07	1.292E-07
RN219	5.870E-10	5.875E-10	5.902E-10	6.262E-10	6.987E-10	8.705E-10	1.626E-09	2.508E-09	5.302E-09	1.301E-08
RN220	5.167E-08	5.246E-08	5.375E-08	6.028E-08	6.798E-08	8.136E-08	1.153E-07	1.309E-07	1.388E-07	1.292E-07
FR223	8.090E-12	8.241E-12	8.394E-12	9.094E-12	1.014E-11	1.232E-11	2.242E-11	3.457E-11	7.310E-11	1.795E-10
RA223	5.870E-10	5.875E-10	5.902E-10	6.262E-10	6.987E-10	8.705E-10	1.626E-09	2.508E-09	5.302E-09	1.301E-08
RA224	5.167E-08	5.246E-08	5.375E-08	6.028E-08	6.798E-08	8.136E-08	1.153E-07	1.309E-07	1.388E-07	1.292E-07
RA226	1.385E-14	1.417E-14	1.449E-14	1.598E-14	1.823E-14	2.309E-14	4.741E-14	7.961E-14	1.954E-13	5.837E-13
RA228	5.709E-10	5.753E-10	5.797E-10	5.994E-10	6.271E-10	6.804E-10	8.682E-10	1.021E-09	1.289E-09	1.545E-09
AC227	5.862E-10	5.972E-10	6.083E-10	6.590E-10	7.344E-10	8.929E-10	1.624E-09	2.505E-09	5.297E-09	1.300E-08
TH227	5.789E-10	5.810E-10	5.866E-10	6.292E-10	7.022E-10	8.569E-10	1.604E-09	2.474E-09	5.229E-09	1.283E-08
TH228	5.158E-08	5.292E-08	5.425E-08	6.001E-08	6.769E-08	8.106E-08	1.151E-07	1.306E-07	1.387E-07	1.292E-07
TH229	8.521E-11	8.686E-11	8.853E-11	9.613E-11	1.072E-10	1.292E-10	2.175E-10	3.058E-10	5.265E-10	9.677E-10
TH230	1.911E-11	1.929E-11	1.946E-11	2.023E-11	2.135E-11	2.359E-11	3.266E-11	4.187E-11	6.548E-11	1.152E-10
TH231	1.135E-04	7.427E-05	7.427E-05	7.426E-05	7.426E-05	7.426E-05	7.426E-05	7.426E-05	7.426E-05	7.426E-05
TH232	1.686E-09	1.686E-09	1.686E-09	1.686E-09	1.686E-09	1.686E-09	1.686E-09	1.686E-09	1.686E-09	1.686E-09
TH234	5.244E-05	5.240E-05	5.237E-05	5.233E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05
PA231	9.561E-09	9.631E-09	9.698E-09	9.976E-09	1.038E-08	1.117E-08	1.431E-08	1.746E-08	2.531E-08	4.101E-08
PA233	2.950E-02	2.060E-02	1.438E-02	2.839E-03	2.753E-04	5.326E-06	2.809E-06	2.810E-06	2.813E-06	2.824E-06
PA234M	6.242E-05	5.240E-05	5.238E-05	5.233E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05
PA234	2.142E-05	6.812E-08	6.809E-08	6.803E-08	6.802E-08	6.801E-08	6.801E-08	6.801E-08	6.801E-08	6.801E-08
U232	1.481E-07	1.485E-07	1.484E-07	1.483E-07	1.480E-07	1.476E-07	1.454E-07	1.431E-07	1.368E-07	1.244E-07
U233	4.542E-07	4.584E-07	4.613E-07	4.667E-07	4.679E-07	4.680E-07	4.680E-07	4.681E-07	4.681E-07	4.682E-07
U234	4.961E-07	4.962E-07	4.964E-07	4.971E-07	4.980E-07	5.000E-07	5.079E-07	5.156E-07	5.345E-07	5.702E-07
U235	7.426E-05	7.426E-05	7.426E-05	7.426E-05	7.426E-05	7.426E-05	7.426E-05	7.426E-05	7.426E-05	7.426E-05
U236	4.886E-05	4.886E-05	4.886E-05	4.886E-05	4.886E-05	4.886E-05	4.886E-05	4.886E-05	4.886E-05	4.886E-05
U237	4.108E+00	9.756E-01	2.317E-01	3.501E-04	7.096E-08	4.015E-08	3.647E-08	3.312E-08	2.604E-08	1.610E-08
U238	5.232E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05	5.232E-05
NP237	2.773E-06	2.800E-06	2.807E-06	2.809E-06	2.809E-06	2.809E-06	2.809E-06	2.810E-06	2.813E-06	2.824E-06
PU236	5.724E-08	5.690E-08	5.637E-08	5.404E-08	5.086E-08	4.504E-08	2.771E-08	1.704E-08	5.058E-09	4.458E-10
PU237	2.558E-07	2.067E-07	1.671E-07	6.389E-08	1.596E-08	9.960E-10	1.511E-14	2.291E-19	2.052E-31	0.000E+00
PU238	1.329E-03	1.338E-03	1.339E-03	1.341E-03	1.343E-03	1.343E-03	1.326E-03	1.306E-03	1.255E-03	1.160E-03

Table S.5 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	2.297E-02	2.304E-02	2.304E-02	2.304E-02	2.304E-02	2.304E-02	2.304E-02	2.303E-02	2.302E-02
PU240	4.984E-03	4.984E-03	4.984E-03	4.984E-03	4.984E-03	4.984E-03	4.982E-03	4.979E-03	4.973E-03
PU241	1.717E-01	1.714E-01	1.711E-01	1.697E-01	1.677E-01	1.637E-01	1.487E-01	1.062E-01	6.562E-02
PU242	1.624E-07	1.624E-07	1.624E-07	1.624E-07	1.624E-07	1.624E-07	1.624E-07	1.624E-07	1.624E-07
PU244	7.720E-17	7.720E-17	7.720E-17	7.720E-17	7.720E-17	7.720E-17	7.720E-17	7.720E-17	7.720E-17
AM241	2.709E-04	2.814E-04	2.919E-04	3.391E-04	4.066E-04	5.389E-04	1.037E-03	2.432E-03	3.733E-03
AM242M	1.281E-06	1.281E-06	1.281E-06	1.280E-06	1.278E-06	1.276E-06	1.264E-06	1.224E-06	1.170E-06
AM242	8.462E-03	1.279E-06	1.275E-06	1.274E-06	1.272E-06	1.269E-06	1.258E-06	1.246E-06	1.164E-06
AM243	5.649E-08	5.655E-08	5.655E-08	5.655E-08	5.655E-08	5.655E-08	5.654E-08	5.650E-08	5.645E-08
CM242	4.114E-03	3.903E-03	3.678E-03	2.812E-03	1.909E-03	8.798E-04	4.061E-05	1.009E-06	9.626E-07
CM243	7.880E-08	7.873E-08	7.865E-08	7.832E-08	7.785E-08	7.691E-08	7.326E-08	6.180E-08	4.846E-08
CM244	4.212E-07	4.212E-07	4.206E-07	4.178E-07	4.138E-07	4.060E-07	3.761E-07	2.877E-07	1.963E-07
CM245	1.909E-12	1.909E-12	1.909E-12	1.909E-12	1.909E-12	1.909E-12	1.908E-12	1.907E-12	1.906E-12
CM246	2.935E-14	2.935E-14	2.935E-14	2.935E-14	2.935E-14	2.935E-14	2.934E-14	2.931E-14	2.927E-14
CM247	3.348E-21	3.348E-21	3.348E-21	3.348E-21	3.348E-21	3.348E-21	3.348E-21	3.348E-21	3.348E-21
Subtotal Ci**	1.844E+03	1.303E+03	1.027E+03	5.716E+02	3.493E+02	2.050E+02	8.866E+01	6.171E+01	3.007E+01
Total Ci***	1.333E+04	1.333E+03	1.035E+03	5.759E+02	3.515E+02	2.057E+02	8.867E+01	6.171E+01	3.007E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGIN output isotopes.

Table S.6 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table S.6 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: ss.6

BURNUP (BU)

BU: U-235 5.0 g
 BU: % U-235 12.82%
 BU: MWd 4.75
 BU: MWd/MTU 24359
 U-235 DEPL 5.81 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	6.955E-02	6.939E-02	6.925E-02	6.858E-02	6.762E-02	6.576E-02	5.878E-02	5.254E-02	3.970E-02	2.265E-02
BE 10	9.263E-08	9.263E-08	9.263E-08	9.263E-08	9.263E-08	9.263E-08	9.263E-08	9.263E-08	9.263E-08	9.263E-08
C 14	5.947E-04	5.947E-04	5.947E-04	5.947E-04	5.947E-04	5.946E-04	5.945E-04	5.944E-04	5.940E-04	5.933E-04
CL 36	1.300E-05	1.300E-05	1.300E-05	1.300E-05	1.300E-05	1.300E-05	1.300E-05	1.300E-05	1.300E-05	1.300E-05
CR 51	3.130E+01	2.205E+01	1.554E+01	3.193E+00	3.257E-01	3.389E-03	3.973E-11	4.659E-19	6.935E-39	0.000E+00
MN 54	1.900E+00	1.841E+00	1.785E+00	1.551E+00	1.267E+00	8.454E-01	1.674E-01	3.316E-02	5.789E-04	1.764E-07
FE 55	1.344E+01	1.330E+01	1.316E+01	1.257E+01	1.176E+01	1.029E+01	6.042E+00	3.546E+00	9.360E-01	6.520E-02
FE 59	5.809E-01	4.682E-01	3.774E-01	1.425E-01	3.493E-02	2.101E-03	2.748E-08	3.595E-13	2.224E-25	0.000E+00
CO 60	1.143E+01	1.137E+01	1.131E+01	1.106E+01	1.070E+01	1.002E+01	7.704E+00	5.923E+00	3.070E+00	8.247E-01
NI 59	2.517E-03	2.517E-03	2.517E-03	2.517E-03	2.517E-03	2.517E-03	2.517E-03	2.517E-03	2.516E-03	2.516E-03
NI 63	3.089E-01	3.088E-01	3.087E-01	3.083E-01	3.077E-01	3.065E-01	3.020E-01	2.975E-01	2.865E-01	2.657E-01
ZN 65	2.374E-01	2.281E-01	2.192E-01	1.831E-01	1.413E-01	8.411E-02	1.056E-02	1.326E-03	7.410E-06	2.313E-10
SE 79	6.189E-05	6.189E-05	6.189E-05	6.189E-05	6.189E-05	6.189E-05	6.189E-05	6.189E-05	6.189E-05	6.188E-05
KR 85	1.663E+00	1.659E+00	1.655E+00	1.636E+00	1.610E+00	1.559E+00	1.370E+00	1.204E+00	8.715E-01	4.567E-01
RB 87	4.305E-09	4.305E-09	4.305E-09	4.305E-09	4.305E-09	4.305E-09	4.305E-09	4.305E-09	4.305E-09	4.305E-09
SR 89	1.265E+02	1.044E+02	8.613E+01	3.615E+01	1.033E+01	8.438E-01	3.754E-05	1.670E-09	2.205E-20	0.000E+00
SR 90	1.399E+01	1.398E+01	1.397E+01	1.391E+01	1.383E+01	1.366E+01	1.303E+01	1.242E+01	1.103E+01	8.695E+00
Y 90	1.458E+01	1.399E+01	1.397E+01	1.391E+01	1.383E+01	1.367E+01	1.303E+01	1.243E+01	1.103E+01	8.698E+00
Y 91	1.547E+02	1.320E+02	1.118E+02	5.287E+01	1.793E+01	2.064E+00	3.620E-04	6.350E-08	2.587E-17	4.293E-36
ZR 93	3.771E-04	3.772E-04	3.772E-04	3.772E-04	3.772E-04	3.772E-04	3.772E-04	3.772E-04	3.772E-04	3.772E-04
ZR 95	1.844E+02	1.584E+02	1.362E+02	6.862E+01	2.554E+01	3.536E+00	1.299E-03	4.778E-07	1.238E-15	8.311E-33
NB 93M	3.420E-05	3.483E-05	3.546E-05	3.830E-05	4.235E-05	5.029E-05	8.013E-05	1.071E-04	1.636E-04	2.413E-04

Table S.6 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	3.757E-05	3.757E-05	3.757E-05	3.757E-05	3.757E-05	3.757E-05	3.757E-05	3.757E-05	3.756E-05	3.755E-05
NB 95	1.888E+02	1.844E+02	1.753E+02	1.159E+02	5.064E+01	7.682E+00	2.886E-03	1.061E-06	2.748E-15	1.845E-32
NB 95M	1.296E+00	1.170E+00	1.010E+00	5.091E-01	1.895E-01	2.623E-02	9.643E-06	3.545E-09	9.184E-18	6.165E-35
MO 93	4.323E-05	4.323E-05	4.323E-05	4.323E-05	4.322E-05	4.322E-05	4.320E-05	4.319E-05	4.314E-05	4.306E-05
TC 99	2.103E-03	2.109E-03	2.109E-03	2.109E-03	2.109E-03	2.109E-03	2.109E-03	2.109E-03	2.109E-03	2.109E-03
RU103	8.764E+01	6.846E+01	5.348E+01	1.752E+01	3.501E+00	1.398E-01	3.560E-07	9.064E-13	9.375E-27	0.000E+00
RU106	1.274E+01	1.241E+01	1.209E+01	1.073E+01	9.038E+00	6.410E+00	1.622E+00	4.103E-01	1.321E-02	1.369E-05
RH103M	7.893E+01	6.172E+01	4.821E+01	1.579E+01	3.156E+00	1.261E-01	3.210E-07	8.172E-13	8.451E-27	0.000E+00
RH106	1.294E+01	1.241E+01	1.209E+01	1.073E+01	9.038E+00	6.410E+00	1.622E+00	4.103E-01	1.321E-02	1.369E-05
PD107	2.778E-06	2.778E-06	2.778E-06	2.778E-06	2.778E-06	2.778E-06	2.778E-06	2.778E-06	2.778E-06	2.778E-06
AG110	1.680E-01	8.529E-05	8.204E-05	6.884E-05	5.345E-05	3.222E-05	4.252E-06	5.613E-07	3.553E-09	1.424E-13
AG110M	6.666E-03	6.412E-03	6.169E-03	5.176E-03	4.019E-03	2.422E-03	3.197E-04	4.220E-05	2.672E-07	1.071E-11
AG111	9.504E-01	2.590E-01	7.042E-02	1.959E-04	4.028E-08	1.702E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.909E-03	1.906E-03	1.902E-03	1.886E-03	1.864E-03	1.821E-03	1.656E-03	1.506E-03	1.187E-03	7.386E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	4.439E-02	3.571E-02	2.873E-02	1.075E-02	2.603E-03	1.525E-04	1.802E-09	2.128E-14	1.020E-26	0.000E+00
IN114	1.924E-03	6.273E-04	5.156E-04	2.127E-04	5.929E-05	4.607E-06	1.680E-10	6.124E-15	4.916E-26	0.000E+00
IN114M	7.973E-04	6.554E-04	5.388E-04	2.222E-04	6.196E-05	4.814E-06	1.755E-10	6.400E-15	5.137E-26	0.000E+00
IN115M	4.483E-01	6.290E-03	8.272E-05	7.547E-07	1.827E-07	1.071E-08	1.265E-13	1.494E-18	7.162E-31	0.000E+00
SN119M	1.943E+00	1.868E+00	1.796E+00	1.502E+00	1.160E+00	6.922E-01	8.777E-02	1.113E-02	6.373E-05	2.089E-09
SN121M	2.871E-04	2.870E-04	2.868E-04	2.860E-04	2.851E-04	2.831E-04	2.754E-04	2.679E-04	2.499E-04	2.176E-04
SN123	2.558E-01	2.373E-01	2.202E-01	1.568E-01	9.609E-02	3.609E-02	7.178E-04	1.428E-05	7.971E-10	2.483E-18
SN125	1.070E+00	3.912E-01	1.429E-01	1.514E-03	2.141E-06	4.282E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	5.723E-05	5.723E-05	5.723E-05	5.723E-05	5.723E-05	5.723E-05	5.722E-05	5.722E-05	5.722E-05	5.722E-05
SB124	3.258E-02	2.772E-02	2.360E-02	1.139E-02	3.984E-03	4.872E-04	1.089E-07	2.435E-11	1.820E-20	1.017E-38
SB125	1.397E+00	1.390E+00	1.379E+00	1.322E+00	1.241E+00	1.096E+00	6.643E-01	4.029E-01	1.154E-01	9.465E-03
SB126	3.088E-02	1.412E-02	6.459E-03	1.958E-04	9.152E-06	8.012E-06	8.011E-06	8.011E-06	8.011E-06	8.010E-06
SB126M	1.552E-02	5.723E-05	5.723E-05	5.723E-05	5.723E-05	5.723E-05	5.722E-05	5.722E-05	5.722E-05	5.722E-05
TE123M	6.021E-05	5.552E-05	5.120E-05	3.549E-05	2.093E-05	7.271E-06	1.060E-07	1.546E-09	3.968E-14	2.615E-23
TE125M	3.095E-01	3.111E-01	3.123E-01	3.109E-01	2.991E-01	2.669E-01	1.622E-01	9.833E-02	2.815E-02	2.309E-03
TE127	4.570E+00	9.474E-01	5.693E-01	3.616E-01	2.024E-01	6.343E-02	6.113E-04	5.893E-06	5.374E-11	4.471E-21
TE127M	6.359E-01	6.015E-01	5.518E-01	3.692E-01	2.067E-01	6.475E-02	6.241E-04	6.016E-06	5.487E-11	4.565E-21
TE129	1.879E+01	1.384E+00	1.037E+00	2.812E-01	4.281E-02	9.918E-04	2.858E-10	8.237E-17	3.672E-33	0.000E+00
TE129M	2.825E+00	2.126E+00	1.593E+00	4.320E-01	6.576E-02	1.524E-03	4.391E-10	1.265E-16	5.642E-33	0.000E+00
I129	3.470E-06	3.475E-06	3.478E-06	3.484E-06	3.487E-06	3.487E-06	3.487E-06	3.487E-06	3.487E-06	3.487E-06
I131	7.777E+01	2.390E+01	7.149E+00	3.064E-02	1.175E-05	1.727E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table S.6 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	8.633E-01	6.467E-01	3.653E-01	1.261E-02	6.518E-05	1.580E-09	5.360E-28	1.818E-46	0.000E+00	0.000E+00
XE133	1.803E+02	3.485E+01	5.490E+00	1.288E-03	7.464E-09	2.508E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.596E+00	1.576E+00	1.556E+00	1.468E+00	1.349E+00	1.141E+00	5.828E-01	2.977E-01	5.549E-02	1.929E-03
CS135	1.675E-04	1.677E-04	1.677E-04	1.677E-04	1.677E-04	1.677E-04	1.677E-04	1.677E-04	1.677E-04	1.677E-04
CS136	8.263E-01	3.940E-01	1.878E-01	6.616E-03	5.297E-05	3.395E-09	5.731E-26	9.676E-43	0.000E+00	0.000E+00
CS137	1.469E+01	1.468E+01	1.467E+01	1.461E+01	1.453E+01	1.436E+01	1.371E+01	1.309E+01	1.166E+01	9.259E+00
BA136M	1.364E-01	6.493E-02	3.096E-02	1.090E-03	8.729E-06	5.595E-10	9.445E-27	1.595E-43	0.000E+00	0.000E+00
BA137M	1.391E+01	1.389E+01	1.388E+01	1.382E+01	1.374E+01	1.358E+01	1.297E+01	1.238E+01	1.103E+01	8.759E+00
BA140	1.654E+02	7.743E+01	3.626E+01	1.177E+00	8.372E-03	4.239E-07	2.785E-24	1.830E-41	0.000E+00	0.000E+00
LA140	1.660E+02	8.904E+01	4.173E+01	1.354E+00	9.635E-03	4.878E-07	3.205E-24	2.106E-41	0.000E+00	0.000E+00
CE141	1.572E+02	1.172E+02	8.700E+01	2.258E+01	3.229E+00	6.594E-02	1.148E-08	1.999E-15	2.528E-32	0.000E+00
CE142	5.405E-09	5.405E-09	5.405E-09	5.405E-09	5.405E-09	5.405E-09	5.405E-09	5.405E-09	5.405E-09	5.405E-09
CE144	1.418E+02	1.370E+02	1.324E+02	1.135E+02	9.084E+01	5.821E+01	9.816E+00	1.655E+00	1.933E-02	2.636E-06
PR143	1.568E+02	8.539E+01	4.176E+01	1.649E+00	1.556E-02	1.387E-06	8.749E-23	5.519E-39	0.000E+00	0.000E+00
PR144	1.418E+02	1.370E+02	1.324E+02	1.135E+02	9.085E+01	5.822E+01	9.817E+00	1.655E+00	1.933E-02	2.636E-06
PR144M	1.702E+00	1.644E+00	1.589E+00	1.362E+00	1.090E+00	6.986E-01	1.178E-01	1.986E-02	2.320E-04	3.163E-08
ND144	1.492E-13	1.510E-13	1.527E-13	1.597E-13	1.681E-13	1.802E-13	1.982E-13	2.012E-13	2.018E-13	2.018E-13
ND147	6.080E+01	2.531E+01	1.052E+01	1.998E-01	6.563E-04	7.078E-09	9.576E-29	1.295E-48	0.000E+00	0.000E+00
PM145	4.507E-06	4.566E-06	4.623E-06	4.857E-06	5.136E-06	5.530E-06	5.930E-06	5.668E-06	4.708E-06	3.184E-06
PM147	3.770E+01	3.773E+01	3.752E+01	3.595E+01	3.366E+01	2.950E+01	1.740E+01	1.026E+01	2.740E+00	1.955E-01
PM148M	9.773E-01	7.726E-01	6.108E-01	2.113E-01	4.567E-02	2.135E-03	1.019E-08	4.860E-14	2.417E-27	0.000E+00
PM148	3.921E+00	6.782E-01	1.386E-01	1.194E-02	2.573E-03	1.202E-04	5.737E-10	2.737E-15	1.361E-28	0.000E+00
SM145	4.428E-05	4.303E-05	4.182E-05	3.676E-05	3.052E-05	2.104E-05	4.751E-06	1.073E-06	2.600E-08	1.527E-11
SM147	6.474E-10	6.568E-10	6.662E-10	7.074E-10	7.637E-10	8.657E-10	1.163E-09	1.338E-09	1.522E-09	1.584E-09
SM151	1.472E-01	1.476E-01	1.476E-01	1.474E-01	1.471E-01	1.465E-01	1.443E-01	1.420E-01	1.367E-01	1.266E-01
EU152	9.454E-03	9.435E-03	9.417E-03	9.334E-03	9.216E-03	8.984E-03	8.114E-03	7.328E-03	5.681E-03	3.414E-03
EU154	7.453E-02	7.430E-02	7.408E-02	7.305E-02	7.159E-02	6.877E-02	5.853E-02	4.982E-02	3.331E-02	1.489E-02
EU155	3.098E-01	3.082E-01	3.065E-01	2.992E-01	2.889E-01	2.694E-01	2.037E-01	1.541E-01	7.665E-02	1.897E-02
EU156	1.071E+00	5.721E-01	3.020E-01	1.683E-02	2.613E-04	6.299E-08	2.128E-22	7.184E-37	0.000E+00	0.000E+00
GD153	4.186E-03	4.021E-03	3.864E-03	3.223E-03	2.482E-03	1.472E-03	1.819E-04	2.248E-05	1.207E-07	3.481E-12
TB160	1.155E-02	1.010E-02	8.830E-03	4.815E-03	2.007E-03	3.491E-04	3.188E-07	2.913E-10	7.345E-18	4.671E-33
TL206	6.665E-06	9.970E-13	9.970E-13	9.970E-13	9.970E-13	9.970E-13	9.970E-13	9.970E-13	9.970E-13	9.970E-13
TL207	6.229E-10	6.235E-10	6.264E-10	6.645E-10	7.412E-10	9.221E-10	1.706E-09	2.606E-09	5.410E-09	1.302E-08
TL208	2.510E-08	2.549E-08	2.612E-08	2.932E-08	3.309E-08	3.965E-08	5.635E-08	6.402E-08	6.801E-08	6.335E-08
PB210	3.039E-15	3.116E-15	3.172E-15	3.312E-15	3.459E-15	3.802E-15	6.185E-15	1.056E-14	3.334E-14	1.532E-13
PB211	6.246E-10	6.252E-10	6.281E-10	6.664E-10	7.433E-10	9.247E-10	1.710E-09	2.613E-09	5.425E-09	1.305E-08

Table S.6 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	6.987E-08	7.095E-08	7.271E-08	8.159E-08	9.209E-08	1.103E-07	1.568E-07	1.782E-07	1.893E-07	1.763E-07
BI211	6.246E-10	6.252E-10	6.281E-10	6.664E-10	7.433E-10	9.247E-10	1.710E-09	2.613E-09	5.425E-09	1.305E-08
BI212	6.987E-08	7.095E-08	7.271E-08	8.159E-08	9.209E-08	1.103E-07	1.568E-07	1.782E-07	1.893E-07	1.763E-07
PO212	4.476E-08	4.546E-08	4.659E-08	5.228E-08	5.900E-08	7.070E-08	1.005E-07	1.142E-07	1.213E-07	1.130E-07
PO215	6.246E-10	6.252E-10	6.281E-10	6.664E-10	7.433E-10	9.247E-10	1.710E-09	2.613E-09	5.425E-09	1.305E-08
PO216	6.987E-08	7.095E-08	7.271E-08	8.159E-08	9.209E-08	1.103E-07	1.568E-07	1.782E-07	1.893E-07	1.763E-07
RN219	6.246E-10	6.252E-10	6.281E-10	6.664E-10	7.433E-10	9.247E-10	1.710E-09	2.613E-09	5.425E-09	1.305E-08
RN220	6.987E-08	7.095E-08	7.271E-08	8.159E-08	9.209E-08	1.103E-07	1.568E-07	1.782E-07	1.893E-07	1.763E-07
FR223	8.609E-12	8.770E-12	8.933E-12	9.677E-12	1.078E-11	1.308E-11	2.358E-11	3.601E-11	7.479E-11	1.800E-10
RA223	6.246E-10	6.252E-10	6.281E-10	6.664E-10	7.433E-10	9.247E-10	1.710E-09	2.613E-09	5.425E-09	1.305E-08
RA224	6.987E-08	7.095E-08	7.271E-08	8.159E-08	9.209E-08	1.103E-07	1.568E-07	1.782E-07	1.893E-07	1.763E-07
RA226	1.735E-14	1.775E-14	1.815E-14	2.002E-14	2.283E-14	2.892E-14	5.939E-14	9.980E-14	2.457E-13	7.412E-13
RA228	5.704E-10	5.748E-10	5.792E-10	5.988E-10	6.265E-10	6.798E-10	8.674E-10	1.020E-09	1.288E-09	1.543E-09
AC227	6.238E-10	6.355E-10	6.473E-10	7.013E-10	7.811E-10	9.481E-10	1.708E-09	2.609E-09	5.420E-09	1.305E-08
TH227	6.161E-10	6.183E-10	6.243E-10	6.696E-10	7.469E-10	9.102E-10	1.687E-09	2.577E-09	5.350E-09	1.287E-08
TH228	6.975E-08	7.158E-08	7.338E-08	8.123E-08	9.170E-08	1.099E-07	1.565E-07	1.778E-07	1.891E-07	1.763E-07
TH229	1.059E-10	1.080E-10	1.101E-10	1.195E-10	1.333E-10	1.608E-10	2.708E-10	3.809E-10	6.559E-10	1.206E-09
TH230	2.397E-11	2.418E-11	2.440E-11	2.536E-11	2.676E-11	2.956E-11	4.094E-11	5.259E-11	8.284E-11	1.480E-10
TH231	1.220E-04	7.179E-05	7.179E-05	7.178E-05	7.178E-05	7.178E-05	7.178E-05	7.178E-05	7.178E-05	7.178E-05
TH232	1.684E-09	1.684E-09	1.684E-09	1.684E-09	1.684E-09	1.684E-09	1.684E-09	1.684E-09	1.684E-09	1.684E-09
TH234	5.248E-05	5.241E-05	5.237E-05	5.229E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05
PA231	1.019E-08	1.026E-08	1.032E-08	1.059E-08	1.098E-08	1.174E-08	1.478E-08	1.782E-08	2.541E-08	4.059E-08
PA233	3.772E-02	2.635E-02	1.840E-02	3.631E-03	3.528E-04	7.505E-06	4.287E-06	4.289E-06	4.295E-06	4.314E-06
PA234M	6.881E-05	5.242E-05	5.237E-05	5.229E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05
PA234	3.504E-05	6.814E-08	6.808E-08	6.798E-08	6.796E-08	6.796E-08	6.796E-08	6.796E-08	6.796E-08	6.796E-08
U232	2.014E-07	2.019E-07	2.019E-07	2.017E-07	2.015E-07	2.009E-07	1.984E-07	1.954E-07	1.872E-07	1.703E-07
U233	5.656E-07	5.709E-07	5.746E-07	5.815E-07	5.830E-07	5.832E-07	5.832E-07	5.833E-07	5.834E-07	5.835E-07
U234	6.178E-07	6.181E-07	6.184E-07	6.197E-07	6.215E-07	6.253E-07	6.401E-07	6.547E-07	6.902E-07	7.574E-07
U235	7.178E-05	7.178E-05	7.178E-05	7.178E-05	7.178E-05	7.178E-05	7.178E-05	7.178E-05	7.178E-05	7.178E-05
U236	6.082E-05	6.082E-05	6.082E-05	6.082E-05	6.082E-05	6.082E-05	6.082E-05	6.082E-05	6.082E-05	6.082E-05
U237	6.427E+00	1.526E+00	3.625E-01	5.478E-04	1.253E-07	7.678E-08	6.974E-08	6.334E-08	4.980E-08	3.078E-08
U238	5.228E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05	5.228E-05
NP237	4.230E-06	4.273E-06	4.283E-06	4.286E-06	4.286E-06	4.286E-06	4.287E-06	4.289E-06	4.295E-06	4.314E-06
PU236	1.099E-07	1.092E-07	1.082E-07	1.038E-07	9.765E-08	8.648E-08	5.319E-08	3.272E-08	9.711E-09	8.558E-10
PU237	4.366E-07	3.529E-07	2.853E-07	1.091E-07	2.725E-08	1.700E-09	2.579E-14	3.911E-19	3.503E-31	0.000E+00
PU238	2.541E-03	2.558E-03	2.561E-03	2.568E-03	2.574E-03	2.577E-03	2.546E-03	2.507E-03	2.410E-03	2.227E-03

Table S.6 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	2.785E-02	2.793E-02	2.793E-02	2.793E-02	2.793E-02	2.793E-02	2.793E-02	2.793E-02	2.793E-02	2.792E-02
PU240	7.598E-03	7.598E-03	7.598E-03	7.598E-03	7.598E-03	7.597E-03	7.596E-03	7.594E-03	7.590E-03	7.582E-03
PU241	3.284E-01	3.278E-01	3.272E-01	3.245E-01	3.206E-01	3.130E-01	2.843E-01	2.582E-01	2.030E-01	1.255E-01
PU242	3.977E-07	3.977E-07	3.977E-07	3.977E-07	3.977E-07	3.977E-07	3.977E-07	3.977E-07	3.977E-07	3.977E-07
PU244	3.083E-16	3.083E-16	3.083E-16	3.083E-16	3.083E-16	3.083E-16	3.083E-16	3.083E-16	3.083E-16	3.083E-16
AM241	5.145E-04	5.347E-04	5.548E-04	6.451E-04	7.740E-04	1.027E-03	1.979E-03	2.840E-03	4.648E-03	7.135E-03
AM242M	2.903E-06	2.902E-06	2.902E-06	2.899E-06	2.896E-06	2.889E-06	2.863E-06	2.837E-06	2.773E-06	2.650E-06
AM242	2.058E-02	2.898E-06	2.887E-06	2.885E-06	2.882E-06	2.875E-06	2.849E-06	2.823E-06	2.760E-06	2.637E-06
AM243	1.757E-07	1.758E-07	1.758E-07	1.758E-07	1.758E-07	1.758E-07	1.758E-07	1.758E-07	1.757E-07	1.755E-07
CM242	1.003E-02	9.515E-03	8.966E-03	6.854E-03	4.653E-03	2.144E-03	9.880E-05	6.681E-06	2.285E-06	2.180E-06
CM243	2.438E-07	2.436E-07	2.433E-07	2.423E-07	2.408E-07	2.379E-07	2.266E-07	2.159E-07	1.912E-07	1.499E-07
CM244	1.671E-06	1.671E-06	1.668E-06	1.657E-06	1.641E-06	1.610E-06	1.492E-06	1.382E-06	1.141E-06	7.786E-07
CM245	9.522E-12	9.522E-12	9.522E-12	9.522E-12	9.522E-12	9.521E-12	9.520E-12	9.518E-12	9.514E-12	9.507E-12
CM246	1.866E-13	1.866E-13	1.866E-13	1.866E-13	1.866E-13	1.866E-13	1.865E-13	1.865E-13	1.863E-13	1.861E-13
CM247	2.705E-20	2.705E-20	2.705E-20	2.705E-20	2.705E-20	2.705E-20	2.705E-20	2.705E-20	2.705E-20	2.705E-20
Subtotal Ci**	2.304E+03	1.627E+03	1.283E+03	7.145E+02	4.368E+02	2.566E+02	1.110E+02	7.726E+01	5.346E+01	3.760E+01
Total Ci***	1.661E+04	1.664E+03	1.293E+03	7.198E+02	4.397E+02	2.575E+02	1.110E+02	7.727E+01	5.348E+01	3.760E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table S.7 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table S.7 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: ss.7

BURNUP (BU)

BU: U-235 6.0 g
 BU: % U-235 15.38%
 BU: MWd 5.70
 BU: MWd/MTU 29231
 U-235 DEPL 6.95 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	8.365E-02	8.347E-02	8.329E-02	8.248E-02	8.134E-02	7.909E-02	7.069E-02	6.319E-02	4.774E-02	2.725E-02
BE 10	1.127E-07	1.127E-07	1.127E-07	1.127E-07	1.127E-07	1.127E-07	1.127E-07	1.127E-07	1.127E-07	1.127E-07
C 14	7.237E-04	7.237E-04	7.237E-04	7.236E-04	7.236E-04	7.236E-04	7.234E-04	7.232E-04	7.228E-04	7.219E-04
CL 36	1.581E-05	1.581E-05	1.581E-05	1.581E-05	1.581E-05	1.581E-05	1.581E-05	1.581E-05	1.581E-05	1.581E-05
CR 51	3.848E+01	2.711E+01	1.910E+01	3.925E+00	4.004E-01	4.167E-03	4.885E-11	5.728E-19	8.526E-39	0.000E+00
MN 54	2.325E+00	2.254E+00	2.185E+00	1.899E+00	1.551E+00	1.035E+00	2.050E-01	4.060E-02	7.087E-04	2.160E-07
FE 55	1.639E+01	1.622E+01	1.606E+01	1.533E+01	1.434E+01	1.256E+01	7.369E+00	4.325E+00	1.142E+00	7.952E-02
FE 59	7.149E-01	5.762E-01	4.644E-01	1.753E-01	4.299E-02	2.585E-03	3.382E-08	4.424E-13	2.737E-25	0.000E+00
CO 60	1.391E+01	1.384E+01	1.377E+01	1.346E+01	1.303E+01	1.220E+01	9.379E+00	7.211E+00	3.737E+00	1.004E+00
NI 59	3.057E-03	3.057E-03	3.057E-03	3.057E-03	3.057E-03	3.057E-03	3.057E-03	3.057E-03	3.057E-03	3.057E-03
NI 63	3.757E-01	3.756E-01	3.755E-01	3.750E-01	3.743E-01	3.729E-01	3.673E-01	3.618E-01	3.485E-01	3.232E-01
ZN 65	2.909E-01	2.796E-01	2.687E-01	2.245E-01	1.732E-01	1.031E-01	1.295E-02	1.626E-03	9.083E-06	2.835E-10
SE 79	7.424E-05	7.424E-05	7.424E-05	7.424E-05	7.424E-05	7.424E-05	7.423E-05	7.423E-05	7.423E-05	7.422E-05
KR 85	1.992E+00	1.987E+00	1.982E+00	1.960E+00	1.929E+00	1.868E+00	1.641E+00	1.442E+00	1.044E+00	5.472E-01
RB 87	5.115E-09	5.115E-09	5.115E-09	5.115E-09	5.115E-09	5.115E-09	5.115E-09	5.115E-09	5.115E-09	5.115E-09
SR 89	1.508E+02	1.245E+02	1.027E+02	4.311E+01	1.232E+01	1.006E+00	4.477E-05	1.991E-09	2.629E-20	0.000E+00
SR 90	1.676E+01	1.674E+01	1.673E+01	1.666E+01	1.656E+01	1.636E+01	1.560E+01	1.488E+01	1.321E+01	1.041E+01
Y 90	1.749E+01	1.677E+01	1.673E+01	1.666E+01	1.656E+01	1.637E+01	1.561E+01	1.488E+01	1.321E+01	1.042E+01
Y 91	1.846E+02	1.575E+02	1.334E+02	6.310E+01	2.141E+01	2.463E+00	4.320E-04	7.577E-08	3.087E-17	5.122E-36
ZR 93	4.530E-04	4.532E-04	4.532E-04	4.532E-04	4.532E-04	4.532E-04	4.532E-04	4.532E-04	4.532E-04	4.531E-04
ZR 95	2.209E+02	1.899E+02	1.631E+02	8.221E+01	3.059E+01	4.235E+00	1.557E-03	5.724E-07	1.483E-15	9.956E-33
NB 93M	4.108E-05	4.183E-05	4.260E-05	4.601E-05	5.087E-05	6.042E-05	9.626E-05	1.286E-04	1.965E-04	2.899E-04

Table S.7 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	4.570E-05	4.570E-05	4.570E-05	4.570E-05	4.570E-05	4.570E-05	4.570E-05	4.569E-05	4.569E-05	4.567E-05
NB 95	2.262E+02	2.210E+02	2.100E+02	1.388E+02	6.067E+01	9.203E+00	3.457E-03	1.271E-06	3.293E-15	2.211E-32
NB 95M	1.553E+00	1.402E+00	1.209E+00	6.098E-01	2.269E-01	3.142E-02	1.155E-05	4.246E-09	1.101E-17	7.385E-35
MO 93	5.260E-05	5.260E-05	5.260E-05	5.260E-05	5.260E-05	5.259E-05	5.257E-05	5.255E-05	5.250E-05	5.239E-05
TC 99	2.519E-03	2.526E-03	2.526E-03	2.526E-03	2.526E-03	2.526E-03	2.526E-03	2.526E-03	2.526E-03	2.526E-03
RU103	1.055E+02	8.243E+01	6.439E+01	2.109E+01	4.215E+00	1.684E-01	4.287E-07	1.091E-12	1.129E-26	0.000E+00
RU106	1.576E+01	1.535E+01	1.495E+01	1.327E+01	1.118E+01	7.927E+00	2.006E+00	5.074E-01	1.634E-02	1.694E-05
RH103M	9.504E+01	7.431E+01	5.804E+01	1.901E+01	3.800E+00	1.518E-01	3.865E-07	9.839E-13	1.018E-26	0.000E+00
RH106	1.606E+01	1.535E+01	1.495E+01	1.327E+01	1.118E+01	7.927E+00	2.006E+00	5.074E-01	1.634E-02	1.694E-05
PD107	3.451E-06	3.451E-06	3.451E-06	3.451E-06	3.451E-06	3.451E-06	3.451E-06	3.451E-06	3.451E-06	3.451E-06
AG110	2.441E-01	1.204E-04	1.158E-04	9.717E-05	7.544E-05	4.548E-05	6.002E-06	7.924E-07	5.017E-09	2.010E-13
AG110M	9.410E-03	9.052E-03	8.708E-03	7.306E-03	5.672E-03	3.418E-03	4.513E-04	5.958E-05	3.772E-07	1.512E-11
AG111	1.186E+00	3.232E-01	8.786E-02	2.444E-04	5.025E-08	2.124E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	2.313E-03	2.309E-03	2.305E-03	2.286E-03	2.259E-03	2.206E-03	2.006E-03	1.824E-03	1.439E-03	8.949E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	5.370E-02	4.320E-02	3.475E-02	1.300E-02	3.148E-03	1.846E-04	2.180E-09	2.575E-14	1.234E-26	0.000E+00
IN114	2.775E-03	9.060E-04	7.448E-04	3.073E-04	8.565E-05	6.656E-06	2.427E-10	8.847E-15	7.101E-26	0.000E+00
IN114M	1.151E-03	9.467E-04	7.782E-04	3.210E-04	8.949E-05	6.954E-06	2.535E-10	9.245E-15	7.420E-26	0.000E+00
IN115M	5.416E-01	7.599E-03	9.994E-05	9.130E-07	2.211E-07	1.296E-08	1.530E-13	1.808E-18	8.665E-31	0.000E+00
SN119M	2.382E+00	2.289E+00	2.201E+00	1.840E+00	1.421E+00	8.482E-01	1.076E-01	1.364E-02	7.810E-05	2.560E-09
SN121M	3.493E-04	3.492E-04	3.490E-04	3.481E-04	3.469E-04	3.445E-04	3.351E-04	3.259E-04	3.042E-04	2.648E-04
SN123	3.104E-01	2.880E-01	2.671E-01	1.902E-01	1.166E-01	4.379E-02	8.709E-04	1.732E-05	9.670E-10	3.013E-18
SN125	1.308E+00	4.779E-01	1.746E-01	1.849E-03	2.615E-06	5.231E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	6.901E-05	6.901E-05	6.901E-05	6.901E-05	6.901E-05	6.901E-05	6.901E-05	6.901E-05	6.901E-05	6.900E-05
SB124	4.115E-02	3.502E-02	2.981E-02	1.439E-02	5.031E-03	6.152E-04	1.376E-07	3.076E-11	2.299E-20	1.284E-38
SB125	1.695E+00	1.687E+00	1.674E+00	1.604E+00	1.507E+00	1.330E+00	8.064E-01	4.890E-01	1.401E-01	1.149E-02
SB126	3.773E-02	1.725E-02	7.892E-03	2.391E-04	1.105E-05	9.662E-06	9.662E-06	9.662E-06	9.661E-06	9.661E-06
SB126M	1.903E-02	6.901E-05	6.901E-05	6.901E-05	6.901E-05	6.901E-05	6.901E-05	6.901E-05	6.901E-05	6.900E-05
TE123M	9.108E-05	8.398E-05	7.744E-05	5.368E-05	3.164E-05	1.100E-05	1.604E-07	2.338E-09	6.002E-14	3.955E-23
TE125M	3.754E-01	3.775E-01	3.788E-01	3.773E-01	3.629E-01	3.239E-01	1.968E-01	1.194E-01	3.418E-02	2.803E-03
TE127	5.523E+00	1.146E+00	6.889E-01	4.376E-01	2.450E-01	7.676E-02	7.398E-04	7.131E-06	6.504E-11	5.410E-21
TE127M	7.696E-01	7.279E-01	6.678E-01	4.468E-01	2.501E-01	7.836E-02	7.553E-04	7.280E-06	6.640E-11	5.524E-21
TE129	2.259E+01	1.664E+00	1.247E+00	3.381E-01	5.147E-02	1.192E-03	3.437E-10	9.904E-17	4.416E-33	0.000E+00
TE129M	3.396E+00	2.556E+00	1.915E+00	5.194E-01	7.907E-02	1.832E-03	5.279E-10	1.521E-16	6.783E-33	0.000E+00
I129	4.172E-06	4.177E-06	4.181E-06	4.189E-06	4.192E-06	4.192E-06	4.192E-06	4.192E-06	4.192E-06	4.192E-06
I131	9.308E+01	2.861E+01	8.557E+00	3.667E-02	1.406E-05	2.067E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table S.7 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	1.033E+00	7.740E-01	4.372E-01	1.510E-02	7.801E-05	1.891E-09	6.415E-28	2.177E-46	0.000E+00	0.000E+00
XE133	2.154E+02	4.164E+01	6.560E+00	1.539E-03	8.919E-09	2.997E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	2.335E+00	2.305E+00	2.276E+00	2.147E+00	1.973E+00	1.668E+00	8.523E-01	4.353E-01	8.116E-02	2.821E-03
CS135	1.919E-04	1.921E-04	1.921E-04	1.921E-04	1.921E-04	1.921E-04	1.921E-04	1.921E-04	1.921E-04	1.921E-04
CS136	1.125E+00	5.362E-01	2.557E-01	9.003E-03	7.208E-05	4.620E-09	7.800E-26	1.317E-42	0.000E+00	0.000E+00
CS137	1.763E+01	1.762E+01	1.760E+01	1.753E+01	1.743E+01	1.723E+01	1.645E+01	1.571E+01	1.400E+01	1.111E+01
BA136M	1.856E-01	8.836E-02	4.213E-02	1.484E-03	1.188E-05	7.615E-10	1.285E-26	2.170E-43	0.000E+00	0.000E+00
BA137M	1.669E+01	1.667E+01	1.665E+01	1.659E+01	1.649E+01	1.630E+01	1.557E+01	1.486E+01	1.324E+01	1.051E+01
BA140	1.975E+02	9.246E+01	4.330E+01	1.405E+00	9.997E-03	5.062E-07	3.326E-24	2.185E-41	0.000E+00	0.000E+00
LA140	1.983E+02	1.063E+02	4.982E+01	1.617E+00	1.151E-02	5.825E-07	3.827E-24	2.515E-41	0.000E+00	0.000E+00
CE141	1.877E+02	1.400E+02	1.039E+02	2.698E+01	3.855E+00	7.875E-02	1.371E-08	2.387E-15	3.020E-32	0.000E+00
CE142	6.245E-09	6.245E-09	6.245E-09	6.245E-09	6.245E-09	6.245E-09	6.245E-09	6.245E-09	6.245E-09	6.245E-09
CE144	1.698E+02	1.641E+02	1.586E+02	1.359E+02	1.088E+02	6.972E+01	1.176E+01	1.982E+00	2.315E-02	3.156E-06
PR143	1.871E+02	1.019E+02	4.983E+01	1.967E+00	1.857E-02	1.655E-06	1.044E-22	6.585E-39	0.000E+00	0.000E+00
PR144	1.699E+02	1.641E+02	1.586E+02	1.359E+02	1.088E+02	6.972E+01	1.176E+01	1.982E+00	2.315E-02	3.156E-06
PR144M	2.038E+00	1.969E+00	1.903E+00	1.631E+00	1.306E+00	8.366E-01	1.411E-01	2.379E-02	2.778E-04	3.788E-08
ND144	1.811E-13	1.832E-13	1.853E-13	1.937E-13	2.037E-13	2.182E-13	2.397E-13	2.433E-13	2.441E-13	2.441E-13
ND147	7.261E+01	3.022E+01	1.257E+01	2.387E-01	7.837E-04	8.453E-09	1.144E-28	1.547E-48	0.000E+00	0.000E+00
PM145	5.467E-06	5.539E-06	5.609E-06	5.895E-06	6.237E-06	6.720E-06	7.212E-06	6.895E-06	5.728E-06	3.874E-06
PM147	4.464E+01	4.468E+01	4.443E+01	4.258E+01	3.986E+01	3.493E+01	2.060E+01	1.215E+01	3.245E+00	2.315E-01
PM148M	1.349E+00	1.066E+00	8.431E-01	2.916E-01	6.305E-02	2.947E-03	1.406E-08	6.708E-14	3.336E-27	0.000E+00
PM148	5.695E+00	9.825E-01	1.989E-01	1.648E-02	3.551E-03	1.660E-04	7.919E-10	3.779E-15	1.879E-28	0.000E+00
SM145	5.415E-05	5.262E-05	5.114E-05	4.496E-05	3.733E-05	2.573E-05	5.811E-06	1.312E-06	3.180E-08	1.867E-11
SM147	7.551E-10	7.662E-10	7.772E-10	8.261E-10	8.928E-10	1.014E-09	1.365E-09	1.572E-09	1.790E-09	1.864E-09
SM151	1.535E-01	1.540E-01	1.539E-01	1.537E-01	1.534E-01	1.529E-01	1.505E-01	1.482E-01	1.426E-01	1.321E-01
EU152	1.117E-02	1.114E-02	1.112E-02	1.102E-02	1.088E-02	1.061E-02	9.584E-03	8.655E-03	6.710E-03	4.032E-03
EU154	1.097E-01	1.094E-01	1.090E-01	1.075E-01	1.053E-01	1.012E-01	8.614E-02	7.332E-02	4.902E-02	2.191E-02
EU155	3.524E-01	3.505E-01	3.487E-01	3.403E-01	3.287E-01	3.065E-01	2.318E-01	1.753E-01	8.719E-02	2.157E-02
EU156	1.418E+00	7.572E-01	3.996E-01	2.228E-02	3.458E-04	8.337E-08	2.815E-22	9.508E-37	0.000E+00	0.000E+00
GD153	5.252E-03	5.045E-03	4.847E-03	4.044E-03	3.114E-03	1.846E-03	2.282E-04	2.820E-05	1.515E-07	4.367E-12
TB160	1.441E-02	1.260E-02	1.101E-02	6.010E-03	2.505E-03	4.355E-04	3.979E-07	3.635E-10	9.166E-18	5.829E-33
TL206	8.198E-06	1.213E-12	1.213E-12	1.213E-12	1.213E-12	1.213E-12	1.213E-12	1.213E-12	1.213E-12	1.213E-12
TL207	6.603E-10	6.609E-10	6.640E-10	7.045E-10	7.857E-10	9.761E-10	1.790E-09	2.711E-09	5.535E-09	1.307E-08
TL208	3.248E-08	3.299E-08	3.381E-08	3.797E-08	4.290E-08	5.146E-08	7.334E-08	8.347E-08	8.886E-08	8.283E-08
PB210	4.584E-15	4.700E-15	4.781E-15	4.967E-15	5.139E-15	5.537E-15	8.347E-15	1.356E-14	4.097E-14	1.871E-13
PB211	6.622E-10	6.628E-10	6.659E-10	7.065E-10	7.879E-10	9.788E-10	1.795E-09	2.719E-09	5.550E-09	1.310E-08

Table S.7 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	9.040E-08	9.181E-08	9.410E-08	1.057E-07	1.194E-07	1.432E-07	2.041E-07	2.323E-07	2.473E-07	2.305E-07
BI211	6.623E-10	6.628E-10	6.659E-10	7.065E-10	7.879E-10	9.788E-10	1.795E-09	2.719E-09	5.550E-09	1.310E-08
BI212	9.040E-08	9.181E-08	9.410E-08	1.057E-07	1.194E-07	1.432E-07	2.041E-07	2.323E-07	2.473E-07	2.305E-07
PO212	5.792E-08	5.882E-08	6.029E-08	6.771E-08	7.649E-08	9.177E-08	1.308E-07	1.488E-07	1.585E-07	1.477E-07
PO215	6.622E-10	6.628E-10	6.659E-10	7.065E-10	7.879E-10	9.788E-10	1.795E-09	2.719E-09	5.550E-09	1.310E-08
PO216	9.040E-08	9.181E-08	9.410E-08	1.057E-07	1.194E-07	1.432E-07	2.041E-07	2.323E-07	2.473E-07	2.305E-07
RN219	6.622E-10	6.628E-10	6.659E-10	7.065E-10	7.879E-10	9.788E-10	1.795E-09	2.719E-09	5.550E-09	1.310E-08
RN220	9.040E-08	9.181E-08	9.410E-08	1.057E-07	1.194E-07	1.432E-07	2.041E-07	2.323E-07	2.473E-07	2.305E-07
FR223	9.126E-12	9.298E-12	9.470E-12	1.026E-11	1.142E-11	1.385E-11	2.474E-11	3.746E-11	7.652E-11	1.807E-10
RA223	6.622E-10	6.628E-10	6.659E-10	7.065E-10	7.879E-10	9.788E-10	1.795E-09	2.719E-09	5.550E-09	1.310E-08
RA224	9.040E-08	9.181E-08	9.410E-08	1.057E-07	1.194E-07	1.432E-07	2.041E-07	2.323E-07	2.473E-07	2.305E-07
RA226	2.087E-14	2.135E-14	2.183E-14	2.408E-14	2.747E-14	3.481E-14	7.150E-14	1.203E-13	2.975E-13	9.081E-13
RA228	5.699E-10	5.743E-10	5.787E-10	5.983E-10	6.259E-10	6.792E-10	8.666E-10	1.019E-09	1.287E-09	1.542E-09
AC227	6.613E-10	6.737E-10	6.862E-10	7.434E-10	8.278E-10	1.003E-09	1.793E-09	2.715E-09	5.545E-09	1.309E-08
TH227	6.532E-10	6.555E-10	6.618E-10	7.099E-10	7.917E-10	9.635E-10	1.770E-09	2.681E-09	5.474E-09	1.292E-08
TH228	9.024E-08	9.263E-08	9.498E-08	1.052E-07	1.189E-07	1.427E-07	2.038E-07	2.318E-07	2.471E-07	2.305E-07
TH229	1.264E-10	1.289E-10	1.313E-10	1.427E-10	1.591E-10	1.920E-10	3.237E-10	4.553E-10	7.843E-10	1.442E-09
TH230	2.888E-11	2.913E-11	2.939E-11	3.054E-11	3.222E-11	3.559E-11	4.935E-11	6.356E-11	1.010E-10	1.839E-10
TH231	1.311E-04	6.933E-05	6.932E-05	6.931E-05	6.931E-05	6.931E-05	6.931E-05	6.931E-05	6.931E-05	6.931E-05
TH232	1.683E-09	1.683E-09	1.683E-09	1.683E-09	1.683E-09	1.683E-09	1.683E-09	1.683E-09	1.683E-09	1.683E-09
TH234	5.254E-05	5.244E-05	5.237E-05	5.226E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05
PA231	1.082E-08	1.089E-08	1.095E-08	1.121E-08	1.158E-08	1.232E-08	1.526E-08	1.820E-08	2.553E-08	4.018E-08
PA233	4.634E-02	3.237E-02	2.260E-02	4.462E-03	4.343E-04	1.005E-05	6.095E-06	6.098E-06	6.108E-06	6.141E-06
PA234M	7.722E-05	5.244E-05	5.237E-05	5.226E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05
PA234	5.291E-05	6.817E-08	6.809E-08	6.794E-08	6.791E-08	6.791E-08	6.791E-08	6.791E-08	6.791E-08	6.791E-08
U232	2.621E-07	2.627E-07	2.627E-07	2.626E-07	2.624E-07	2.619E-07	2.591E-07	2.556E-07	2.451E-07	2.232E-07
U233	6.760E-07	6.825E-07	6.871E-07	6.955E-07	6.974E-07	6.976E-07	6.977E-07	6.977E-07	6.978E-07	6.981E-07
U234	7.396E-07	7.400E-07	7.405E-07	7.427E-07	7.459E-07	7.522E-07	7.776E-07	8.025E-07	8.633E-07	9.779E-07
U235	6.931E-05	6.931E-05	6.931E-05	6.931E-05	6.931E-05	6.931E-05	6.931E-05	6.931E-05	6.931E-05	6.931E-05
U236	7.267E-05	7.267E-05	7.267E-05	7.267E-05	7.267E-05	7.267E-05	7.267E-05	7.267E-05	7.267E-05	7.267E-05
U237	9.327E+00	2.215E+00	5.261E-01	7.950E-04	2.007E-07	1.298E-07	1.179E-07	1.071E-07	8.420E-08	5.205E-08
U238	5.224E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05	5.224E-05
NP237	6.012E-06	6.074E-06	6.088E-06	6.093E-06	6.093E-06	6.093E-06	6.095E-06	6.098E-06	6.108E-06	6.141E-06
PU236	1.893E-07	1.882E-07	1.865E-07	1.788E-07	1.683E-07	1.490E-07	9.166E-08	5.638E-08	1.673E-08	1.475E-09
PU237	6.983E-07	5.644E-07	4.562E-07	1.744E-07	4.358E-08	2.719E-09	4.124E-14	6.255E-19	5.603E-31	0.000E+00
PU238	4.361E-03	4.393E-03	4.398E-03	4.414E-03	4.428E-03	4.437E-03	4.389E-03	4.321E-03	4.154E-03	3.839E-03

Table S.7 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	3.241E-02	3.251E-02	3.251E-02	3.251E-02	3.251E-02	3.251E-02	3.251E-02	3.251E-02	3.250E-02	3.249E-02
PU240	1.067E-02	1.067E-02	1.067E-02	1.067E-02	1.067E-02	1.067E-02	1.067E-02	1.066E-02	1.066E-02	1.065E-02
PU241	5.553E-01	5.543E-01	5.533E-01	5.487E-01	5.421E-01	5.292E-01	4.807E-01	4.366E-01	3.433E-01	2.122E-01
PU242	8.274E-07	8.274E-07	8.274E-07	8.274E-07	8.274E-07	8.274E-07	8.274E-07	8.274E-07	8.274E-07	8.274E-07
PU244	9.644E-16	9.645E-16	9.645E-16	9.645E-16	9.645E-16	9.645E-16	9.645E-16	9.645E-16	9.645E-16	9.645E-16
AM241	8.640E-04	8.980E-04	9.320E-04	1.085E-03	1.303E-03	1.731E-03	3.340E-03	4.796E-03	7.854E-03	1.206E-02
AM242M	5.587E-06	5.586E-06	5.585E-06	5.581E-06	5.574E-06	5.562E-06	5.511E-06	5.461E-06	5.338E-06	5.101E-06
AM242	4.251E-02	5.579E-06	5.557E-06	5.553E-06	5.547E-06	5.534E-06	5.484E-06	5.434E-06	5.312E-06	5.075E-06
AM243	4.455E-07	4.460E-07	4.460E-07	4.460E-07	4.459E-07	4.459E-07	4.458E-07	4.458E-07	4.456E-07	4.451E-07
CM242	2.076E-02	1.970E-02	1.856E-02	1.419E-02	9.630E-03	4.439E-03	2.042E-04	1.349E-05	4.399E-06	4.197E-06
CM243	6.150E-07	6.144E-07	6.138E-07	6.112E-07	6.075E-07	6.002E-07	5.717E-07	5.446E-07	4.823E-07	3.782E-07
CM244	5.192E-06	5.191E-06	5.184E-06	5.150E-06	5.101E-06	5.004E-06	4.635E-06	4.294E-06	3.547E-06	2.419E-06
CM245	3.572E-11	3.572E-11	3.572E-11	3.572E-11	3.572E-11	3.572E-11	3.572E-11	3.571E-11	3.570E-11	3.567E-11
CM246	8.568E-13	8.568E-13	8.568E-13	8.567E-13	8.567E-13	8.566E-13	8.564E-13	8.561E-13	8.555E-13	8.543E-13
CM247	1.516E-19	1.516E-19	1.516E-19	1.516E-19	1.516E-19	1.516E-19	1.516E-19	1.516E-19	1.516E-19	1.516E-19
Subtotal Ci**	2.762E+03	1.950E+03	1.538E+03	8.571E+02	5.245E+02	3.084E+02	1.335E+02	9.289E+01	6.425E+01	4.514E+01
Total Ci***	1.987E+04	1.995E+03	1.550E+03	8.636E+02	5.280E+02	3.095E+02	1.335E+02	9.290E+01	6.426E+01	4.514E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table S.8 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table S.8 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: ss.8

BURNUP (BU)

BU: U-235 7.0 g
 BU: % U-235 17.95%
 BU: MWd 6.65
 BU: MWd/MTU 34103
 U-235 DEPL 8.08 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	9.781E-02	9.760E-02	9.738E-02	9.645E-02	9.511E-02	9.248E-02	8.266E-02	7.389E-02	5.582E-02	3.185E-02
BE 10	1.334E-07	1.334E-07	1.334E-07	1.334E-07	1.334E-07	1.334E-07	1.334E-07	1.334E-07	1.334E-07	1.334E-07
C 14	8.564E-04	8.564E-04	8.564E-04	8.564E-04	8.563E-04	8.563E-04	8.561E-04	8.559E-04	8.554E-04	8.543E-04
CL 36	1.870E-05	1.870E-05	1.870E-05	1.870E-05	1.870E-05	1.870E-05	1.870E-05	1.870E-05	1.870E-05	1.870E-05
CR 51	4.603E+01	3.243E+01	2.285E+01	4.695E+00	4.789E-01	4.984E-03	5.843E-11	6.851E-19	1.020E-38	0.000E+00
MN 54	2.769E+00	2.684E+00	2.602E+00	2.262E+00	1.847E+00	1.232E+00	2.441E-01	4.834E-02	8.439E-04	2.572E-07
FE 55	1.944E+01	1.924E+01	1.905E+01	1.819E+01	1.702E+01	1.489E+01	8.742E+00	5.131E+00	1.354E+00	9.433E-02
FE 59	8.559E-01	6.899E-01	5.560E-01	2.099E-01	5.147E-02	3.095E-03	4.049E-08	5.296E-13	3.277E-25	0.000E+00
CO 60	1.647E+01	1.639E+01	1.631E+01	1.594E+01	1.542E+01	1.444E+01	1.110E+01	8.538E+00	4.425E+00	1.189E+00
NI 59	3.612E-03	3.612E-03	3.612E-03	3.612E-03	3.612E-03	3.612E-03	3.612E-03	3.612E-03	3.612E-03	3.611E-03
NI 63	4.444E-01	4.443E-01	4.442E-01	4.436E-01	4.428E-01	4.411E-01	4.345E-01	4.280E-01	4.122E-01	3.823E-01
ZN 65	3.469E-01	3.334E-01	3.204E-01	2.677E-01	2.065E-01	1.229E-01	1.544E-02	1.938E-03	1.083E-05	3.381E-10
SE 79	8.657E-05	8.657E-05	8.657E-05	8.657E-05	8.657E-05	8.657E-05	8.657E-05	8.657E-05	8.656E-05	8.655E-05
KR 85	2.320E+00	2.314E+00	2.309E+00	2.283E+00	2.246E+00	2.175E+00	1.911E+00	1.680E+00	1.216E+00	6.372E-01
RB 87	5.921E-09	5.922E-09	5.922E-09	5.922E-09	5.922E-09	5.922E-09	5.922E-09	5.922E-09	5.922E-09	5.922E-09
SR 89	1.748E+02	1.443E+02	1.190E+02	4.997E+01	1.428E+01	1.166E+00	5.189E-05	2.308E-09	3.048E-20	0.000E+00
SR 90	1.951E+01	1.949E+01	1.948E+01	1.940E+01	1.928E+01	1.905E+01	1.817E+01	1.732E+01	1.538E+01	1.212E+01
Y 90	2.041E+01	1.952E+01	1.948E+01	1.940E+01	1.929E+01	1.906E+01	1.817E+01	1.733E+01	1.538E+01	1.213E+01
Y 91	2.142E+02	1.827E+02	1.548E+02	7.317E+01	2.483E+01	2.857E+00	5.010E-04	8.787E-08	3.580E-17	5.942E-36
ZR 93	5.291E-04	5.294E-04	5.294E-04	5.294E-04	5.294E-04	5.294E-04	5.294E-04	5.294E-04	5.294E-04	5.294E-04
ZR 95	2.573E+02	2.211E+02	1.899E+02	9.574E+01	3.562E+01	4.933E+00	1.813E-03	6.666E-07	1.727E-15	1.159E-32
NB 93M	4.798E-05	4.886E-05	4.975E-05	5.372E-05	5.941E-05	7.056E-05	1.124E-04	1.503E-04	2.296E-04	3.386E-04

Table S.8 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	5.405E-05	5.405E-05	5.405E-05	5.405E-05	5.405E-05	5.405E-05	5.404E-05	5.404E-05	5.403E-05	5.401E-05
NB 95	2.634E+02	2.573E+02	2.445E+02	1.617E+02	7.065E+01	1.072E+01	4.026E-03	1.480E-06	3.834E-15	2.574E-32
NB 95M	1.808E+00	1.633E+00	1.408E+00	7.103E-01	2.643E-01	3.659E-02	1.346E-05	4.946E-09	1.281E-17	8.601E-35
MO 93	6.225E-05	6.225E-05	6.225E-05	6.225E-05	6.225E-05	6.224E-05	6.221E-05	6.219E-05	6.213E-05	6.201E-05
TC 99	2.934E-03	2.942E-03	2.942E-03	2.942E-03	2.942E-03	2.942E-03	2.942E-03	2.942E-03	2.942E-03	2.942E-03
RU103	1.235E+02	9.647E+01	7.536E+01	2.468E+01	4.934E+00	1.971E-01	5.017E-07	1.277E-12	1.321E-26	0.000E+00
RU106	1.894E+01	1.844E+01	1.796E+01	1.595E+01	1.343E+01	9.525E+00	2.410E+00	6.097E-01	1.963E-02	2.035E-05
RH103M	1.112E+02	8.697E+01	6.793E+01	2.225E+01	4.448E+00	1.777E-01	4.523E-07	1.152E-12	1.191E-26	0.000E+00
RH106	1.936E+01	1.844E+01	1.796E+01	1.595E+01	1.343E+01	9.525E+00	2.410E+00	6.097E-01	1.963E-02	2.035E-05
PD107	4.165E-06	4.165E-06	4.165E-06	4.165E-06	4.165E-06	4.165E-06	4.165E-06	4.165E-06	4.165E-06	4.165E-06
AG110	3.406E-01	1.639E-04	1.576E-04	1.323E-04	1.027E-04	6.191E-05	8.171E-06	1.079E-06	6.829E-09	2.737E-13
AG110M	1.281E-02	1.232E-02	1.185E-02	9.946E-03	7.721E-03	4.654E-03	6.144E-04	8.110E-05	5.134E-07	2.057E-11
AG111	1.437E+00	3.917E-01	1.065E-01	2.962E-04	6.091E-08	2.574E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	2.724E-03	2.720E-03	2.715E-03	2.693E-03	2.661E-03	2.598E-03	2.363E-03	2.149E-03	1.695E-03	1.054E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	6.316E-02	5.081E-02	4.088E-02	1.530E-02	3.703E-03	2.171E-04	2.564E-09	3.028E-14	1.451E-26	0.000E+00
IN114	3.824E-03	1.249E-03	1.027E-03	4.235E-04	1.181E-04	9.175E-06	3.345E-10	1.220E-14	9.789E-26	0.000E+00
IN114M	1.588E-03	1.305E-03	1.073E-03	4.426E-04	1.234E-04	9.587E-06	3.496E-10	1.274E-14	1.023E-25	0.000E+00
IN115M	6.362E-01	8.926E-03	1.174E-04	1.074E-06	2.600E-07	1.524E-08	1.800E-13	2.126E-18	1.019E-30	0.000E+00
SN119M	2.839E+00	2.730E+00	2.624E+00	2.194E+00	1.694E+00	1.012E+00	1.283E-01	1.626E-02	9.310E-05	3.052E-09
SN121M	4.134E-04	4.132E-04	4.130E-04	4.120E-04	4.106E-04	4.077E-04	3.966E-04	3.857E-04	3.599E-04	3.133E-04
SN123	3.663E-01	3.398E-01	3.152E-01	2.244E-01	1.376E-01	5.166E-02	1.028E-03	2.044E-05	1.141E-09	3.555E-18
SN125	1.553E+00	5.677E-01	2.074E-01	2.197E-03	3.107E-06	6.214E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	8.091E-05	8.091E-05	8.091E-05	8.091E-05	8.091E-05	8.091E-05	8.091E-05	8.091E-05	8.091E-05	8.090E-05
SB124	5.053E-02	4.300E-02	3.660E-02	1.767E-02	6.180E-03	7.555E-04	1.689E-07	3.777E-11	2.823E-20	1.577E-38
SB125	2.000E+00	1.991E+00	1.976E+00	1.893E+00	1.779E+00	1.570E+00	9.518E-01	5.772E-01	1.653E-01	1.356E-02
SB126	4.483E-02	2.050E-02	9.377E-03	2.839E-04	1.298E-05	1.133E-05	1.133E-05	1.133E-05	1.133E-05	1.133E-05
SB126M	2.268E-02	8.091E-05	8.091E-05	8.091E-05	8.091E-05	8.091E-05	8.091E-05	8.091E-05	8.091E-05	8.090E-05
TE123M	1.303E-04	1.202E-04	1.108E-04	7.683E-05	4.529E-05	1.573E-05	2.295E-07	3.346E-09	8.588E-14	5.659E-23
TE125M	4.428E-01	4.453E-01	4.470E-01	4.452E-01	4.283E-01	3.824E-01	2.323E-01	1.409E-01	4.033E-02	3.309E-03
TE127	6.488E+00	1.347E+00	8.103E-01	5.148E-01	2.882E-01	9.029E-02	8.703E-04	8.388E-06	7.651E-11	6.364E-21
TE127M	9.053E-01	8.562E-01	7.856E-01	5.256E-01	2.942E-01	9.218E-02	8.885E-04	8.564E-06	7.811E-11	6.498E-21
TE129	2.638E+01	1.945E+00	1.457E+00	3.951E-01	6.015E-02	1.394E-03	4.016E-10	1.157E-16	5.160E-33	0.000E+00
TE129M	3.969E+00	2.988E+00	2.238E+00	6.070E-01	9.240E-02	2.141E-03	6.170E-10	1.778E-16	7.927E-33	0.000E+00
I129	4.876E-06	4.883E-06	4.887E-06	4.897E-06	4.900E-06	4.900E-06	4.900E-06	4.900E-06	4.900E-06	4.900E-06
I131	1.083E+02	3.328E+01	9.955E+00	4.266E-02	1.636E-05	2.405E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table S.8 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	1.202E+00	9.005E-01	5.086E-01	1.756E-02	9.076E-05	2.199E-09	7.463E-28	2.532E-46	0.000E+00	0.000E+00
XE133	2.502E+02	4.836E+01	7.620E+00	1.787E-03	1.036E-08	3.481E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	3.229E+00	3.188E+00	3.147E+00	2.970E+00	2.731E+00	2.308E+00	1.179E+00	6.021E-01	1.123E-01	3.903E-03
CS135	2.140E-04	2.141E-04	2.141E-04	2.141E-04	2.141E-04	2.141E-04	2.141E-04	2.141E-04	2.141E-04	2.141E-04
CS136	1.462E+00	6.972E-01	3.324E-01	1.171E-02	9.373E-05	6.008E-09	1.014E-25	1.712E-42	0.000E+00	0.000E+00
CS137	2.057E+01	2.056E+01	2.054E+01	2.046E+01	2.034E+01	2.010E+01	1.920E+01	1.833E+01	1.633E+01	1.296E+01
BA136M	2.413E-01	1.149E-01	5.478E-02	1.929E-03	1.545E-05	9.901E-10	1.671E-26	2.822E-43	0.000E+00	0.000E+00
BA137M	1.947E+01	1.945E+01	1.943E+01	1.935E+01	1.924E+01	1.902E+01	1.816E+01	1.734E+01	1.545E+01	1.226E+01
BA140	2.292E+02	1.073E+02	5.025E+01	1.631E+00	1.160E-02	5.874E-07	3.860E-24	2.536E-41	0.000E+00	0.000E+00
LA140	2.303E+02	1.234E+02	5.782E+01	1.877E+00	1.335E-02	6.760E-07	4.442E-24	2.918E-41	0.000E+00	0.000E+00
CE141	2.178E+02	1.625E+02	1.206E+02	3.131E+01	4.474E+00	9.140E-02	1.591E-08	2.771E-15	3.504E-32	0.000E+00
CE142	7.084E-09	7.084E-09	7.084E-09	7.084E-09	7.084E-09	7.084E-09	7.084E-09	7.084E-09	7.084E-09	7.084E-09
CE144	1.976E+02	1.910E+02	1.846E+02	1.582E+02	1.267E+02	8.116E+01	1.369E+01	2.308E+00	2.695E-02	3.675E-06
PR143	2.170E+02	1.182E+02	5.779E+01	2.281E+00	2.154E-02	1.919E-06	1.211E-22	7.636E-39	0.000E+00	0.000E+00
PR144	1.978E+02	1.910E+02	1.846E+02	1.582E+02	1.267E+02	8.117E+01	1.369E+01	2.308E+00	2.695E-02	3.675E-06
PR144M	2.373E+00	2.292E+00	2.215E+00	1.899E+00	1.520E+00	9.740E-01	1.642E-01	2.770E-02	3.234E-04	4.410E-08
ND144	2.137E-13	2.162E-13	2.185E-13	2.283E-13	2.400E-13	2.569E-13	2.819E-13	2.861E-13	2.870E-13	2.870E-13
ND147	8.428E+01	3.508E+01	1.459E+01	2.770E-01	9.097E-04	9.811E-09	1.327E-28	1.796E-48	0.000E+00	0.000E+00
PM145	6.449E-06	6.534E-06	6.617E-06	6.958E-06	7.365E-06	7.941E-06	8.530E-06	8.156E-06	6.776E-06	4.583E-06
PM147	5.137E+01	5.142E+01	5.114E+01	4.901E+01	4.588E+01	4.021E+01	2.371E+01	1.398E+01	3.735E+00	2.665E-01
PM148M	1.761E+00	1.392E+00	1.100E+00	3.806E-01	8.228E-02	3.846E-03	1.835E-08	8.755E-14	4.354E-27	0.000E+00
PM148	7.820E+00	1.346E+00	2.700E-01	2.151E-02	4.635E-03	2.166E-04	1.034E-09	4.931E-15	2.453E-28	0.000E+00
SM145	6.441E-05	6.260E-05	6.083E-05	5.348E-05	4.440E-05	3.061E-05	6.912E-06	1.561E-06	3.782E-08	2.221E-11
SM147	8.599E-10	8.726E-10	8.854E-10	9.416E-10	1.018E-09	1.158E-09	1.562E-09	1.800E-09	2.052E-09	2.137E-09
SM151	1.570E-01	1.576E-01	1.575E-01	1.573E-01	1.570E-01	1.564E-01	1.541E-01	1.517E-01	1.460E-01	1.352E-01
EU152	1.260E-02	1.258E-02	1.254E-02	1.244E-02	1.228E-02	1.197E-02	1.081E-02	9.765E-03	7.570E-03	4.549E-03
EU154	1.528E-01	1.523E-01	1.519E-01	1.497E-01	1.468E-01	1.410E-01	1.200E-01	1.022E-01	6.829E-02	3.052E-02
EU155	3.916E-01	3.895E-01	3.875E-01	3.782E-01	3.652E-01	3.406E-01	2.575E-01	1.948E-01	9.689E-02	2.397E-02
EU156	1.808E+00	9.645E-01	5.091E-01	2.837E-02	4.405E-04	1.062E-07	3.586E-22	1.211E-36	0.000E+00	0.000E+00
GD153	6.373E-03	6.121E-03	5.881E-03	4.907E-03	3.778E-03	2.241E-03	2.769E-04	3.422E-05	1.837E-07	5.299E-12
TB160	1.751E-02	1.531E-02	1.339E-02	7.301E-03	3.044E-03	5.292E-04	4.834E-07	4.416E-10	1.114E-17	7.082E-33
TL206	9.810E-06	1.436E-12	1.436E-12	1.436E-12	1.436E-12	1.436E-12	1.436E-12	1.436E-12	1.436E-12	1.436E-12
TL207	6.975E-10	6.982E-10	7.015E-10	7.443E-10	8.300E-10	1.030E-09	1.875E-09	2.817E-09	5.662E-09	1.312E-08
TL208	4.073E-08	4.137E-08	4.242E-08	4.768E-08	5.391E-08	6.476E-08	9.258E-08	1.056E-07	1.127E-07	1.051E-07
PB210	6.616E-15	6.783E-15	6.896E-15	7.137E-15	7.332E-15	7.778E-15	1.099E-14	1.703E-14	4.912E-14	2.229E-13
PB211	6.995E-10	7.002E-10	7.035E-10	7.464E-10	8.323E-10	1.033E-09	1.880E-09	2.825E-09	5.678E-09	1.315E-08

Table S.8 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.134E-07	1.151E-07	1.181E-07	1.327E-07	1.500E-07	1.802E-07	2.577E-07	2.938E-07	3.135E-07	2.926E-07
BI211	6.996E-10	7.002E-10	7.035E-10	7.464E-10	8.323E-10	1.033E-09	1.880E-09	2.825E-09	5.678E-09	1.315E-08
BI212	1.134E-07	1.151E-07	1.181E-07	1.327E-07	1.500E-07	1.802E-07	2.577E-07	2.938E-07	3.135E-07	2.926E-07
PO212	7.263E-08	7.378E-08	7.564E-08	8.502E-08	9.613E-08	1.155E-07	1.651E-07	1.882E-07	2.009E-07	1.875E-07
PO215	6.995E-10	7.002E-10	7.035E-10	7.464E-10	8.323E-10	1.033E-09	1.880E-09	2.825E-09	5.678E-09	1.315E-08
PO216	1.134E-07	1.151E-07	1.181E-07	1.327E-07	1.500E-07	1.802E-07	2.577E-07	2.938E-07	3.135E-07	2.926E-07
RN219	6.995E-10	7.002E-10	7.035E-10	7.464E-10	8.323E-10	1.033E-09	1.880E-09	2.825E-09	5.678E-09	1.315E-08
RN220	1.134E-07	1.151E-07	1.181E-07	1.327E-07	1.500E-07	1.802E-07	2.577E-07	2.938E-07	3.135E-07	2.926E-07
FR223	9.641E-12	9.822E-12	1.001E-11	1.084E-11	1.207E-11	1.461E-11	2.592E-11	3.893E-11	7.828E-11	1.814E-10
RA223	6.995E-10	7.002E-10	7.035E-10	7.464E-10	8.323E-10	1.033E-09	1.880E-09	2.825E-09	5.678E-09	1.315E-08
RA224	1.134E-07	1.151E-07	1.181E-07	1.327E-07	1.500E-07	1.802E-07	2.577E-07	2.938E-07	3.135E-07	2.926E-07
RA226	2.441E-14	2.497E-14	2.554E-14	2.818E-14	3.215E-14	4.074E-14	8.375E-14	1.411E-13	3.510E-13	1.087E-12
RA228	5.693E-10	5.737E-10	5.781E-10	5.977E-10	6.253E-10	6.785E-10	8.658E-10	1.018E-09	1.286E-09	1.541E-09
AC227	6.986E-10	7.118E-10	7.250E-10	7.854E-10	8.745E-10	1.059E-09	1.878E-09	2.821E-09	5.673E-09	1.314E-08
TH227	6.900E-10	6.925E-10	6.992E-10	7.500E-10	8.363E-10	1.017E-09	1.854E-09	2.786E-09	5.600E-09	1.297E-08
TH228	1.132E-07	1.162E-07	1.192E-07	1.321E-07	1.494E-07	1.796E-07	2.572E-07	2.931E-07	3.133E-07	2.925E-07
TH229	1.466E-10	1.495E-10	1.524E-10	1.655E-10	1.846E-10	2.229E-10	3.760E-10	5.291E-10	9.117E-10	1.677E-09
TH230	3.384E-11	3.414E-11	3.443E-11	3.578E-11	3.774E-11	4.168E-11	5.791E-11	7.485E-11	1.203E-10	2.238E-10
TH231	1.407E-04	6.688E-05	6.687E-05	6.686E-05	6.686E-05	6.686E-05	6.686E-05	6.686E-05	6.686E-05	6.686E-05
TH232	1.681E-09	1.681E-09	1.681E-09	1.681E-09	1.681E-09	1.681E-09	1.681E-09	1.681E-09	1.681E-09	1.681E-09
TH234	5.263E-05	5.248E-05	5.239E-05	5.223E-05	5.220E-05	5.219E-05	5.219E-05	5.219E-05	5.219E-05	5.219E-05
PA231	1.146E-08	1.153E-08	1.159E-08	1.184E-08	1.220E-08	1.291E-08	1.575E-08	1.858E-08	2.565E-08	3.978E-08
PA233	5.538E-02	3.869E-02	2.701E-02	5.333E-03	5.199E-04	1.297E-05	8.244E-06	8.248E-06	8.264E-06	8.315E-06
PA234M	8.792E-05	5.249E-05	5.239E-05	5.223E-05	5.220E-05	5.219E-05	5.219E-05	5.219E-05	5.219E-05	5.219E-05
PA234	7.562E-05	6.823E-08	6.811E-08	6.789E-08	6.785E-08	6.785E-08	6.785E-08	6.785E-08	6.785E-08	6.785E-08
U232	3.306E-07	3.314E-07	3.314E-07	3.313E-07	3.312E-07	3.308E-07	3.281E-07	3.241E-07	3.113E-07	2.836E-07
U233	7.854E-07	7.932E-07	7.986E-07	8.087E-07	8.110E-07	8.112E-07	8.113E-07	8.114E-07	8.115E-07	8.119E-07
U234	8.616E-07	8.624E-07	8.631E-07	8.666E-07	8.716E-07	8.817E-07	9.220E-07	9.617E-07	1.058E-06	1.241E-06
U235	6.686E-05	6.686E-05	6.686E-05	6.686E-05	6.686E-05	6.686E-05	6.686E-05	6.686E-05	6.686E-05	6.686E-05
U236	8.440E-05	8.440E-05	8.440E-05	8.440E-05	8.440E-05	8.440E-05	8.440E-05	8.440E-05	8.441E-05	8.441E-05
U237	1.284E+01	3.050E+00	7.245E-01	1.095E-03	2.998E-07	2.016E-07	1.831E-07	1.663E-07	1.308E-07	8.083E-08
U238	5.219E-05	5.219E-05	5.219E-05	5.219E-05	5.219E-05	5.219E-05	5.219E-05	5.219E-05	5.219E-05	5.219E-05
NP237	8.130E-06	8.214E-06	8.234E-06	8.241E-06	8.241E-06	8.241E-06	8.244E-06	8.248E-06	8.264E-06	8.315E-06
PU236	3.025E-07	3.007E-07	2.979E-07	2.856E-07	2.688E-07	2.381E-07	1.464E-07	9.008E-08	2.673E-08	2.356E-09
PU237	1.070E-06	8.646E-07	6.989E-07	2.672E-07	6.675E-08	4.166E-09	6.318E-14	9.582E-19	8.583E-31	0.000E+00
PU238	6.941E-03	6.994E-03	7.003E-03	7.035E-03	7.064E-03	7.085E-03	7.013E-03	6.905E-03	6.638E-03	6.135E-03

Table S.8 Stainless Steel-clad TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	3.665E-02	3.678E-02	3.678E-02	3.678E-02	3.678E-02	3.678E-02	3.677E-02	3.677E-02	3.677E-02	3.676E-02
PU240	1.416E-02	1.416E-02	1.416E-02	1.416E-02	1.416E-02	1.416E-02	1.415E-02	1.415E-02	1.414E-02	1.413E-02
PU241	8.624E-01	8.608E-01	8.592E-01	8.521E-01	8.419E-01	8.219E-01	7.465E-01	6.780E-01	5.331E-01	3.295E-01
PU242	1.538E-06	1.538E-06	1.538E-06	1.538E-06	1.538E-06	1.538E-06	1.538E-06	1.538E-06	1.538E-06	1.538E-06
PU244	2.551E-15	2.551E-15	2.551E-15	2.551E-15	2.551E-15	2.551E-15	2.551E-15	2.551E-15	2.551E-15	2.551E-15
AM241	1.332E-03	1.385E-03	1.438E-03	1.675E-03	2.013E-03	2.678E-03	5.177E-03	7.438E-03	1.219E-02	1.872E-02
AM242M	9.613E-06	9.611E-06	9.609E-06	9.602E-06	9.591E-06	9.569E-06	9.482E-06	9.396E-06	9.185E-06	8.775E-06
AM242	7.841E-02	9.601E-06	9.561E-06	9.554E-06	9.543E-06	9.521E-06	9.435E-06	9.349E-06	9.139E-06	8.732E-06
AM243	9.820E-07	9.830E-07	9.830E-07	9.829E-07	9.829E-07	9.829E-07	9.827E-07	9.825E-07	9.820E-07	9.811E-07
CM242	3.838E-02	3.642E-02	3.431E-02	2.623E-02	1.781E-02	8.206E-03	3.769E-04	2.437E-05	7.568E-06	7.221E-06
CM243	1.348E-06	1.346E-06	1.345E-06	1.340E-06	1.331E-06	1.315E-06	1.253E-06	1.193E-06	1.057E-06	8.289E-07
CM244	1.364E-05	1.364E-05	1.362E-05	1.353E-05	1.340E-05	1.314E-05	1.218E-05	1.128E-05	9.315E-06	6.355E-06
CM245	1.102E-10	1.102E-10	1.102E-10	1.102E-10	1.102E-10	1.101E-10	1.101E-10	1.101E-10	1.101E-10	1.100E-10
CM246	3.145E-12	3.145E-12	3.145E-12	3.145E-12	3.144E-12	3.144E-12	3.143E-12	3.142E-12	3.140E-12	3.135E-12
CM247	6.602E-19	6.602E-19	6.602E-19	6.602E-19	6.602E-19	6.602E-19	6.602E-19	6.602E-19	6.602E-19	6.602E-19
Subtotal Ci**	3.219E+03	2.272E+03	1.793E+03	9.998E+02	6.124E+02	3.604E+02	1.562E+02	1.086E+02	7.508E+01	5.270E+01
Total Ci***	2.311E+04	2.325E+03	1.807E+03	1.007E+03	6.163E+02	3.617E+02	1.562E+02	1.086E+02	7.509E+01	5.271E+01

• Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

APPENDIX F

High Enrichment FLIP TRIGA fuel element

Activity
vs
Burnup/Decay Time

Table F.1 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.1 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.1

BURNUP (BU)

BU: U-235 5.0 g
 BU: % U-235 3.65%
 BU: MWd 4.75
 BU: MWd/MTU 24235
 U-235 DEPL 6.1 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	6.651E-02	6.637E-02	6.622E-02	6.558E-02	6.468E-02	6.288E-02	5.621E-02	5.025E-02	3.796E-02	2.167E-02
BE 10	6.558E-08	6.558E-08	6.558E-08	6.558E-08	6.558E-08	6.558E-08	6.558E-08	6.558E-08	6.558E-08	6.558E-08
C 14	4.187E-04	4.187E-04	4.187E-04	4.187E-04	4.187E-04	4.187E-04	4.186E-04	4.185E-04	4.182E-04	4.177E-04
CL 36	9.199E-06	9.199E-06	9.199E-06	9.199E-06	9.199E-06	9.199E-06	9.198E-06	9.198E-06	9.198E-06	9.198E-06
CR 51	2.139E+01	1.507E+01	1.062E+01	2.182E+00	2.226E-01	2.317E-03	2.716E-11	3.185E-19	4.740E-39	0.000E+00
MN 54	1.317E+00	1.277E+00	1.238E+00	1.076E+00	8.785E-01	5.861E-01	1.161E-01	2.299E-02	4.014E-04	1.223E-07
FE 55	9.426E+00	9.330E+00	9.236E+00	8.819E+00	8.251E+00	7.222E+00	4.239E+00	2.488E+00	6.566E-01	4.574E-02
FE 59	3.966E-01	3.197E-01	2.577E-01	9.727E-02	2.385E-02	1.434E-03	1.876E-08	2.454E-13	1.519E-25	0.000E+00
CO 60	8.053E+00	8.013E+00	7.973E+00	7.793E+00	7.541E+00	7.061E+00	5.429E+00	4.174E+00	2.163E+00	5.811E-01
NI 59	1.783E-03	1.783E-03	1.783E-03	1.783E-03	1.783E-03	1.783E-03	1.783E-03	1.783E-03	1.782E-03	1.782E-03
NI 63	2.184E-01	2.183E-01	2.182E-01	2.180E-01	2.175E-01	2.167E-01	2.135E-01	2.103E-01	2.025E-01	1.878E-01
ZN 65	1.637E-01	1.574E-01	1.512E-01	1.263E-01	9.747E-02	5.802E-02	7.286E-03	9.149E-04	5.112E-06	1.596E-10
SE 79	6.184E-05	6.184E-05	6.184E-05	6.184E-05	6.184E-05	6.184E-05	6.184E-05	6.184E-05	6.184E-05	6.183E-05
KR 85	1.677E+00	1.673E+00	1.669E+00	1.650E+00	1.624E+00	1.572E+00	1.381E+00	1.214E+00	8.788E-01	4.605E-01
RB 87	4.342E-09	4.342E-09	4.342E-09	4.342E-09	4.342E-09	4.342E-09	4.342E-09	4.342E-09	4.342E-09	4.342E-09
SR 89	1.296E+02	1.070E+02	8.827E+01	3.704E+01	1.059E+01	8.647E-01	3.847E-05	1.711E-09	2.260E-20	0.000E+00
SR 90	1.413E+01	1.411E+01	1.410E+01	1.404E+01	1.396E+01	1.379E+01	1.315E+01	1.254E+01	1.114E+01	8.779E+00
Y 90	1.451E+01	1.413E+01	1.410E+01	1.405E+01	1.396E+01	1.380E+01	1.316E+01	1.255E+01	1.114E+01	8.781E+00
Y 91	1.582E+02	1.350E+02	1.143E+02	5.405E+01	1.833E+01	2.110E+00	3.701E-04	6.491E-08	2.644E-17	4.389E-36
ZR 93	3.606E-04	3.607E-04	3.607E-04	3.607E-04	3.607E-04	3.607E-04	3.607E-04	3.607E-04	3.607E-04	3.607E-04
ZR 95	1.825E+02	1.568E+02	1.348E+02	6.794E+01	2.528E+01	3.501E+00	1.287E-03	4.730E-07	1.226E-15	8.227E-33
NB 93M	3.270E-05	3.330E-05	3.390E-05	3.662E-05	4.049E-05	4.809E-05	7.662E-05	1.024E-04	1.564E-04	2.308E-04

Table F.1 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	2.641E-05	2.641E-05	2.641E-05	2.641E-05	2.641E-05	2.641E-05	2.641E-05	2.641E-05	2.640E-05	2.639E-05
NB 95	1.870E+02	1.825E+02	1.735E+02	1.146E+02	5.014E+01	7.605E+00	2.856E-03	1.050E-06	2.721E-15	1.827E-32
NB 95M	1.283E+00	1.159E+00	9.997E-01	5.040E-01	1.876E-01	2.597E-02	9.546E-06	3.509E-09	9.092E-18	6.103E-35
MO 93	1.069E-05	1.069E-05	1.069E-05	1.069E-05	1.068E-05	1.068E-05	1.068E-05	1.068E-05	1.066E-05	1.064E-05
TC 99	2.108E-03	2.114E-03	2.114E-03	2.114E-03	2.114E-03	2.114E-03	2.114E-03	2.114E-03	2.114E-03	2.114E-03
RU103	8.595E+01	6.714E+01	5.244E+01	1.718E+01	3.433E+00	1.371E-01	3.491E-07	8.889E-13	9.193E-27	0.000E+00
RU106	1.096E+01	1.068E+01	1.040E+01	9.233E+00	7.775E+00	5.515E+00	1.395E+00	3.530E-01	1.137E-02	1.178E-05
RH103M	7.740E+01	6.052E+01	4.728E+01	1.549E+01	3.095E+00	1.236E-01	3.148E-07	8.013E-13	8.288E-27	0.000E+00
RH106	1.102E+01	1.068E+01	1.040E+01	9.233E+00	7.775E+00	5.515E+00	1.395E+00	3.530E-01	1.137E-02	1.178E-05
PD107	2.324E-06	2.324E-06	2.324E-06	2.324E-06	2.324E-06	2.324E-06	2.324E-06	2.324E-06	2.324E-06	2.324E-06
AG110	8.578E-02	5.064E-05	4.871E-05	4.087E-05	3.173E-05	1.913E-05	2.525E-06	3.332E-07	2.110E-09	8.456E-14
AG110M	3.957E-03	3.807E-03	3.662E-03	3.073E-03	2.386E-03	1.438E-03	1.898E-04	2.506E-05	1.586E-07	6.358E-12
AG111	7.577E-01	2.065E-01	5.614E-02	1.562E-04	3.211E-08	1.357E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.769E-03	1.766E-03	1.763E-03	1.748E-03	1.727E-03	1.687E-03	1.534E-03	1.395E-03	1.100E-03	6.844E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	4.058E-02	3.264E-02	2.626E-02	9.826E-03	2.379E-03	1.395E-04	1.647E-09	1.945E-14	9.326E-27	0.000E+00
IN114	9.968E-04	3.244E-04	2.666E-04	1.100E-04	3.067E-05	2.383E-06	8.688E-11	3.167E-15	2.543E-26	0.000E+00
IN114M	4.124E-04	3.389E-04	2.786E-04	1.150E-04	3.204E-05	2.490E-06	9.078E-11	3.310E-15	2.656E-26	0.000E+00
IN115M	4.114E-01	5.774E-03	7.593E-05	6.901E-07	1.671E-07	9.795E-09	1.157E-13	1.366E-18	6.550E-31	0.000E+00
SN119M	1.327E+00	1.276E+00	1.226E+00	1.025E+00	7.918E-01	4.725E-01	5.992E-02	7.597E-03	4.351E-05	1.426E-09
SN121M	2.035E-04	2.034E-04	2.033E-04	2.029E-04	2.021E-04	2.007E-04	1.953E-04	1.899E-04	1.772E-04	1.543E-04
SN123	2.194E-01	2.036E-01	1.889E-01	1.345E-01	8.241E-02	3.095E-02	6.156E-04	1.225E-05	6.836E-10	2.130E-18
SN125	8.411E-01	3.074E-01	1.123E-01	1.190E-03	1.682E-06	3.365E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	5.518E-05	5.518E-05	5.518E-05	5.518E-05	5.518E-05	5.518E-05	5.518E-05	5.518E-05	5.518E-05	5.517E-05
SB124	2.218E-02	1.888E-02	1.607E-02	7.756E-03	2.713E-03	3.316E-04	7.415E-08	1.658E-11	1.239E-20	6.924E-39
SB125	1.152E+00	1.146E+00	1.137E+00	1.090E+00	1.024E+00	9.036E-01	5.480E-01	3.323E-01	9.517E-02	7.807E-03
SB126	2.879E-02	1.316E-02	6.022E-03	1.828E-04	8.789E-06	7.726E-06	7.725E-06	7.725E-06	7.725E-06	7.724E-06
SB126M	1.399E-02	5.518E-05	5.518E-05	5.518E-05	5.518E-05	5.518E-05	5.518E-05	5.518E-05	5.518E-05	5.517E-05
TE123M	2.889E-05	2.665E-05	2.457E-05	1.704E-05	1.004E-05	3.489E-06	5.087E-08	7.418E-10	1.904E-14	1.255E-23
TE125M	2.558E-01	2.571E-01	2.580E-01	2.567E-01	2.468E-01	2.201E-01	1.337E-01	8.110E-02	2.322E-02	1.905E-03
TE127	4.365E+00	9.037E-01	5.425E-01	3.446E-01	1.929E-01	6.043E-02	5.825E-04	5.614E-06	5.121E-11	4.260E-21
TE127M	6.058E-01	5.731E-01	5.258E-01	3.518E-01	1.969E-01	6.170E-02	5.947E-04	5.732E-06	5.228E-11	4.349E-21
TE129	1.851E+01	1.362E+00	1.020E+00	2.767E-01	4.212E-02	9.759E-04	2.812E-10	8.105E-17	3.614E-33	0.000E+00
TE129M	2.779E+00	2.092E+00	1.567E+00	4.251E-01	6.470E-02	1.499E-03	4.320E-10	1.245E-16	5.551E-33	0.000E+00
I129	3.427E-06	3.432E-06	3.435E-06	3.442E-06	3.444E-06	3.444E-06	3.444E-06	3.444E-06	3.444E-06	3.444E-06
I131	7.820E+01	2.403E+01	7.187E+00	3.080E-02	1.181E-05	1.736E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.1 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	8.681E-01	6.502E-01	3.673E-01	1.268E-02	6.553E-05	1.588E-09	5.388E-28	1.828E-46	0.000E+00	0.000E+00
XE133	1.827E+02	3.530E+01	5.562E+00	1.304E-03	7.561E-09	2.541E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	8.281E-01	8.175E-01	8.070E-01	7.614E-01	7.000E-01	5.919E-01	3.023E-01	1.544E-01	2.879E-02	1.000E-03
CS135	2.014E-04	2.015E-04	2.015E-04	2.015E-04	2.015E-04	2.015E-04	2.015E-04	2.015E-04	2.015E-04	2.015E-04
CS136	5.447E-01	2.597E-01	1.238E-01	4.361E-03	3.492E-05	2.238E-09	3.778E-26	6.379E-43	0.000E+00	0.000E+00
CS137	1.470E+01	1.468E+01	1.467E+01	1.461E+01	1.453E+01	1.436E+01	1.371E+01	1.309E+01	1.167E+01	9.260E+00
BA136M	8.993E-02	4.280E-02	2.041E-02	7.187E-04	5.754E-06	3.689E-10	6.227E-27	1.051E-43	0.000E+00	0.000E+00
BA137M	1.391E+01	1.389E+01	1.388E+01	1.382E+01	1.374E+01	1.358E+01	1.297E+01	1.239E+01	1.104E+01	8.760E+00
BA140	1.681E+02	7.872E+01	3.686E+01	1.196E+00	8.511E-03	4.309E-07	2.831E-24	1.860E-41	0.000E+00	0.000E+00
LA140	1.684E+02	9.051E+01	4.242E+01	1.377E+00	9.795E-03	4.959E-07	3.258E-24	2.141E-41	0.000E+00	0.000E+00
CE141	1.597E+02	1.191E+02	8.841E+01	2.295E+01	3.280E+00	6.702E-02	1.167E-08	2.031E-15	2.569E-32	0.000E+00
CE142	5.417E-09	5.417E-09	5.417E-09	5.417E-09	5.417E-09	5.417E-09	5.417E-09	5.417E-09	5.417E-09	5.417E-09
CE144	1.430E+02	1.382E+02	1.335E+02	1.145E+02	9.163E+01	5.872E+01	9.901E+00	1.670E+00	1.950E-02	2.658E-06
PR143	1.600E+02	8.711E+01	4.260E+01	1.682E+00	1.588E-02	1.415E-06	8.925E-23	5.629E-39	0.000E+00	0.000E+00
PR144	1.430E+02	1.382E+02	1.336E+02	1.145E+02	9.163E+01	5.872E+01	9.902E+00	1.670E+00	1.950E-02	2.658E-06
PR144M	1.717E+00	1.658E+00	1.603E+00	1.374E+00	1.100E+00	7.046E-01	1.188E-01	2.004E-02	2.340E-04	3.190E-08
ND144	1.437E-13	1.455E-13	1.472E-13	1.543E-13	1.628E-13	1.750E-13	1.931E-13	1.961E-13	1.967E-13	1.967E-13
ND147	6.175E+01	2.570E+01	1.069E+01	2.030E-01	6.666E-04	7.189E-09	9.726E-29	1.316E-48	0.000E+00	0.000E+00
PM145	3.171E-06	3.211E-06	3.250E-06	3.410E-06	3.601E-06	3.869E-06	4.138E-06	3.953E-06	3.283E-06	2.220E-06
PM147	3.866E+01	3.868E+01	3.847E+01	3.686E+01	3.451E+01	3.024E+01	1.784E+01	1.052E+01	2.809E+00	2.004E-01
PM148M	7.933E-01	6.272E-01	4.959E-01	1.715E-01	3.708E-02	1.733E-03	8.269E-09	3.945E-14	1.962E-27	0.000E+00
PM148	2.281E+00	4.024E-01	8.818E-02	9.685E-03	2.089E-03	9.761E-05	4.657E-10	2.222E-15	1.105E-28	0.000E+00
SM145	3.036E-05	2.951E-05	2.867E-05	2.521E-05	2.093E-05	1.443E-05	3.258E-06	7.357E-07	1.783E-08	1.047E-11
SM147	6.592E-10	6.688E-10	6.784E-10	7.206E-10	7.784E-10	8.830E-10	1.187E-09	1.366E-09	1.555E-09	1.619E-09
SM151	2.758E-01	2.761E-01	2.760E-01	2.757E-01	2.751E-01	2.741E-01	2.698E-01	2.657E-01	2.557E-01	2.367E-01
EU152	5.736E-03	5.725E-03	5.713E-03	5.663E-03	5.592E-03	5.451E-03	4.923E-03	4.446E-03	3.447E-03	2.071E-03
EU154	3.483E-02	3.472E-02	3.461E-02	3.413E-02	3.345E-02	3.213E-02	2.736E-02	2.329E-02	1.556E-02	6.956E-03
EU155	3.828E-01	3.808E-01	3.787E-01	3.696E-01	3.570E-01	3.329E-01	2.518E-01	1.904E-01	9.471E-02	2.344E-02
EU156	6.074E-01	3.264E-01	1.723E-01	9.602E-03	1.491E-04	3.594E-08	1.214E-22	4.099E-37	0.000E+00	0.000E+00
GD153	2.969E-03	2.852E-03	2.740E-03	2.286E-03	1.761E-03	1.044E-03	1.290E-04	1.595E-05	8.561E-08	2.469E-12
TB160	7.826E-03	6.843E-03	5.984E-03	3.263E-03	1.361E-03	2.366E-04	2.160E-07	1.973E-10	4.977E-18	3.165E-33
TL206	4.555E-06	7.046E-13	7.046E-13	7.046E-13	7.046E-13	7.046E-13	7.046E-13	7.046E-13	7.046E-13	7.046E-13
TL207	1.661E-09	1.663E-09	1.671E-09	1.774E-09	1.983E-09	2.488E-09	4.825E-09	7.693E-09	1.723E-08	4.483E-08
TL208	4.663E-08	4.734E-08	4.850E-08	5.433E-08	6.121E-08	7.314E-08	1.033E-07	1.169E-07	1.235E-07	1.146E-07
PB210	4.139E-15	4.248E-15	4.328E-15	4.560E-15	4.838E-15	5.518E-15	1.063E-14	2.084E-14	7.919E-14	4.101E-13
PB211	1.666E-09	1.668E-09	1.675E-09	1.779E-09	1.988E-09	2.495E-09	4.839E-09	7.714E-09	1.728E-08	4.496E-08

Table F.1 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.298E-07	1.318E-07	1.350E-07	1.512E-07	1.704E-07	2.036E-07	2.875E-07	3.254E-07	3.437E-07	3.190E-07
BI211	1.666E-09	1.668E-09	1.675E-09	1.779E-09	1.988E-09	2.495E-09	4.839E-09	7.714E-09	1.728E-08	4.496E-08
BI212	1.298E-07	1.318E-07	1.350E-07	1.512E-07	1.704E-07	2.036E-07	2.875E-07	3.254E-07	3.437E-07	3.190E-07
PO212	8.315E-08	8.442E-08	8.648E-08	9.688E-08	1.091E-07	1.304E-07	1.842E-07	2.085E-07	2.202E-07	2.044E-07
PO215	1.666E-09	1.668E-09	1.675E-09	1.779E-09	1.988E-09	2.495E-09	4.839E-09	7.714E-09	1.728E-08	4.496E-08
PO216	1.298E-07	1.318E-07	1.350E-07	1.512E-07	1.704E-07	2.036E-07	2.875E-07	3.254E-07	3.437E-07	3.190E-07
RN219	1.666E-09	1.668E-09	1.675E-09	1.779E-09	1.988E-09	2.495E-09	4.839E-09	7.714E-09	1.728E-08	4.496E-08
RN220	1.298E-07	1.318E-07	1.350E-07	1.512E-07	1.704E-07	2.036E-07	2.875E-07	3.254E-07	3.437E-07	3.190E-07
FR223	2.296E-11	2.340E-11	2.383E-11	2.585E-11	2.887E-11	3.535E-11	6.670E-11	1.063E-10	2.382E-10	6.200E-10
RA223	1.666E-09	1.668E-09	1.675E-09	1.779E-09	1.988E-09	2.495E-09	4.839E-09	7.714E-09	1.728E-08	4.496E-08
RA224	1.298E-07	1.318E-07	1.350E-07	1.512E-07	1.704E-07	2.036E-07	2.875E-07	3.254E-07	3.437E-07	3.190E-07
RA226	3.111E-14	3.191E-14	3.273E-14	3.658E-14	4.255E-14	5.600E-14	1.299E-13	2.359E-13	6.418E-13	2.060E-12
RA228	5.640E-10	5.683E-10	5.727E-10	5.921E-10	6.195E-10	6.722E-10	8.578E-10	1.009E-09	1.274E-09	1.526E-09
AC227	1.664E-09	1.695E-09	1.727E-09	1.873E-09	2.092E-09	2.562E-09	4.833E-09	7.704E-09	1.726E-08	4.493E-08
TH227	1.643E-09	1.649E-09	1.665E-09	1.788E-09	1.999E-09	2.456E-09	4.772E-09	7.608E-09	1.704E-08	4.434E-08
TH228	1.296E-07	1.329E-07	1.362E-07	1.505E-07	1.696E-07	2.028E-07	2.870E-07	3.246E-07	3.435E-07	3.189E-07
TH229	6.752E-11	6.882E-11	7.014E-11	7.615E-11	8.486E-11	1.023E-10	1.721E-10	2.419E-10	4.162E-10	7.649E-10
TH230	4.826E-11	4.897E-11	4.968E-11	5.290E-11	5.753E-11	6.681E-11	1.040E-10	1.412E-10	2.347E-10	4.233E-10
TH231	3.262E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04
TH232	1.666E-09	1.666E-09	1.666E-09	1.666E-09	1.666E-09	1.666E-09	1.666E-09	1.666E-09	1.666E-09	1.666E-09
TH234	1.980E-05	1.979E-05	1.978E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05
PA231	2.722E-08	2.748E-08	2.773E-08	2.880E-08	3.032E-08	3.334E-08	4.533E-08	5.732E-08	8.727E-08	1.471E-07
PA233	2.190E-02	1.530E-02	1.068E-02	2.109E-03	2.059E-04	5.440E-06	3.571E-06	3.571E-06	3.572E-06	3.574E-06
PA234M	2.628E-05	1.979E-05	1.978E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05
PA234	1.307E-05	2.572E-08	2.572E-08	2.570E-08	2.570E-08	2.570E-08	2.570E-08	2.570E-08	2.570E-08	2.570E-08
U232	3.707E-07	3.715E-07	3.714E-07	3.709E-07	3.702E-07	3.688E-07	3.626E-07	3.563E-07	3.402E-07	3.092E-07
U233	3.595E-07	3.626E-07	3.648E-07	3.688E-07	3.697E-07	3.698E-07	3.698E-07	3.698E-07	3.699E-07	3.700E-07
U234	2.061E-06	2.061E-06	2.061E-06	2.062E-06	2.062E-06	2.064E-06	2.068E-06	2.073E-06	2.085E-06	2.107E-06
U235	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04
U236	7.366E-05	7.366E-05	7.366E-05	7.366E-05	7.366E-05	7.366E-05	7.366E-05	7.366E-05	7.366E-05	7.366E-05
U237	5.416E+00	1.286E+00	3.054E-01	4.615E-04	4.751E-08	7.984E-09	7.251E-09	6.586E-09	5.178E-09	3.201E-09
U238	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05	1.977E-05
NP237	3.524E-06	3.560E-06	3.568E-06	3.571E-06	3.571E-06	3.571E-06	3.571E-06	3.571E-06	3.572E-06	3.574E-06
PU236	7.812E-08	7.766E-08	7.694E-08	7.377E-08	6.942E-08	6.148E-08	3.782E-08	2.326E-08	6.904E-09	6.085E-10
PU237	1.623E-07	1.312E-07	1.061E-07	4.055E-08	1.013E-08	6.322E-10	9.588E-15	1.454E-19	1.303E-31	0.000E+00
PU238	8.574E-04	8.626E-04	8.625E-04	8.617E-04	8.604E-04	8.575E-04	8.445E-04	8.313E-04	7.991E-04	7.385E-04

Table F.1 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	1.336E-02	1.340E-02	1.340E-02	1.340E-02	1.340E-02	1.340E-02	1.339E-02	1.339E-02	1.339E-02	1.339E-02
PU240	1.179E-03	1.179E-03	1.179E-03	1.179E-03	1.179E-03	1.179E-03	1.178E-03	1.178E-03	1.177E-03	1.176E-03
PU241	3.415E-02	3.408E-02	3.402E-02	3.374E-02	3.334E-02	3.254E-02	2.956E-02	2.685E-02	2.111E-02	1.305E-02
PU242	1.174E-08	1.174E-08	1.174E-08	1.174E-08	1.174E-08	1.174E-08	1.174E-08	1.174E-08	1.174E-08	1.174E-08
PU244	2.628E-18	2.629E-18	2.629E-18	2.629E-18	2.629E-18	2.629E-18	2.629E-18	2.629E-18	2.629E-18	2.629E-18
AM241	5.470E-05	5.679E-05	5.888E-05	6.827E-05	8.168E-05	1.080E-04	2.069E-04	2.965E-04	4.845E-04	7.430E-04
AM242M	2.754E-07	2.754E-07	2.753E-07	2.751E-07	2.748E-07	2.742E-07	2.717E-07	2.692E-07	2.631E-07	2.514E-07
AM242	7.838E-04	2.744E-07	2.739E-07	2.737E-07	2.734E-07	2.728E-07	2.703E-07	2.679E-07	2.618E-07	2.502E-07
AM243	3.843E-09	3.847E-09	3.847E-09	3.847E-09	3.847E-09	3.847E-09	3.846E-09	3.845E-09	3.843E-09	3.840E-09
CM242	3.800E-04	3.605E-04	3.397E-04	2.598E-04	1.764E-04	8.137E-05	3.877E-06	3.864E-07	2.167E-07	2.069E-07
CM243	5.273E-09	5.268E-09	5.263E-09	5.241E-09	5.210E-09	5.147E-09	4.903E-09	4.670E-09	4.136E-09	3.243E-09
CM244	2.462E-08	2.462E-08	2.458E-08	2.442E-08	2.419E-08	2.373E-08	2.198E-08	2.036E-08	1.682E-08	1.147E-08
CM245	1.089E-13	1.089E-13	1.089E-13	1.089E-13	1.089E-13	1.089E-13	1.088E-13	1.088E-13	1.088E-13	1.087E-13
CM246	5.362E-16	5.362E-16	5.362E-16	5.361E-16	5.361E-16	5.361E-16	5.359E-16	5.358E-16	5.354E-16	5.346E-16
CM247	6.205E-23	6.205E-23	6.205E-23	6.205E-23	6.205E-23	6.205E-23	6.205E-23	6.205E-23	6.205E-23	6.205E-23
Subtotal Ci**	2.293E+03	1.615E+03	1.271E+03	7.041E+02	4.280E+02	2.492E+02	1.066E+02	7.443E+01	5.236E+01	3.739E+01
Total Ci***	1.643E+04	1.653E+03	1.282E+03	7.105E+02	4.324E+02	2.517E+02	1.076E+02	7.489E+01	5.245E+01	3.742E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table F.2 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.2 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.2

BURNUP (BU)

BU: U-235 10.0 g
 BU: % U-235 7.30%
 BU: MWd 9.50
 BU: MWd/MTU 48481
 U-235 DEPL 12.1 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	1.331E-01	1.328E-01	1.326E-01	1.313E-01	1.295E-01	1.259E-01	1.125E-01	1.006E-01	7.598E-02	4.336E-02
BE 10	1.339E-07	1.339E-07	1.339E-07	1.339E-07	1.339E-07	1.339E-07	1.339E-07	1.339E-07	1.339E-07	1.339E-07
C 14	8.555E-04	8.555E-04	8.555E-04	8.555E-04	8.554E-04	8.554E-04	8.552E-04	8.550E-04	8.544E-04	8.534E-04
CL 36	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05
CR 51	4.437E+01	3.126E+01	2.202E+01	4.526E+00	4.617E-01	4.804E-03	5.633E-11	6.604E-19	9.830E-39	0.000E+00
MN 54	2.715E+00	2.632E+00	2.551E+00	2.217E+00	1.811E+00	1.208E+00	2.393E-01	4.739E-02	8.274E-04	2.522E-07
FE 55	1.933E+01	1.913E+01	1.893E+01	1.808E+01	1.692E+01	1.481E+01	8.690E+00	5.101E+00	1.346E+00	9.378E-02
FE 59	8.252E-01	6.651E-01	5.361E-01	2.024E-01	4.963E-02	2.985E-03	3.904E-08	5.107E-13	3.160E-25	0.000E+00
CO 60	1.644E+01	1.636E+01	1.628E+01	1.591E+01	1.540E+01	1.442E+01	1.108E+01	8.522E+00	4.417E+00	1.187E+00
NI 59	3.622E-03	3.622E-03	3.622E-03	3.622E-03	3.622E-03	3.622E-03	3.621E-03	3.621E-03	3.621E-03	3.621E-03
NI 63	4.455E-01	4.454E-01	4.453E-01	4.447E-01	4.439E-01	4.422E-01	4.356E-01	4.291E-01	4.132E-01	3.833E-01
ZN 65	3.383E-01	3.251E-01	3.124E-01	2.610E-01	2.014E-01	1.199E-01	1.505E-02	1.890E-03	1.056E-05	3.297E-10
SE 79	1.236E-04	1.236E-04	1.236E-04	1.236E-04	1.236E-04	1.236E-04	1.236E-04	1.236E-04	1.236E-04	1.236E-04
KR 85	3.350E+00	3.342E+00	3.334E+00	3.297E+00	3.244E+00	3.141E+00	2.760E+00	2.425E+00	1.756E+00	9.202E-01
RB 87	8.465E-09	8.465E-09	8.465E-09	8.465E-09	8.465E-09	8.465E-09	8.465E-09	8.465E-09	8.465E-09	8.465E-09
SR 89	2.576E+02	2.126E+02	1.755E+02	7.366E+01	2.105E+01	1.719E+00	7.649E-05	3.403E-09	4.493E-20	0.000E+00
SR 90	2.822E+01	2.819E+01	2.816E+01	2.805E+01	2.788E+01	2.755E+01	2.627E+01	2.505E+01	2.224E+01	1.753E+01
Y 90	2.905E+01	2.822E+01	2.817E+01	2.805E+01	2.789E+01	2.756E+01	2.628E+01	2.506E+01	2.225E+01	1.754E+01
Y 91	3.148E+02	2.685E+02	2.274E+02	1.075E+02	3.648E+01	4.198E+00	7.362E-04	1.291E-07	5.260E-17	8.730E-36
ZR 93	7.223E-04	7.226E-04	7.226E-04	7.226E-04	7.226E-04	7.226E-04	7.226E-04	7.226E-04	7.226E-04	7.226E-04
ZR 95	3.644E+02	3.131E+02	2.691E+02	1.356E+02	5.046E+01	6.987E+00	2.569E-03	9.441E-07	2.447E-15	1.642E-32
NB 93M	6.549E-05	6.669E-05	6.791E-05	7.334E-05	8.110E-05	9.632E-05	1.535E-04	2.051E-04	3.133E-04	4.623E-04

Table F.2 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	5.386E-05	5.386E-05	5.386E-05	5.385E-05	5.385E-05	5.385E-05	5.385E-05	5.385E-05	5.384E-05	5.382E-05
NB 95	3.731E+02	3.644E+02	3.464E+02	2.289E+02	1.001E+02	1.518E+01	5.702E-03	2.096E-06	5.431E-15	3.646E-32
NB 95M	2.561E+00	2.313E+00	1.995E+00	1.006E+00	3.743E-01	5.183E-02	1.905E-05	7.004E-09	1.814E-17	1.218E-34
MO 93	2.183E-05	2.183E-05	2.183E-05	2.183E-05	2.183E-05	2.183E-05	2.182E-05	2.181E-05	2.179E-05	2.175E-05
TC 99	4.197E-03	4.209E-03	4.210E-03	4.210E-03	4.210E-03	4.210E-03	4.210E-03	4.210E-03	4.210E-03	4.210E-03
RU103	1.720E+02	1.344E+02	1.049E+02	3.438E+01	6.871E+00	2.744E-01	6.987E-07	1.779E-12	1.840E-26	0.000E+00
RU106	2.246E+01	2.187E+01	2.130E+01	1.891E+01	1.593E+01	1.129E+01	2.858E+00	7.230E-01	2.328E-02	2.413E-05
RH103M	1.549E+02	1.211E+02	9.461E+01	3.099E+01	6.194E+00	2.474E-01	6.299E-07	1.604E-12	1.659E-26	0.000E+00
RH106	2.268E+01	2.187E+01	2.130E+01	1.891E+01	1.593E+01	1.129E+01	2.858E+00	7.230E-01	2.328E-02	2.413E-05
PD107	4.780E-06	4.780E-06	4.780E-06	4.780E-06	4.780E-06	4.780E-06	4.780E-06	4.780E-06	4.780E-06	4.780E-06
AG110	2.887E-01	1.622E-04	1.561E-04	1.310E-04	1.017E-04	6.130E-05	8.092E-06	1.068E-06	6.762E-09	2.711E-13
AG110M	1.269E-02	1.220E-02	1.174E-02	9.850E-03	7.647E-03	4.609E-03	6.084E-04	8.031E-05	5.085E-07	2.038E-11
AG111	1.563E+00	4.260E-01	1.158E-01	3.222E-04	6.623E-08	2.799E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	3.575E-03	3.569E-03	3.563E-03	3.534E-03	3.492E-03	3.410E-03	3.101E-03	2.820E-03	2.224E-03	1.384E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	8.153E-02	6.559E-02	5.277E-02	1.974E-02	4.780E-03	2.802E-04	3.309E-09	3.909E-14	1.873E-26	0.000E+00
IN114	3.661E-03	1.198E-03	9.843E-04	4.060E-04	1.132E-04	8.795E-06	3.207E-10	1.170E-14	9.385E-26	0.000E+00
IN114M	1.522E-03	1.251E-03	1.029E-03	4.242E-04	1.183E-04	9.190E-06	3.351E-10	1.222E-14	9.806E-26	0.000E+00
IN115M	8.253E-01	1.158E-02	1.523E-04	1.386E-06	3.357E-07	1.968E-08	2.324E-13	2.745E-18	1.316E-30	0.000E+00
SN119M	2.740E+00	2.634E+00	2.532E+00	2.117E+00	1.635E+00	9.758E-01	1.237E-01	1.569E-02	8.984E-05	2.946E-09
SN121M	4.156E-04	4.154E-04	4.152E-04	4.142E-04	4.128E-04	4.100E-04	3.988E-04	3.879E-04	3.618E-04	3.150E-04
SN123	4.441E-01	4.119E-01	3.821E-01	2.721E-01	1.667E-01	6.263E-02	1.246E-03	2.478E-05	1.383E-09	4.309E-18
SN125	1.717E+00	6.275E-01	2.293E-01	2.428E-03	3.434E-06	6.869E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	1.108E-04	1.108E-04	1.108E-04	1.108E-04	1.108E-04	1.108E-04	1.108E-04	1.108E-04	1.108E-04	1.107E-04
SB124	5.183E-02	4.411E-02	3.755E-02	1.812E-02	6.338E-03	7.750E-04	1.733E-07	3.874E-11	2.896E-20	1.618E-38
SB125	2.334E+00	2.322E+00	2.304E+00	2.208E+00	2.074E+00	1.831E+00	1.110E+00	6.732E-01	1.928E-01	1.581E-02
SB126	5.934E-02	2.714E-02	1.241E-02	3.763E-04	1.770E-05	1.551E-05	1.551E-05	1.551E-05	1.551E-05	1.550E-05
SB126M	2.850E-02	1.108E-04	1.108E-04	1.108E-04	1.108E-04	1.108E-04	1.108E-04	1.108E-04	1.108E-04	1.107E-04
TE123M	1.282E-04	1.182E-04	1.090E-04	7.556E-05	4.454E-05	1.548E-05	2.257E-07	3.290E-09	8.447E-14	5.567E-23
TE125M	5.179E-01	5.206E-01	5.224E-01	5.198E-01	4.997E-01	4.459E-01	2.709E-01	1.643E-01	4.703E-02	3.858E-03
TE127	8.754E+00	1.815E+00	1.090E+00	6.926E-01	3.877E-01	1.215E-01	1.171E-03	1.129E-05	1.029E-10	8.563E-21
TE127M	1.218E+00	1.152E+00	1.057E+00	7.071E-01	3.958E-01	1.240E-01	1.195E-03	1.152E-05	1.051E-10	8.742E-21
TE129	3.696E+01	2.720E+00	2.038E+00	5.527E-01	8.413E-02	1.949E-03	5.618E-10	1.619E-16	7.218E-33	0.000E+00
TE129M	5.552E+00	4.179E+00	3.131E+00	8.491E-01	1.292E-01	2.995E-03	8.630E-10	2.487E-16	1.109E-32	0.000E+00
I129	6.856E-06	6.866E-06	6.872E-06	6.885E-06	6.889E-06	6.890E-06	6.890E-06	6.890E-06	6.890E-06	6.890E-06
I131	1.557E+02	4.783E+01	1.431E+01	6.131E-02	2.351E-05	3.456E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.2 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	1.728E+00	1.294E+00	7.312E-01	2.525E-02	1.305E-04	3.162E-09	1.073E-27	3.640E-46	0.000E+00	0.000E+00	0.000E+00
XE133	3.632E+02	7.020E+01	1.106E+01	2.594E-03	1.504E-08	5.053E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	3.379E+00	3.336E+00	3.293E+00	3.107E+00	2.857E+00	2.415E+00	1.234E+00	6.299E-01	1.175E-01	4.083E-03	3.786E-04
CS135	3.784E-04	3.786E-04	3.786E-04	3.786E-04	3.786E-04	3.786E-04	3.786E-04	3.786E-04	3.786E-04	3.786E-04	3.786E-04
CS136	1.750E+00	8.342E-01	3.978E-01	1.401E-02	1.122E-04	7.189E-09	1.214E-25	2.049E-42	0.000E+00	0.000E+00	0.000E+00
CS137	2.939E+01	2.937E+01	2.934E+01	2.923E+01	2.906E+01	2.872E+01	2.743E+01	2.619E+01	2.333E+01	1.852E+01	0.000E+00
BA136M	2.886E-01	1.375E-01	6.555E-02	2.309E-03	1.848E-05	1.185E-09	2.000E-26	3.376E-43	0.000E+00	0.000E+00	0.000E+00
BA137M	2.782E+01	2.778E+01	2.776E+01	2.765E+01	2.749E+01	2.717E+01	2.595E+01	2.478E+01	2.207E+01	1.752E+01	0.000E+00
BA140	3.341E+02	1.565E+02	7.326E+01	2.378E+00	1.692E-02	8.565E-07	5.628E-24	3.698E-41	0.000E+00	0.000E+00	0.000E+00
LA140	3.351E+02	1.799E+02	8.431E+01	2.736E+00	1.947E-02	9.857E-07	6.476E-24	4.255E-41	0.000E+00	0.000E+00	0.000E+00
CE141	3.175E+02	2.368E+02	1.757E+02	4.563E+01	6.521E+00	1.332E-01	2.319E-08	4.038E-15	5.107E-32	0.000E+00	0.000E+00
CE142	9.640E-09	9.640E-09	9.640E-09	9.640E-09	9.640E-09	9.640E-09	9.640E-09	9.640E-09	9.640E-09	9.640E-09	9.640E-09
CE144	2.855E+02	2.759E+02	2.666E+02	2.285E+02	1.829E+02	1.172E+02	1.977E+01	3.333E+00	3.892E-02	5.307E-06	0.000E+00
PR143	3.178E+02	1.730E+02	8.463E+01	3.341E+00	3.154E-02	2.811E-06	1.773E-22	1.118E-38	0.000E+00	0.000E+00	0.000E+00
PR144	2.856E+02	2.759E+02	2.666E+02	2.285E+02	1.829E+02	1.172E+02	1.977E+01	3.334E+00	3.893E-02	5.307E-06	0.000E+00
PR144M	3.427E+00	3.311E+00	3.200E+00	2.742E+00	2.195E+00	1.407E+00	2.372E-01	4.000E-02	4.671E-04	6.369E-08	3.978E-13
ND144	2.920E-13	2.955E-13	2.989E-13	3.131E-13	3.300E-13	3.544E-13	3.905E-13	3.966E-13	3.978E-13	3.978E-13	3.978E-13
ND147	1.228E+02	5.110E+01	2.125E+01	4.035E-01	1.325E-03	1.429E-08	1.933E-28	2.616E-48	0.000E+00	0.000E+00	0.000E+00
PM145	6.442E-06	6.525E-06	6.605E-06	6.934E-06	7.327E-06	7.880E-06	8.438E-06	8.062E-06	6.697E-06	4.529E-06	3.866E-01
PM147	7.453E+01	7.460E+01	7.419E+01	7.110E+01	6.657E+01	5.833E+01	3.440E+01	2.029E+01	5.419E+00	3.866E-01	0.000E+00
PM148M	3.081E+00	2.436E+00	1.926E+00	6.661E-01	1.440E-01	6.730E-03	3.211E-08	1.532E-13	7.620E-27	0.000E+00	0.000E+00
PM148	9.072E+00	1.598E+00	3.482E-01	3.761E-02	8.111E-03	3.791E-04	1.809E-09	8.630E-15	4.292E-28	0.000E+00	0.000E+00
SM145	6.241E-05	6.065E-05	5.894E-05	5.181E-05	4.302E-05	2.966E-05	6.697E-06	1.512E-06	3.665E-08	2.152E-11	3.063E-09
SM147	1.211E-09	1.230E-09	1.248E-09	1.330E-09	1.441E-09	1.643E-09	2.229E-09	2.575E-09	2.940E-09	3.063E-09	3.807E-01
SM151	4.432E-01	4.439E-01	4.437E-01	4.431E-01	4.423E-01	4.406E-01	4.339E-01	4.273E-01	4.111E-01	3.807E-01	5.241E-03
EU152	1.452E-02	1.448E-02	1.446E-02	1.434E-02	1.415E-02	1.379E-02	1.246E-02	1.125E-02	8.722E-03	5.241E-03	2.875E-02
EU154	1.439E-01	1.435E-01	1.430E-01	1.410E-01	1.382E-01	1.328E-01	1.130E-01	9.619E-02	6.431E-02	2.875E-02	4.265E-02
EU155	6.969E-01	6.931E-01	6.894E-01	6.729E-01	6.498E-01	6.060E-01	4.583E-01	3.466E-01	1.724E-01	4.265E-02	0.000E+00
EU156	1.569E+00	8.399E-01	4.433E-01	2.470E-02	3.835E-04	9.247E-08	3.123E-22	1.055E-36	0.000E+00	0.000E+00	6.712E-12
GD153	8.073E-03	7.755E-03	7.450E-03	6.216E-03	4.787E-03	2.838E-03	3.508E-04	4.335E-05	2.328E-07	6.712E-12	6.932E-33
TB160	1.714E-02	1.499E-02	1.310E-02	7.145E-03	2.980E-03	5.180E-04	4.732E-07	4.322E-10	1.090E-17	6.932E-33	1.440E-12
TL206	9.458E-06	1.440E-12	1.440E-12	1.440E-12	1.440E-12	1.440E-12	1.440E-12	1.440E-12	1.440E-12	1.440E-12	1.440E-12
TL207	1.790E-09	1.792E-09	1.800E-09	1.911E-09	2.135E-09	2.671E-09	5.098E-09	8.012E-09	1.751E-08	4.446E-08	2.621E-07
TL208	1.039E-07	1.055E-07	1.081E-07	1.212E-07	1.368E-07	1.638E-07	2.328E-07	2.647E-07	2.815E-07	2.621E-07	8.273E-13
PB210	1.645E-14	1.686E-14	1.713E-14	1.774E-14	1.825E-14	1.946E-14	2.909E-14	4.889E-14	1.641E-13	8.273E-13	4.459E-08
PB211	1.795E-09	1.797E-09	1.805E-09	1.916E-09	2.141E-09	2.679E-09	5.112E-09	8.034E-09	1.756E-08	4.459E-08	4.459E-08

Table F.2 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	2.891E-07	2.936E-07	3.008E-07	3.374E-07	3.806E-07	4.559E-07	6.479E-07	7.367E-07	7.835E-07	7.295E-07
BI211	1.795E-09	1.797E-09	1.805E-09	1.916E-09	2.141E-09	2.679E-09	5.112E-09	8.034E-09	1.756E-08	4.459E-08
BI212	2.891E-07	2.936E-07	3.008E-07	3.374E-07	3.806E-07	4.559E-07	6.479E-07	7.367E-07	7.835E-07	7.295E-07
PO212	1.853E-07	1.881E-07	1.927E-07	2.162E-07	2.439E-07	2.921E-07	4.151E-07	4.720E-07	5.020E-07	4.674E-07
PO215	1.795E-09	1.797E-09	1.805E-09	1.916E-09	2.141E-09	2.679E-09	5.112E-09	8.034E-09	1.756E-08	4.459E-08
PO216	2.891E-07	2.936E-07	3.008E-07	3.374E-07	3.806E-07	4.559E-07	6.479E-07	7.367E-07	7.835E-07	7.295E-07
RN219	1.795E-09	1.797E-09	1.805E-09	1.916E-09	2.141E-09	2.679E-09	5.112E-09	8.034E-09	1.756E-08	4.459E-08
RN220	2.891E-07	2.936E-07	3.008E-07	3.374E-07	3.806E-07	4.559E-07	6.479E-07	7.367E-07	7.835E-07	7.295E-07
FR223	2.474E-11	2.521E-11	2.568E-11	2.784E-11	3.108E-11	3.794E-11	7.047E-11	1.107E-10	2.421E-10	6.149E-10
RA223	1.795E-09	1.797E-09	1.805E-09	1.916E-09	2.141E-09	2.679E-09	5.112E-09	8.034E-09	1.756E-08	4.459E-08
RA224	2.891E-07	2.936E-07	3.008E-07	3.374E-07	3.806E-07	4.559E-07	6.479E-07	7.367E-07	7.835E-07	7.295E-07
RA226	6.175E-14	6.335E-14	6.498E-14	7.260E-14	8.444E-14	1.111E-13	2.577E-13	4.687E-13	1.281E-12	4.153E-12
RA228	5.623E-10	5.667E-10	5.710E-10	5.904E-10	6.177E-10	6.703E-10	8.553E-10	1.006E-09	1.270E-09	1.522E-09
AC227	1.793E-09	1.827E-09	1.861E-09	2.017E-09	2.252E-09	2.749E-09	5.106E-09	8.023E-09	1.754E-08	4.456E-08
TH227	1.771E-09	1.777E-09	1.794E-09	1.926E-09	2.152E-09	2.637E-09	5.042E-09	7.924E-09	1.731E-08	4.397E-08
TH228	2.886E-07	2.962E-07	3.036E-07	3.359E-07	3.790E-07	4.542E-07	6.468E-07	7.350E-07	7.829E-07	7.294E-07
TH229	1.333E-10	1.359E-10	1.385E-10	1.504E-10	1.677E-10	2.023E-10	3.408E-10	4.793E-10	8.255E-10	1.518E-09
TH230	9.572E-11	9.712E-11	9.853E-11	1.049E-10	1.141E-10	1.325E-10	2.066E-10	2.814E-10	4.714E-10	8.633E-10
TH231	3.593E-04	2.701E-04	2.700E-04	2.700E-04	2.700E-04	2.700E-04	2.700E-04	2.700E-04	2.700E-04	2.700E-04
TH232	1.661E-09	1.661E-09	1.661E-09	1.661E-09	1.661E-09	1.661E-09	1.661E-09	1.661E-09	1.661E-09	1.661E-09
TH234	1.981E-05	1.977E-05	1.974E-05	1.969E-05	1.969E-05	1.968E-05	1.968E-05	1.968E-05	1.968E-05	1.968E-05
PA231	2.936E-08	2.961E-08	2.985E-08	3.087E-08	3.232E-08	3.519E-08	4.663E-08	5.807E-08	8.663E-08	1.437E-07
PA233	4.533E-02	3.166E-02	2.211E-02	4.371E-03	4.328E-04	1.793E-05	1.407E-05	1.407E-05	1.407E-05	1.409E-05
PA234M	4.766E-05	1.977E-05	1.974E-05	1.969E-05	1.969E-05	1.968E-05	1.968E-05	1.968E-05	1.968E-05	1.968E-05
PA234	5.606E-05	2.570E-08	2.566E-08	2.560E-08	2.559E-08	2.559E-08	2.559E-08	2.559E-08	2.559E-08	2.559E-08
U232	8.321E-07	8.342E-07	8.341E-07	8.337E-07	8.331E-07	8.316E-07	8.232E-07	8.120E-07	7.789E-07	7.093E-07
U233	7.127E-07	7.191E-07	7.235E-07	7.318E-07	7.337E-07	7.339E-07	7.340E-07	7.341E-07	7.344E-07	7.350E-07
U234	4.081E-06	4.082E-06	4.083E-06	4.086E-06	4.091E-06	4.101E-06	4.139E-06	4.177E-06	4.269E-06	4.443E-06
U235	2.700E-04	2.700E-04	2.700E-04	2.700E-04	2.700E-04	2.700E-04	2.700E-04	2.700E-04	2.700E-04	2.700E-04
U236	1.463E-04	1.463E-04	1.463E-04	1.463E-04	1.463E-04	1.463E-04	1.463E-04	1.463E-04	1.464E-04	1.464E-04
U237	2.201E+01	5.227E+00	1.241E+00	1.876E-03	2.216E-07	6.029E-08	5.476E-08	4.974E-08	3.911E-08	2.417E-08
U238	1.968E-05	1.968E-05	1.968E-05	1.968E-05	1.968E-05	1.968E-05	1.968E-05	1.968E-05	1.968E-05	1.968E-05
NP237	1.388E-05	1.402E-05	1.406E-05	1.407E-05	1.407E-05	1.407E-05	1.407E-05	1.407E-05	1.407E-05	1.409E-05
PU236	6.235E-07	6.199E-07	6.142E-07	5.889E-07	5.542E-07	4.908E-07	3.019E-07	1.857E-07	5.511E-08	4.857E-09
PU237	1.073E-06	8.677E-07	7.014E-07	2.682E-07	6.699E-08	4.180E-09	6.340E-14	9.616E-19	8.614E-31	0.000E+00
PU238	6.810E-03	6.853E-03	6.853E-03	6.850E-03	6.843E-03	6.823E-03	6.723E-03	6.618E-03	6.362E-03	5.879E-03

Table F.2 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	2.540E-02	2.547E-02	2.547E-02	2.547E-02	2.547E-02	2.547E-02	2.547E-02	2.547E-02	2.547E-02	2.546E-02
PU240	4.377E-03	4.377E-03	4.377E-03	4.377E-03	4.377E-03	4.377E-03	4.376E-03	4.375E-03	4.373E-03	4.368E-03
PU241	2.579E-01	2.574E-01	2.569E-01	2.548E-01	2.518E-01	2.458E-01	2.232E-01	2.028E-01	1.594E-01	9.854E-02
PU242	1.845E-07	1.845E-07	1.845E-07	1.845E-07	1.845E-07	1.845E-07	1.845E-07	1.845E-07	1.845E-07	1.845E-07
PU244	1.764E-16	1.764E-16	1.764E-16	1.764E-16	1.764E-16	1.764E-16	1.764E-16	1.764E-16	1.764E-16	1.764E-16
AM241	4.093E-04	4.252E-04	4.409E-04	5.119E-04	6.131E-04	8.119E-04	1.559E-03	2.235E-03	3.655E-03	5.608E-03
AM242M	3.879E-06	3.879E-06	3.878E-06	3.875E-06	3.871E-06	3.862E-06	3.827E-06	3.792E-06	3.707E-06	3.542E-06
AM242	1.218E-02	3.865E-06	3.859E-06	3.856E-06	3.851E-06	3.843E-06	3.808E-06	3.773E-06	3.688E-06	3.524E-06
AM243	1.231E-07	1.232E-07	1.232E-07	1.232E-07	1.232E-07	1.232E-07	1.232E-07	1.232E-07	1.231E-07	1.230E-07
CM242	5.935E-03	5.632E-03	5.307E-03	4.057E-03	2.755E-03	1.271E-03	6.022E-05	5.695E-06	3.053E-06	2.914E-06
CM243	1.695E-07	1.693E-07	1.691E-07	1.684E-07	1.674E-07	1.654E-07	1.575E-07	1.501E-07	1.329E-07	1.042E-07
CM244	1.633E-06	1.633E-06	1.630E-06	1.620E-06	1.604E-06	1.574E-06	1.458E-06	1.350E-06	1.115E-06	7.609E-07
CM245	1.468E-11	1.468E-11	1.468E-11	1.468E-11	1.468E-11	1.467E-11	1.467E-11	1.467E-11	1.466E-11	1.465E-11
CM246	1.493E-13	1.493E-13	1.493E-13	1.493E-13	1.492E-13	1.492E-13	1.492E-13	1.492E-13	1.490E-13	1.488E-13
CM247	3.546E-20	3.546E-20	3.546E-20	3.546E-20	3.546E-20	3.546E-20	3.546E-20	3.546E-20	3.546E-20	3.546E-20
Subtotal Ci**	4.590E+03	3.227E+03	2.539E+03	1.407E+03	8.555E+02	4.983E+02	2.132E+02	1.488E+02	1.047E+02	7.476E+01
Total Ci***	3.273E+04	3.304E+03	2.562E+03	1.420E+03	8.644E+02	5.035E+02	2.151E+02	1.497E+02	1.049E+02	7.482E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table F.3 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.3 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.3

BURNUP (BU)

BU: U-235 15.0 g
 BU: % U-235 10.95%
 BU: MWd 14.25
 BU: MWd/MTU 72722
 U-235 DEPL 18.2g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	1.998E-01	1.993E-01	1.989E-01	1.970E-01	1.943E-01	1.889E-01	1.688E-01	1.509E-01	1.140E-01	6.506E-02
BE 10	2.055E-07	2.055E-07	2.055E-07	2.055E-07	2.055E-07	2.055E-07	2.055E-07	2.055E-07	2.055E-07	2.055E-07
C 14	1.312E-03	1.312E-03	1.312E-03	1.312E-03	1.312E-03	1.311E-03	1.311E-03	1.311E-03	1.310E-03	1.308E-03
CL 36	2.869E-05	2.869E-05	2.869E-05	2.869E-05	2.869E-05	2.869E-05	2.869E-05	2.869E-05	2.869E-05	2.869E-05
CR 51	6.909E+01	4.868E+01	3.429E+01	7.048E+00	7.190E-01	7.481E-03	8.772E-11	1.028E-18	1.531E-38	0.000E+00
MN 54	4.202E+00	4.073E+00	3.949E+00	3.432E+00	2.803E+00	1.870E+00	3.703E-01	7.335E-02	1.280E-03	3.903E-07
FE 55	2.974E+01	2.944E+01	2.914E+01	2.782E+01	2.603E+01	2.278E+01	1.337E+01	7.849E+00	2.072E+00	1.443E-01
FE 59	1.289E+00	1.039E+00	8.377E-01	3.162E-01	7.755E-02	4.664E-03	6.100E-08	7.980E-13	4.938E-25	0.000E+00
CO 60	2.519E+01	2.507E+01	2.494E+01	2.438E+01	2.359E+01	2.209E+01	1.698E+01	1.306E+01	6.768E+00	1.818E+00
NI 59	5.520E-03	5.520E-03	5.520E-03	5.520E-03	5.520E-03	5.520E-03	5.520E-03	5.520E-03	5.520E-03	5.519E-03
NI 63	6.821E-01	6.819E-01	6.818E-01	6.809E-01	6.796E-01	6.770E-01	6.669E-01	6.569E-01	6.327E-01	5.868E-01
ZN 65	5.248E-01	5.043E-01	4.847E-01	4.049E-01	3.124E-01	1.860E-01	2.335E-02	2.932E-03	1.638E-05	5.115E-10
SE 79	1.854E-04	1.854E-04	1.854E-04	1.854E-04	1.854E-04	1.854E-04	1.854E-04	1.854E-04	1.854E-04	1.854E-04
KR 85	5.018E+00	5.007E+00	4.995E+00	4.939E+00	4.860E+00	4.705E+00	4.135E+00	3.634E+00	2.630E+00	1.379E+00
RB 87	1.258E-08	1.258E-08	1.258E-08	1.258E-08	1.258E-08	1.258E-08	1.258E-08	1.258E-08	1.258E-08	1.258E-08
SR 89	3.839E+02	3.169E+02	2.615E+02	1.097E+02	3.136E+01	2.562E+00	1.140E-04	5.071E-09	6.696E-20	0.000E+00
SR 90	4.226E+01	4.222E+01	4.218E+01	4.201E+01	4.176E+01	4.126E+01	3.935E+01	3.752E+01	3.331E+01	2.626E+01
Y 90	4.359E+01	4.226E+01	4.219E+01	4.202E+01	4.177E+01	4.127E+01	3.936E+01	3.753E+01	3.332E+01	2.627E+01
Y 91	4.693E+02	4.004E+02	3.392E+02	1.603E+02	5.439E+01	6.259E+00	1.098E-03	1.925E-07	7.844E-17	1.302E-35
ZR 93	1.085E-03	1.085E-03	1.085E-03	1.085E-03	1.085E-03	1.085E-03	1.085E-03	1.085E-03	1.085E-03	1.085E-03
ZR 95	5.453E+02	4.686E+02	4.027E+02	2.029E+02	7.551E+01	1.046E+01	3.843E-03	1.413E-06	3.661E-15	2.457E-32
NB 93M	9.836E-05	1.002E-04	1.020E-04	1.102E-04	1.218E-04	1.446E-04	2.305E-04	3.080E-04	4.705E-04	6.942E-04

Table F.3 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	8.238E-05	8.238E-05	8.238E-05	8.238E-05	8.238E-05	8.238E-05	8.238E-05	8.237E-05	8.236E-05	8.233E-05
NB 95	5.584E+02	5.453E+02	5.183E+02	3.426E+02	1.498E+02	2.272E+01	8.533E-03	3.137E-06	8.127E-15	5.456E-32
NB 95M	3.832E+00	3.462E+00	2.986E+00	1.505E+00	5.602E-01	7.756E-02	2.851E-05	1.048E-08	2.715E-17	1.823E-34
MO 93	3.348E-05	3.348E-05	3.348E-05	3.348E-05	3.348E-05	3.347E-05	3.346E-05	3.345E-05	3.341E-05	3.335E-05
TC 99	6.265E-03	6.283E-03	6.284E-03	6.284E-03	6.284E-03	6.284E-03	6.284E-03	6.284E-03	6.284E-03	6.283E-03
RU103	2.580E+02	2.015E+02	1.574E+02	5.157E+01	1.031E+01	4.117E-01	1.048E-06	2.668E-12	2.760E-26	0.000E+00
RU106	3.447E+01	3.358E+01	3.270E+01	2.903E+01	2.445E+01	1.734E+01	4.387E+00	1.110E+00	3.574E-02	3.704E-05
RH103M	2.324E+02	1.817E+02	1.419E+02	4.649E+01	9.291E+00	3.711E-01	9.448E-07	2.405E-12	2.488E-26	0.000E+00
RH106	3.499E+01	3.358E+01	3.270E+01	2.903E+01	2.445E+01	1.734E+01	4.387E+00	1.110E+00	3.574E-02	3.704E-05
PD107	7.365E-06	7.365E-06	7.365E-06	7.365E-06	7.365E-06	7.365E-06	7.365E-06	7.365E-06	7.365E-06	7.365E-06
AG110	6.356E-01	3.469E-04	3.337E-04	2.800E-04	2.174E-04	1.310E-04	1.729E-05	2.283E-06	1.446E-08	5.793E-13
AG110M	2.711E-02	2.608E-02	2.509E-02	2.106E-02	1.635E-02	9.852E-03	1.301E-03	1.717E-04	1.087E-06	4.356E-11
AG111	2.416E+00	6.585E-01	1.790E-01	4.980E-04	1.024E-07	4.328E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	5.421E-03	5.412E-03	5.402E-03	5.358E-03	5.295E-03	5.171E-03	4.702E-03	4.276E-03	3.373E-03	2.098E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	1.228E-01	9.881E-02	7.948E-02	2.973E-02	7.201E-03	4.221E-04	4.985E-09	5.888E-14	2.822E-26	0.000E+00
IN114	8.268E-03	2.709E-03	2.227E-03	9.187E-04	2.561E-04	1.989E-05	7.255E-10	2.645E-14	2.123E-25	0.000E+00
IN114M	3.443E-03	2.831E-03	2.327E-03	9.599E-04	2.676E-04	2.079E-05	7.581E-10	2.764E-14	2.219E-25	0.000E+00
IN115M	1.241E+00	1.742E-02	2.291E-04	2.088E-06	5.057E-07	2.964E-08	3.501E-13	4.135E-18	1.982E-30	0.000E+00
SN119M	4.249E+00	4.084E+00	3.925E+00	3.282E+00	2.536E+00	1.513E+00	1.918E-01	2.433E-02	1.393E-04	4.567E-09
SN121M	6.370E-04	6.366E-04	6.362E-04	6.347E-04	6.325E-04	6.281E-04	6.110E-04	5.943E-04	5.545E-04	4.828E-04
SN123	6.742E-01	6.254E-01	5.801E-01	4.132E-01	2.532E-01	9.509E-02	1.892E-03	3.762E-05	2.100E-09	6.542E-18
SN125	2.631E+00	9.612E-01	3.513E-01	3.720E-03	5.260E-06	1.052E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	1.667E-04	1.667E-04	1.667E-04	1.667E-04	1.667E-04	1.667E-04	1.667E-04	1.667E-04	1.667E-04	1.667E-04
SB124	8.982E-02	7.646E-02	6.507E-02	3.142E-02	1.098E-02	1.343E-03	3.003E-07	6.714E-11	5.019E-20	2.805E-38
SB125	3.546E+00	3.528E+00	3.501E+00	3.355E+00	3.152E+00	2.781E+00	1.687E+00	1.023E+00	2.929E-01	2.403E-02
SB126	9.182E-02	4.199E-02	1.920E-02	5.815E-04	2.673E-05	2.334E-05	2.334E-05	2.334E-05	2.334E-05	2.333E-05
SB126M	4.352E-02	1.667E-04	1.667E-04	1.667E-04	1.667E-04	1.667E-04	1.667E-04	1.667E-04	1.667E-04	1.667E-04
TE123M	3.201E-04	2.952E-04	2.722E-04	1.887E-04	1.113E-04	3.865E-05	5.636E-07	8.217E-09	2.110E-13	1.390E-22
TE125M	7.865E-01	7.908E-01	7.934E-01	7.897E-01	7.593E-01	6.775E-01	4.117E-01	2.496E-01	7.148E-02	5.863E-03
TE127	1.316E+01	2.731E+00	1.643E+00	1.044E+00	5.841E-01	1.830E-01	1.764E-03	1.700E-05	1.551E-10	1.290E-20
TE127M	1.835E+00	1.736E+00	1.592E+00	1.065E+00	5.964E-01	1.869E-01	1.801E-03	1.736E-05	1.583E-10	1.317E-20
TE129	5.532E+01	4.072E+00	3.051E+00	8.274E-01	1.259E-01	2.918E-03	8.409E-10	2.423E-16	1.080E-32	0.000E+00
TE129M	8.310E+00	6.256E+00	4.686E+00	1.271E+00	1.935E-01	4.483E-03	1.292E-09	3.723E-16	1.660E-32	0.000E+00
I129	1.028E-05	1.030E-05	1.031E-05	1.033E-05	1.033E-05	1.033E-05	1.033E-05	1.033E-05	1.033E-05	1.033E-05
I131	2.323E+02	7.137E+01	2.135E+01	9.148E-02	3.508E-05	5.157E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.3 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	2.578E+00	1.931E+00	1.091E+00	3.767E-02	1.946E-04	4.717E-09	1.601E-27	5.431E-46	0.000E+00	0.000E+00
XE133	5.413E+02	1.046E+02	1.648E+01	3.866E-03	2.241E-08	7.530E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	7.777E+00	7.677E+00	7.579E+00	7.150E+00	6.574E+00	5.558E+00	2.839E+00	1.450E+00	2.703E-01	9.396E-03
CS135	5.336E-04	5.340E-04	5.340E-04	5.340E-04	5.340E-04	5.340E-04	5.340E-04	5.340E-04	5.340E-04	5.340E-04
CS136	3.572E+00	1.703E+00	8.121E-01	2.860E-02	2.290E-04	1.468E-08	2.478E-25	4.183E-42	0.000E+00	0.000E+00
CS137	4.409E+01	4.405E+01	4.401E+01	4.383E+01	4.358E+01	4.308E+01	4.114E+01	3.928E+01	3.500E+01	2.778E+01
BA136M	5.892E-01	2.807E-01	1.338E-01	4.713E-03	3.774E-05	2.419E-09	4.083E-26	6.893E-43	0.000E+00	0.000E+00
BA137M	4.173E+01	4.167E+01	4.163E+01	4.147E+01	4.123E+01	4.075E+01	3.891E+01	3.716E+01	3.311E+01	2.628E+01
BA140	4.977E+02	2.331E+02	1.091E+02	3.542E+00	2.520E-02	1.276E-06	8.383E-24	5.508E-41	0.000E+00	0.000E+00
LA140	4.996E+02	2.680E+02	1.256E+02	4.076E+00	2.900E-02	1.468E-06	9.647E-24	6.339E-41	0.000E+00	0.000E+00
CE141	4.730E+02	3.528E+02	2.618E+02	6.797E+01	9.714E+00	1.984E-01	3.454E-08	6.015E-15	7.608E-32	0.000E+00
CE142	1.386E-08	1.386E-08	1.386E-08	1.386E-08	1.386E-08	1.386E-08	1.386E-08	1.386E-08	1.386E-08	1.386E-08
CE144	4.273E+02	4.130E+02	3.991E+02	3.421E+02	2.738E+02	1.755E+02	2.959E+01	4.990E+00	5.826E-02	7.944E-06
PR143	4.732E+02	2.576E+02	1.260E+02	4.974E+00	4.696E-02	4.185E-06	2.640E-22	1.665E-38	0.000E+00	0.000E+00
PR144	4.275E+02	4.130E+02	3.991E+02	3.421E+02	2.738E+02	1.755E+02	2.959E+01	4.990E+00	5.827E-02	7.945E-06
PR144M	5.131E+00	4.956E+00	4.789E+00	4.105E+00	3.286E+00	2.106E+00	3.551E-01	5.988E-02	6.992E-04	9.534E-08
ND144	4.449E-13	4.503E-13	4.554E-13	4.765E-13	5.019E-13	5.383E-13	5.924E-13	6.015E-13	6.034E-13	6.034E-13
ND147	1.829E+02	7.612E+01	3.166E+01	6.011E-01	1.974E-03	2.129E-08	2.880E-28	3.897E-48	0.000E+00	0.000E+00
PM145	9.819E-06	9.946E-06	1.007E-05	1.058E-05	1.119E-05	1.204E-05	1.291E-05	1.234E-05	1.025E-05	6.933E-06
PM147	1.075E+02	1.077E+02	1.071E+02	1.027E+02	9.612E+01	8.423E+01	4.968E+01	2.930E+01	7.825E+00	5.582E-01
PM148M	6.408E+00	5.066E+00	4.005E+00	1.385E+00	2.995E-01	1.400E-02	6.679E-08	3.187E-13	1.585E-26	0.000E+00
PM148	2.026E+01	3.552E+00	7.618E-01	7.825E-02	1.687E-02	7.884E-04	3.762E-09	1.795E-14	8.927E-28	0.000E+00
SM145	9.629E-05	9.358E-05	9.095E-05	7.995E-05	6.638E-05	4.576E-05	1.033E-05	2.333E-06	5.654E-08	3.320E-11
SM147	1.724E-09	1.751E-09	1.778E-09	1.895E-09	2.056E-09	2.348E-09	3.195E-09	3.694E-09	4.221E-09	4.399E-09
SM151	5.419E-01	5.430E-01	5.429E-01	5.421E-01	5.411E-01	5.390E-01	5.308E-01	5.227E-01	5.030E-01	4.658E-01
EU152	2.286E-02	2.281E-02	2.277E-02	2.257E-02	2.228E-02	2.172E-02	1.962E-02	1.772E-02	1.373E-02	8.254E-03
EU154	3.380E-01	3.370E-01	3.360E-01	3.313E-01	3.247E-01	3.119E-01	2.655E-01	2.259E-01	1.510E-01	6.751E-02
EU155	9.651E-01	9.600E-01	9.548E-01	9.320E-01	9.000E-01	8.393E-01	6.348E-01	4.801E-01	2.387E-01	5.908E-02
EU156	2.851E+00	1.523E+00	8.038E-01	4.480E-02	6.956E-04	1.677E-07	5.663E-22	1.912E-36	0.000E+00	0.000E+00
GD153	1.569E-02	1.508E-02	1.448E-02	1.208E-02	9.304E-03	5.517E-03	6.818E-04	8.426E-05	4.525E-07	1.305E-11
TB160	2.819E-02	2.464E-02	2.155E-02	1.175E-02	4.900E-03	8.518E-04	7.781E-07	7.108E-10	1.792E-17	1.140E-32
TL206	1.475E-05	2.208E-12	2.208E-12	2.208E-12	2.208E-12	2.208E-12	2.208E-12	2.208E-12	2.208E-12	2.208E-12
TL207	1.910E-09	1.912E-09	1.921E-09	2.039E-09	2.278E-09	2.844E-09	5.357E-09	8.315E-09	1.776E-08	4.407E-08
TL208	1.723E-07	1.750E-07	1.793E-07	2.014E-07	2.277E-07	2.735E-07	3.923E-07	4.491E-07	4.826E-07	4.518E-07
PB210	4.031E-14	4.130E-14	4.194E-14	4.312E-14	4.379E-14	4.535E-14	5.871E-14	8.738E-14	2.584E-13	1.267E-12
PB211	1.916E-09	1.918E-09	1.927E-09	2.045E-09	2.284E-09	2.852E-09	5.373E-09	8.338E-09	1.781E-08	4.419E-08

Table F.3 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	4.795E-07	4.870E-07	4.992E-07	5.607E-07	6.336E-07	7.611E-07	1.092E-06	1.250E-06	1.343E-06	1.258E-06
BI211	1.916E-09	1.918E-09	1.927E-09	2.045E-09	2.284E-09	2.852E-09	5.373E-09	8.338E-09	1.781E-08	4.419E-08
BI212	4.795E-07	4.870E-07	4.992E-07	5.607E-07	6.336E-07	7.611E-07	1.092E-06	1.250E-06	1.343E-06	1.258E-06
PO212	3.072E-07	3.120E-07	3.198E-07	3.592E-07	4.060E-07	4.877E-07	6.996E-07	8.009E-07	8.606E-07	8.057E-07
PO215	1.916E-09	1.918E-09	1.927E-09	2.045E-09	2.284E-09	2.852E-09	5.373E-09	8.338E-09	1.781E-08	4.419E-08
PO216	4.795E-07	4.870E-07	4.992E-07	5.607E-07	6.336E-07	7.611E-07	1.092E-06	1.250E-06	1.343E-06	1.258E-06
RN219	1.916E-09	1.918E-09	1.927E-09	2.045E-09	2.284E-09	2.852E-09	5.373E-09	8.338E-09	1.781E-08	4.419E-08
RN220	4.795E-07	4.870E-07	4.992E-07	5.607E-07	6.336E-07	7.611E-07	1.092E-06	1.250E-06	1.343E-06	1.258E-06
FR223	2.640E-11	2.690E-11	2.740E-11	2.971E-11	3.315E-11	4.038E-11	7.405E-11	1.149E-10	2.456E-10	6.095E-10
RA223	1.916E-09	1.918E-09	1.927E-09	2.045E-09	2.284E-09	2.852E-09	5.373E-09	8.338E-09	1.781E-08	4.419E-08
RA224	4.795E-07	4.870E-07	4.991E-07	5.607E-07	6.336E-07	7.611E-07	1.092E-06	1.250E-06	1.343E-06	1.258E-06
RA226	9.202E-14	9.441E-14	9.682E-14	1.082E-13	1.258E-13	1.655E-13	3.845E-13	7.009E-13	1.931E-12	6.373E-12
RA228	5.606E-10	5.649E-10	5.693E-10	5.886E-10	6.158E-10	6.682E-10	8.528E-10	1.003E-09	1.267E-09	1.518E-09
AC227	1.913E-09	1.949E-09	1.986E-09	2.153E-09	2.402E-09	2.926E-09	5.366E-09	8.327E-09	1.780E-08	4.416E-08
TH227	1.890E-09	1.897E-09	1.915E-09	2.055E-09	2.296E-09	2.808E-09	5.298E-09	8.223E-09	1.757E-08	4.358E-08
TH228	4.787E-07	4.913E-07	5.038E-07	5.582E-07	6.309E-07	7.584E-07	1.090E-06	1.247E-06	1.342E-06	1.257E-06
TH229	1.973E-10	2.012E-10	2.051E-10	2.228E-10	2.485E-10	3.000E-10	5.061E-10	7.122E-10	1.227E-09	2.258E-09
TH230	1.425E-10	1.446E-10	1.467E-10	1.562E-10	1.699E-10	1.974E-10	3.091E-10	4.232E-10	7.184E-10	1.350E-09
TH231	3.960E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04
TH232	1.656E-09	1.656E-09	1.656E-09	1.656E-09	1.656E-09	1.656E-09	1.656E-09	1.657E-09	1.657E-09	1.657E-09
TH234	1.990E-05	1.980E-05	1.973E-05	1.962E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05
PA231	3.143E-08	3.168E-08	3.191E-08	3.287E-08	3.425E-08	3.699E-08	4.788E-08	5.876E-08	8.594E-08	1.403E-07
PA233	7.042E-02	4.920E-02	3.436E-02	6.800E-03	6.822E-04	3.778E-05	3.177E-05	3.178E-05	3.179E-05	3.184E-05
PA234M	8.737E-05	1.980E-05	1.973E-05	1.962E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05
PA234	1.358E-04	2.574E-08	2.565E-08	2.551E-08	2.548E-08	2.548E-08	2.548E-08	2.548E-08	2.548E-08	2.548E-08
U232	1.392E-06	1.396E-06	1.396E-06	1.397E-06	1.399E-06	1.401E-06	1.400E-06	1.389E-06	1.341E-06	1.224E-06
U233	1.059E-06	1.069E-06	1.076E-06	1.089E-06	1.092E-06	1.092E-06	1.092E-06	1.092E-06	1.093E-06	1.094E-06
U234	6.075E-06	6.077E-06	6.080E-06	6.091E-06	6.108E-06	6.141E-06	6.274E-06	6.405E-06	6.723E-06	7.322E-06
U235	2.570E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04	2.570E-04
U236	2.180E-04	2.180E-04	2.180E-04	2.180E-04	2.180E-04	2.180E-04	2.180E-04	2.180E-04	2.180E-04	2.180E-04
U237	5.086E+01	1.208E+01	2.868E+00	4.334E-03	5.656E-07	1.916E-07	1.741E-07	1.581E-07	1.243E-07	7.683E-08
U238	1.960E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05	1.960E-05
NP237	3.133E-05	3.167E-05	3.175E-05	3.177E-05	3.177E-05	3.177E-05	3.177E-05	3.178E-05	3.179E-05	3.184E-05
PU236	2.157E-06	2.144E-06	2.124E-06	2.037E-06	1.917E-06	1.697E-06	1.044E-06	6.423E-07	1.906E-07	1.680E-08
PU237	4.150E-06	3.355E-06	2.712E-06	1.037E-06	2.590E-07	1.616E-08	2.451E-13	3.718E-18	3.330E-30	0.000E+00
PU238	2.348E-02	2.364E-02	2.364E-02	2.364E-02	2.362E-02	2.357E-02	2.323E-02	2.287E-02	2.198E-02	2.032E-02

Table F.3 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	3.619E-02	3.630E-02	3.630E-02	3.630E-02	3.630E-02	3.630E-02	3.629E-02	3.629E-02	3.629E-02	3.628E-02
PU240	9.126E-03	9.126E-03	9.126E-03	9.125E-03	9.125E-03	9.125E-03	9.123E-03	9.121E-03	9.116E-03	9.106E-03
PU241	8.197E-01	8.182E-01	8.167E-01	8.099E-01	8.002E-01	7.812E-01	7.095E-01	6.445E-01	5.067E-01	3.132E-01
PU242	9.158E-07	9.158E-07	9.158E-07	9.158E-07	9.158E-07	9.158E-07	9.158E-07	9.158E-07	9.159E-07	9.159E-07
PU244	2.108E-15	2.108E-15	2.108E-15	2.108E-15	2.108E-15	2.108E-15	2.108E-15	2.108E-15	2.108E-15	2.108E-15
AM241	1.288E-03	1.338E-03	1.389E-03	1.614E-03	1.936E-03	2.568E-03	4.943E-03	7.092E-03	1.161E-02	1.781E-02
AM242M	1.726E-05	1.726E-05	1.726E-05	1.724E-05	1.722E-05	1.718E-05	1.703E-05	1.687E-05	1.649E-05	1.576E-05
AM242	5.975E-02	1.720E-05	1.717E-05	1.716E-05	1.714E-05	1.710E-05	1.694E-05	1.679E-05	1.641E-05	1.568E-05
AM243	9.353E-07	9.362E-07	9.362E-07	9.362E-07	9.362E-07	9.362E-07	9.360E-07	9.358E-07	9.354E-07	9.345E-07
CM242	2.929E-02	2.779E-02	2.618E-02	2.002E-02	1.359E-02	6.268E-03	2.956E-04	2.659E-05	1.358E-05	1.297E-05
CM243	1.291E-06	1.290E-06	1.289E-06	1.283E-06	1.275E-06	1.260E-06	1.200E-06	1.143E-06	1.012E-06	7.940E-07
CM244	1.928E-05	1.928E-05	1.925E-05	1.912E-05	1.894E-05	1.858E-05	1.721E-05	1.595E-05	1.317E-05	8.984E-06
CM245	2.642E-10	2.642E-10	2.642E-10	2.642E-10	2.642E-10	2.642E-10	2.641E-10	2.641E-10	2.640E-10	2.638E-10
CM246	4.166E-12	4.166E-12	4.166E-12	4.166E-12	4.165E-12	4.165E-12	4.164E-12	4.163E-12	4.160E-12	4.154E-12
CM247	1.524E-18	1.524E-18	1.524E-18	1.524E-18	1.524E-18	1.524E-18	1.524E-18	1.524E-18	1.524E-18	1.524E-18
Subtotal Ci**	6.889E+03	4.835E+03	3.802E+03	2.108E+03	1.282E+03	7.476E+02	3.199E+02	2.232E+02	1.571E+02	1.122E+02
Total Ci***	4.886E+04	4.951E+03	3.838E+03	2.128E+03	1.296E+03	7.555E+02	3.228E+02	2.247E+02	1.574E+02	1.123E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table F.4 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.4 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.4

BURNUP (BU)

BU: U-235 20.0 g
 BU: % U-235 14.60%
 BU: MWd 19.00
 BU: MWd/MTU 96962
 U-235 DEPL 24.2 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	2.664E-01	2.658E-01	2.653E-01	2.628E-01	2.591E-01	2.519E-01	2.251E-01	2.013E-01	1.521E-01	8.677E-02
BE 10	2.802E-07	2.802E-07	2.802E-07	2.802E-07	2.802E-07	2.802E-07	2.802E-07	2.802E-07	2.802E-07	2.802E-07
C 14	1.789E-03	1.789E-03	1.789E-03	1.789E-03	1.789E-03	1.789E-03	1.789E-03	1.788E-03	1.787E-03	1.785E-03
CL 36	3.905E-05	3.905E-05	3.905E-05	3.905E-05	3.905E-05	3.905E-05	3.905E-05	3.905E-05	3.904E-05	3.904E-05
CR 51	9.580E+01	6.749E+01	4.755E+01	9.772E+00	9.969E-01	1.037E-02	1.216E-10	1.426E-18	2.123E-38	0.000E+00
MN 54	5.788E+00	5.611E+00	5.439E+00	4.727E+00	3.861E+00	2.576E+00	5.102E-01	1.010E-01	1.764E-03	5.376E-07
FE 55	4.072E+01	4.031E+01	3.990E+01	3.810E+01	3.564E+01	3.120E+01	1.831E+01	1.075E+01	2.837E+00	1.976E-01
FE 59	1.794E+00	1.446E+00	1.166E+00	4.400E-01	1.079E-01	6.489E-03	8.489E-08	1.110E-12	6.871E-25	0.000E+00
CO 60	3.434E+01	3.417E+01	3.400E+01	3.323E+01	3.216E+01	3.011E+01	2.315E+01	1.780E+01	9.226E+00	2.478E+00
NI 59	7.484E-03	7.484E-03	7.484E-03	7.484E-03	7.484E-03	7.484E-03	7.484E-03	7.484E-03	7.484E-03	7.483E-03
NI 63	9.292E-01	9.289E-01	9.286E-01	9.274E-01	9.257E-01	9.222E-01	9.084E-01	8.949E-01	8.618E-01	7.993E-01
ZN 65	7.247E-01	6.965E-01	6.693E-01	5.592E-01	4.314E-01	2.568E-01	3.225E-02	4.049E-03	2.262E-05	7.063E-10
SE 79	2.471E-04	2.471E-04	2.471E-04	2.471E-04	2.471E-04	2.471E-04	2.471E-04	2.471E-04	2.471E-04	2.470E-04
KR 85	6.683E+00	6.668E+00	6.651E+00	6.577E+00	6.472E+00	6.266E+00	5.507E+00	4.839E+00	3.503E+00	1.836E+00
RB 87	1.667E-08	1.667E-08	1.667E-08	1.667E-08	1.667E-08	1.667E-08	1.667E-08	1.667E-08	1.667E-08	1.667E-08
SR 89	5.084E+02	4.196E+02	3.462E+02	1.453E+02	4.153E+01	3.392E+00	1.509E-04	6.715E-09	8.866E-20	0.000E+00
SR 90	5.626E+01	5.620E+01	5.615E+01	5.592E+01	5.559E+01	5.493E+01	5.238E+01	4.995E+01	4.435E+01	3.496E+01
Y 90	5.816E+01	5.627E+01	5.617E+01	5.594E+01	5.560E+01	5.495E+01	5.239E+01	4.996E+01	4.436E+01	3.497E+01
Y 91	6.218E+02	5.305E+02	4.495E+02	2.124E+02	7.207E+01	8.294E+00	1.454E-03	2.551E-07	1.039E-16	1.725E-35
ZR 93	1.449E-03	1.449E-03	1.449E-03	1.449E-03	1.449E-03	1.449E-03	1.449E-03	1.449E-03	1.449E-03	1.449E-03
ZR 95	7.253E+02	6.233E+02	5.356E+02	2.700E+02	1.004E+02	1.391E+01	5.112E-03	1.880E-06	4.869E-15	3.269E-32
NB 93M	1.313E-04	1.337E-04	1.362E-04	1.471E-04	1.627E-04	1.932E-04	3.078E-04	4.113E-04	6.283E-04	9.269E-04

Table F.4 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	1.121E-04	1.121E-04	1.121E-04	1.121E-04	1.121E-04	1.121E-04	1.121E-04	1.121E-04	1.121E-04	1.120E-04
NB 95	7.426E+02	7.253E+02	6.894E+02	4.556E+02	1.992E+02	3.022E+01	1.135E-02	4.172E-06	1.081E-14	7.257E-32
NB 95M	5.097E+00	4.605E+00	3.972E+00	2.002E+00	7.451E-01	1.032E-01	3.792E-05	1.394E-08	3.613E-17	2.425E-34
MO 93	4.568E-05	4.568E-05	4.568E-05	4.567E-05	4.567E-05	4.567E-05	4.565E-05	4.563E-05	4.559E-05	4.550E-05
TC 99	8.310E-03	8.333E-03	8.334E-03	8.334E-03	8.334E-03	8.334E-03	8.334E-03	8.334E-03	8.334E-03	8.334E-03
RU103	3.439E+02	2.686E+02	2.098E+02	6.874E+01	1.374E+01	5.488E-01	1.397E-06	3.557E-12	3.679E-26	0.000E+00
RU106	4.704E+01	4.581E+01	4.462E+01	3.961E+01	3.336E+01	2.366E+01	5.986E+00	1.514E+00	4.876E-02	5.054E-05
RH103M	3.097E+02	2.422E+02	1.892E+02	6.197E+01	1.238E+01	4.947E-01	1.259E-06	3.207E-12	3.316E-26	0.000E+00
RH106	4.800E+01	4.581E+01	4.462E+01	3.961E+01	3.336E+01	2.366E+01	5.986E+00	1.514E+00	4.876E-02	5.055E-05
PD107	1.008E-05	1.009E-05	1.009E-05	1.009E-05	1.009E-05	1.009E-05	1.009E-05	1.009E-05	1.009E-05	1.008E-05
AG110	1.158E+00	6.181E-04	5.946E-04	4.990E-04	3.874E-04	2.335E-04	3.082E-05	4.069E-06	2.576E-08	1.032E-12
AG110M	4.831E-02	4.648E-02	4.471E-02	3.751E-02	2.913E-02	1.755E-02	2.317E-03	3.059E-04	1.936E-06	7.762E-11
AG111	3.321E+00	9.050E-01	2.460E-01	6.844E-04	1.407E-07	5.948E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	7.310E-03	7.298E-03	7.285E-03	7.225E-03	7.140E-03	6.972E-03	6.341E-03	5.766E-03	4.548E-03	2.829E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	1.644E-01	1.323E-01	1.064E-01	3.982E-02	9.642E-03	5.653E-04	6.675E-09	7.884E-14	3.779E-26	0.000E+00
IN114	1.516E-02	4.968E-03	4.084E-03	1.684E-03	4.696E-04	3.649E-05	1.330E-09	4.851E-14	3.894E-25	0.000E+00
IN114M	6.315E-03	5.191E-03	4.267E-03	1.760E-03	4.907E-04	3.813E-05	1.390E-09	5.069E-14	4.069E-25	0.000E+00
IN115M	1.659E+00	2.328E-02	3.062E-04	2.796E-06	6.771E-07	3.969E-08	4.688E-13	5.537E-18	2.654E-30	0.000E+00
SN119M	5.864E+00	5.636E+00	5.418E+00	4.530E+00	3.500E+00	2.088E+00	2.648E-01	3.358E-02	1.922E-04	6.303E-09
SN121M	8.683E-04	8.679E-04	8.674E-04	8.654E-04	8.624E-04	8.564E-04	8.330E-04	8.102E-04	7.559E-04	6.581E-04
SN123	9.104E-01	8.445E-01	7.834E-01	5.579E-01	3.419E-01	1.284E-01	2.554E-03	5.081E-05	2.836E-09	8.835E-18
SN125	3.585E+00	1.310E+00	4.787E-01	5.070E-03	7.170E-06	1.434E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	2.230E-04	2.230E-04	2.230E-04	2.230E-04	2.230E-04	2.230E-04	2.230E-04	2.230E-04	2.230E-04	2.230E-04
SB124	1.372E-01	1.168E-01	9.941E-02	4.799E-02	1.678E-02	2.053E-03	4.588E-07	1.026E-10	7.668E-20	4.284E-38
SB125	4.792E+00	4.769E+00	4.731E+00	4.534E+00	4.259E+00	3.759E+00	2.279E+00	1.383E+00	3.959E-01	3.248E-02
SB126	1.264E-01	5.783E-02	2.645E-02	8.001E-04	3.589E-05	3.122E-05	3.122E-05	3.122E-05	3.122E-05	3.122E-05
SB126M	5.902E-02	2.230E-04	2.230E-04	2.230E-04	2.230E-04	2.230E-04	2.230E-04	2.230E-04	2.230E-04	2.230E-04
TE123M	6.327E-04	5.833E-04	5.379E-04	3.729E-04	2.199E-04	7.639E-05	1.114E-06	1.624E-08	4.169E-13	2.748E-22
TE125M	1.062E+00	1.068E+00	1.072E+00	1.067E+00	1.026E+00	9.157E-01	5.563E-01	3.374E-01	9.660E-02	7.923E-03
TE127	1.757E+01	3.653E+00	2.199E+00	1.397E+00	7.822E-01	2.451E-01	2.362E-03	2.277E-05	2.077E-10	1.728E-20
TE127M	2.458E+00	2.324E+00	2.132E+00	1.427E+00	7.986E-01	2.502E-01	2.412E-03	2.325E-05	2.120E-10	1.764E-20
TE129	7.354E+01	5.416E+00	4.057E+00	1.100E+00	1.675E-01	3.881E-03	1.118E-09	3.223E-16	1.437E-32	0.000E+00
TE129M	1.105E+01	8.320E+00	6.233E+00	1.690E+00	2.573E-01	5.962E-03	1.718E-09	4.951E-16	2.208E-32	0.000E+00
I129	1.371E-05	1.373E-05	1.374E-05	1.377E-05	1.378E-05	1.378E-05	1.378E-05	1.378E-05	1.378E-05	1.378E-05
I131	3.079E+02	9.461E+01	2.830E+01	1.213E-01	4.650E-05	6.836E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.4 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	3.418E+00	2.560E+00	1.446E+00	4.993E-02	2.580E-04	6.253E-09	2.122E-27	7.199E-46	0.000E+00	0.000E+00
XE133	7.167E+02	1.385E+02	2.183E+01	5.118E-03	2.967E-08	9.970E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.416E+01	1.398E+01	1.381E+01	1.303E+01	1.198E+01	1.013E+01	5.171E+00	2.641E+00	4.924E-01	1.712E-02
CS135	6.696E-04	6.701E-04	6.701E-04	6.701E-04	6.701E-04	6.701E-04	6.701E-04	6.701E-04	6.701E-04	6.701E-04
CS136	5.983E+00	2.852E+00	1.360E+00	4.790E-02	3.835E-04	2.458E-08	4.150E-25	7.005E-42	0.000E+00	0.000E+00
CS137	5.878E+01	5.872E+01	5.867E+01	5.844E+01	5.810E+01	5.743E+01	5.484E+01	5.237E+01	4.666E+01	3.704E+01
BA136M	9.866E-01	4.701E-01	2.241E-01	7.894E-03	6.320E-05	4.051E-09	6.839E-26	1.154E-42	0.000E+00	0.000E+00
BA137M	5.563E+01	5.555E+01	5.550E+01	5.528E+01	5.496E+01	5.433E+01	5.188E+01	4.954E+01	4.414E+01	3.504E+01
BA140	6.587E+02	3.085E+02	1.444E+02	4.687E+00	3.335E-02	1.689E-06	1.109E-23	7.289E-41	0.000E+00	0.000E+00
LA140	6.620E+02	3.547E+02	1.662E+02	5.394E+00	3.838E-02	1.943E-06	1.277E-23	8.389E-41	0.000E+00	0.000E+00
CE141	6.260E+02	4.670E+02	3.465E+02	8.995E+01	1.285E+01	2.626E-01	4.573E-08	7.961E-15	1.007E-31	0.000E+00
CE142	1.807E-08	1.807E-08	1.807E-08	1.807E-08	1.807E-08	1.807E-08	1.807E-08	1.807E-08	1.807E-08	1.807E-08
CE144	5.686E+02	5.495E+02	5.310E+02	4.551E+02	3.643E+02	2.335E+02	3.937E+01	6.639E+00	7.752E-02	1.057E-05
PR143	6.258E+02	3.408E+02	1.667E+02	6.579E+00	6.211E-02	5.535E-06	3.491E-22	2.202E-38	0.000E+00	0.000E+00
PR144	5.689E+02	5.495E+02	5.311E+02	4.552E+02	3.644E+02	2.335E+02	3.937E+01	6.639E+00	7.753E-02	1.057E-05
PR144M	6.826E+00	6.594E+00	6.373E+00	5.462E+00	4.372E+00	2.802E+00	4.725E-01	7.967E-02	9.303E-04	1.268E-07
ND144	6.030E-13	6.101E-13	6.170E-13	6.451E-13	6.788E-13	7.273E-13	7.993E-13	8.114E-13	8.139E-13	8.139E-13
ND147	2.421E+02	1.008E+02	4.190E+01	7.957E-01	2.613E-03	2.818E-08	3.813E-28	5.158E-48	0.000E+00	0.000E+00
PM145	1.331E-05	1.349E-05	1.366E-05	1.436E-05	1.519E-05	1.637E-05	1.758E-05	1.680E-05	1.396E-05	9.442E-06
PM147	1.377E+02	1.379E+02	1.372E+02	1.315E+02	1.232E+02	1.079E+02	6.365E+01	3.754E+01	1.003E+01	7.152E-01
PM148M	1.053E+01	8.325E+00	6.581E+00	2.276E+00	4.921E-01	2.300E-02	1.097E-07	5.237E-13	2.604E-26	0.000E+00
PM148	3.574E+01	6.239E+00	1.318E+00	1.286E-01	2.772E-02	1.296E-03	6.182E-09	2.950E-14	1.467E-27	0.000E+00
SM145	1.322E-04	1.285E-04	1.249E-04	1.098E-04	9.115E-05	6.284E-05	1.419E-05	3.204E-06	7.765E-08	4.560E-11
SM147	2.200E-09	2.234E-09	2.268E-09	2.419E-09	2.625E-09	2.999E-09	4.084E-09	4.724E-09	5.399E-09	5.627E-09
SM151	5.983E-01	5.997E-01	5.996E-01	5.988E-01	5.976E-01	5.953E-01	5.863E-01	5.773E-01	5.554E-01	5.143E-01
EU152	2.932E-02	2.925E-02	2.920E-02	2.895E-02	2.858E-02	2.786E-02	2.517E-02	2.272E-02	1.762E-02	1.058E-02
EU154	6.311E-01	6.290E-01	6.271E-01	6.185E-01	6.062E-01	5.822E-01	4.956E-01	4.218E-01	2.820E-01	1.260E-01
EU155	1.210E+00	1.204E+00	1.198E+00	1.169E+00	1.129E+00	1.052E+00	7.960E-01	6.020E-01	2.995E-01	7.408E-02
EU156	4.467E+00	2.383E+00	1.257E+00	7.009E-02	1.088E-03	2.624E-07	8.859E-22	2.992E-36	0.000E+00	0.000E+00
GD153	2.547E-02	2.448E-02	2.352E-02	1.962E-02	1.511E-02	8.957E-03	1.107E-03	1.368E-04	7.347E-07	2.118E-11
TB160	4.125E-02	3.607E-02	3.154E-02	1.720E-02	7.171E-03	1.247E-03	1.139E-06	1.040E-09	2.623E-17	1.668E-32
TL206	2.048E-05	3.012E-12	3.012E-12	3.012E-12	3.012E-12	3.012E-12	3.012E-12	3.012E-12	3.012E-12	3.012E-12
TL207	2.022E-09	2.024E-09	2.033E-09	2.159E-09	2.411E-09	3.007E-09	5.603E-09	8.602E-09	1.800E-08	4.365E-08
TL208	2.523E-07	2.563E-07	2.628E-07	2.957E-07	3.349E-07	4.039E-07	5.861E-07	6.767E-07	7.362E-07	6.940E-07
PB210	7.984E-14	8.179E-14	8.303E-14	8.506E-14	8.582E-14	8.746E-14	1.035E-13	1.402E-13	3.667E-13	1.747E-12
PB211	2.027E-09	2.030E-09	2.039E-09	2.165E-09	2.418E-09	3.015E-09	5.619E-09	8.626E-09	1.805E-08	4.377E-08

Table F.4 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	7.022E-07	7.134E-07	7.315E-07	8.231E-07	9.322E-07	1.124E-06	1.631E-06	1.883E-06	2.049E-06	1.931E-06
BI211	2.027E-09	2.030E-09	2.039E-09	2.165E-09	2.418E-09	3.015E-09	5.619E-09	8.626E-09	1.805E-08	4.377E-08
BI212	7.022E-07	7.134E-07	7.315E-07	8.231E-07	9.322E-07	1.124E-06	1.631E-06	1.883E-06	2.049E-06	1.931E-06
PO212	4.499E-07	4.570E-07	4.687E-07	5.274E-07	5.973E-07	7.202E-07	1.045E-06	1.207E-06	1.313E-06	1.237E-06
PO215	2.027E-09	2.030E-09	2.039E-09	2.165E-09	2.418E-09	3.015E-09	5.619E-09	8.626E-09	1.805E-08	4.377E-08
PO216	7.022E-07	7.134E-07	7.315E-07	8.231E-07	9.322E-07	1.124E-06	1.631E-06	1.883E-06	2.049E-06	1.931E-06
RN219	2.027E-09	2.030E-09	2.039E-09	2.165E-09	2.418E-09	3.015E-09	5.619E-09	8.626E-09	1.805E-08	4.377E-08
RN220	7.022E-07	7.134E-07	7.315E-07	8.231E-07	9.322E-07	1.124E-06	1.631E-06	1.883E-06	2.049E-06	1.931E-06
FR223	2.794E-11	2.847E-11	2.900E-11	3.145E-11	3.508E-11	4.268E-11	7.745E-11	1.189E-10	2.488E-10	6.036E-10
RA223	2.027E-09	2.030E-09	2.039E-09	2.165E-09	2.418E-09	3.015E-09	5.619E-09	8.626E-09	1.805E-08	4.377E-08
RA224	7.022E-07	7.133E-07	7.315E-07	8.231E-07	9.322E-07	1.124E-06	1.631E-06	1.883E-06	2.049E-06	1.931E-06
RA226	1.219E-13	1.251E-13	1.283E-13	1.433E-13	1.667E-13	2.194E-13	5.107E-13	9.348E-13	2.608E-12	8.825E-12
RA228	5.588E-10	5.631E-10	5.674E-10	5.867E-10	6.138E-10	6.661E-10	8.502E-10	9.999E-10	1.263E-09	1.514E-09
AC227	2.025E-09	2.063E-09	2.102E-09	2.279E-09	2.542E-09	3.093E-09	5.612E-09	8.613E-09	1.803E-08	4.374E-08
TH227	2.000E-09	2.007E-09	2.027E-09	2.176E-09	2.430E-09	2.968E-09	5.542E-09	8.507E-09	1.780E-08	4.317E-08
TH228	7.010E-07	7.198E-07	7.384E-07	8.195E-07	9.283E-07	1.120E-06	1.628E-06	1.879E-06	2.047E-06	1.931E-06
TH229	2.599E-10	2.650E-10	2.701E-10	2.936E-10	3.276E-10	3.957E-10	6.682E-10	9.407E-10	1.622E-09	2.986E-09
TH230	1.887E-10	1.915E-10	1.943E-10	2.069E-10	2.251E-10	2.619E-10	4.127E-10	5.693E-10	9.855E-10	1.919E-09
TH231	4.365E-04	2.441E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04
TH232	1.652E-09	1.652E-09	1.652E-09	1.652E-09	1.652E-09	1.652E-09	1.652E-09	1.652E-09	1.652E-09	1.652E-09
TH234	2.009E-05	1.990E-05	1.977E-05	1.955E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05
PA231	3.344E-08	3.368E-08	3.390E-08	3.481E-08	3.613E-08	3.873E-08	4.906E-08	5.940E-08	8.521E-08	1.368E-07
PA233	9.740E-02	6.805E-02	4.753E-02	9.417E-03	9.565E-04	6.531E-05	5.701E-05	5.702E-05	5.705E-05	5.716E-05
PA234M	1.497E-04	1.990E-05	1.977E-05	1.955E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05
PA234	2.607E-04	2.586E-08	2.570E-08	2.542E-08	2.537E-08	2.536E-08	2.536E-08	2.536E-08	2.536E-08	2.536E-08
U232	2.060E-06	2.066E-06	2.068E-06	2.073E-06	2.079E-06	2.091E-06	2.113E-06	2.112E-06	2.055E-06	1.882E-06
U233	1.398E-06	1.412E-06	1.421E-06	1.439E-06	1.443E-06	1.444E-06	1.444E-06	1.445E-06	1.446E-06	1.448E-06
U234	8.055E-06	8.061E-06	8.068E-06	8.096E-06	8.137E-06	8.219E-06	8.543E-06	8.863E-06	9.640E-06	1.111E-05
U235	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04
U236	2.885E-04	2.885E-04	2.885E-04	2.885E-04	2.885E-04	2.885E-04	2.885E-04	2.885E-04	2.885E-04	2.885E-04
U237	9.321E+01	2.214E+01	5.257E+00	7.943E-03	1.114E-06	4.271E-07	3.879E-07	3.523E-07	2.770E-07	1.712E-07
U238	1.951E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05	1.951E-05
NP237	5.620E-05	5.681E-05	5.696E-05	5.700E-05	5.700E-05	5.700E-05	5.701E-05	5.702E-05	5.705E-05	5.716E-05
PU236	5.282E-06	5.252E-06	5.203E-06	4.989E-06	4.695E-06	4.158E-06	2.558E-06	1.573E-06	4.669E-07	4.115E-08
PU237	1.211E-05	9.786E-06	7.910E-06	3.024E-06	7.555E-07	4.715E-08	7.151E-13	1.084E-17	9.714E-30	0.000E+00
PU238	5.736E-02	5.775E-02	5.776E-02	5.778E-02	5.776E-02	5.765E-02	5.684E-02	5.596E-02	5.379E-02	4.971E-02

Table F.4 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	4.580E-02	4.595E-02	4.595E-02	4.595E-02	4.595E-02	4.595E-02	4.595E-02	4.594E-02	4.594E-02	4.594E-02	4.592E-02
PU240	1.501E-02	1.501E-02	1.501E-02	1.501E-02	1.501E-02	1.501E-02	1.501E-02	1.500E-02	1.500E-02	1.499E-02	1.498E-02
PU241	1.827E+00	1.823E+00	1.820E+00	1.820E+00	1.805E+00	1.783E+00	1.741E+00	1.581E+00	1.436E+00	1.129E+00	6.980E-01
PU242	2.838E-06	2.838E-06	2.838E-06	2.838E-06	2.838E-06	2.838E-06	2.838E-06	2.838E-06	2.838E-06	2.838E-06	2.838E-06
PU244	1.247E-14	1.247E-14	1.247E-14	1.247E-14	1.247E-14	1.247E-14	1.247E-14	1.247E-14	1.247E-14	1.247E-14	1.247E-14
AM241	2.839E-03	2.951E-03	3.063E-03	3.063E-03	3.565E-03	4.282E-03	5.690E-03	1.098E-02	1.577E-02	2.583E-02	3.966E-02
AM242M	4.792E-05	4.791E-05	4.790E-05	4.786E-05	4.786E-05	4.781E-05	4.770E-05	4.727E-05	4.684E-05	4.578E-05	4.375E-05
AM242	1.829E-01	4.776E-05	4.766E-05	4.763E-05	4.763E-05	4.757E-05	4.746E-05	4.703E-05	4.661E-05	4.556E-05	4.353E-05
AM243	3.945E-06	3.950E-06	3.950E-06	3.950E-06	3.950E-06	3.949E-06	3.949E-06	3.949E-06	3.948E-06	3.946E-06	3.942E-06
CM242	9.016E-02	8.554E-02	8.060E-02	6.162E-02	6.162E-02	4.184E-02	1.929E-02	9.058E-04	7.764E-05	3.771E-05	3.600E-05
CM243	5.460E-06	5.455E-06	5.450E-06	5.427E-06	5.427E-06	5.394E-06	5.329E-06	5.076E-06	4.835E-06	4.282E-06	3.358E-06
CM244	1.125E-04	1.125E-04	1.124E-04	1.116E-04	1.116E-04	1.106E-04	1.085E-04	1.005E-04	9.308E-05	7.688E-05	5.244E-05
CM245	2.091E-09	2.091E-09	2.091E-09	2.091E-09	2.091E-09	2.091E-09	2.091E-09	2.090E-09	2.090E-09	2.089E-09	2.088E-09
CM246	4.550E-11	4.550E-11	4.550E-11	4.550E-11	4.550E-11	4.549E-11	4.549E-11	4.548E-11	4.546E-11	4.543E-11	4.536E-11
CM247	2.282E-17	2.282E-17	2.282E-17	2.282E-17	2.282E-17	2.282E-17	2.282E-17	2.282E-17	2.282E-17	2.282E-17	2.282E-17
Subtotal Ci**	9.190E+03	6.437E+03	5.061E+03	2.807E+03	2.807E+03	1.709E+03	9.972E+02	4.269E+02	2.980E+02	2.098E+02	1.498E+02
Total Ci***	6.482E+04	6.596E+03	5.110E+03	2.835E+03	2.835E+03	1.728E+03	1.008E+03	4.310E+02	3.000E+02	2.102E+02	1.499E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGIN output isotopes.

Table F.5 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.5

BURNUP (BU)

BU: U-235 25.0 g
 BU: % U-235 18.25%
 BU: MWd 23.76
 BU: MWd/MTU 121200
 U-235 DEPL 30.1 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	3.331E-01	3.323E-01	3.316E-01	3.284E-01	3.238E-01	3.149E-01	2.815E-01	2.516E-01	1.901E-01	1.085E-01
BE 10	3.587E-07	3.587E-07	3.587E-07	3.587E-07	3.587E-07	3.587E-07	3.587E-07	3.587E-07	3.587E-07	3.587E-07
C 14	2.290E-03	2.290E-03	2.290E-03	2.290E-03	2.290E-03	2.290E-03	2.289E-03	2.289E-03	2.287E-03	2.285E-03
CL 36	4.985E-05	4.985E-05	4.985E-05	4.985E-05	4.985E-05	4.985E-05	4.985E-05	4.985E-05	4.985E-05	4.985E-05
CR 51	1.247E+02	8.787E+01	6.191E+01	1.272E+01	1.298E+00	1.350E-02	1.583E-10	1.857E-18	2.764E-38	0.000E+00
MN 54	7.484E+00	7.255E+00	7.033E+00	6.113E+00	4.993E+00	3.331E+00	6.597E-01	1.307E-01	2.281E-03	6.951E-07
FE 55	5.233E+01	5.180E+01	5.127E+01	4.896E+01	4.580E+01	4.009E+01	2.353E+01	1.381E+01	3.645E+00	2.539E-01
FE 59	2.345E+00	1.890E+00	1.523E+00	5.750E-01	1.410E-01	8.480E-03	1.109E-07	1.451E-12	8.979E-25	0.000E+00
CO 60	4.393E+01	4.370E+01	4.348E+01	4.251E+01	4.113E+01	3.852E+01	2.961E+01	2.277E+01	1.180E+01	3.170E+00
NI 59	9.518E-03	9.518E-03	9.518E-03	9.518E-03	9.518E-03	9.518E-03	9.518E-03	9.517E-03	9.517E-03	9.516E-03
NI 63	1.187E+00	1.187E+00	1.187E+00	1.185E+00	1.183E+00	1.179E+00	1.161E+00	1.144E+00	1.101E+00	1.021E+00
ZN 65	9.395E-01	9.029E-01	8.677E-01	7.249E-01	5.593E-01	3.329E-01	4.181E-02	5.249E-03	2.933E-05	9.156E-10
SE 79	3.087E-04	3.087E-04	3.087E-04	3.087E-04	3.087E-04	3.087E-04	3.086E-04	3.086E-04	3.086E-04	3.086E-04
KR 85	8.343E+00	8.324E+00	8.303E+00	8.211E+00	8.079E+00	7.822E+00	6.874E+00	6.041E+00	4.373E+00	2.292E+00
RB 87	2.076E-08	2.076E-08	2.076E-08	2.076E-08	2.076E-08	2.076E-08	2.076E-08	2.076E-08	2.076E-08	2.076E-08
SR 89	6.308E+02	5.205E+02	4.295E+02	1.803E+02	5.152E+01	4.208E+00	1.872E-04	8.330E-09	1.100E-19	0.000E+00
SR 90	7.020E+01	7.014E+01	7.007E+01	6.978E+01	6.937E+01	6.855E+01	6.537E+01	6.233E+01	5.534E+01	4.363E+01
Y 90	7.275E+01	7.022E+01	7.009E+01	6.980E+01	6.939E+01	6.857E+01	6.538E+01	6.234E+01	5.535E+01	4.364E+01
Y 91	7.720E+02	6.587E+02	5.580E+02	2.638E+02	8.948E+01	1.029E+01	1.806E-03	3.168E-07	1.290E-16	2.141E-35
ZR 93	1.813E-03	1.814E-03	1.814E-03	1.814E-03	1.814E-03	1.814E-03	1.814E-03	1.814E-03	1.814E-03	1.814E-03
ZR 95	9.042E+02	7.769E+02	6.676E+02	3.365E+02	1.252E+02	1.734E+01	6.373E-03	2.343E-06	6.070E-15	4.074E-32
NB 93M	1.644E-04	1.674E-04	1.705E-04	1.842E-04	2.036E-04	2.418E-04	3.853E-04	5.149E-04	7.865E-04	1.160E-03

Table F.5 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	1.431E-04	1.431E-04	1.431E-04	1.431E-04	1.431E-04	1.431E-04	1.431E-04	1.431E-04	1.431E-04	1.430E-04
NB 95	9.257E+02	9.041E+02	8.594E+02	5.679E+02	2.483E+02	3.767E+01	1.415E-02	5.201E-06	1.348E-14	9.047E-32
NB 95M	6.354E+00	5.740E+00	4.951E+00	2.496E+00	9.288E-01	1.286E-01	4.728E-05	1.738E-08	4.503E-17	3.022E-34
MO 93	5.847E-05	5.847E-05	5.847E-05	5.847E-05	5.846E-05	5.846E-05	5.843E-05	5.841E-05	5.835E-05	5.824E-05
TC 99	1.033E-02	1.036E-02	1.036E-02	1.036E-02	1.036E-02	1.036E-02	1.036E-02	1.036E-02	1.036E-02	1.036E-02
RU103	4.296E+02	3.356E+02	2.621E+02	8.586E+01	1.716E+01	6.855E-01	1.745E-06	4.443E-12	4.595E-26	0.000E+00
RU106	6.016E+01	5.860E+01	5.707E+01	5.067E+01	4.267E+01	3.026E+01	7.656E+00	1.937E+00	6.237E-02	6.465E-05
RH103M	3.869E+02	3.025E+02	2.363E+02	7.740E+01	1.547E+01	6.179E-01	1.573E-06	4.005E-12	4.142E-26	0.000E+00
RH106	6.175E+01	5.860E+01	5.707E+01	5.067E+01	4.267E+01	3.026E+01	7.656E+00	1.937E+00	6.237E-02	6.465E-05
PD107	1.294E-05	1.294E-05	1.294E-05	1.294E-05	1.294E-05	1.294E-05	1.294E-05	1.294E-05	1.294E-05	1.294E-05
AG110	1.891E+00	9.912E-04	9.535E-04	8.001E-04	6.211E-04	3.744E-04	4.942E-05	6.524E-06	4.131E-08	1.656E-12
AG110M	7.749E-02	7.453E-02	7.169E-02	6.016E-02	4.670E-02	2.815E-02	3.716E-03	4.906E-04	3.106E-06	1.244E-10
AG111	4.281E+00	1.167E+00	3.172E-01	8.824E-04	1.814E-07	7.667E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	9.246E-03	9.231E-03	9.214E-03	9.138E-03	9.030E-03	8.819E-03	8.020E-03	7.293E-03	5.752E-03	3.578E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	2.065E-01	1.660E-01	1.336E-01	4.999E-02	1.210E-02	7.095E-04	8.380E-09	9.897E-14	4.744E-26	0.000E+00
IN114	2.470E-02	8.103E-03	6.661E-03	2.748E-03	7.660E-04	5.953E-05	2.170E-09	7.912E-14	6.350E-25	0.000E+00
IN114M	1.030E-02	8.467E-03	6.961E-03	2.872E-03	8.004E-04	6.220E-05	2.268E-09	8.268E-14	6.636E-25	0.000E+00
IN115M	2.079E+00	2.917E-02	3.837E-04	3.510E-06	8.499E-07	4.983E-08	5.885E-13	6.950E-18	3.332E-30	0.000E+00
SN119M	7.598E+00	7.303E+00	7.020E+00	5.869E+00	4.534E+00	2.706E+00	3.431E-01	4.350E-02	2.491E-04	8.167E-09
SN121M	1.111E-03	1.110E-03	1.109E-03	1.107E-03	1.103E-03	1.095E-03	1.065E-03	1.036E-03	9.669E-04	8.419E-04
SN123	1.153E+00	1.070E+00	9.924E-01	7.068E-01	4.332E-01	1.627E-01	3.236E-03	6.436E-05	3.592E-09	1.119E-17
SN125	4.584E+00	1.675E+00	6.121E-01	6.483E-03	9.169E-06	1.834E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	2.796E-04	2.796E-04	2.796E-04	2.796E-04	2.796E-04	2.796E-04	2.796E-04	2.796E-04	2.796E-04	2.796E-04
SB124	1.952E-01	1.662E-01	1.414E-01	6.827E-02	2.387E-02	2.919E-03	6.527E-07	1.459E-10	1.091E-19	6.095E-38
SB125	6.074E+00	6.043E+00	5.996E+00	5.747E+00	5.399E+00	4.764E+00	2.890E+00	1.752E+00	5.018E-01	4.116E-02
SB126	1.635E-01	7.477E-02	3.420E-02	1.033E-03	4.519E-05	3.915E-05	3.915E-05	3.915E-05	3.915E-05	3.915E-05
SB126M	7.500E-02	2.796E-04	2.796E-04	2.796E-04	2.796E-04	2.796E-04	2.796E-04	2.796E-04	2.796E-04	2.796E-04
TE123M	1.100E-03	1.015E-03	9.358E-04	6.487E-04	3.824E-04	1.328E-04	1.937E-06	2.826E-08	7.253E-13	4.779E-22
TE125M	1.346E+00	1.353E+00	1.358E+00	1.352E+00	1.300E+00	1.161E+00	7.051E-01	4.276E-01	1.224E-01	1.004E-02
TE127	2.198E+01	4.578E+00	2.759E+00	1.754E+00	9.816E-01	3.076E-01	2.964E-03	2.857E-05	2.606E-10	2.168E-20
TE127M	3.085E+00	2.917E+00	2.676E+00	1.790E+00	1.002E+00	3.140E-01	3.027E-03	2.917E-05	2.661E-10	2.213E-20
TE129	9.160E+01	6.747E+00	5.055E+00	1.371E+00	2.087E-01	4.835E-03	1.393E-09	4.016E-16	1.790E-32	0.000E+00
TE129M	1.377E+01	1.037E+01	7.765E+00	2.106E+00	3.206E-01	7.428E-03	2.141E-09	6.169E-16	2.750E-32	0.000E+00
I129	1.713E-05	1.715E-05	1.717E-05	1.720E-05	1.721E-05	1.721E-05	1.721E-05	1.721E-05	1.721E-05	1.721E-05
I131	3.823E+02	1.175E+02	3.514E+01	1.506E-01	5.774E-05	8.489E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.5 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	4.244E+00	3.179E+00	1.796E+00	6.201E-02	3.204E-04	7.765E-09	2.635E-27	8.940E-46	0.000E+00	0.000E+00
XE133	8.890E+02	1.718E+02	2.707E+01	6.349E-03	3.680E-08	1.237E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	2.270E+01	2.241E+01	2.212E+01	2.087E+01	1.919E+01	1.622E+01	8.286E+00	4.232E+00	7.889E-01	2.742E-02
CS135	7.883E-04	7.889E-04	7.889E-04	7.889E-04	7.889E-04	7.889E-04	7.889E-04	7.889E-04	7.889E-04	7.889E-04
CS136	8.959E+00	4.271E+00	2.037E+00	7.172E-02	5.742E-04	3.681E-08	6.214E-25	1.049E-41	0.000E+00	0.000E+00
CS137	7.345E+01	7.339E+01	7.332E+01	7.303E+01	7.261E+01	7.178E+01	6.854E+01	6.544E+01	5.831E+01	4.629E+01
BA136M	1.477E+00	7.039E-01	3.356E-01	1.182E-02	9.463E-05	6.066E-09	1.024E-25	1.729E-42	0.000E+00	0.000E+00
BA137M	6.952E+01	6.943E+01	6.936E+01	6.909E+01	6.869E+01	6.790E+01	6.484E+01	6.191E+01	5.516E+01	4.379E+01
BA140	8.167E+02	3.824E+02	1.791E+02	5.811E+00	4.135E-02	2.093E-06	1.375E-23	9.037E-41	0.000E+00	0.000E+00
LA140	8.217E+02	4.397E+02	2.061E+02	6.687E+00	4.758E-02	2.409E-06	1.583E-23	1.040E-40	0.000E+00	0.000E+00
CE141	7.761E+02	5.790E+02	4.296E+02	1.115E+02	1.594E+01	3.255E-01	5.669E-08	9.870E-15	1.248E-31	0.000E+00
CE142	2.228E-08	2.228E-08	2.228E-08	2.228E-08	2.228E-08	2.228E-08	2.228E-08	2.228E-08	2.228E-08	2.228E-08
CE144	7.090E+02	6.852E+02	6.622E+02	5.676E+02	4.544E+02	2.912E+02	4.910E+01	8.279E+00	9.668E-02	1.318E-05
PR143	7.754E+02	4.222E+02	2.065E+02	8.152E+00	7.696E-02	6.858E-06	4.326E-22	2.729E-38	0.000E+00	0.000E+00
PR144	7.096E+02	6.853E+02	6.623E+02	5.676E+02	4.544E+02	2.912E+02	4.910E+01	8.280E+00	9.668E-02	1.318E-05
PR144M	8.513E+00	8.223E+00	7.947E+00	6.811E+00	5.452E+00	3.494E+00	5.892E-01	9.935E-02	1.160E-03	1.582E-07
ND144	7.666E-13	7.755E-13	7.840E-13	8.191E-13	8.611E-13	9.216E-13	1.011E-12	1.026E-12	1.029E-12	1.029E-12
ND147	3.002E+02	1.249E+02	5.196E+01	9.867E-01	3.240E-03	3.495E-08	4.728E-28	6.396E-48	0.000E+00	0.000E+00
PM145	1.692E-05	1.715E-05	1.737E-05	1.827E-05	1.935E-05	2.088E-05	2.245E-05	2.147E-05	1.783E-05	1.206E-05
PM147	1.649E+02	1.653E+02	1.645E+02	1.577E+02	1.476E+02	1.294E+02	7.629E+01	4.499E+01	1.202E+01	8.573E-01
PM148M	1.519E+01	1.201E+01	9.497E+00	3.285E+00	7.102E-01	3.319E-02	1.584E-07	7.557E-13	3.758E-26	0.000E+00
PM148	5.536E+01	9.623E+00	2.003E+00	1.856E-01	4.000E-02	1.869E-03	8.920E-09	4.256E-14	2.117E-27	0.000E+00
SM145	1.704E-04	1.656E-04	1.610E-04	1.415E-04	1.175E-04	8.098E-05	1.829E-05	4.130E-06	1.001E-07	5.876E-11
SM147	2.636E-09	2.677E-09	2.718E-09	2.899E-09	3.145E-09	3.593E-09	4.894E-09	5.661E-09	6.470E-09	6.743E-09
SM151	6.298E-01	6.316E-01	6.315E-01	6.306E-01	6.294E-01	6.269E-01	6.174E-01	6.080E-01	5.850E-01	5.416E-01
EU152	3.359E-02	3.353E-02	3.345E-02	3.316E-02	3.275E-02	3.192E-02	2.883E-02	2.604E-02	2.018E-02	1.213E-02
EU154	1.038E+00	1.035E+00	1.032E+00	1.018E+00	9.973E-01	9.579E-01	8.154E-01	6.941E-01	4.640E-01	2.074E-01
EU155	1.454E+00	1.446E+00	1.439E+00	1.404E+00	1.356E+00	1.264E+00	9.563E-01	7.232E-01	3.597E-01	8.900E-02
EU156	6.481E+00	3.452E+00	1.821E+00	1.015E-01	1.577E-03	3.801E-07	1.283E-21	4.335E-36	0.000E+00	0.000E+00
GD153	3.684E-02	3.539E-02	3.400E-02	2.837E-02	2.184E-02	1.295E-02	1.601E-03	1.978E-04	1.062E-06	3.063E-11
TB160	5.666E-02	4.955E-02	4.332E-02	2.362E-02	9.850E-03	1.712E-03	1.564E-06	1.429E-09	3.604E-17	2.291E-32
TL206	2.670E-05	3.856E-12	3.856E-12	3.856E-12	3.856E-12	3.856E-12	3.856E-12	3.856E-12	3.856E-12	3.856E-12
TL207	2.123E-09	2.126E-09	2.136E-09	2.268E-09	2.534E-09	3.159E-09	5.835E-09	8.871E-09	1.821E-08	4.320E-08
TL208	3.444E-07	3.499E-07	3.590E-07	4.048E-07	4.596E-07	5.566E-07	8.187E-07	9.543E-07	1.053E-06	1.000E-06
PB210	1.399E-13	1.434E-13	1.455E-13	1.488E-13	1.495E-13	1.509E-13	1.684E-13	2.119E-13	4.940E-13	2.286E-12
PB211	2.129E-09	2.132E-09	2.142E-09	2.275E-09	2.541E-09	3.167E-09	5.851E-09	8.896E-09	1.826E-08	4.332E-08

Table F.5 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	9.585E-07	9.739E-07	9.991E-07	1.127E-06	1.279E-06	1.549E-06	2.278E-06	2.656E-06	2.930E-06	2.783E-06
BI211	2.130E-09	2.132E-09	2.142E-09	2.275E-09	2.541E-09	3.167E-09	5.851E-09	8.896E-09	1.826E-08	4.332E-08
BI212	9.585E-07	9.739E-07	9.991E-07	1.127E-06	1.279E-06	1.549E-06	2.278E-06	2.656E-06	2.930E-06	2.783E-06
PO212	6.141E-07	6.240E-07	6.401E-07	7.218E-07	8.196E-07	9.926E-07	1.460E-06	1.702E-06	1.877E-06	1.783E-06
PO215	2.129E-09	2.132E-09	2.142E-09	2.275E-09	2.541E-09	3.167E-09	5.851E-09	8.896E-09	1.826E-08	4.332E-08
PO216	9.585E-07	9.739E-07	9.991E-07	1.127E-06	1.279E-06	1.549E-06	2.278E-06	2.656E-06	2.930E-06	2.783E-06
RN219	2.129E-09	2.132E-09	2.142E-09	2.275E-09	2.541E-09	3.167E-09	5.851E-09	8.896E-09	1.826E-08	4.332E-08
RN220	9.585E-07	9.739E-07	9.991E-07	1.127E-06	1.279E-06	1.549E-06	2.278E-06	2.656E-06	2.930E-06	2.783E-06
FR223	2.935E-11	2.991E-11	3.047E-11	3.306E-11	3.688E-11	4.483E-11	8.065E-11	1.226E-10	2.518E-10	5.974E-10
RA223	2.129E-09	2.132E-09	2.142E-09	2.275E-09	2.541E-09	3.167E-09	5.851E-09	8.896E-09	1.826E-08	4.332E-08
RA224	9.585E-07	9.739E-07	9.991E-07	1.127E-06	1.279E-06	1.549E-06	2.278E-06	2.656E-06	2.930E-06	2.783E-06
RA226	1.515E-13	1.554E-13	1.594E-13	1.781E-13	2.071E-13	2.726E-13	6.371E-13	1.173E-12	3.327E-12	1.163E-11
RA228	5.569E-10	5.612E-10	5.655E-10	5.847E-10	6.118E-10	6.639E-10	8.475E-10	9.967E-10	1.259E-09	1.509E-09
AC227	2.127E-09	2.167E-09	2.208E-09	2.396E-09	2.672E-09	3.248E-09	5.844E-09	8.883E-09	1.824E-08	4.329E-08
TH227	2.102E-09	2.109E-09	2.129E-09	2.286E-09	2.554E-09	3.118E-09	5.770E-09	8.773E-09	1.801E-08	4.272E-08
TH228	9.568E-07	9.829E-07	1.009E-06	1.122E-06	1.274E-06	1.544E-06	2.275E-06	2.650E-06	2.928E-06	2.783E-06
TH229	3.212E-10	3.275E-10	3.339E-10	3.629E-10	4.050E-10	4.894E-10	8.271E-10	1.165E-09	2.010E-09	3.701E-09
TH230	2.344E-10	2.379E-10	2.413E-10	2.571E-10	2.799E-10	3.262E-10	5.186E-10	7.227E-10	1.283E-09	2.609E-09
TH231	4.815E-04	2.312E-04	2.311E-04	2.311E-04	2.311E-04	2.311E-04	2.311E-04	2.311E-04	2.311E-04	2.311E-04
TH232	1.646E-09	1.646E-09	1.646E-09	1.646E-09	1.646E-09	1.647E-09	1.647E-09	1.647E-09	1.647E-09	1.647E-09
TH234	2.039E-05	2.007E-05	1.985E-05	1.949E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05
PA231	3.539E-08	3.562E-08	3.582E-08	3.669E-08	3.793E-08	4.040E-08	5.019E-08	5.998E-08	8.442E-08	1.333E-07
PA233	1.265E-01	8.837E-02	6.172E-02	1.224E-02	1.258E-03	1.009E-04	9.009E-05	9.010E-05	9.016E-05	9.036E-05
PA234M	2.398E-04	2.007E-05	1.985E-05	1.949E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05
PA234	4.413E-04	2.609E-08	2.581E-08	2.533E-08	2.525E-08	2.524E-08	2.524E-08	2.524E-08	2.524E-08	2.524E-08
U232	2.845E-06	2.855E-06	2.858E-06	2.870E-06	2.887E-06	2.916E-06	2.988E-06	3.009E-06	2.954E-06	2.715E-06
U233	1.730E-06	1.747E-06	1.760E-06	1.783E-06	1.788E-06	1.789E-06	1.790E-06	1.791E-06	1.793E-06	1.796E-06
U234	1.004E-05	1.005E-05	1.006E-05	1.012E-05	1.020E-05	1.037E-05	1.102E-05	1.167E-05	1.324E-05	1.621E-05
U235	2.311E-04	2.311E-04	2.311E-04	2.311E-04	2.311E-04	2.311E-04	2.311E-04	2.311E-04	2.311E-04	2.311E-04
U236	3.578E-04	3.578E-04	3.578E-04	3.578E-04	3.578E-04	3.578E-04	3.578E-04	3.578E-04	3.578E-04	3.578E-04
U237	1.505E+02	3.573E+01	8.486E+00	1.282E-02	1.894E-06	7.824E-07	7.106E-07	6.454E-07	5.074E-07	3.137E-07
U238	1.942E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05	1.942E-05
NP237	8.878E-05	8.977E-05	9.000E-05	9.007E-05	9.008E-05	9.008E-05	9.009E-05	9.010E-05	9.016E-05	9.036E-05
PU236	1.070E-05	1.064E-05	1.054E-05	1.011E-05	9.511E-06	8.423E-06	5.181E-06	3.187E-06	9.459E-07	8.335E-08
PU237	2.932E-05	2.370E-05	1.916E-05	7.325E-06	1.830E-06	1.142E-07	1.732E-12	2.627E-17	2.353E-29	0.000E+00
PU238	1.159E-01	1.167E-01	1.167E-01	1.168E-01	1.168E-01	1.166E-01	1.150E-01	1.132E-01	1.088E-01	1.006E-01

Table F.5 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	5.430E-02	5.449E-02	5.449E-02	5.449E-02	5.449E-02	5.449E-02	5.449E-02	5.449E-02	5.448E-02	5.446E-02
PU240	2.166E-02	2.166E-02	2.166E-02	2.165E-02	2.165E-02	2.165E-02	2.165E-02	2.164E-02	2.163E-02	2.161E-02
PU241	3.346E+00	3.340E+00	3.334E+00	3.306E+00	3.267E+00	3.189E+00	2.897E+00	2.631E+00	2.069E+00	1.279E+00
PU242	6.787E-06	6.788E-06	6.788E-06	6.788E-06	6.788E-06	6.788E-06	6.788E-06	6.788E-06	6.788E-06	6.788E-06
PU244	5.014E-14	5.014E-14	5.014E-14	5.014E-14	5.014E-14	5.014E-14	5.014E-14	5.014E-14	5.014E-14	5.014E-14
AM241	5.138E-03	5.343E-03	5.548E-03	6.468E-03	7.782E-03	1.036E-02	2.006E-02	2.883E-02	4.726E-02	7.260E-02
AM242M	1.026E-04	1.025E-04	1.025E-04	1.024E-04	1.023E-04	1.021E-04	1.012E-04	1.003E-04	9.800E-05	9.363E-05
AM242	4.314E-01	1.022E-04	1.020E-04	1.019E-04	1.018E-04	1.016E-04	1.007E-04	9.976E-05	9.751E-05	9.317E-05
AM243	1.205E-05	1.206E-05	1.206E-05	1.206E-05	1.206E-05	1.206E-05	1.206E-05	1.206E-05	1.205E-05	1.204E-05
CM242	2.141E-01	2.031E-01	1.914E-01	1.463E-01	9.934E-02	4.581E-02	2.142E-03	1.753E-04	8.072E-05	7.705E-05
CM243	1.672E-05	1.670E-05	1.668E-05	1.661E-05	1.651E-05	1.631E-05	1.554E-05	1.480E-05	1.311E-05	1.028E-05
CM244	4.465E-04	4.464E-04	4.458E-04	4.428E-04	4.386E-04	4.303E-04	3.986E-04	3.692E-04	3.050E-04	2.080E-04
CM245	1.055E-08	1.055E-08	1.055E-08	1.055E-08	1.055E-08	1.055E-08	1.054E-08	1.054E-08	1.054E-08	1.053E-08
CM246	2.973E-10	2.973E-10	2.973E-10	2.973E-10	2.973E-10	2.973E-10	2.972E-10	2.971E-10	2.969E-10	2.964E-10
CM247	1.918E-16	1.918E-16	1.918E-16	1.918E-16	1.918E-16	1.918E-16	1.918E-16	1.918E-16	1.918E-16	1.918E-16
Subtotal Ci**	1.149E+04	8.031E+03	6.313E+03	3.504E+03	2.136E+03	1.248E+03	5.345E+02	3.731E+02	2.628E+02	1.875E+02
Total Ci***	8.059E+04	8.235E+03	6.378E+03	3.541E+03	2.161E+03	1.262E+03	5.397E+02	3.757E+02	2.634E+02	1.877E+02

• Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table F.6 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.6 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.6

BURNUP (BU)

BU: U-235 30.0 g
 BU: % U-235 21.90%
 BU: MWd 28.51
 BU: MWd/MTU 145440
 U-235 DEPL 36.1 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	3.997E-01	3.988E-01	3.979E-01	3.941E-01	3.886E-01	3.778E-01	3.377E-01	3.018E-01	2.281E-01	1.301E-01
BE 10	4.411E-07	4.411E-07	4.411E-07	4.411E-07	4.411E-07	4.411E-07	4.411E-07	4.411E-07	4.411E-07	4.411E-07
C 14	2.817E-03	2.817E-03	2.817E-03	2.817E-03	2.817E-03	2.817E-03	2.816E-03	2.815E-03	2.813E-03	2.810E-03
CL 36	6.116E-05	6.116E-05	6.116E-05	6.116E-05	6.116E-05	6.116E-05	6.116E-05	6.116E-05	6.116E-05	6.116E-05
CR 51	1.562E+02	1.100E+02	7.751E+01	1.593E+01	1.625E+00	1.691E-02	1.983E-10	2.325E-18	3.460E-38	0.000E+00
MN 54	9.304E+00	9.019E+00	8.743E+00	7.599E+00	6.207E+00	4.141E+00	8.201E-01	1.624E-01	2.835E-03	8.642E-07
FE 55	6.464E+01	6.398E+01	6.333E+01	6.047E+01	5.658E+01	4.952E+01	2.907E+01	1.706E+01	4.503E+00	3.137E-01
FE 59	2.947E+00	2.375E+00	1.915E+00	7.227E-01	1.772E-01	1.066E-02	1.394E-07	1.824E-12	1.129E-24	0.000E+00
CO 60	5.399E+01	5.372E+01	5.345E+01	5.224E+01	5.055E+01	4.734E+01	3.639E+01	2.798E+01	1.450E+01	3.896E+00
NI 59	1.163E-02	1.163E-02	1.163E-02	1.163E-02	1.163E-02	1.163E-02	1.163E-02	1.163E-02	1.163E-02	1.163E-02
NI 63	1.458E+00	1.458E+00	1.457E+00	1.455E+00	1.453E+00	1.447E+00	1.426E+00	1.404E+00	1.352E+00	1.254E+00
ZN 65	1.171E+00	1.125E+00	1.082E+00	9.036E-01	6.972E-01	4.150E-01	5.211E-02	6.544E-03	3.656E-05	1.141E-09
SE 79	3.701E-04	3.701E-04	3.701E-04	3.701E-04	3.701E-04	3.701E-04	3.701E-04	3.701E-04	3.701E-04	3.700E-04
KR 85	9.997E+00	9.974E+00	9.950E+00	9.839E+00	9.681E+00	9.374E+00	8.237E+00	7.239E+00	5.240E+00	2.746E+00
RB 87	2.482E-08	2.482E-08	2.482E-08	2.482E-08	2.482E-08	2.482E-08	2.482E-08	2.482E-08	2.482E-08	2.482E-08
SR 89	7.508E+02	6.197E+02	5.113E+02	2.146E+02	6.133E+01	5.008E+00	2.228E-04	9.915E-09	1.309E-19	0.000E+00
SR 90	8.409E+01	8.402E+01	8.394E+01	8.359E+01	8.310E+01	8.212E+01	7.830E+01	7.466E+01	6.629E+01	5.226E+01
Y 90	8.738E+01	8.412E+01	8.396E+01	8.362E+01	8.312E+01	8.214E+01	7.832E+01	7.468E+01	6.631E+01	5.227E+01
Y 91	9.197E+02	7.847E+02	6.647E+02	3.142E+02	1.066E+02	1.226E+01	2.151E-03	3.773E-07	1.537E-16	2.552E-35
ZR 93	2.180E-03	2.181E-03	2.181E-03	2.181E-03	2.181E-03	2.181E-03	2.181E-03	2.181E-03	2.181E-03	2.181E-03
ZR 95	1.082E+03	9.296E+02	7.988E+02	4.025E+02	1.498E+02	2.075E+01	7.626E-03	2.804E-06	7.262E-15	4.875E-32
NB 93M	1.976E-04	2.013E-04	2.049E-04	2.213E-04	2.447E-04	2.907E-04	4.631E-04	6.189E-04	9.453E-04	1.394E-03

Table F.6 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	1.756E-04	1.756E-04	1.756E-04	1.756E-04	1.756E-04	1.756E-04	1.756E-04	1.756E-04	1.756E-04	1.755E-04
NB 95	1.108E+03	1.081E+03	1.028E+03	6.796E+02	2.970E+02	4.507E+01	1.692E-02	6.223E-06	1.613E-14	1.083E-31
NB 95M	7.603E+00	6.868E+00	5.924E+00	2.986E+00	1.111E+00	1.538E-01	5.657E-05	2.079E-08	5.387E-17	3.616E-34
MO 93	7.192E-05	7.192E-05	7.192E-05	7.192E-05	7.192E-05	7.191E-05	7.188E-05	7.185E-05	7.178E-05	7.164E-05
TC 99	1.232E-02	1.235E-02	1.235E-02	1.235E-02	1.235E-02	1.235E-02	1.235E-02	1.235E-02	1.235E-02	1.235E-02
RU103	5.149E+02	4.022E+02	3.142E+02	1.029E+02	2.057E+01	8.217E-01	2.092E-06	5.326E-12	5.508E-26	0.000E+00
RU106	7.390E+01	7.198E+01	7.011E+01	6.224E+01	5.241E+01	3.717E+01	9.405E+00	2.379E+00	7.661E-02	7.941E-05
RH103M	4.638E+02	3.626E+02	2.833E+02	9.278E+01	1.854E+01	7.407E-01	1.886E-06	4.801E-12	4.966E-26	0.000E+00
RH106	7.631E+01	7.198E+01	7.011E+01	6.224E+01	5.241E+01	3.717E+01	9.405E+00	2.379E+00	7.661E-02	7.942E-05
PD107	1.595E-05	1.595E-05	1.595E-05	1.595E-05	1.595E-05	1.595E-05	1.595E-05	1.595E-05	1.595E-05	1.595E-05
AG110	2.877E+00	1.485E-03	1.428E-03	1.198E-03	9.302E-04	5.607E-04	7.401E-05	9.770E-06	6.185E-08	2.479E-12
AG110M	1.160E-01	1.116E-01	1.074E-01	9.008E-02	6.994E-02	4.216E-02	5.565E-03	7.346E-04	4.651E-06	1.864E-10
AG111	5.304E+00	1.446E+00	3.930E-01	1.093E-03	2.248E-07	9.501E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.123E-02	1.122E-02	1.119E-02	1.110E-02	1.097E-02	1.071E-02	9.744E-03	8.861E-03	6.989E-03	4.347E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	2.488E-01	2.002E-01	1.610E-01	6.025E-02	1.459E-02	8.552E-04	1.010E-08	1.193E-13	5.718E-26	0.000E+00
IN114	3.742E-02	1.227E-02	1.009E-02	4.161E-03	1.160E-03	9.015E-05	3.286E-09	1.198E-13	9.619E-25	0.000E+00
IN114M	1.560E-02	1.283E-02	1.054E-02	4.349E-03	1.212E-03	9.419E-05	3.434E-09	1.253E-13	1.005E-24	0.000E+00
IN115M	2.501E+00	3.510E-02	4.617E-04	4.231E-06	1.024E-06	6.006E-08	7.093E-13	8.377E-18	4.016E-30	0.000E+00
SN119M	9.466E+00	9.098E+00	8.745E+00	7.312E+00	5.649E+00	3.370E+00	4.274E-01	5.420E-02	3.103E-04	1.018E-08
SN121M	1.365E-03	1.364E-03	1.364E-03	1.361E-03	1.356E-03	1.346E-03	1.310E-03	1.274E-03	1.189E-03	1.035E-03
SN123	1.404E+00	1.302E+00	1.208E+00	8.601E-01	5.271E-01	1.980E-01	3.938E-03	7.834E-05	4.372E-09	1.362E-17
SN125	5.634E+00	2.058E+00	7.524E-01	7.968E-03	1.127E-05	2.254E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	3.367E-04	3.367E-04	3.367E-04	3.367E-04	3.367E-04	3.367E-04	3.366E-04	3.366E-04	3.366E-04	3.366E-04
SB124	2.653E-01	2.257E-01	1.921E-01	9.275E-02	3.244E-02	3.966E-03	8.867E-07	1.983E-10	1.482E-19	8.280E-38
SB125	7.395E+00	7.358E+00	7.300E+00	6.998E+00	6.573E+00	5.801E+00	3.517E+00	2.133E+00	6.110E-01	5.011E-02
SB126	2.034E-01	9.300E-02	4.254E-02	1.284E-03	5.464E-05	4.713E-05	4.713E-05	4.713E-05	4.713E-05	4.712E-05
SB126M	9.147E-02	3.367E-04	3.367E-04	3.367E-04	3.367E-04	3.367E-04	3.366E-04	3.366E-04	3.366E-04	3.366E-04
TE123M	1.769E-03	1.631E-03	1.504E-03	1.042E-03	6.144E-04	2.135E-04	3.113E-06	4.539E-08	1.165E-12	7.678E-22
TE125M	1.637E+00	1.646E+00	1.652E+00	1.646E+00	1.583E+00	1.413E+00	8.586E-01	5.207E-01	1.491E-01	1.223E-02
TE127	2.638E+01	5.505E+00	3.323E+00	2.112E+00	1.182E+00	3.704E-01	3.571E-03	3.442E-05	3.139E-10	2.611E-20
TE127M	3.716E+00	3.513E+00	3.223E+00	2.156E+00	1.207E+00	3.782E-01	3.645E-03	3.514E-05	3.205E-10	2.666E-20
TE129	1.095E+02	8.065E+00	6.042E+00	1.639E+00	2.494E-01	5.779E-03	1.665E-09	4.800E-16	2.140E-32	0.000E+00
TE129M	1.646E+01	1.239E+01	9.282E+00	2.517E+00	3.832E-01	8.878E-03	2.559E-09	7.374E-16	3.288E-32	0.000E+00
I129	2.054E-05	2.057E-05	2.059E-05	2.063E-05	2.064E-05	2.064E-05	2.064E-05	2.064E-05	2.064E-05	2.064E-05
I131	4.555E+02	1.400E+02	4.187E+01	1.794E-01	6.879E-05	1.011E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.6 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	5.057E+00	3.788E+00	2.139E+00	7.388E-02	3.817E-04	9.251E-09	3.139E-27	1.065E-45	0.000E+00	0.000E+00
XE133	1.058E+03	2.045E+02	3.221E+01	7.554E-03	4.379E-08	1.472E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	3.355E+01	3.312E+01	3.270E+01	3.085E+01	2.837E+01	2.398E+01	1.225E+01	6.256E+00	1.166E+00	4.054E-02
CS135	8.915E-04	8.921E-04	8.921E-04	8.921E-04	8.921E-04	8.921E-04	8.921E-04	8.921E-04	8.921E-04	8.921E-04
CS136	1.249E+01	5.955E+00	2.839E+00	1.000E-01	8.006E-04	5.132E-08	8.664E-25	1.463E-41	0.000E+00	0.000E+00
CS137	8.812E+01	8.805E+01	8.797E+01	8.762E+01	8.711E+01	8.611E+01	8.223E+01	7.852E+01	6.995E+01	5.553E+01
BA136M	2.059E+00	9.814E-01	4.679E-01	1.648E-02	1.319E-04	8.457E-09	1.428E-25	2.410E-42	0.000E+00	0.000E+00
BA137M	8.341E+01	8.329E+01	8.322E+01	8.289E+01	8.241E+01	8.146E+01	7.779E+01	7.428E+01	6.618E+01	5.253E+01
BA140	9.713E+02	4.548E+02	2.130E+02	6.911E+00	4.918E-02	2.490E-06	1.636E-23	1.075E-40	0.000E+00	0.000E+00
LA140	9.786E+02	5.230E+02	2.451E+02	7.954E+00	5.659E-02	2.865E-06	1.883E-23	1.237E-40	0.000E+00	0.000E+00
CE141	9.229E+02	6.885E+02	5.109E+02	1.326E+02	1.895E+01	3.873E-01	6.742E-08	1.174E-14	1.484E-31	0.000E+00
CE142	2.648E-08	2.648E-08	2.648E-08	2.648E-08	2.648E-08	2.648E-08	2.648E-08	2.648E-08	2.648E-08	2.648E-08
CE144	8.487E+02	8.202E+02	7.927E+02	6.794E+02	5.439E+02	3.485E+02	5.877E+01	9.910E+00	1.157E-01	1.578E-05
PR143	9.216E+02	5.018E+02	2.454E+02	9.689E+00	9.147E-02	8.151E-06	5.142E-22	3.243E-38	0.000E+00	0.000E+00
PR144	8.496E+02	8.203E+02	7.927E+02	6.794E+02	5.439E+02	3.485E+02	5.877E+01	9.911E+00	1.157E-01	1.578E-05
PR144M	1.019E+01	9.843E+00	9.513E+00	8.153E+00	6.527E+00	4.182E+00	7.053E-01	1.189E-01	1.389E-03	1.894E-07
ND144	9.360E-13	9.465E-13	9.568E-13	9.988E-13	1.049E-12	1.121E-12	1.229E-12	1.247E-12	1.251E-12	1.251E-12
ND147	3.571E+02	1.486E+02	6.181E+01	1.174E+00	3.855E-03	4.157E-08	5.624E-28	7.609E-48	0.000E+00	0.000E+00
PM145	2.067E-05	2.095E-05	2.122E-05	2.234E-05	2.368E-05	2.558E-05	2.755E-05	2.635E-05	2.189E-05	1.481E-05
PM147	1.892E+02	1.897E+02	1.888E+02	1.810E+02	1.695E+02	1.485E+02	8.760E+01	5.166E+01	1.380E+01	9.844E-01
PM148M	2.019E+01	1.596E+01	1.262E+01	4.365E+00	9.436E-01	4.410E-02	2.104E-07	1.004E-12	4.993E-26	0.000E+00
PM148	7.894E+01	1.367E+01	2.807E+00	2.466E-01	5.315E-02	2.484E-03	1.185E-08	5.655E-14	2.812E-27	0.000E+00
SM145	2.111E-04	2.052E-04	1.994E-04	1.753E-04	1.455E-04	1.003E-04	2.266E-05	5.116E-06	1.240E-07	7.280E-11
SM147	3.033E-09	3.080E-09	3.127E-09	3.335E-09	3.618E-09	4.132E-09	5.626E-09	6.507E-09	7.435E-09	7.749E-09
SM151	6.449E-01	6.472E-01	6.470E-01	6.461E-01	6.449E-01	6.424E-01	6.325E-01	6.229E-01	5.994E-01	5.549E-01
EU152	3.576E-02	3.569E-02	3.562E-02	3.530E-02	3.486E-02	3.398E-02	3.070E-02	2.772E-02	2.149E-02	1.292E-02
EU154	1.576E+00	1.571E+00	1.567E+00	1.545E+00	1.514E+00	1.454E+00	1.238E+00	1.054E+00	7.043E-01	3.148E-01
EU155	1.718E+00	1.709E+00	1.700E+00	1.659E+00	1.602E+00	1.494E+00	1.130E+00	8.548E-01	4.252E-01	1.052E-01
EU156	9.018E+00	4.799E+00	2.533E+00	1.412E-01	2.192E-03	5.284E-07	1.784E-21	6.026E-36	0.000E+00	0.000E+00
GD153	4.908E-02	4.715E-02	4.530E-02	3.779E-02	2.911E-02	1.726E-02	2.132E-03	2.636E-04	1.415E-06	4.081E-11
TB160	7.483E-02	6.543E-02	5.722E-02	3.120E-02	1.301E-02	2.261E-03	2.066E-06	1.887E-09	4.759E-17	3.027E-32
TL206	3.349E-05	4.743E-12	4.743E-12	4.743E-12	4.743E-12	4.743E-12	4.743E-12	4.743E-12	4.743E-12	4.743E-12
TL207	2.216E-09	2.218E-09	2.229E-09	2.368E-09	2.647E-09	3.299E-09	6.051E-09	9.123E-09	1.840E-08	4.272E-08
TL208	4.490E-07	4.563E-07	4.684E-07	5.294E-07	6.028E-07	7.337E-07	1.095E-06	1.290E-06	1.445E-06	1.383E-06
PB210	2.266E-13	2.322E-13	2.357E-13	2.407E-13	2.413E-13	2.420E-13	2.593E-13	3.083E-13	6.466E-13	2.908E-12
PB211	2.222E-09	2.225E-09	2.235E-09	2.375E-09	2.654E-09	3.308E-09	6.068E-09	9.148E-09	1.845E-08	4.284E-08

Table F.6 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.250E-06	1.270E-06	1.304E-06	1.474E-06	1.678E-06	2.042E-06	3.048E-06	3.591E-06	4.022E-06	3.850E-06
BI211	2.223E-09	2.225E-09	2.235E-09	2.375E-09	2.654E-09	3.308E-09	6.068E-09	9.148E-09	1.845E-08	4.284E-08
BI212	1.250E-06	1.270E-06	1.304E-06	1.474E-06	1.678E-06	2.042E-06	3.048E-06	3.591E-06	4.022E-06	3.850E-06
PO212	8.006E-07	8.137E-07	8.352E-07	9.441E-07	1.075E-06	1.308E-06	1.953E-06	2.301E-06	2.577E-06	2.467E-06
PO215	2.222E-09	2.225E-09	2.235E-09	2.375E-09	2.654E-09	3.308E-09	6.068E-09	9.148E-09	1.845E-08	4.284E-08
PO216	1.250E-06	1.270E-06	1.304E-06	1.474E-06	1.678E-06	2.042E-06	3.048E-06	3.591E-06	4.022E-06	3.850E-06
RN219	2.222E-09	2.225E-09	2.235E-09	2.375E-09	2.654E-09	3.308E-09	6.068E-09	9.148E-09	1.845E-08	4.284E-08
RN220	1.250E-06	1.270E-06	1.304E-06	1.474E-06	1.678E-06	2.042E-06	3.048E-06	3.591E-06	4.022E-06	3.850E-06
FR223	3.062E-11	3.121E-11	3.181E-11	3.452E-11	3.852E-11	4.681E-11	8.364E-11	1.261E-10	2.544E-10	5.907E-10
RA223	2.222E-09	2.225E-09	2.235E-09	2.375E-09	2.654E-09	3.308E-09	6.068E-09	9.148E-09	1.845E-08	4.284E-08
RA224	1.250E-06	1.270E-06	1.304E-06	1.474E-06	1.678E-06	2.042E-06	3.048E-06	3.591E-06	4.022E-06	3.850E-06
RA226	1.807E-13	1.854E-13	1.901E-13	2.124E-13	2.471E-13	3.255E-13	7.646E-13	1.418E-12	4.107E-12	1.491E-11
RA228	5.549E-10	5.592E-10	5.635E-10	5.826E-10	6.096E-10	6.616E-10	8.446E-10	9.934E-10	1.255E-09	1.504E-09
AC227	2.219E-09	2.262E-09	2.305E-09	2.502E-09	2.792E-09	3.392E-09	6.061E-09	9.135E-09	1.843E-08	4.281E-08
TH227	2.193E-09	2.200E-09	2.222E-09	2.387E-09	2.668E-09	3.256E-09	5.985E-09	9.022E-09	1.820E-08	4.225E-08
TH228	1.247E-06	1.282E-06	1.316E-06	1.467E-06	1.671E-06	2.035E-06	3.043E-06	3.583E-06	4.019E-06	3.849E-06
TH229	3.814E-10	3.889E-10	3.965E-10	4.309E-10	4.811E-10	5.814E-10	9.830E-10	1.385E-09	2.390E-09	4.402E-09
TH230	2.796E-10	2.838E-10	2.879E-10	3.068E-10	3.344E-10	3.905E-10	6.283E-10	8.871E-10	1.624E-09	3.466E-09
TH231	5.315E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04
TH232	1.641E-09	1.641E-09	1.641E-09	1.641E-09	1.641E-09	1.641E-09	1.641E-09	1.641E-09	1.641E-09	1.642E-09
TH234	2.084E-05	2.034E-05	2.000E-05	1.943E-05	1.933E-05	1.932E-05	1.932E-05	1.932E-05	1.932E-05	1.932E-05
PA231	3.726E-08	3.749E-08	3.768E-08	3.850E-08	3.967E-08	4.200E-08	5.125E-08	6.049E-08	8.358E-08	1.297E-07
PA233	1.579E-01	1.103E-01	7.706E-02	1.530E-02	1.589E-03	1.448E-04	1.314E-04	1.314E-04	1.315E-04	1.318E-04
PA234M	3.643E-04	2.034E-05	2.000E-05	1.943E-05	1.933E-05	1.932E-05	1.932E-05	1.932E-05	1.932E-05	1.932E-05
PA234	6.907E-04	2.644E-08	2.600E-08	2.526E-08	2.512E-08	2.511E-08	2.511E-08	2.511E-08	2.511E-08	2.511E-08
U232	3.758E-06	3.773E-06	3.779E-06	3.803E-06	3.837E-06	3.895E-06	4.050E-06	4.113E-06	4.075E-06	3.758E-06
U233	2.053E-06	2.076E-06	2.091E-06	2.120E-06	2.127E-06	2.127E-06	2.129E-06	2.130E-06	2.133E-06	2.138E-06
U234	1.203E-05	1.206E-05	1.208E-05	1.218E-05	1.233E-05	1.263E-05	1.380E-05	1.496E-05	1.778E-05	2.310E-05
U235	2.183E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04	2.183E-04
U236	4.258E-04	4.258E-04	4.258E-04	4.258E-04	4.258E-04	4.258E-04	4.258E-04	4.258E-04	4.258E-04	4.258E-04
U237	2.243E+02	5.326E+01	1.265E+01	1.911E-02	2.925E-06	1.265E-06	1.149E-06	1.044E-06	8.207E-07	5.073E-07
U238	1.932E-05	1.932E-05	1.932E-05	1.932E-05	1.932E-05	1.932E-05	1.932E-05	1.932E-05	1.932E-05	1.932E-05
NP237	1.294E-04	1.309E-04	1.313E-04	1.314E-04	1.314E-04	1.314E-04	1.314E-04	1.314E-04	1.315E-04	1.318E-04
PU236	1.923E-05	1.912E-05	1.895E-05	1.817E-05	1.710E-05	1.514E-05	9.313E-06	5.729E-06	1.700E-06	1.498E-07
PU237	6.236E-05	5.041E-05	4.075E-05	1.558E-05	3.892E-06	2.429E-07	3.683E-12	5.586E-17	5.004E-29	0.000E+00
PU238	2.076E-01	2.091E-01	2.092E-01	2.093E-01	2.094E-01	2.091E-01	2.063E-01	2.031E-01	1.952E-01	1.804E-01

Table F.6 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	6.176E-02	6.200E-02	6.201E-02	6.201E-02	6.201E-02	6.201E-02	6.200E-02	6.200E-02	6.199E-02	6.197E-02
PU240	2.875E-02	2.875E-02	2.875E-02	2.874E-02	2.874E-02	2.874E-02	2.874E-02	2.873E-02	2.872E-02	2.869E-02
PU241	5.412E+00	5.402E+00	5.392E+00	5.347E+00	5.283E+00	5.158E+00	4.685E+00	4.255E+00	3.345E+00	2.068E+00
PU242	1.378E-05	1.378E-05	1.378E-05	1.378E-05	1.378E-05	1.378E-05	1.378E-05	1.378E-05	1.378E-05	1.378E-05
PU244	1.583E-13	1.583E-13	1.583E-13	1.583E-13	1.583E-13	1.583E-13	1.583E-13	1.583E-13	1.583E-13	1.583E-13
AM241	8.199E-03	8.531E-03	8.862E-03	1.035E-02	1.248E-02	1.665E-02	3.233E-02	4.652E-02	7.633E-02	1.173E-01
AM242M	1.861E-04	1.861E-04	1.861E-04	1.859E-04	1.857E-04	1.853E-04	1.836E-04	1.819E-04	1.778E-04	1.699E-04
AM242	8.632E-01	1.856E-04	1.851E-04	1.850E-04	1.848E-04	1.844E-04	1.827E-04	1.810E-04	1.770E-04	1.691E-04
AM243	3.002E-05	3.005E-05	3.005E-05	3.005E-05	3.005E-05	3.005E-05	3.004E-05	3.003E-05	3.002E-05	2.999E-05
CM242	4.314E-01	4.093E-01	3.856E-01	2.948E-01	2.001E-01	9.228E-02	4.299E-03	3.367E-04	1.465E-04	1.398E-04
CM243	4.172E-05	4.169E-05	4.165E-05	4.147E-05	4.122E-05	4.072E-05	3.879E-05	3.695E-05	3.272E-05	2.566E-05
CM244	1.389E-03	1.389E-03	1.387E-03	1.378E-03	1.365E-03	1.339E-03	1.240E-03	1.149E-03	9.488E-04	6.472E-04
CM245	4.008E-08	4.008E-08	4.008E-08	4.007E-08	4.007E-08	4.007E-08	4.007E-08	4.006E-08	4.004E-08	4.001E-08
CM246	1.407E-09	1.407E-09	1.407E-09	1.407E-09	1.407E-09	1.407E-09	1.406E-09	1.406E-09	1.405E-09	1.403E-09
CM247	1.122E-15	1.122E-15	1.122E-15	1.122E-15	1.122E-15	1.122E-15	1.122E-15	1.122E-15	1.122E-15	1.122E-15
Subtotal Ci**	1.379E+04	9.618E+03	7.559E+03	4.199E+03	2.562E+03	1.499E+03	6.428E+02	4.488E+02	3.162E+02	2.255E+02
Total Ci***	9.615E+04	9.869E+03	7.640E+03	4.245E+03	2.594E+03	1.517E+03	6.493E+02	4.520E+02	3.169E+02	2.257E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table F.7 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.7 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.7

BURNUP (BU)

BU: U-235 35.0 g
 BU: % U-235 25.55%
 BU: MWd 33.26
 BU: MWd/MTU 169680
 U-235 DEPL 41.96 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	4.661E-01	4.651E-01	4.641E-01	4.596E-01	4.533E-01	4.407E-01	3.939E-01	3.521E-01	2.660E-01	1.518E-01
BE 10	5.281E-07	5.281E-07	5.281E-07	5.281E-07	5.281E-07	5.281E-07	5.281E-07	5.281E-07	5.281E-07	5.281E-07
C 14	3.372E-03	3.372E-03	3.372E-03	3.372E-03	3.372E-03	3.371E-03	3.371E-03	3.370E-03	3.368E-03	3.364E-03
CL 36	7.301E-05	7.301E-05	7.301E-05	7.301E-05	7.301E-05	7.301E-05	7.301E-05	7.301E-05	7.301E-05	7.301E-05
CR 51	1.904E+02	1.342E+02	9.452E+01	1.943E+01	1.982E+00	2.062E-02	2.418E-10	2.835E-18	4.219E-38	0.000E+00
MN 54	1.126E+01	1.092E+01	1.058E+01	9.198E+00	7.512E+00	5.012E+00	9.926E-01	1.966E-01	3.432E-03	1.046E-06
FE 55	7.771E+01	7.692E+01	7.614E+01	7.270E+01	6.802E+01	5.953E+01	3.494E+01	2.051E+01	5.413E+00	3.771E-01
FE 59	3.609E+00	2.909E+00	2.344E+00	8.849E-01	2.170E-01	1.305E-02	1.707E-07	2.233E-12	1.382E-24	0.000E+00
CO 60	6.457E+01	6.425E+01	6.392E+01	6.248E+01	6.046E+01	5.662E+01	4.353E+01	3.347E+01	1.735E+01	4.659E+00
NI 59	1.382E-02	1.382E-02	1.382E-02	1.382E-02	1.382E-02	1.382E-02	1.382E-02	1.382E-02	1.382E-02	1.382E-02
NI 63	1.742E+00	1.742E+00	1.741E+00	1.739E+00	1.736E+00	1.729E+00	1.704E+00	1.678E+00	1.616E+00	1.499E+00
ZN 65	1.422E+00	1.366E+00	1.313E+00	1.097E+00	8.462E-01	5.037E-01	6.325E-02	7.942E-03	4.438E-05	1.385E-09
SE 79	4.314E-04	4.314E-04	4.314E-04	4.314E-04	4.314E-04	4.314E-04	4.314E-04	4.314E-04	4.313E-04	4.313E-04
KR 85	1.165E+01	1.162E+01	1.159E+01	1.146E+01	1.128E+01	1.092E+01	9.595E+00	8.432E+00	6.104E+00	3.199E+00
RB 87	2.887E-08	2.887E-08	2.887E-08	2.887E-08	2.887E-08	2.887E-08	2.887E-08	2.887E-08	2.887E-08	2.887E-08
SR 89	8.681E+02	7.165E+02	5.913E+02	2.481E+02	7.092E+01	5.792E+00	2.577E-04	1.146E-08	1.514E-19	0.000E+00
SR 90	9.792E+01	9.783E+01	9.774E+01	9.734E+01	9.676E+01	9.562E+01	9.117E+01	8.694E+01	7.719E+01	6.085E+01
Y 90	1.020E+02	9.797E+01	9.777E+01	9.736E+01	9.679E+01	9.564E+01	9.120E+01	8.696E+01	7.721E+01	6.087E+01
Y 91	1.064E+03	9.081E+02	7.693E+02	3.636E+02	1.233E+02	1.419E+01	2.490E-03	4.367E-07	1.779E-16	2.953E-35
ZR 93	2.547E-03	2.548E-03	2.548E-03	2.548E-03	2.548E-03	2.548E-03	2.548E-03	2.548E-03	2.548E-03	2.548E-03
ZR 95	1.258E+03	1.081E+03	9.289E+02	4.682E+02	1.742E+02	2.412E+01	8.867E-03	3.260E-06	8.445E-15	5.669E-32
NB 93M	2.308E-04	2.351E-04	2.394E-04	2.586E-04	2.860E-04	3.396E-04	5.411E-04	7.231E-04	1.105E-03	1.630E-03

Table F.7 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	2.097E-04	2.097E-04	2.097E-04	2.097E-04	2.097E-04	2.096E-04	2.096E-04	2.096E-04	2.096E-04	2.095E-04
NB 95	1.288E+03	1.257E+03	1.196E+03	7.902E+02	3.455E+02	5.240E+01	1.968E-02	7.236E-06	1.875E-14	1.259E-31
NB 95M	8.841E+00	7.986E+00	6.889E+00	3.473E+00	1.293E+00	1.789E-01	6.578E-05	2.418E-08	6.265E-17	4.205E-34
MO 93	8.610E-05	8.610E-05	8.610E-05	8.610E-05	8.609E-05	8.609E-05	8.605E-05	8.602E-05	8.593E-05	8.576E-05
TC 99	1.427E-02	1.432E-02	1.432E-02	1.432E-02	1.432E-02	1.432E-02	1.432E-02	1.432E-02	1.432E-02	1.432E-02
RU103	5.999E+02	4.686E+02	3.660E+02	1.199E+02	2.396E+01	9.572E-01	2.437E-06	6.204E-12	6.416E-26	0.000E+00
RU106	8.829E+01	8.599E+01	8.376E+01	7.435E+01	6.262E+01	4.441E+01	1.124E+01	2.843E+00	9.152E-02	9.487E-05
RH103M	5.402E+02	4.224E+02	3.300E+02	1.081E+02	2.160E+01	8.629E-01	2.197E-06	5.593E-12	5.784E-26	0.000E+00
RH106	9.173E+01	8.599E+01	8.376E+01	7.435E+01	6.262E+01	4.441E+01	1.124E+01	2.843E+00	9.152E-02	9.488E-05
PD107	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05
AG110	4.166E+00	2.118E-03	2.038E-03	1.710E-03	1.327E-03	8.001E-04	1.056E-04	1.394E-05	8.826E-08	3.538E-12
AG110M	1.656E-01	1.593E-01	1.532E-01	1.286E-01	9.981E-02	6.016E-02	7.941E-03	1.048E-03	6.637E-06	2.660E-10
AG111	6.399E+00	1.744E+00	4.741E-01	1.319E-03	2.712E-07	1.146E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.328E-02	1.326E-02	1.323E-02	1.312E-02	1.297E-02	1.267E-02	1.152E-02	1.047E-02	8.261E-03	5.139E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	2.917E-01	2.346E-01	1.888E-01	7.061E-02	1.710E-02	1.002E-03	1.184E-08	1.398E-13	6.702E-26	0.000E+00
IN114	5.385E-02	1.766E-02	1.452E-02	5.990E-03	1.669E-03	1.298E-04	4.730E-09	1.725E-13	1.384E-24	0.000E+00
IN114M	2.245E-02	1.846E-02	1.517E-02	6.259E-03	1.745E-03	1.355E-04	4.943E-09	1.802E-13	1.447E-24	0.000E+00
IN115M	2.926E+00	4.106E-02	5.401E-04	4.959E-06	1.201E-06	7.038E-08	8.312E-13	9.817E-18	4.706E-30	0.000E+00
SN119M	1.148E+01	1.104E+01	1.061E+01	8.870E+00	6.852E+00	4.089E+00	5.185E-01	6.575E-02	3.765E-04	1.234E-08
SN121M	1.633E-03	1.633E-03	1.632E-03	1.627E-03	1.622E-03	1.610E-03	1.567E-03	1.524E-03	1.421E-03	1.237E-03
SN123	1.662E+00	1.542E+00	1.430E+00	1.019E+00	6.242E-01	2.344E-01	4.663E-03	9.276E-05	5.178E-09	1.613E-17
SN125	6.738E+00	2.462E+00	8.999E-01	9.530E-03	1.348E-05	2.696E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	3.940E-04	3.940E-04	3.940E-04	3.940E-04	3.940E-04	3.940E-04	3.940E-04	3.940E-04	3.940E-04	3.939E-04
SB124	3.489E-01	2.970E-01	2.528E-01	1.220E-01	4.266E-02	5.217E-03	1.166E-06	2.608E-10	1.949E-19	1.089E-37
SB125	8.757E+00	8.714E+00	8.646E+00	8.288E+00	7.786E+00	6.871E+00	4.167E+00	2.527E+00	7.236E-01	5.936E-02
SB126	2.464E-01	1.127E-01	5.153E-02	1.553E-03	6.426E-05	5.516E-05	5.516E-05	5.516E-05	5.515E-05	5.515E-05
SB126M	1.084E-01	3.940E-04	3.940E-04	3.940E-04	3.940E-04	3.940E-04	3.940E-04	3.940E-04	3.940E-04	3.939E-04
TE123M	2.690E-03	2.481E-03	2.288E-03	1.586E-03	9.349E-04	3.249E-04	4.737E-06	6.906E-08	1.773E-12	1.168E-21
TE125M	1.937E+00	1.949E+00	1.956E+00	1.949E+00	1.875E+00	1.674E+00	1.017E+00	6.166E-01	1.766E-01	1.448E-02
TE127	3.077E+01	6.434E+00	3.889E+00	2.472E+00	1.384E+00	4.336E-01	4.180E-03	4.029E-05	3.674E-10	3.057E-20
TE127M	4.350E+00	4.112E+00	3.773E+00	2.524E+00	1.413E+00	4.427E-01	4.267E-03	4.113E-05	3.751E-10	3.121E-20
TE129	1.271E+02	9.364E+00	7.015E+00	1.903E+00	2.896E-01	6.710E-03	1.934E-09	5.573E-16	2.485E-32	0.000E+00
TE129M	1.911E+01	1.439E+01	1.078E+01	2.923E+00	4.449E-01	1.031E-02	2.971E-09	8.562E-16	3.817E-32	0.000E+00
I129	2.395E-05	2.398E-05	2.400E-05	2.405E-05	2.406E-05	2.406E-05	2.406E-05	2.406E-05	2.406E-05	2.406E-05
I131	5.271E+02	1.620E+02	4.845E+01	2.076E-01	7.961E-05	1.170E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.7 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	5.852E+00	4.383E+00	2.476E+00	8.549E-02	4.417E-04	1.071E-08	3.633E-27	1.232E-45	0.000E+00	0.000E+00
XE133	1.223E+03	2.363E+02	3.723E+01	8.731E-03	5.061E-08	1.701E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	4.693E+01	4.633E+01	4.573E+01	4.315E+01	3.967E+01	3.354E+01	1.713E+01	8.749E+00	1.631E+00	5.670E-02
CS135	9.806E-04	9.814E-04	9.814E-04	9.814E-04	9.814E-04	9.814E-04	9.814E-04	9.814E-04	9.814E-04	9.814E-04
CS136	1.657E+01	7.902E+00	3.768E+00	1.327E-01	1.062E-03	6.809E-08	1.150E-24	1.941E-41	0.000E+00	0.000E+00
CS137	1.028E+02	1.027E+02	1.026E+02	1.022E+02	1.016E+02	1.004E+02	9.590E+01	9.157E+01	8.158E+01	6.476E+01
BA136M	2.732E+00	1.302E+00	6.209E-01	2.187E-02	1.751E-04	1.122E-08	1.894E-25	3.198E-42	0.000E+00	0.000E+00
BA137M	9.728E+01	9.714E+01	9.705E+01	9.666E+01	9.611E+01	9.501E+01	9.072E+01	8.662E+01	7.718E+01	6.127E+01
BA140	1.122E+03	5.254E+02	2.460E+02	7.984E+00	5.681E-02	2.876E-06	1.890E-23	1.242E-40	0.000E+00	0.000E+00
LA140	1.132E+03	6.041E+02	2.831E+02	9.188E+00	6.538E-02	3.310E-06	2.175E-23	1.429E-40	0.000E+00	0.000E+00
CE141	1.066E+03	7.953E+02	5.901E+02	1.532E+02	2.189E+01	4.473E-01	7.787E-08	1.356E-14	1.715E-31	0.000E+00
CE142	3.067E-08	3.067E-08	3.067E-08	3.067E-08	3.067E-08	3.067E-08	3.067E-08	3.067E-08	3.067E-08	3.067E-08
CE144	9.874E+02	9.543E+02	9.223E+02	7.905E+02	6.328E+02	4.055E+02	6.838E+01	1.153E+01	1.346E-01	1.836E-05
PR143	1.064E+03	5.793E+02	2.833E+02	1.119E+01	1.056E-01	9.410E-06	5.935E-22	3.744E-38	0.000E+00	0.000E+00
PR144	9.887E+02	9.543E+02	9.223E+02	7.905E+02	6.328E+02	4.055E+02	6.838E+01	1.153E+01	1.346E-01	1.836E-05
PR144M	1.186E+01	1.145E+01	1.107E+01	9.486E+00	7.593E+00	4.866E+00	8.205E-01	1.384E-01	1.616E-03	2.203E-07
ND144	1.111E-12	1.124E-12	1.136E-12	1.184E-12	1.243E-12	1.327E-12	1.452E-12	1.473E-12	1.478E-12	1.478E-12
ND147	4.127E+02	1.718E+02	7.143E+01	1.356E+00	4.454E-03	4.804E-08	6.499E-28	8.792E-48	0.000E+00	0.000E+00
PM145	2.456E-05	2.490E-05	2.523E-05	2.658E-05	2.820E-05	3.049E-05	3.289E-05	3.148E-05	2.616E-05	1.769E-05
PM147	2.105E+02	2.112E+02	2.102E+02	2.016E+02	1.887E+02	1.654E+02	9.754E+01	5.752E+01	1.536E+01	1.096E+00
PM148M	2.532E+01	2.001E+01	1.582E+01	5.473E+00	1.183E+00	5.530E-02	2.639E-07	1.259E-12	6.261E-26	0.000E+00
PM148	1.063E+02	1.834E+01	3.716E+00	3.093E-01	6.664E-02	3.115E-03	1.486E-08	7.091E-14	3.527E-27	0.000E+00
SM145	2.546E-04	2.474E-04	2.405E-04	2.114E-04	1.755E-04	1.210E-04	2.732E-05	6.169E-06	1.495E-07	8.779E-11
SM147	3.389E-09	3.441E-09	3.494E-09	3.725E-09	4.041E-09	4.613E-09	6.276E-09	7.257E-09	8.291E-09	8.641E-09
SM151	6.513E-01	6.540E-01	6.538E-01	6.529E-01	6.516E-01	6.491E-01	6.392E-01	6.295E-01	6.057E-01	5.608E-01
EU152	3.623E-02	3.615E-02	3.608E-02	3.577E-02	3.531E-02	3.442E-02	3.109E-02	2.808E-02	2.177E-02	1.308E-02
EU154	2.260E+00	2.253E+00	2.246E+00	2.215E+00	2.171E+00	2.085E+00	1.774E+00	1.511E+00	1.010E+00	4.513E-01
EU155	2.026E+00	2.014E+00	2.004E+00	1.956E+00	1.889E+00	1.761E+00	1.332E+00	1.007E+00	5.011E-01	1.239E-01
EU156	1.228E+01	6.529E+00	3.446E+00	1.921E-01	2.982E-03	7.189E-07	2.428E-21	8.199E-36	0.000E+00	0.000E+00
GD153	6.157E-02	5.916E-02	5.683E-02	4.741E-02	3.651E-02	2.164E-02	2.676E-03	3.307E-04	1.775E-06	5.120E-11
TB160	9.623E-02	8.414E-02	7.357E-02	4.012E-02	1.673E-02	2.908E-03	2.656E-06	2.427E-09	6.120E-17	3.892E-32
TL206	4.090E-05	5.678E-12	5.678E-12	5.678E-12	5.678E-12	5.678E-12	5.678E-12	5.678E-12	5.678E-12	5.678E-12
TL207	2.297E-09	2.300E-09	2.312E-09	2.457E-09	2.749E-09	3.427E-09	6.252E-09	9.355E-09	1.856E-08	4.221E-08
TL208	5.664E-07	5.759E-07	5.915E-07	6.704E-07	7.657E-07	9.370E-07	1.422E-06	1.694E-06	1.926E-06	1.859E-06
PB210	3.470E-13	3.557E-13	3.611E-13	3.686E-13	3.689E-13	3.683E-13	3.832E-13	4.361E-13	8.319E-13	3.640E-12
PB211	2.304E-09	2.307E-09	2.318E-09	2.464E-09	2.756E-09	3.436E-09	6.270E-09	9.382E-09	1.861E-08	4.232E-08

Table F.7 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.576E-06	1.603E-06	1.646E-06	1.866E-06	2.131E-06	2.608E-06	3.957E-06	4.714E-06	5.361E-06	5.174E-06
BI211	2.306E-09	2.307E-09	2.318E-09	2.464E-09	2.756E-09	3.436E-09	6.270E-09	9.382E-09	1.861E-08	4.232E-08
BI212	1.576E-06	1.603E-06	1.646E-06	1.866E-06	2.131E-06	2.608E-06	3.957E-06	4.714E-06	5.361E-06	5.174E-06
PO212	1.010E-06	1.027E-06	1.055E-06	1.195E-06	1.365E-06	1.671E-06	2.535E-06	3.020E-06	3.435E-06	3.315E-06
PO215	2.304E-09	2.307E-09	2.318E-09	2.464E-09	2.756E-09	3.436E-09	6.270E-09	9.382E-09	1.861E-08	4.232E-08
PO216	1.576E-06	1.603E-06	1.646E-06	1.866E-06	2.131E-06	2.608E-06	3.957E-06	4.714E-06	5.361E-06	5.174E-06
RN219	2.304E-09	2.307E-09	2.318E-09	2.464E-09	2.756E-09	3.436E-09	6.270E-09	9.382E-09	1.861E-08	4.232E-08
RN220	1.576E-06	1.603E-06	1.646E-06	1.866E-06	2.131E-06	2.608E-06	3.957E-06	4.714E-06	5.361E-06	5.174E-06
FR223	3.175E-11	3.237E-11	3.299E-11	3.584E-11	4.001E-11	4.863E-11	8.641E-11	1.293E-10	2.566E-10	5.837E-10
RA223	2.304E-09	2.307E-09	2.318E-09	2.464E-09	2.756E-09	3.436E-09	6.270E-09	9.382E-09	1.861E-08	4.232E-08
RA224	1.576E-06	1.603E-06	1.646E-06	1.866E-06	2.131E-06	2.608E-06	3.957E-06	4.714E-06	5.361E-06	5.174E-06
RA226	2.095E-13	2.149E-13	2.204E-13	2.463E-13	2.866E-13	3.779E-13	8.938E-13	1.674E-12	4.972E-12	1.884E-11
RA228	5.528E-10	5.571E-10	5.614E-10	5.804E-10	6.074E-10	6.592E-10	8.416E-10	9.899E-10	1.251E-09	1.499E-09
AC227	2.301E-09	2.346E-09	2.391E-09	2.597E-09	2.900E-09	3.524E-09	6.262E-09	9.368E-09	1.860E-08	4.229E-08
TH227	2.275E-09	2.282E-09	2.305E-09	2.477E-09	2.771E-09	3.383E-09	6.183E-09	9.252E-09	1.836E-08	4.174E-08
TH228	1.574E-06	1.618E-06	1.663E-06	1.858E-06	2.122E-06	2.599E-06	3.950E-06	4.704E-06	5.357E-06	5.173E-06
TH229	4.408E-10	4.495E-10	4.582E-10	4.980E-10	5.559E-10	6.719E-10	1.136E-09	1.600E-09	2.762E-09	5.089E-09
TH230	3.244E-10	3.293E-10	3.341E-10	3.563E-10	3.888E-10	4.553E-10	7.435E-10	1.066E-09	2.022E-09	4.541E-09
TH231	5.871E-04	2.056E-04	2.055E-04	2.055E-04	2.055E-04	2.055E-04	2.055E-04	2.055E-04	2.055E-04	2.055E-04
TH232	1.636E-09	1.636E-09	1.636E-09	1.636E-09	1.636E-09	1.636E-09	1.636E-09	1.636E-09	1.636E-09	1.636E-09
TH234	2.148E-05	2.073E-05	2.023E-05	1.938E-05	1.923E-05	1.922E-05	1.922E-05	1.922E-05	1.922E-05	1.922E-05
PA231	3.907E-08	3.928E-08	3.947E-08	4.024E-08	4.134E-08	4.353E-08	5.224E-08	6.095E-08	8.268E-08	1.261E-07
PA233	1.920E-01	1.341E-01	9.370E-02	1.862E-02	1.953E-03	1.976E-04	1.813E-04	1.813E-04	1.814E-04	1.819E-04
PA234M	5.315E-04	2.073E-05	2.023E-05	1.938E-05	1.923E-05	1.922E-05	1.922E-05	1.922E-05	1.922E-05	1.922E-05
PA234	1.026E-03	2.695E-08	2.630E-08	2.519E-08	2.500E-08	2.498E-08	2.498E-08	2.498E-08	2.498E-08	2.498E-08
U232	4.810E-06	4.832E-06	4.842E-06	4.885E-06	4.943E-06	5.047E-06	5.329E-06	5.460E-06	5.460E-06	5.055E-06
U233	2.368E-06	2.395E-06	2.414E-06	2.449E-06	2.457E-06	2.459E-06	2.460E-06	2.462E-06	2.466E-06	2.474E-06
U234	1.406E-05	1.410E-05	1.414E-05	1.431E-05	1.455E-05	1.504E-05	1.699E-05	1.890E-05	2.356E-05	3.234E-05
U235	2.055E-04	2.055E-04	2.055E-04	2.055E-04	2.055E-04	2.055E-04	2.055E-04	2.055E-04	2.055E-04	2.055E-04
U236	4.923E-04	4.923E-04	4.923E-04	4.923E-04	4.923E-04	4.923E-04	4.923E-04	4.923E-04	4.923E-04	4.923E-04
U237	3.164E+02	7.515E+01	1.785E+01	2.697E-02	4.219E-06	1.876E-06	1.703E-06	1.547E-06	1.216E-06	7.519E-07
U238	1.922E-05	1.922E-05	1.922E-05	1.922E-05	1.922E-05	1.922E-05	1.922E-05	1.922E-05	1.922E-05	1.922E-05
NP237	1.785E-04	1.806E-04	1.811E-04	1.812E-04	1.812E-04	1.812E-04	1.813E-04	1.813E-04	1.814E-04	1.819E-04
PU236	3.183E-05	3.165E-05	3.136E-05	3.007E-05	2.829E-05	2.506E-05	1.541E-05	9.481E-06	2.814E-06	2.480E-07
PU237	1.205E-04	9.742E-05	7.874E-05	3.011E-05	7.521E-06	4.694E-07	7.119E-12	1.080E-16	9.671E-29	0.000E+00
PU238	3.424E-01	3.449E-01	3.450E-01	3.454E-01	3.456E-01	3.452E-01	3.406E-01	3.353E-01	3.223E-01	2.979E-01

Table F.7 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	6.826E-02	6.855E-02	6.856E-02	6.856E-02	6.856E-02	6.856E-02	6.855E-02	6.855E-02	6.854E-02	6.852E-02
PU240	3.600E-02	3.600E-02	3.600E-02	3.600E-02	3.600E-02	3.599E-02	3.599E-02	3.598E-02	3.596E-02	3.593E-02
PU241	8.022E+00	8.007E+00	7.993E+00	7.926E+00	7.832E+00	7.645E+00	6.944E+00	6.307E+00	4.959E+00	3.065E+00
PU242	2.497E-05	2.498E-05	2.498E-05	2.498E-05	2.498E-05	2.498E-05	2.498E-05	2.498E-05	2.498E-05	2.498E-05
PU244	4.230E-13	4.230E-13	4.230E-13	4.230E-13	4.230E-13	4.230E-13	4.230E-13	4.230E-13	4.230E-13	4.230E-13
AM241	1.197E-02	1.247E-02	1.296E-02	1.516E-02	1.831E-02	2.450E-02	4.774E-02	6.878E-02	1.130E-01	1.737E-01
AM242M	3.011E-04	3.010E-04	3.009E-04	3.007E-04	3.004E-04	2.997E-04	2.970E-04	2.943E-04	2.876E-04	2.748E-04
AM242	1.540E+00	3.002E-04	2.994E-04	2.992E-04	2.989E-04	2.982E-04	2.955E-04	2.928E-04	2.862E-04	2.735E-04
AM243	6.492E-05	6.499E-05	6.499E-05	6.499E-05	6.499E-05	6.499E-05	6.497E-05	6.496E-05	6.493E-05	6.487E-05
CM242	7.753E-01	7.355E-01	6.930E-01	5.298E-01	3.597E-01	1.658E-01	7.699E-03	5.782E-04	2.369E-04	2.261E-04
CM243	9.041E-05	9.033E-05	9.024E-05	8.986E-05	8.932E-05	8.824E-05	8.405E-05	8.006E-05	7.090E-05	5.560E-05
CM244	3.654E-03	3.653E-03	3.648E-03	3.624E-03	3.589E-03	3.521E-03	3.262E-03	3.022E-03	2.496E-03	1.703E-03
CM245	1.252E-07	1.252E-07	1.252E-07	1.252E-07	1.252E-07	1.252E-07	1.252E-07	1.252E-07	1.251E-07	1.250E-07
CM246	5.333E-09	5.333E-09	5.333E-09	5.333E-09	5.332E-09	5.332E-09	5.330E-09	5.329E-09	5.325E-09	5.317E-09
CM247	5.118E-15	5.118E-15	5.118E-15	5.118E-15	5.118E-15	5.118E-15	5.118E-15	5.118E-15	5.118E-15	5.118E-15
Subtotal Ci**	1.609E+04	1.120E+04	8.797E+03	4.892E+03	2.989E+03	1.751E+03	7.520E+02	5.251E+02	3.699E+02	2.637E+02
Total Ci***	1.115E+05	1.150E+04	8.897E+03	4.949E+03	3.028E+03	1.773E+03	7.597E+02	5.290E+02	3.708E+02	2.639E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table F.8 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.8 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.8

BURNUP (BU)

BU: U-235 40.0 g
 BU: % U-235 29.20%
 BU: MWd 38.01
 BU: MWd/MTU 193920
 U-235 DEPL 47.82 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	5.324E-01	5.313E-01	5.302E-01	5.251E-01	5.177E-01	5.034E-01	4.501E-01	4.023E-01	3.038E-01	1.734E-01
BE 10	6.199E-07	6.199E-07	6.199E-07	6.199E-07	6.199E-07	6.199E-07	6.199E-07	6.199E-07	6.199E-07	6.199E-07
C 14	3.958E-03	3.958E-03	3.958E-03	3.958E-03	3.958E-03	3.958E-03	3.957E-03	3.956E-03	3.953E-03	3.948E-03
CL 36	8.546E-05	8.546E-05	8.546E-05	8.546E-05	8.546E-05	8.546E-05	8.546E-05	8.546E-05	8.546E-05	8.546E-05
CR 51	2.279E+02	1.606E+02	1.131E+02	2.325E+01	2.372E+00	2.468E-02	2.894E-10	3.393E-18	5.050E-38	0.000E+00
MN 54	1.337E+01	1.296E+01	1.257E+01	1.092E+01	8.922E+00	5.952E+00	1.179E+00	2.335E-01	4.076E-03	1.242E-06
FE 55	9.164E+01	9.071E+01	8.979E+01	8.573E+01	8.021E+01	7.021E+01	4.121E+01	2.419E+01	6.384E+00	4.447E-01
FE 59	4.338E+00	3.496E+00	2.818E+00	1.064E+00	2.609E-01	1.569E-02	2.052E-07	2.684E-12	1.661E-24	0.000E+00
CO 60	7.573E+01	7.535E+01	7.498E+01	7.329E+01	7.092E+01	6.641E+01	5.106E+01	3.925E+01	2.034E+01	5.465E+00
NI 59	1.610E-02	1.610E-02	1.610E-02	1.610E-02	1.610E-02	1.610E-02	1.610E-02	1.610E-02	1.610E-02	1.610E-02
NI 63	2.042E+00	2.041E+00	2.041E+00	2.038E+00	2.034E+00	2.026E+00	1.996E+00	1.966E+00	1.894E+00	1.756E+00
ZN 65	1.693E+00	1.627E+00	1.564E+00	1.306E+00	1.008E+00	6.000E-01	7.534E-02	9.460E-03	5.286E-05	1.650E-09
SE 79	4.926E-04	4.926E-04	4.926E-04	4.926E-04	4.926E-04	4.926E-04	4.926E-04	4.926E-04	4.925E-04	4.925E-04
KR 85	1.329E+01	1.326E+01	1.322E+01	1.308E+01	1.287E+01	1.246E+01	1.095E+01	9.620E+00	6.964E+00	3.650E+00
RB 87	3.290E-08	3.290E-08	3.290E-08	3.290E-08	3.290E-08	3.290E-08	3.290E-08	3.290E-08	3.290E-08	3.290E-08
SR 89	9.824E+02	8.108E+02	6.691E+02	2.808E+02	8.025E+01	6.555E+00	2.916E-04	1.297E-08	1.713E-19	0.000E+00
SR 90	1.117E+02	1.116E+02	1.115E+02	1.110E+02	1.104E+02	1.090E+02	1.040E+02	9.915E+01	8.803E+01	6.940E+01
Y 90	1.167E+02	1.117E+02	1.115E+02	1.110E+02	1.104E+02	1.091E+02	1.040E+02	9.918E+01	8.806E+01	6.942E+01
Y 91	1.205E+03	1.028E+03	8.714E+02	4.119E+02	1.397E+02	1.608E+01	2.821E-03	4.946E-07	2.015E-16	3.345E-35
ZR 93	2.916E-03	2.917E-03	2.917E-03	2.917E-03	2.917E-03	2.917E-03	2.917E-03	2.917E-03	2.917E-03	2.917E-03
ZR 95	1.432E+03	1.231E+03	1.058E+03	5.331E+02	1.984E+02	2.746E+01	1.010E-02	3.712E-06	9.616E-15	6.455E-32
NB 93M	2.642E-04	2.692E-04	2.741E-04	2.960E-04	3.272E-04	3.887E-04	6.195E-04	8.278E-04	1.265E-03	1.866E-03

Table F.8 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	2.454E-04	2.454E-04	2.454E-04	2.454E-04	2.454E-04	2.454E-04	2.454E-04	2.454E-04	2.453E-04	2.452E-04
NB 95	1.466E+03	1.432E+03	1.361E+03	8.998E+02	3.933E+02	5.967E+01	2.241E-02	8.240E-06	2.135E-14	1.433E-31
NB 95M	1.007E+01	9.093E+00	7.844E+00	3.955E+00	1.471E+00	2.037E-01	7.490E-05	2.754E-08	7.134E-17	4.789E-34
MO 93	1.011E-04	1.011E-04	1.011E-04	1.011E-04	1.011E-04	1.011E-04	1.010E-04	1.010E-04	1.009E-04	1.007E-04
TC 99	1.620E-02	1.624E-02	1.625E-02	1.625E-02	1.625E-02	1.625E-02	1.625E-02	1.625E-02	1.625E-02	1.624E-02
RU103	6.842E+02	5.345E+02	4.175E+02	1.367E+02	2.733E+01	1.092E+00	2.779E-06	7.076E-12	7.318E-26	0.000E+00
RU106	1.034E+02	1.007E+02	9.808E+01	8.707E+01	7.332E+01	5.200E+01	1.316E+01	3.329E+00	1.072E-01	1.111E-04
RH103M	6.162E+02	4.818E+02	3.763E+02	1.233E+02	2.464E+01	9.842E-01	2.506E-06	6.379E-12	6.597E-26	0.000E+00
RH106	1.081E+02	1.007E+02	9.808E+01	8.707E+01	7.332E+01	5.200E+01	1.316E+01	3.329E+00	1.072E-01	1.111E-04
PD107	2.244E-05	2.244E-05	2.244E-05	2.244E-05	2.244E-05	2.244E-05	2.244E-05	2.244E-05	2.244E-05	2.244E-05
AG110	5.822E+00	2.918E-03	2.806E-03	2.355E-03	1.829E-03	1.102E-03	1.455E-04	1.921E-05	1.216E-07	4.873E-12
AG110M	2.280E-01	2.194E-01	2.110E-01	1.771E-01	1.374E-01	8.286E-02	1.094E-02	1.444E-03	9.141E-06	3.663E-10
AG111	7.575E+00	2.064E+00	5.612E-01	1.561E-03	3.210E-07	1.357E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.539E-02	1.536E-02	1.534E-02	1.521E-02	1.503E-02	1.468E-02	1.335E-02	1.214E-02	9.574E-03	5.955E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	3.349E-01	2.695E-01	2.167E-01	8.110E-02	1.964E-02	1.151E-03	1.359E-08	1.606E-13	7.696E-26	0.000E+00
IN114	7.474E-02	2.451E-02	2.015E-02	8.309E-03	2.317E-03	1.800E-04	6.562E-09	2.393E-13	1.921E-24	0.000E+00
IN114M	3.115E-02	2.560E-02	2.105E-02	8.683E-03	2.420E-03	1.881E-04	6.857E-09	2.500E-13	2.007E-24	0.000E+00
IN115M	3.353E+00	4.705E-02	6.190E-04	5.694E-06	1.379E-06	8.082E-08	9.546E-13	1.127E-17	5.404E-30	0.000E+00
SN119M	1.367E+01	1.314E+01	1.262E+01	1.056E+01	8.157E+00	4.868E+00	6.173E-01	7.827E-02	4.481E-04	1.469E-08
SN121M	1.916E-03	1.915E-03	1.914E-03	1.909E-03	1.902E-03	1.890E-03	1.838E-03	1.788E-03	1.668E-03	1.451E-03
SN123	1.930E+00	1.790E+00	1.660E+00	1.182E+00	7.247E-01	2.722E-01	5.414E-03	1.077E-04	6.011E-09	1.873E-17
SN125	7.906E+00	2.889E+00	1.056E+00	1.118E-02	1.581E-05	3.163E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	4.516E-04	4.516E-04	4.516E-04	4.516E-04	4.516E-04	4.516E-04	4.516E-04	4.516E-04	4.516E-04	4.516E-04
SB124	4.481E-01	3.814E-01	3.246E-01	1.567E-01	5.480E-02	6.700E-03	1.498E-06	3.349E-10	2.504E-19	1.399E-37
SB125	1.017E+01	1.012E+01	1.004E+01	9.622E+00	9.039E+00	7.976E+00	4.837E+00	2.934E+00	8.402E-01	6.891E-02
SB126	2.932E-01	1.341E-01	6.132E-02	1.846E-03	7.406E-05	6.323E-05	6.323E-05	6.323E-05	6.322E-05	6.322E-05
SB126M	1.258E-01	4.516E-04	4.516E-04	4.516E-04	4.516E-04	4.516E-04	4.516E-04	4.516E-04	4.516E-04	4.516E-04
TE123M	3.939E-03	3.632E-03	3.349E-03	2.322E-03	1.368E-03	4.756E-04	6.934E-06	1.011E-07	2.596E-12	1.711E-21
TE125M	2.248E+00	2.261E+00	2.270E+00	2.262E+00	2.176E+00	1.943E+00	1.180E+00	7.159E-01	2.050E-01	1.681E-02
TE127	3.513E+01	7.363E+00	4.457E+00	2.834E+00	1.587E+00	4.971E-01	4.791E-03	4.618E-05	4.212E-10	3.504E-20
TE127M	4.988E+00	4.715E+00	4.325E+00	2.894E+00	1.620E+00	5.075E-01	4.892E-03	4.715E-05	4.300E-10	3.577E-20
TE129	1.443E+02	1.064E+01	7.972E+00	2.162E+00	3.291E-01	7.626E-03	2.198E-09	6.333E-16	2.824E-32	0.000E+00
TE129M	2.172E+01	1.635E+01	1.225E+01	3.322E+00	5.056E-01	1.172E-02	3.376E-09	9.730E-16	4.338E-32	0.000E+00
I129	2.734E-05	2.737E-05	2.740E-05	2.745E-05	2.747E-05	2.747E-05	2.747E-05	2.747E-05	2.747E-05	2.747E-05
I131	5.969E+02	1.834E+02	5.487E+01	2.351E-01	9.016E-05	1.325E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.8 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	6.627E+00	4.964E+00	2.804E+00	9.682E-02	5.003E-04	1.212E-08	4.114E-27	1.396E-45	0.000E+00	0.000E+00
XE133	1.383E+03	2.673E+02	4.211E+01	9.875E-03	5.725E-08	1.924E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	6.303E+01	6.222E+01	6.143E+01	5.796E+01	5.329E+01	4.505E+01	2.301E+01	1.175E+01	2.191E+00	7.615E-02
CS135	1.057E-03	1.058E-03	1.058E-03	1.058E-03	1.058E-03	1.058E-03	1.058E-03	1.058E-03	1.058E-03	1.058E-03
CS136	2.121E+01	1.012E+01	4.823E+00	1.698E-01	1.360E-03	8.716E-08	1.471E-24	2.484E-41	0.000E+00	0.000E+00
CS137	1.174E+02	1.173E+02	1.172E+02	1.167E+02	1.161E+02	1.147E+02	1.095E+02	1.046E+02	9.320E+01	7.398E+01
BA136M	3.498E+00	1.667E+00	7.948E-01	2.799E-02	2.241E-04	1.436E-08	2.425E-25	4.094E-42	0.000E+00	0.000E+00
BA137M	1.111E+02	1.110E+02	1.109E+02	1.104E+02	1.098E+02	1.085E+02	1.036E+02	9.895E+01	8.817E+01	6.999E+01
BA140	1.268E+03	5.940E+02	2.781E+02	9.026E+00	6.422E-02	3.251E-06	2.136E-23	1.404E-40	0.000E+00	0.000E+00
LA140	1.282E+03	6.830E+02	3.201E+02	1.039E+01	7.390E-02	3.742E-06	2.458E-23	1.615E-40	0.000E+00	0.000E+00
CE141	1.205E+03	8.991E+02	6.671E+02	1.732E+02	2.475E+01	5.056E-01	8.804E-08	1.532E-14	1.938E-31	0.000E+00
CE142	3.485E-08	3.486E-08	3.486E-08	3.486E-08	3.486E-08	3.486E-08	3.486E-08	3.486E-08	3.486E-08	3.486E-08
CE144	1.125E+03	1.087E+03	1.051E+03	9.006E+02	7.210E+02	4.620E+02	7.791E+01	1.314E+01	1.534E-01	2.092E-05
PR143	1.202E+03	6.544E+02	3.200E+02	1.263E+01	1.193E-01	1.063E-05	6.705E-22	4.229E-38	0.000E+00	0.000E+00
PR144	1.127E+03	1.087E+03	1.051E+03	9.007E+02	7.210E+02	4.620E+02	7.791E+01	1.314E+01	1.534E-01	2.092E-05
PR144M	1.351E+01	1.305E+01	1.261E+01	1.081E+01	8.652E+00	5.544E+00	9.349E-01	1.577E-01	1.841E-03	2.510E-07
ND144	1.294E-12	1.308E-12	1.321E-12	1.377E-12	1.444E-12	1.540E-12	1.682E-12	1.706E-12	1.711E-12	1.711E-12
ND147	4.666E+02	1.942E+02	8.077E+01	1.534E+00	5.037E-03	5.432E-08	7.349E-28	9.943E-48	0.000E+00	0.000E+00
PM145	2.861E-05	2.901E-05	2.940E-05	3.100E-05	3.292E-05	3.564E-05	3.851E-05	3.687E-05	3.064E-05	2.072E-05
PM147	2.288E+02	2.296E+02	2.286E+02	2.193E+02	2.053E+02	1.799E+02	1.061E+02	6.257E+01	1.671E+01	1.192E+00
PM148M	3.041E+01	2.404E+01	1.900E+01	6.574E+00	1.421E+00	6.642E-02	3.169E-07	1.512E-12	7.520E-26	0.000E+00
PM148	1.371E+02	2.357E+01	4.718E+00	3.716E-01	8.005E-02	3.741E-03	1.785E-08	8.517E-14	4.236E-27	0.000E+00
SM145	3.012E-04	2.927E-04	2.845E-04	2.501E-04	2.076E-04	1.431E-04	3.232E-05	7.298E-06	1.769E-07	1.039E-10
SM147	3.704E-09	3.761E-09	3.818E-09	4.070E-09	4.413E-09	5.036E-09	6.845E-09	7.912E-09	9.036E-09	9.417E-09
SM151	6.531E-01	6.562E-01	6.560E-01	6.551E-01	6.539E-01	6.514E-01	6.415E-01	6.316E-01	6.078E-01	5.628E-01
EU152	3.543E-02	3.536E-02	3.529E-02	3.498E-02	3.454E-02	3.368E-02	3.041E-02	2.746E-02	2.129E-02	1.280E-02
EU154	3.106E+00	3.096E+00	3.087E+00	3.044E+00	2.984E+00	2.866E+00	2.439E+00	2.076E+00	1.388E+00	6.204E-01
EU155	2.396E+00	2.383E+00	2.371E+00	2.314E+00	2.235E+00	2.083E+00	1.576E+00	1.192E+00	5.928E-01	1.466E-01
EU156	1.658E+01	8.802E+00	4.645E+00	2.590E-01	4.020E-03	9.691E-07	3.273E-21	1.105E-35	0.000E+00	0.000E+00
GD153	7.390E-02	7.100E-02	6.821E-02	5.690E-02	4.382E-02	2.598E-02	3.211E-03	3.968E-04	2.131E-06	6.145E-11
TB160	1.214E-01	1.062E-01	9.283E-02	5.062E-02	2.111E-02	3.670E-03	3.352E-06	3.062E-09	7.722E-17	4.911E-32
TL206	4.905E-05	6.666E-12	6.666E-12	6.666E-12	6.666E-12	6.666E-12	6.666E-12	6.666E-12	6.666E-12	6.666E-12
TL207	2.368E-09	2.372E-09	2.384E-09	2.535E-09	2.839E-09	3.542E-09	6.437E-09	9.569E-09	1.870E-08	4.166E-08
TL208	6.971E-07	7.092E-07	7.288E-07	8.284E-07	9.495E-07	1.169E-06	1.804E-06	2.175E-06	2.513E-06	2.444E-06
PB210	5.101E-13	5.231E-13	5.311E-13	5.419E-13	5.416E-13	5.392E-13	5.491E-13	6.037E-13	1.059E-12	4.511E-12
PB211	2.375E-09	2.378E-09	2.390E-09	2.542E-09	2.847E-09	3.552E-09	6.455E-09	9.596E-09	1.875E-08	4.178E-08

Table F.8 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.940E-06	1.974E-06	2.028E-06	2.306E-06	2.643E-06	3.253E-06	5.022E-06	6.054E-06	6.995E-06	6.803E-06
BI211	2.378E-09	2.378E-09	2.390E-09	2.542E-09	2.847E-09	3.552E-09	6.455E-09	9.596E-09	1.875E-08	4.178E-08
BI212	1.940E-06	1.974E-06	2.028E-06	2.306E-06	2.643E-06	3.253E-06	5.022E-06	6.054E-06	6.995E-06	6.803E-06
PO212	1.243E-06	1.265E-06	1.300E-06	1.477E-06	1.693E-06	2.084E-06	3.218E-06	3.879E-06	4.481E-06	4.359E-06
PO215	2.375E-09	2.378E-09	2.390E-09	2.542E-09	2.847E-09	3.552E-09	6.455E-09	9.596E-09	1.875E-08	4.178E-08
PO216	1.940E-06	1.974E-06	2.028E-06	2.306E-06	2.643E-06	3.253E-06	5.022E-06	6.054E-06	6.995E-06	6.803E-06
RN219	2.375E-09	2.378E-09	2.390E-09	2.542E-09	2.847E-09	3.552E-09	6.455E-09	9.596E-09	1.875E-08	4.178E-08
RN220	1.940E-06	1.974E-06	2.028E-06	2.306E-06	2.643E-06	3.253E-06	5.022E-06	6.054E-06	6.995E-06	6.803E-06
FR223	3.273E-11	3.338E-11	3.403E-11	3.700E-11	4.134E-11	5.027E-11	8.897E-11	1.322E-10	2.585E-10	5.761E-10
RA223	2.375E-09	2.378E-09	2.390E-09	2.542E-09	2.847E-09	3.552E-09	6.455E-09	9.596E-09	1.875E-08	4.178E-08
RA224	1.940E-06	1.974E-06	2.028E-06	2.306E-06	2.643E-06	3.253E-06	5.022E-06	6.054E-06	6.995E-06	6.803E-06
RA226	2.380E-13	2.441E-13	2.504E-13	2.799E-13	3.257E-13	4.300E-13	1.026E-12	1.943E-12	5.944E-12	2.360E-11
RA228	5.506E-10	5.549E-10	5.591E-10	5.781E-10	6.050E-10	6.566E-10	8.384E-10	9.862E-10	1.246E-09	1.493E-09
AC227	2.372E-09	2.419E-09	2.466E-09	2.681E-09	2.996E-09	3.643E-09	6.447E-09	9.582E-09	1.873E-08	4.175E-08
TH227	2.345E-09	2.353E-09	2.376E-09	2.557E-09	2.862E-09	3.497E-09	6.366E-09	9.464E-09	1.849E-08	4.121E-08
TH228	1.937E-06	1.993E-06	2.049E-06	2.295E-06	2.632E-06	3.242E-06	5.014E-06	6.041E-06	6.989E-06	6.802E-06
TH229	4.997E-10	5.095E-10	5.193E-10	5.644E-10	6.299E-10	7.611E-10	1.286E-09	1.812E-09	3.127E-09	5.762E-09
TH230	3.689E-10	3.745E-10	3.801E-10	4.056E-10	4.432E-10	5.210E-10	8.660E-10	1.265E-09	2.493E-09	5.894E-09
TH231	6.490E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04
TH232	1.630E-09	1.630E-09	1.630E-09	1.630E-09	1.630E-09	1.630E-09	1.630E-09	1.630E-09	1.630E-09	1.630E-09
TH234	2.235E-05	2.127E-05	2.056E-05	1.934E-05	1.913E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05
PA231	4.079E-08	4.101E-08	4.118E-08	4.190E-08	4.294E-08	4.500E-08	5.317E-08	6.133E-08	8.173E-08	1.225E-07
PA233	2.290E-01	1.600E-01	1.118E-01	2.223E-02	2.354E-03	2.596E-04	2.401E-04	2.401E-04	2.404E-04	2.410E-04
PA234M	7.519E-04	2.127E-05	2.056E-05	1.934E-05	1.913E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05
PA234	1.467E-03	2.766E-08	2.672E-08	2.515E-08	2.486E-08	2.484E-08	2.484E-08	2.484E-08	2.484E-08	2.484E-08
U232	6.013E-06	6.045E-06	6.061E-06	6.130E-06	6.225E-06	6.394E-06	6.862E-06	7.093E-06	7.160E-06	6.652E-06
U233	2.674E-06	2.706E-06	2.729E-06	2.771E-06	2.780E-06	2.782E-06	2.784E-06	2.786E-06	2.791E-06	2.802E-06
U234	1.615E-05	1.620E-05	1.626E-05	1.653E-05	1.691E-05	1.767E-05	2.069E-05	2.366E-05	3.090E-05	4.454E-05
U235	1.929E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04	1.929E-04
U236	5.573E-04	5.573E-04	5.573E-04	5.573E-04	5.573E-04	5.573E-04	5.573E-04	5.573E-04	5.573E-04	5.573E-04
U237	4.291E+02	1.019E+02	2.420E+01	3.657E-02	5.786E-06	2.606E-06	2.367E-06	2.150E-06	1.690E-06	1.045E-06
U238	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05	1.911E-05
NP237	2.363E-04	2.392E-04	2.398E-04	2.401E-04	2.401E-04	2.401E-04	2.401E-04	2.401E-04	2.404E-04	2.410E-04
PU236	4.961E-05	4.934E-05	4.888E-05	4.687E-05	4.410E-05	3.906E-05	2.403E-05	1.478E-05	4.386E-06	3.865E-07
PU237	2.167E-04	1.751E-04	1.416E-04	5.412E-05	1.352E-05	8.438E-07	1.280E-11	1.941E-16	1.739E-28	0.000E+00
PU238	5.316E-01	5.356E-01	5.358E-01	5.365E-01	5.368E-01	5.363E-01	5.293E-01	5.210E-01	5.009E-01	4.629E-01

Table F.8 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	7.386E-02	7.421E-02	7.422E-02	7.422E-02	7.422E-02	7.422E-02	7.421E-02	7.421E-02	7.420E-02	7.417E-02
PU240	4.318E-02	4.318E-02	4.318E-02	4.318E-02	4.318E-02	4.318E-02	4.317E-02	4.316E-02	4.314E-02	4.310E-02
PU241	1.115E+01	1.113E+01	1.111E+01	1.101E+01	1.088E+01	1.062E+01	9.650E+00	8.765E+00	6.891E+00	4.260E+00
PU242	4.164E-05	4.164E-05	4.164E-05	4.164E-05	4.164E-05	4.164E-05	4.164E-05	4.164E-05	4.164E-05	4.164E-05
PU244	1.002E-12	1.002E-12	1.002E-12	1.002E-12	1.002E-12	1.002E-12	1.002E-12	1.002E-12	1.002E-12	1.002E-12
AM241	1.637E-02	1.705E-02	1.773E-02	2.080E-02	2.518E-02	3.377E-02	6.608E-02	9.530E-02	1.567E-01	2.411E-01
AM242M	4.471E-04	4.470E-04	4.469E-04	4.466E-04	4.461E-04	4.451E-04	4.410E-04	4.370E-04	4.272E-04	4.082E-04
AM242	2.523E+00	4.460E-04	4.447E-04	4.444E-04	4.439E-04	4.428E-04	4.388E-04	4.348E-04	4.251E-04	4.061E-04
AM243	1.266E-04	1.268E-04	1.268E-04	1.268E-04	1.268E-04	1.268E-04	1.267E-04	1.267E-04	1.267E-04	1.265E-04
CM242	1.281E+00	1.215E+00	1.145E+00	8.754E-01	5.942E-01	2.739E-01	1.268E-02	9.148E-04	3.519E-04	3.359E-04
CM243	1.766E-04	1.765E-04	1.763E-04	1.756E-04	1.745E-04	1.724E-04	1.642E-04	1.564E-04	1.385E-04	1.086E-04
CM244	8.507E-03	8.506E-03	8.494E-03	8.437E-03	8.357E-03	8.199E-03	7.595E-03	7.036E-03	5.811E-03	3.964E-03
CM245	3.394E-07	3.394E-07	3.394E-07	3.394E-07	3.394E-07	3.394E-07	3.393E-07	3.392E-07	3.391E-07	3.388E-07
CM246	1.720E-08	1.720E-08	1.720E-08	1.720E-08	1.720E-08	1.720E-08	1.720E-08	1.719E-08	1.718E-08	1.715E-08
CM247	1.949E-14	1.949E-14	1.949E-14	1.949E-14	1.949E-14	1.949E-14	1.949E-14	1.949E-14	1.949E-14	1.949E-14
Subtotal Ci**	1.838E+04	1.276E+04	1.003E+04	5.582E+03	3.416E+03	2.004E+03	8.620E+02	6.022E+02	4.242E+02	3.021E+02
Total Ci***	1.265E+05	1.311E+04	1.015E+04	5.651E+03	3.463E+03	2.031E+03	8.713E+02	6.068E+02	4.251E+02	3.024E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table F.9 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.9 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.9

BURNUP (BU)

BU: U-235 45.0 g
 BU: % U-235 32.85%
 BU: MWd 42.76
 BU: MWd/MTU 218170
 U-235 DEPL 53.63 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	5.988E-01	5.974E-01	5.961E-01	5.904E-01	5.821E-01	5.660E-01	5.060E-01	4.523E-01	3.417E-01	1.950E-01
BE 10	7.172E-07	7.172E-07	7.172E-07	7.172E-07	7.172E-07	7.172E-07	7.172E-07	7.172E-07	7.172E-07	7.172E-07
C 14	4.579E-03	4.579E-03	4.579E-03	4.579E-03	4.579E-03	4.579E-03	4.578E-03	4.577E-03	4.574E-03	4.568E-03
CL 36	9.858E-05	9.858E-05	9.858E-05	9.858E-05	9.858E-05	9.858E-05	9.858E-05	9.858E-05	9.858E-05	9.858E-05
CR 51	2.691E+02	1.896E+02	1.336E+02	2.745E+01	2.801E+00	2.914E-02	3.417E-10	4.006E-18	5.963E-38	0.000E+00
MN 54	1.566E+01	1.518E+01	1.472E+01	1.279E+01	1.045E+01	6.971E+00	1.381E+00	2.734E-01	4.774E-03	1.455E-06
FE 55	1.065E+02	1.055E+02	1.044E+02	9.967E+01	9.325E+01	8.162E+01	4.791E+01	2.812E+01	7.421E+00	5.170E-01
FE 59	5.145E+00	4.147E+00	3.343E+00	1.262E+00	3.094E-01	1.861E-02	2.434E-07	3.184E-12	1.970E-24	0.000E+00
CO 60	8.755E+01	8.711E+01	8.667E+01	8.472E+01	8.198E+01	7.676E+01	5.902E+01	4.537E+01	2.352E+01	6.317E+00
NI 59	1.848E-02	1.848E-02	1.848E-02	1.848E-02	1.848E-02	1.848E-02	1.848E-02	1.848E-02	1.848E-02	1.848E-02
NI 63	2.358E+00	2.357E+00	2.356E+00	2.353E+00	2.349E+00	2.340E+00	2.305E+00	2.271E+00	2.187E+00	2.028E+00
ZN 65	1.989E+00	1.911E+00	1.837E+00	1.535E+00	1.184E+00	7.048E-01	8.851E-02	1.111E-02	6.209E-05	1.938E-09
SE 79	5.536E-04	5.536E-04	5.536E-04	5.536E-04	5.536E-04	5.536E-04	5.536E-04	5.535E-04	5.535E-04	5.535E-04
KR 85	1.492E+01	1.489E+01	1.485E+01	1.468E+01	1.445E+01	1.399E+01	1.229E+01	1.080E+01	7.821E+00	4.099E+00
RB 87	3.691E-08	3.691E-08	3.691E-08	3.691E-08	3.691E-08	3.691E-08	3.691E-08	3.691E-08	3.691E-08	3.691E-08
SR 89	1.093E+03	9.024E+02	7.446E+02	3.125E+02	8.931E+01	7.294E+00	3.245E-04	1.444E-08	1.906E-19	0.000E+00
SR 90	1.254E+02	1.252E+02	1.251E+02	1.246E+02	1.239E+02	1.224E+02	1.167E+02	1.113E+02	9.882E+01	7.790E+01
Y 90	1.315E+02	1.254E+02	1.252E+02	1.246E+02	1.239E+02	1.224E+02	1.168E+02	1.113E+02	9.884E+01	7.792E+01
Y 91	1.343E+03	1.146E+03	9.707E+02	4.589E+02	1.556E+02	1.791E+01	3.142E-03	5.510E-07	2.245E-16	3.726E-35
ZR 93	3.287E-03	3.288E-03	3.288E-03	3.288E-03	3.288E-03	3.288E-03	3.288E-03	3.288E-03	3.288E-03	3.288E-03
ZR 95	1.605E+03	1.379E+03	1.185E+03	5.973E+02	2.222E+02	3.078E+01	1.131E-02	4.159E-06	1.078E-14	7.233E-32
NB 93M	2.978E-04	3.033E-04	3.088E-04	3.336E-04	3.688E-04	4.381E-04	6.981E-04	9.330E-04	1.425E-03	2.103E-03

Table F.9 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.831E-04	2.830E-04	2.830E-04	2.829E-04
NB 95	1.643E+03	1.605E+03	1.525E+03	1.008E+03	4.408E+02	6.686E+01	2.511E-02	9.232E-06	2.392E-14	1.606E-31
NB 95M	1.128E+01	1.019E+01	8.789E+00	4.430E+00	1.649E+00	2.283E-01	8.392E-05	3.085E-08	7.993E-17	5.366E-34
MO 93	1.170E-04	1.170E-04	1.170E-04	1.170E-04	1.170E-04	1.169E-04	1.169E-04	1.169E-04	1.167E-04	1.165E-04
TC 99	1.809E-02	1.815E-02	1.815E-02	1.815E-02	1.815E-02	1.815E-02	1.815E-02	1.815E-02	1.815E-02	1.815E-02
RU103	7.678E+02	5.998E+02	4.685E+02	1.535E+02	3.067E+01	1.225E+00	3.119E-06	7.941E-12	8.213E-26	0.000E+00
RU106	1.193E+02	1.162E+02	1.131E+02	1.004E+02	8.459E+01	5.999E+01	1.518E+01	3.840E+00	1.236E-01	1.282E-04
RH103M	6.915E+02	5.407E+02	4.223E+02	1.383E+02	2.765E+01	1.104E+00	2.812E-06	7.159E-12	7.404E-26	0.000E+00
RH106	1.256E+02	1.162E+02	1.131E+02	1.004E+02	8.459E+01	5.999E+01	1.518E+01	3.840E+00	1.236E-01	1.282E-04
PD107	2.596E-05	2.596E-05	2.596E-05	2.596E-05	2.596E-05	2.596E-05	2.596E-05	2.596E-05	2.596E-05	2.596E-05
AG110	7.917E+00	3.912E-03	3.763E-03	3.158E-03	2.451E-03	1.477E-03	1.950E-04	2.575E-05	1.630E-07	6.533E-12
AG110M	3.058E-01	2.941E-01	2.829E-01	2.374E-01	1.843E-01	1.111E-01	1.467E-02	1.936E-03	1.226E-05	4.912E-10
AG111	8.844E+00	2.410E+00	6.553E-01	1.823E-03	3.747E-07	1.584E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.757E-02	1.754E-02	1.751E-02	1.737E-02	1.716E-02	1.676E-02	1.524E-02	1.386E-02	1.093E-02	6.800E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	3.787E-01	3.047E-01	2.450E-01	9.170E-02	2.220E-02	1.301E-03	1.538E-08	1.816E-13	8.703E-26	0.000E+00
IN114	1.009E-01	3.308E-02	2.719E-02	1.122E-02	3.127E-03	2.430E-04	8.859E-09	3.231E-13	2.592E-24	0.000E+00
IN114M	4.205E-02	3.457E-02	2.842E-02	1.172E-02	3.268E-03	2.539E-04	9.258E-09	3.376E-13	2.709E-24	0.000E+00
IN115M	3.784E+00	5.309E-02	6.985E-04	6.439E-06	1.559E-06	9.139E-08	1.079E-12	1.275E-17	6.111E-30	0.000E+00
SN119M	1.605E+01	1.542E+01	1.482E+01	1.239E+01	9.576E+00	5.715E+00	7.246E-01	9.188E-02	5.261E-04	1.725E-08
SN121M	2.215E-03	2.214E-03	2.213E-03	2.207E-03	2.199E-03	2.184E-03	2.125E-03	2.066E-03	1.928E-03	1.679E-03
SN123	2.208E+00	2.048E+00	1.899E+00	1.353E+00	8.291E-01	3.114E-01	6.195E-03	1.232E-04	6.877E-09	2.142E-17
SN125	9.145E+00	3.341E+00	1.221E+00	1.293E-02	1.830E-05	3.659E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	5.096E-04	5.096E-04	5.096E-04	5.096E-04	5.096E-04	5.096E-04	5.096E-04	5.096E-04	5.096E-04	5.096E-04
SB124	5.652E-01	4.811E-01	4.094E-01	1.977E-01	6.912E-02	8.451E-03	1.889E-06	4.225E-10	3.158E-19	1.764E-37
SB125	1.163E+01	1.157E+01	1.148E+01	1.100E+01	1.034E+01	9.122E+00	5.532E+00	3.355E+00	9.609E-01	7.882E-02
SB126	3.444E-01	1.575E-01	7.203E-02	2.166E-03	8.407E-05	7.135E-05	7.135E-05	7.135E-05	7.134E-05	7.134E-05
SB126M	1.439E-01	5.096E-04	5.096E-04	5.096E-04	5.096E-04	5.096E-04	5.096E-04	5.096E-04	5.096E-04	5.096E-04
TE123M	5.603E-03	5.166E-03	4.764E-03	3.303E-03	1.947E-03	6.766E-04	9.865E-06	1.439E-07	3.692E-12	2.433E-21
TE125M	2.568E+00	2.584E+00	2.594E+00	2.586E+00	2.489E+00	2.222E+00	1.350E+00	8.188E-01	2.345E-01	1.923E-02
TE127	3.945E+01	8.290E+00	5.027E+00	3.198E+00	1.790E+00	5.608E-01	5.406E-03	5.210E-05	4.752E-10	3.953E-20
TE127M	5.629E+00	5.319E+00	4.880E+00	3.265E+00	1.827E+00	5.726E-01	5.519E-03	5.319E-05	4.852E-10	4.036E-20
TE129	1.613E+02	1.189E+01	8.910E+00	2.417E+00	3.678E-01	8.523E-03	2.456E-09	7.078E-16	3.156E-32	0.000E+00
TE129M	2.427E+01	1.827E+01	1.369E+01	3.713E+00	5.651E-01	1.309E-02	3.773E-09	1.087E-15	4.848E-32	0.000E+00
I129	3.071E-05	3.076E-05	3.078E-05	3.084E-05	3.086E-05	3.086E-05	3.086E-05	3.086E-05	3.086E-05	3.086E-05
I131	6.648E+02	2.043E+02	6.111E+01	2.619E-01	1.004E-04	1.476E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.9 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	7.381E+00	5.529E+00	3.123E+00	1.078E-01	5.572E-04	1.350E-08	4.582E-27	1.555E-45	0.000E+00	0.000E+00
XE133	1.538E+03	2.973E+02	4.683E+01	1.098E-02	6.367E-08	2.139E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	8.213E+01	8.108E+01	8.004E+01	7.552E+01	6.943E+01	5.870E+01	2.998E+01	1.531E+01	2.855E+00	9.923E-02
CS135	1.122E-03	1.123E-03	1.123E-03	1.123E-03	1.123E-03	1.123E-03	1.123E-03	1.123E-03	1.123E-03	1.123E-03
CS136	2.643E+01	1.260E+01	6.009E+00	2.116E-01	1.694E-03	1.086E-07	1.834E-24	3.095E-41	0.000E+00	0.000E+00
CS137	1.320E+02	1.319E+02	1.318E+02	1.313E+02	1.305E+02	1.290E+02	1.232E+02	1.176E+02	1.048E+02	8.319E+01
BA136M	4.358E+00	2.077E+00	9.903E-01	3.488E-02	2.792E-04	1.790E-08	3.022E-25	5.101E-42	0.000E+00	0.000E+00
BA137M	1.250E+02	1.248E+02	1.247E+02	1.242E+02	1.235E+02	1.220E+02	1.165E+02	1.113E+02	9.914E+01	7.870E+01
BA140	1.410E+03	6.602E+02	3.091E+02	1.003E+01	7.138E-02	3.614E-06	2.375E-23	1.560E-40	0.000E+00	0.000E+00
LA140	1.428E+03	7.592E+02	3.557E+02	1.155E+01	8.215E-02	4.159E-06	2.733E-23	1.795E-40	0.000E+00	0.000E+00
CE141	1.339E+03	9.993E+02	7.414E+02	1.925E+02	2.752E+01	5.620E-01	9.784E-08	1.703E-14	2.154E-31	0.000E+00
CE142	3.903E-08	3.903E-08	3.903E-08	3.903E-08	3.903E-08	3.903E-08	3.903E-08	3.903E-08	3.903E-08	3.903E-08
CE144	1.262E+03	1.219E+03	1.178E+03	1.010E+03	8.084E+02	5.180E+02	8.736E+01	1.473E+01	1.720E-01	2.345E-05
PR143	1.335E+03	7.267E+02	3.554E+02	1.403E+01	1.325E-01	1.181E-05	7.446E-22	4.697E-38	0.000E+00	0.000E+00
PR144	1.264E+03	1.219E+03	1.178E+03	1.010E+03	8.084E+02	5.181E+02	8.736E+01	1.473E+01	1.720E-01	2.345E-05
PR144M	1.515E+01	1.463E+01	1.414E+01	1.212E+01	9.701E+00	6.217E+00	1.048E+00	1.768E-01	2.064E-03	2.815E-07
ND144	1.483E-12	1.499E-12	1.514E-12	1.577E-12	1.651E-12	1.759E-12	1.919E-12	1.946E-12	1.951E-12	1.951E-12
ND147	5.189E+02	2.160E+02	8.981E+01	1.705E+00	5.601E-03	6.040E-08	8.172E-28	1.106E-47	0.000E+00	0.000E+00
PM145	3.282E-05	3.329E-05	3.375E-05	3.562E-05	3.787E-05	4.105E-05	4.444E-05	4.255E-05	3.537E-05	2.392E-05
PM147	2.440E+02	2.450E+02	2.440E+02	2.341E+02	2.192E+02	1.921E+02	1.133E+02	6.680E+01	1.784E+01	1.273E+00
PM148M	3.531E+01	2.792E+01	2.207E+01	7.634E+00	1.650E+00	7.714E-02	3.680E-07	1.756E-12	8.734E-26	0.000E+00
PM148	1.710E+02	2.932E+01	5.798E+00	4.316E-01	9.296E-02	4.345E-03	2.073E-08	9.891E-14	4.919E-27	0.000E+00
SM145	3.513E-04	3.414E-04	3.318E-04	2.917E-04	2.422E-04	1.669E-04	3.770E-05	8.512E-06	2.063E-07	1.211E-10
SM147	3.979E-09	4.040E-09	4.101E-09	4.369E-09	4.736E-09	5.400E-09	7.332E-09	8.471E-09	9.671E-09	1.008E-08
SM151	6.529E-01	6.563E-01	6.561E-01	6.553E-01	6.540E-01	6.515E-01	6.415E-01	6.317E-01	6.078E-01	5.629E-01
EU152	3.377E-02	3.370E-02	3.364E-02	3.335E-02	3.292E-02	3.209E-02	2.898E-02	2.618E-02	2.029E-02	1.220E-02
EU154	4.130E+00	4.116E+00	4.104E+00	4.048E+00	3.967E+00	3.810E+00	3.243E+00	2.761E+00	1.846E+00	8.247E-01
EU155	2.852E+00	2.837E+00	2.822E+00	2.754E+00	2.660E+00	2.481E+00	1.876E+00	1.418E+00	7.056E-01	1.746E-01
EU156	2.231E+01	1.183E+01	6.247E+00	3.481E-01	5.405E-03	1.303E-06	4.400E-21	1.486E-35	0.000E+00	0.000E+00
GD153	8.572E-02	8.235E-02	7.912E-02	6.601E-02	5.083E-02	3.014E-02	3.725E-03	4.604E-04	2.471E-06	7.127E-11
TB160	1.511E-01	1.321E-01	1.156E-01	6.301E-02	2.627E-02	4.568E-03	4.172E-06	3.811E-09	9.612E-17	6.113E-32
TL206	5.802E-05	7.714E-12	7.714E-12	7.714E-12	7.714E-12	7.714E-12	7.714E-12	7.714E-12	7.714E-12	7.714E-12
TL207	2.428E-09	2.432E-09	2.444E-09	2.602E-09	2.917E-09	3.645E-09	6.604E-09	9.762E-09	1.881E-08	4.109E-08
TL208	8.415E-07	8.564E-07	8.807E-07	1.004E-06	1.156E-06	1.432E-06	2.251E-06	2.747E-06	3.224E-06	3.161E-06
PB210	7.267E-13	7.454E-13	7.570E-13	7.723E-13	7.713E-13	7.660E-13	7.676E-13	8.215E-13	1.338E-12	5.557E-12
PB211	2.435E-09	2.439E-09	2.451E-09	2.609E-09	2.925E-09	3.655E-09	6.623E-09	9.790E-09	1.886E-08	4.121E-08

Table F.9 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	2.342E-06	2.384E-06	2.451E-06	2.795E-06	3.216E-06	3.985E-06	6.266E-06	7.645E-06	8.973E-06	8.797E-06
BI211	2.439E-09	2.439E-09	2.451E-09	2.609E-09	2.925E-09	3.655E-09	6.623E-09	9.790E-09	1.886E-08	4.121E-08
BI212	2.342E-06	2.384E-06	2.451E-06	2.795E-06	3.216E-06	3.985E-06	6.266E-06	7.645E-06	8.973E-06	8.797E-06
PO212	1.501E-06	1.527E-06	1.570E-06	1.791E-06	2.061E-06	2.553E-06	4.014E-06	4.898E-06	5.749E-06	5.636E-06
PO215	2.435E-09	2.439E-09	2.451E-09	2.609E-09	2.925E-09	3.655E-09	6.623E-09	9.790E-09	1.886E-08	4.121E-08
PO216	2.342E-06	2.384E-06	2.451E-06	2.795E-06	3.216E-06	3.985E-06	6.266E-06	7.645E-06	8.973E-06	8.797E-06
RN219	2.435E-09	2.439E-09	2.451E-09	2.609E-09	2.925E-09	3.655E-09	6.623E-09	9.790E-09	1.886E-08	4.121E-08
RN220	2.342E-06	2.384E-06	2.451E-06	2.795E-06	3.216E-06	3.985E-06	6.266E-06	7.645E-06	8.973E-06	8.797E-06
FR223	3.355E-11	3.423E-11	3.491E-11	3.799E-11	4.250E-11	5.172E-11	9.128E-11	1.349E-10	2.601E-10	5.682E-10
RA223	2.435E-09	2.439E-09	2.451E-09	2.609E-09	2.925E-09	3.655E-09	6.623E-09	9.790E-09	1.886E-08	4.121E-08
RA224	2.342E-06	2.384E-06	2.451E-06	2.795E-06	3.216E-06	3.985E-06	6.266E-06	7.645E-06	8.973E-06	8.797E-06
RA226	2.661E-13	2.730E-13	2.800E-13	3.130E-13	3.645E-13	4.818E-13	1.162E-12	2.231E-12	7.053E-12	2.938E-11
RA228	5.483E-10	5.525E-10	5.568E-10	5.757E-10	6.024E-10	6.539E-10	8.350E-10	9.823E-10	1.241E-09	1.488E-09
AC227	2.431E-09	2.480E-09	2.530E-09	2.753E-09	3.080E-09	3.748E-09	6.615E-09	9.775E-09	1.884E-08	4.117E-08
TH227	2.405E-09	2.413E-09	2.437E-09	2.624E-09	2.942E-09	3.598E-09	6.531E-09	9.655E-09	1.860E-08	4.064E-08
TH228	2.338E-06	2.408E-06	2.477E-06	2.783E-06	3.203E-06	3.970E-06	6.256E-06	7.629E-06	8.967E-06	8.795E-06
TH229	5.585E-10	5.693E-10	5.803E-10	6.304E-10	7.033E-10	8.494E-10	1.434E-09	2.019E-09	3.484E-09	6.420E-09
TH230	4.131E-10	4.194E-10	4.258E-10	4.549E-10	4.979E-10	5.878E-10	9.980E-10	1.488E-09	3.056E-09	7.594E-09
TH231	7.181E-04	1.804E-04	1.803E-04	1.803E-04	1.803E-04	1.803E-04	1.803E-04	1.803E-04	1.803E-04	1.803E-04
TH232	1.623E-09	1.623E-09	1.623E-09	1.623E-09	1.623E-09	1.623E-09	1.623E-09	1.624E-09	1.624E-09	1.624E-09
TH234	2.350E-05	2.201E-05	2.101E-05	1.932E-05	1.902E-05	1.900E-05	1.900E-05	1.900E-05	1.900E-05	1.900E-05
PA231	4.244E-08	4.265E-08	4.282E-08	4.349E-08	4.446E-08	4.638E-08	5.402E-08	6.165E-08	8.072E-08	1.188E-07
PA233	2.694E-01	1.883E-01	1.315E-01	2.618E-02	2.795E-03	3.313E-04	3.083E-04	3.084E-04	3.087E-04	3.096E-04
PA234M	1.039E-03	2.201E-05	2.101E-05	1.932E-05	1.902E-05	1.900E-05	1.900E-05	1.900E-05	1.900E-05	1.900E-05
PA234	2.041E-03	2.861E-08	2.731E-08	2.512E-08	2.472E-08	2.469E-08	2.469E-08	2.469E-08	2.469E-08	2.469E-08
U232	7.383E-06	7.426E-06	7.451E-06	7.557E-06	7.702E-06	7.962E-06	8.688E-06	9.062E-06	9.232E-06	8.606E-06
U233	2.970E-06	3.008E-06	3.035E-06	3.084E-06	3.095E-06	3.097E-06	3.100E-06	3.103E-06	3.109E-06	3.123E-06
U234	1.830E-05	1.839E-05	1.847E-05	1.886E-05	1.943E-05	2.055E-05	2.504E-05	2.945E-05	4.019E-05	6.045E-05
U235	1.803E-04	1.803E-04	1.803E-04	1.803E-04	1.803E-04	1.803E-04	1.803E-04	1.803E-04	1.803E-04	1.803E-04
U236	6.205E-04	6.205E-04	6.205E-04	6.205E-04	6.205E-04	6.205E-04	6.205E-04	6.205E-04	6.205E-04	6.206E-04
U237	5.648E+02	1.341E+02	3.186E+01	4.814E-02	7.631E-06	3.445E-06	3.129E-06	2.842E-06	2.235E-06	1.381E-06
U238	1.900E-05	1.900E-05	1.900E-05	1.900E-05	1.900E-05	1.900E-05	1.900E-05	1.900E-05	1.900E-05	1.900E-05
NP237	3.034E-04	3.071E-04	3.080E-04	3.083E-04	3.083E-04	3.083E-04	3.083E-04	3.084E-04	3.087E-04	3.096E-04
PU236	7.389E-05	7.350E-05	7.282E-05	6.982E-05	6.570E-05	5.819E-05	3.579E-05	2.202E-05	6.534E-06	5.758E-07
PU237	3.682E-04	2.976E-04	2.406E-04	9.198E-05	2.298E-05	1.434E-06	2.175E-11	3.298E-16	2.955E-28	0.000E+00
PU238	7.885E-01	7.946E-01	7.949E-01	7.960E-01	7.966E-01	7.960E-01	7.856E-01	7.734E-01	7.435E-01	6.871E-01

Table F.9 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	7.864E-02	7.905E-02	7.906E-02	7.906E-02	7.906E-02	7.906E-02	7.905E-02	7.905E-02	7.904E-02	7.901E-02
PU240	5.010E-02	5.010E-02	5.010E-02	5.010E-02	5.010E-02	5.009E-02	5.009E-02	5.008E-02	5.006E-02	5.002E-02
PU241	1.474E+01	1.471E+01	1.468E+01	1.456E+01	1.439E+01	1.404E+01	1.276E+01	1.159E+01	9.109E+00	5.630E+00
PU242	6.513E-05	6.514E-05	6.514E-05	6.514E-05	6.514E-05	6.514E-05	6.514E-05	6.514E-05	6.514E-05	6.514E-05
PU244	2.165E-12	2.165E-12	2.165E-12	2.165E-12	2.165E-12	2.165E-12	2.165E-12	2.165E-12	2.165E-12	2.165E-12
AM241	2.124E-02	2.214E-02	2.305E-02	2.710E-02	3.289E-02	4.424E-02	8.695E-02	1.256E-01	2.068E-01	3.183E-01
AM242M	6.215E-04	6.213E-04	6.212E-04	6.207E-04	6.200E-04	6.186E-04	6.130E-04	6.075E-04	5.938E-04	5.673E-04
AM242	3.872E+00	6.201E-04	6.181E-04	6.176E-04	6.169E-04	6.155E-04	6.100E-04	6.044E-04	5.908E-04	5.645E-04
AM243	2.283E-04	2.285E-04	2.285E-04	2.285E-04	2.285E-04	2.285E-04	2.285E-04	2.284E-04	2.283E-04	2.281E-04
CM242	1.984E+00	1.882E+00	1.773E+00	1.356E+00	9.203E-01	4.242E-01	1.958E-02	1.360E-03	4.892E-04	4.668E-04
CM243	3.188E-04	3.185E-04	3.182E-04	3.168E-04	3.149E-04	3.111E-04	2.964E-04	2.823E-04	2.500E-04	1.961E-04
CM244	1.805E-02	1.805E-02	1.803E-02	1.791E-02	1.774E-02	1.740E-02	1.612E-02	1.493E-02	1.233E-02	8.413E-03
CM245	8.258E-07	8.258E-07	8.258E-07	8.258E-07	8.258E-07	8.257E-07	8.256E-07	8.255E-07	8.251E-07	8.244E-07
CM246	4.915E-08	4.915E-08	4.915E-08	4.915E-08	4.914E-08	4.914E-08	4.913E-08	4.911E-08	4.908E-08	4.900E-08
CM247	6.477E-14	6.477E-14	6.477E-14	6.477E-14	6.477E-14	6.477E-14	6.477E-14	6.477E-14	6.477E-14	6.477E-14
Subtotal Ci**	2.067E+04	1.432E+04	1.124E+04	6.269E+03	3.843E+03	2.259E+03	9.734E+02	6.800E+02	4.788E+02	3.407E+02
Total Ci***	1.412E+05	1.472E+04	1.139E+04	6.352E+03	3.899E+03	2.291E+03	9.841E+02	6.854E+02	4.800E+02	3.410E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table F.10 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.10 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.10

BURNUP (BU)

BU: U-235 50.0 g
 BU: % U-235 36.50%
 BU: MWd 47.51
 BU: MWd/MTU 242410
 U-235 DEPL 59.4 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	6.649E-01	6.634E-01	6.619E-01	6.556E-01	6.464E-01	6.286E-01	5.619E-01	5.022E-01	3.794E-01	2.165E-01
BE 10	8.206E-07	8.206E-07	8.206E-07	8.206E-07	8.206E-07	8.206E-07	8.206E-07	8.206E-07	8.206E-07	8.206E-07
C 14	5.239E-03	5.239E-03	5.239E-03	5.239E-03	5.239E-03	5.239E-03	5.238E-03	5.236E-03	5.233E-03	5.227E-03
CL 36	1.124E-04	1.124E-04	1.124E-04	1.124E-04	1.124E-04	1.124E-04	1.124E-04	1.124E-04	1.124E-04	1.124E-04
CR 51	3.145E+02	2.216E+02	1.561E+02	3.209E+01	3.273E+00	3.406E-02	3.993E-10	4.682E-18	6.970E-38	0.000E+00
MN 54	1.815E+01	1.760E+01	1.706E+01	1.482E+01	1.211E+01	8.078E+00	1.600E+00	3.169E-01	5.532E-03	1.686E-06
FE 55	1.225E+02	1.213E+02	1.200E+02	1.146E+02	1.072E+02	9.386E+01	5.509E+01	3.233E+01	8.534E+00	5.945E-01
FE 59	6.042E+00	4.870E+00	3.925E+00	1.482E+00	3.634E-01	2.185E-02	2.858E-07	3.739E-12	2.314E-24	0.000E+00
CO 60	1.001E+02	9.957E+01	9.907E+01	9.683E+01	9.370E+01	8.774E+01	6.746E+01	5.186E+01	2.688E+01	7.221E+00
NI 59	2.097E-02	2.097E-02	2.097E-02	2.097E-02	2.097E-02	2.097E-02	2.097E-02	2.097E-02	2.097E-02	2.097E-02
NI 63	2.692E+00	2.691E+00	2.691E+00	2.687E+00	2.682E+00	2.672E+00	2.632E+00	2.593E+00	2.497E+00	2.316E+00
ZN 65	2.312E+00	2.222E+00	2.136E+00	1.784E+00	1.377E+00	8.194E-01	1.029E-01	1.292E-02	7.219E-05	2.254E-09
SE 79	6.143E-04	6.143E-04	6.143E-04	6.143E-04	6.143E-04	6.143E-04	6.143E-04	6.142E-04	6.142E-04	6.141E-04
KR 85	1.655E+01	1.651E+01	1.647E+01	1.628E+01	1.602E+01	1.551E+01	1.363E+01	1.198E+01	8.673E+00	4.545E+00
RB 87	4.089E-08	4.090E-08	4.090E-08	4.090E-08	4.090E-08	4.090E-08	4.090E-08	4.090E-08	4.090E-08	4.090E-08
SR 89	1.200E+03	9.906E+02	8.174E+02	3.430E+02	9.804E+01	8.007E+00	3.562E-04	1.585E-08	2.093E-19	0.000E+00
SR 90	1.389E+02	1.388E+02	1.387E+02	1.381E+02	1.373E+02	1.357E+02	1.294E+02	1.234E+02	1.095E+02	8.634E+01
Y 90	1.463E+02	1.390E+02	1.387E+02	1.382E+02	1.373E+02	1.357E+02	1.294E+02	1.234E+02	1.096E+02	8.637E+01
Y 91	1.476E+03	1.259E+03	1.067E+03	5.043E+02	1.710E+02	1.969E+01	3.453E-03	6.057E-07	2.468E-16	4.095E-35
ZR 93	3.659E-03	3.660E-03	3.660E-03	3.660E-03	3.660E-03	3.660E-03	3.660E-03	3.660E-03	3.660E-03	3.660E-03
ZR 95	1.775E+03	1.526E+03	1.311E+03	6.606E+02	2.458E+02	3.404E+01	1.252E-02	4.599E-06	1.191E-14	8.000E-32
NB 93M	3.315E-04	3.376E-04	3.437E-04	3.712E-04	4.105E-04	4.876E-04	7.771E-04	1.039E-03	1.587E-03	2.341E-03

Table F.10 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	3.229E-04	3.229E-04	3.229E-04	3.229E-04	3.229E-04	3.229E-04	3.228E-04	3.228E-04	3.228E-04	3.226E-04
NB 95	1.817E+03	1.774E+03	1.687E+03	1.115E+03	4.874E+02	7.395E+01	2.777E-02	1.021E-05	2.646E-14	1.776E-31
NB 95M	1.248E+01	1.127E+01	9.721E+00	4.900E+00	1.823E+00	2.525E-01	9.282E-05	3.412E-08	8.841E-17	5.935E-34
MO 93	1.338E-04	1.338E-04	1.338E-04	1.338E-04	1.338E-04	1.338E-04	1.338E-04	1.337E-04	1.336E-04	1.333E-04
TC 99	1.994E-02	1.999E-02	1.999E-02	1.999E-02	1.999E-02	1.999E-02	1.999E-02	1.999E-02	1.999E-02	1.999E-02
RU103	8.505E+02	6.644E+02	5.190E+02	1.700E+02	3.398E+01	1.357E+00	3.455E-06	8.797E-12	9.098E-26	0.000E+00
RU106	1.360E+02	1.325E+02	1.290E+02	1.145E+02	9.646E+01	6.841E+01	1.731E+01	4.379E+00	1.410E-01	1.462E-04
RH103M	7.660E+02	5.989E+02	4.678E+02	1.533E+02	3.063E+01	1.223E+00	3.115E-06	7.930E-12	8.201E-26	0.000E+00
RH106	1.443E+02	1.325E+02	1.290E+02	1.145E+02	9.646E+01	6.841E+01	1.731E+01	4.379E+00	1.410E-01	1.462E-04
PD107	2.967E-05	2.967E-05	2.967E-05	2.967E-05	2.967E-05	2.967E-05	2.967E-05	2.967E-05	2.967E-05	2.967E-05
AG110	1.054E+01	5.136E-03	4.941E-03	4.145E-03	3.219E-03	1.940E-03	2.560E-04	3.380E-05	2.140E-07	8.577E-12
AG110M	4.014E-01	3.861E-01	3.715E-01	3.117E-01	2.420E-01	1.459E-01	1.925E-02	2.542E-03	1.609E-05	6.449E-10
AG111	1.022E+01	2.785E+00	7.571E-01	2.106E-03	4.330E-07	1.830E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.984E-02	1.981E-02	1.977E-02	1.961E-02	1.938E-02	1.892E-02	1.721E-02	1.565E-02	1.234E-02	7.677E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	4.230E-01	3.404E-01	2.738E-01	1.024E-01	2.481E-02	1.454E-03	1.717E-08	2.028E-13	9.722E-26	0.000E+00
IN114	1.335E-01	4.374E-02	3.595E-02	1.483E-02	4.134E-03	3.212E-04	1.172E-08	4.270E-13	3.428E-24	0.000E+00
IN114M	5.560E-02	4.570E-02	3.757E-02	1.550E-02	4.321E-03	3.357E-04	1.224E-08	4.463E-13	3.582E-24	0.000E+00
IN115M	4.218E+00	5.918E-02	7.786E-04	7.192E-06	1.741E-06	1.021E-07	1.206E-12	1.424E-17	6.826E-30	0.000E+00
SN119M	1.865E+01	1.792E+01	1.722E+01	1.440E+01	1.112E+01	6.639E+00	8.419E-01	1.067E-01	6.113E-04	2.004E-08
SN121M	2.532E-03	2.531E-03	2.530E-03	2.523E-03	2.515E-03	2.497E-03	2.429E-03	2.362E-03	2.204E-03	1.919E-03
SN123	2.497E+00	2.317E+00	2.149E+00	1.531E+00	9.379E-01	3.523E-01	7.007E-03	1.394E-04	7.780E-09	2.423E-17
SN125	1.046E+01	3.824E+00	1.397E+00	1.480E-02	2.093E-05	4.186E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	5.679E-04	5.679E-04	5.679E-04	5.679E-04	5.679E-04	5.679E-04	5.679E-04	5.679E-04	5.679E-04	5.679E-04
SB124	7.029E-01	5.982E-01	5.092E-01	2.458E-01	8.595E-02	1.051E-02	2.350E-06	5.254E-10	3.927E-19	2.194E-37
SB125	1.314E+01	1.308E+01	1.298E+01	1.244E+01	1.169E+01	1.031E+01	6.255E+00	3.793E+00	1.086E+00	8.910E-02
SB126	4.009E-01	1.832E-01	8.383E-02	2.517E-03	9.432E-05	7.951E-05	7.951E-05	7.951E-05	7.950E-05	7.950E-05
SB126M	1.624E-01	5.679E-04	5.679E-04	5.679E-04	5.679E-04	5.679E-04	5.679E-04	5.679E-04	5.679E-04	5.679E-04
TE123M	7.799E-03	7.191E-03	6.632E-03	4.598E-03	2.711E-03	9.418E-04	1.374E-05	2.002E-07	5.140E-12	3.387E-21
TE125M	2.900E+00	2.918E+00	2.931E+00	2.923E+00	2.814E+00	2.512E+00	1.526E+00	9.257E-01	2.650E-01	2.174E-02
TE127	4.372E+01	9.214E+00	5.598E+00	3.562E+00	1.994E+00	6.247E-01	6.021E-03	5.804E-05	5.293E-10	4.403E-20
TE127M	6.271E+00	5.925E+00	5.435E+00	3.636E+00	2.035E+00	6.378E-01	6.147E-03	5.925E-05	5.404E-10	4.496E-20
TE129	1.778E+02	1.311E+01	9.824E+00	2.665E+00	4.056E-01	9.397E-03	2.708E-09	7.805E-16	3.480E-32	0.000E+00
TE129M	2.676E+01	2.015E+01	1.509E+01	4.093E+00	6.231E-01	1.444E-02	4.160E-09	1.199E-15	5.346E-32	0.000E+00
I129	3.407E-05	3.411E-05	3.414E-05	3.421E-05	3.423E-05	3.423E-05	3.423E-05	3.423E-05	3.423E-05	3.423E-05
I131	7.302E+02	2.244E+02	6.713E+01	2.877E-01	1.103E-04	1.622E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.10 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	8.109E+00	6.074E+00	3.431E+00	1.185E-01	6.121E-04	1.483E-08	5.033E-27	1.708E-45	0.000E+00	0.000E+00
XE133	1.687E+03	3.261E+02	5.137E+01	1.205E-02	6.984E-08	2.347E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.045E+02	1.032E+02	1.019E+02	9.607E+01	8.834E+01	7.468E+01	3.814E+01	1.948E+01	3.632E+00	1.263E-01
CS135	1.177E-03	1.178E-03	1.178E-03	1.178E-03	1.178E-03	1.178E-03	1.178E-03	1.178E-03	1.178E-03	1.178E-03
CS136	3.226E+01	1.538E+01	7.333E+00	2.583E-01	2.068E-03	1.325E-07	2.237E-24	3.777E-41	0.000E+00	0.000E+00
CS137	1.466E+02	1.465E+02	1.463E+02	1.457E+02	1.449E+02	1.432E+02	1.368E+02	1.306E+02	1.164E+02	9.237E+01
BA136M	5.318E+00	2.535E+00	1.208E+00	4.256E-02	3.407E-04	2.184E-08	3.687E-25	6.225E-42	0.000E+00	0.000E+00
BA137M	1.387E+02	1.385E+02	1.384E+02	1.379E+02	1.371E+02	1.355E+02	1.294E+02	1.235E+02	1.101E+02	8.738E+01
BA140	1.546E+03	7.237E+02	3.389E+02	1.100E+01	7.825E-02	3.962E-06	2.603E-23	1.710E-40	0.000E+00	0.000E+00
LA140	1.568E+03	8.322E+02	3.900E+02	1.266E+01	9.006E-02	4.559E-06	2.996E-23	1.968E-40	0.000E+00	0.000E+00
CE141	1.468E+03	1.095E+03	8.127E+02	2.110E+02	3.016E+01	6.160E-01	1.072E-07	1.867E-14	2.361E-31	0.000E+00
CE142	4.318E-08	4.318E-08	4.318E-08	4.318E-08	4.318E-08	4.318E-08	4.318E-08	4.318E-08	4.318E-08	4.318E-08
CE144	1.397E+03	1.350E+03	1.304E+03	1.118E+03	8.949E+02	5.735E+02	9.670E+01	1.631E+01	1.904E-01	2.596E-05
PR143	1.462E+03	7.960E+02	3.893E+02	1.537E+01	1.451E-01	1.293E-05	8.156E-22	5.144E-38	0.000E+00	0.000E+00
PR144	1.399E+03	1.350E+03	1.304E+03	1.118E+03	8.949E+02	5.735E+02	9.671E+01	1.631E+01	1.904E-01	2.596E-05
PR144M	1.677E+01	1.620E+01	1.565E+01	1.342E+01	1.074E+01	6.882E+00	1.160E+00	1.957E-01	2.285E-03	3.116E-07
ND144	1.681E-12	1.698E-12	1.715E-12	1.784E-12	1.867E-12	1.986E-12	2.163E-12	2.193E-12	2.198E-12	2.199E-12
ND147	5.691E+02	2.369E+02	9.850E+01	1.870E+00	6.143E-03	6.625E-08	8.963E-28	1.213E-47	0.000E+00	0.000E+00
PM145	3.722E-05	3.777E-05	3.829E-05	4.046E-05	4.305E-05	4.674E-05	5.069E-05	4.856E-05	4.037E-05	2.730E-05
PM147	2.561E+02	2.574E+02	2.563E+02	2.460E+02	2.303E+02	2.018E+02	1.190E+02	7.018E+01	1.875E+01	1.337E+00
PM148M	3.989E+01	3.154E+01	2.493E+01	8.624E+00	1.864E+00	8.714E-02	4.158E-07	1.984E-12	9.866E-26	0.000E+00
PM148	2.077E+02	3.550E+01	6.941E+00	4.877E-01	1.050E-01	4.908E-03	2.342E-08	1.117E-13	5.557E-27	0.000E+00
SM145	4.053E-04	3.939E-04	3.828E-04	3.365E-04	2.794E-04	1.926E-04	4.349E-05	9.821E-06	2.380E-07	1.397E-10
SM147	4.211E-09	4.275E-09	4.339E-09	4.621E-09	5.006E-09	5.704E-09	7.734E-09	8.931E-09	1.019E-08	1.061E-08
SM151	6.517E-01	6.556E-01	6.554E-01	6.545E-01	6.533E-01	6.508E-01	6.409E-01	6.311E-01	6.073E-01	5.622E-01
EU152	3.157E-02	3.150E-02	3.143E-02	3.116E-02	3.076E-02	2.999E-02	2.709E-02	2.446E-02	1.896E-02	1.139E-02
EU154	5.343E+00	5.326E+00	5.310E+00	5.236E+00	5.131E+00	4.930E+00	4.195E+00	3.572E+00	2.387E+00	1.067E+00
EU155	3.414E+00	3.396E+00	3.378E+00	3.297E+00	3.185E+00	2.969E+00	2.245E+00	1.698E+00	8.448E-01	2.090E-01
EU156	3.003E+01	1.592E+01	8.401E+00	4.683E-01	7.270E-03	1.753E-06	5.918E-21	1.999E-35	0.000E+00	0.000E+00
GD153	9.681E-02	9.300E-02	8.935E-02	7.455E-02	5.740E-02	3.403E-02	4.207E-03	5.198E-04	2.791E-06	8.049E-11
TB160	1.862E-01	1.628E-01	1.424E-01	7.763E-02	3.236E-02	5.627E-03	5.141E-06	4.696E-09	1.184E-16	7.531E-32
TL206	6.795E-05	8.827E-12	8.827E-12	8.827E-12	8.827E-12	8.827E-12	8.827E-12	8.827E-12	8.827E-12	8.827E-12
TL207	2.475E-09	2.480E-09	2.492E-09	2.656E-09	2.982E-09	3.733E-09	6.754E-09	9.934E-09	1.890E-08	4.048E-08
TL208	9.997E-07	1.018E-06	1.048E-06	1.199E-06	1.385E-06	1.728E-06	2.770E-06	3.422E-06	4.080E-06	4.030E-06
PB210	1.010E-12	1.036E-12	1.053E-12	1.074E-12	1.072E-12	1.063E-12	1.052E-12	1.102E-12	1.683E-12	6.820E-12
PB211	2.482E-09	2.487E-09	2.499E-09	2.663E-09	2.991E-09	3.743E-09	6.773E-09	9.962E-09	1.895E-08	4.060E-08

Table F.10 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	2.782E-06	2.833E-06	2.916E-06	3.337E-06	3.855E-06	4.809E-06	7.710E-06	9.524E-06	1.136E-05	1.122E-05
BI211	2.487E-09	2.487E-09	2.499E-09	2.663E-09	2.991E-09	3.743E-09	6.773E-09	9.962E-09	1.895E-08	4.060E-08
BI212	2.782E-06	2.833E-06	2.916E-06	3.337E-06	3.855E-06	4.809E-06	7.710E-06	9.524E-06	1.136E-05	1.122E-05
PO212	1.783E-06	1.815E-06	1.868E-06	2.138E-06	2.470E-06	3.081E-06	4.940E-06	6.102E-06	7.276E-06	7.187E-06
PO215	2.482E-09	2.487E-09	2.499E-09	2.663E-09	2.991E-09	3.743E-09	6.773E-09	9.962E-09	1.895E-08	4.060E-08
PO216	2.782E-06	2.833E-06	2.916E-06	3.337E-06	3.855E-06	4.809E-06	7.710E-06	9.524E-06	1.136E-05	1.122E-05
RN219	2.482E-09	2.487E-09	2.499E-09	2.663E-09	2.991E-09	3.743E-09	6.773E-09	9.962E-09	1.895E-08	4.060E-08
RN220	2.782E-06	2.833E-06	2.916E-06	3.337E-06	3.855E-06	4.809E-06	7.710E-06	9.524E-06	1.136E-05	1.122E-05
FR223	3.421E-11	3.491E-11	3.562E-11	3.881E-11	4.347E-11	5.298E-11	9.335E-11	1.373E-10	2.612E-10	5.598E-10
RA223	2.482E-09	2.487E-09	2.499E-09	2.663E-09	2.991E-09	3.743E-09	6.773E-09	9.962E-09	1.895E-08	4.060E-08
RA224	2.782E-06	2.833E-06	2.916E-06	3.337E-06	3.855E-06	4.809E-06	7.710E-06	9.524E-06	1.136E-05	1.122E-05
RA226	2.938E-13	3.014E-13	3.092E-13	3.457E-13	4.029E-13	5.336E-13	1.303E-12	2.542E-12	8.331E-12	3.642E-11
RA228	5.458E-10	5.501E-10	5.543E-10	5.731E-10	5.998E-10	6.510E-10	8.314E-10	9.781E-10	1.236E-09	1.482E-09
AC227	2.479E-09	2.530E-09	2.581E-09	2.812E-09	3.150E-09	3.839E-09	6.764E-09	9.947E-09	1.893E-08	4.057E-08
TH227	2.453E-09	2.461E-09	2.486E-09	2.680E-09	3.008E-09	3.685E-09	6.679E-09	9.825E-09	1.869E-08	4.004E-08
TH228	2.777E-06	2.863E-06	2.947E-06	3.322E-06	3.839E-06	4.792E-06	7.698E-06	9.504E-06	1.135E-05	1.122E-05
TH229	6.175E-10	6.294E-10	6.414E-10	6.965E-10	7.766E-10	9.371E-10	1.580E-09	2.223E-09	3.833E-09	7.062E-09
TH230	4.571E-10	4.642E-10	4.713E-10	5.042E-10	5.531E-10	6.564E-10	1.142E-09	1.742E-09	3.732E-09	9.720E-09
TH231	7.955E-04	1.679E-04	1.678E-04	1.678E-04	1.678E-04	1.678E-04	1.678E-04	1.678E-04	1.678E-04	1.678E-04
TH232	1.617E-09	1.617E-09	1.617E-09	1.617E-09	1.617E-09	1.617E-09	1.617E-09	1.617E-09	1.617E-09	1.617E-09
TH234	2.503E-05	2.299E-05	2.163E-05	1.932E-05	1.891E-05	1.888E-05	1.888E-05	1.888E-05	1.888E-05	1.888E-05
PA231	4.401E-08	4.422E-08	4.437E-08	4.500E-08	4.590E-08	4.769E-08	5.480E-08	6.191E-08	7.965E-08	1.151E-07
PA233	3.136E-01	2.192E-01	1.531E-01	3.051E-02	3.281E-03	4.131E-04	3.864E-04	3.865E-04	3.868E-04	3.879E-04
PA234M	1.409E-03	2.299E-05	2.163E-05	1.932E-05	1.891E-05	1.888E-05	1.888E-05	1.888E-05	1.888E-05	1.888E-05
PA234	2.781E-03	2.989E-08	2.811E-08	2.512E-08	2.458E-08	2.454E-08	2.454E-08	2.454E-08	2.454E-08	2.454E-08
U232	8.932E-06	8.991E-06	9.027E-06	9.183E-06	9.394E-06	9.776E-06	1.085E-05	1.142E-05	1.174E-05	1.098E-05
U233	3.255E-06	3.300E-06	3.330E-06	3.388E-06	3.401E-06	3.403E-06	3.407E-06	3.410E-06	3.419E-06	3.435E-06
U234	2.054E-05	2.067E-05	2.079E-05	2.135E-05	2.216E-05	2.377E-05	3.019E-05	3.651E-05	5.189E-05	8.088E-05
U235	1.678E-04	1.678E-04	1.678E-04	1.678E-04	1.678E-04	1.678E-04	1.678E-04	1.678E-04	1.678E-04	1.678E-04
U236	6.819E-04	6.819E-04	6.819E-04	6.819E-04	6.819E-04	6.819E-04	6.819E-04	6.819E-04	6.819E-04	6.819E-04
U237	7.263E+02	1.725E+02	4.096E+01	6.190E-02	9.755E-06	4.374E-06	3.972E-06	3.608E-06	2.837E-06	1.753E-06
U238	1.888E-05	1.888E-05	1.888E-05	1.888E-05	1.888E-05	1.888E-05	1.888E-05	1.888E-05	1.888E-05	1.888E-05
NP237	3.801E-04	3.848E-04	3.860E-04	3.863E-04	3.863E-04	3.863E-04	3.864E-04	3.865E-04	3.868E-04	3.879E-04
PU236	1.062E-04	1.057E-04	1.047E-04	1.004E-04	9.445E-05	8.365E-05	5.145E-05	3.165E-05	9.393E-06	8.277E-07
PU237	5.982E-04	4.835E-04	3.908E-04	1.494E-04	3.733E-05	2.330E-06	3.533E-11	5.359E-16	4.800E-28	0.000E+00
PU238	1.128E+00	1.137E+00	1.138E+00	1.139E+00	1.140E+00	1.139E+00	1.125E+00	1.107E+00	1.064E+00	9.835E-01

Table F.10 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	8.267E-02	8.314E-02	8.315E-02	8.315E-02	8.315E-02	8.315E-02	8.314E-02	8.314E-02	8.313E-02	8.310E-02
PU240	5.659E-02	5.659E-02	5.659E-02	5.659E-02	5.659E-02	5.659E-02	5.658E-02	5.658E-02	5.656E-02	5.652E-02
PU241	1.871E+01	1.867E+01	1.864E+01	1.848E+01	1.826E+01	1.783E+01	1.619E+01	1.471E+01	1.156E+01	7.148E+00
PU242	9.682E-05	9.683E-05	9.683E-05	9.683E-05	9.683E-05	9.683E-05	9.683E-05	9.683E-05	9.683E-05	9.683E-05
PU244	4.355E-12	4.355E-12	4.355E-12	4.355E-12	4.355E-12	4.355E-12	4.355E-12	4.355E-12	4.355E-12	4.355E-12
AM241	2.642E-02	2.756E-02	2.871E-02	3.385E-02	4.120E-02	5.562E-02	1.098E-01	1.589E-01	2.619E-01	4.036E-01
AM242M	8.186E-04	8.185E-04	8.183E-04	8.177E-04	8.168E-04	8.149E-04	8.075E-04	8.002E-04	7.822E-04	7.473E-04
AM242	5.639E+00	8.171E-04	8.143E-04	8.136E-04	8.127E-04	8.108E-04	8.035E-04	7.962E-04	7.783E-04	7.436E-04
AM243	3.864E-04	3.869E-04	3.869E-04	3.869E-04	3.869E-04	3.868E-04	3.868E-04	3.867E-04	3.865E-04	3.862E-04
CM242	2.918E+00	2.767E+00	2.607E+00	1.993E+00	1.353E+00	6.237E-01	2.871E-02	1.922E-03	6.444E-04	6.149E-04
CM243	5.401E-04	5.396E-04	5.391E-04	5.369E-04	5.336E-04	5.272E-04	5.021E-04	4.783E-04	4.236E-04	3.322E-04
CM244	3.561E-02	3.561E-02	3.556E-02	3.532E-02	3.499E-02	3.433E-02	3.180E-02	2.946E-02	2.433E-02	1.660E-02
CM245	1.845E-06	1.845E-06	1.845E-06	1.845E-06	1.845E-06	1.845E-06	1.845E-06	1.845E-06	1.844E-06	1.842E-06
CM246	1.276E-07	1.276E-07	1.276E-07	1.276E-07	1.276E-07	1.276E-07	1.276E-07	1.275E-07	1.274E-07	1.273E-07
CM247	1.935E-13	1.935E-13	1.935E-13	1.935E-13	1.935E-13	1.935E-13	1.935E-13	1.935E-13	1.935E-13	1.935E-13
Subtotal Ci**	2.295E+04	1.586E+04	1.245E+04	6.952E+03	4.269E+03	2.516E+03	1.086E+03	7.587E+02	5.340E+02	3.795E+02
Total Ci***	1.556E+05	1.632E+04	1.262E+04	7.050E+03	4.336E+03	2.553E+03	1.098E+03	7.648E+02	5.352E+02	3.799E+02

† Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table F.11 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.11 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.11

BURNUP (BU)

BU: U-235 55.0 g
 BU: % U-235 40.15%
 BU: MWd 52.26
 BU: MWd/MTU 266650
 U-235 DEPL 65.12 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	7.308E-01	7.293E-01	7.276E-01	7.206E-01	7.106E-01	6.910E-01	6.176E-01	5.521E-01	4.171E-01	2.380E-01
BE 10	9.310E-07	9.310E-07	9.310E-07	9.310E-07	9.310E-07	9.310E-07	9.310E-07	9.310E-07	9.309E-07	9.309E-07
C 14	5.944E-03	5.944E-03	5.944E-03	5.944E-03	5.944E-03	5.943E-03	5.942E-03	5.940E-03	5.937E-03	5.930E-03
CL 36	1.271E-04	1.271E-04	1.271E-04	1.271E-04	1.271E-04	1.271E-04	1.271E-04	1.271E-04	1.271E-04	1.271E-04
CR 51	3.649E+02	2.571E+02	1.811E+02	3.722E+01	3.797E+00	3.951E-02	4.633E-10	5.432E-18	8.085E-38	0.000E+00
MN 54	2.087E+01	2.023E+01	1.961E+01	1.704E+01	1.392E+01	9.287E+00	1.839E+00	3.643E-01	6.360E-03	1.938E-06
FE 55	1.397E+02	1.383E+02	1.369E+02	1.307E+02	1.223E+02	1.070E+02	6.283E+01	3.688E+01	9.733E+00	6.780E-01
FE 59	7.045E+00	5.679E+00	4.577E+00	1.728E+00	4.237E-01	2.548E-02	3.333E-07	4.360E-12	2.698E-24	0.000E+00
CO 60	1.134E+02	1.128E+02	1.123E+02	1.097E+02	1.062E+02	9.944E+01	7.645E+01	5.878E+01	3.046E+01	8.183E+00
NI 59	2.358E-02	2.358E-02	2.358E-02	2.358E-02	2.358E-02	2.358E-02	2.358E-02	2.358E-02	2.358E-02	2.357E-02
NI 63	3.047E+00	3.046E+00	3.046E+00	3.042E+00	3.036E+00	3.025E+00	2.979E+00	2.935E+00	2.826E+00	2.621E+00
ZN 65	2.668E+00	2.564E+00	2.464E+00	2.058E+00	1.588E+00	9.453E-01	1.187E-01	1.491E-02	8.328E-05	2.600E-09
SE 79	6.747E-04	6.747E-04	6.747E-04	6.747E-04	6.747E-04	6.747E-04	6.747E-04	6.747E-04	6.746E-04	6.746E-04
KR 85	1.816E+01	1.812E+01	1.807E+01	1.787E+01	1.759E+01	1.703E+01	1.496E+01	1.315E+01	9.519E+00	4.989E+00
RB 87	4.485E-08	4.485E-08	4.485E-08	4.485E-08	4.485E-08	4.485E-08	4.485E-08	4.485E-08	4.485E-08	4.485E-08
SR 89	1.302E+03	1.075E+03	8.871E+02	3.723E+02	1.064E+02	8.690E+00	3.867E-04	1.720E-08	2.271E-19	0.000E+00
SR 90	1.524E+02	1.523E+02	1.522E+02	1.515E+02	1.506E+02	1.489E+02	1.419E+02	1.353E+02	1.202E+02	9.473E+01
Y 90	1.612E+02	1.526E+02	1.522E+02	1.516E+02	1.507E+02	1.489E+02	1.420E+02	1.354E+02	1.202E+02	9.475E+01
Y 91	1.604E+03	1.368E+03	1.159E+03	5.480E+02	1.860E+02	2.140E+01	3.752E-03	6.582E-07	2.681E-16	4.450E-35
ZR 93	4.034E-03	4.035E-03	4.035E-03	4.035E-03	4.035E-03	4.035E-03	4.035E-03	4.035E-03	4.035E-03	4.035E-03
ZR 95	1.943E+03	1.670E+03	1.434E+03	7.229E+02	2.690E+02	3.725E+01	1.369E-02	5.034E-06	1.304E-14	8.756E-32
NB 93M	3.653E-04	3.720E-04	3.788E-04	4.091E-04	4.524E-04	5.374E-04	8.566E-04	1.145E-03	1.749E-03	2.581E-03

Table F.11 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	3.650E-04	3.650E-04	3.650E-04	3.650E-04	3.650E-04	3.650E-04	3.650E-04	3.650E-04	3.649E-04	3.648E-04
NB 95	1.989E+03	1.942E+03	1.846E+03	1.220E+03	5.335E+02	8.093E+01	3.040E-02	1.118E-05	2.896E-14	1.944E-31
NB 95M	1.366E+01	1.233E+01	1.064E+01	5.364E+00	1.996E+00	2.764E-01	1.016E-04	3.734E-08	9.676E-17	6.495E-34
MO 93	1.519E-04	1.519E-04	1.519E-04	1.519E-04	1.519E-04	1.518E-04	1.518E-04	1.517E-04	1.516E-04	1.513E-04
TC 99	2.173E-02	2.179E-02	2.179E-02	2.179E-02	2.179E-02	2.179E-02	2.179E-02	2.179E-02	2.179E-02	2.179E-02
RU103	9.322E+02	7.282E+02	5.688E+02	1.863E+02	3.724E+01	1.487E+00	3.787E-06	9.641E-12	9.971E-26	0.000E+00
RU106	1.537E+02	1.497E+02	1.458E+02	1.295E+02	1.090E+02	7.732E+01	1.956E+01	4.949E+00	1.594E-01	1.652E-04
RH103M	8.395E+02	6.565E+02	5.128E+02	1.680E+02	3.357E+01	1.341E+00	3.414E-06	8.692E-12	8.989E-26	0.000E+00
RH106	1.644E+02	1.497E+02	1.458E+02	1.295E+02	1.090E+02	7.732E+01	1.956E+01	4.949E+00	1.594E-01	1.652E-04
PD107	3.360E-05	3.360E-05	3.360E-05	3.360E-05	3.360E-05	3.360E-05	3.360E-05	3.360E-05	3.360E-05	3.360E-05
AG110	1.381E+01	6.632E-03	6.381E-03	5.354E-03	4.156E-03	2.506E-03	3.307E-04	4.365E-05	2.764E-07	1.108E-11
AG110M	5.185E-01	4.987E-01	4.797E-01	4.025E-01	3.125E-01	1.883E-01	2.487E-02	3.282E-03	2.078E-05	8.328E-10
AG111	1.171E+01	3.192E+00	8.678E-01	2.414E-03	4.964E-07	2.098E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	2.220E-02	2.216E-02	2.212E-02	2.194E-02	2.168E-02	2.118E-02	1.926E-02	1.751E-02	1.381E-02	8.591E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	4.680E-01	3.765E-01	3.029E-01	1.133E-01	2.744E-02	1.609E-03	1.900E-08	2.243E-13	1.075E-25	0.000E+00
IN114	1.738E-01	5.691E-02	4.679E-02	1.930E-02	5.380E-03	4.180E-04	1.524E-08	5.557E-13	4.461E-24	0.000E+00
IN114M	7.234E-02	5.947E-02	4.889E-02	2.017E-02	5.622E-03	4.369E-04	1.592E-08	5.807E-13	4.661E-24	0.000E+00
IN115M	4.656E+00	6.532E-02	8.594E-04	7.957E-06	1.926E-06	1.129E-07	1.334E-12	1.575E-17	7.551E-30	0.000E+00
SN119M	2.149E+01	2.066E+01	1.986E+01	1.660E+01	1.283E+01	7.654E+00	9.706E-01	1.231E-01	7.046E-04	2.310E-08
SN121M	2.870E-03	2.869E-03	2.867E-03	2.860E-03	2.850E-03	2.831E-03	2.753E-03	2.678E-03	2.499E-03	2.175E-03
SN123	2.801E+00	2.598E+00	2.410E+00	1.716E+00	1.052E+00	3.950E-01	7.857E-03	1.563E-04	8.725E-09	2.717E-17
SN125	1.188E+01	4.340E+00	1.586E+00	1.679E-02	2.376E-05	4.751E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	6.266E-04	6.266E-04	6.266E-04	6.266E-04	6.266E-04	6.266E-04	6.266E-04	6.266E-04	6.265E-04	6.265E-04
SB124	8.646E-01	7.359E-01	6.263E-01	3.024E-01	1.057E-01	1.293E-02	2.890E-06	6.463E-10	4.831E-19	2.700E-37
SB125	1.472E+01	1.465E+01	1.454E+01	1.394E+01	1.309E+01	1.156E+01	7.008E+00	4.250E+00	1.217E+00	9.983E-02
SB126	4.636E-01	2.120E-01	9.695E-02	2.907E-03	1.048E-04	8.773E-05	8.772E-05	8.772E-05	8.772E-05	8.771E-05
SB126M	1.816E-01	6.266E-04	6.266E-04	6.266E-04	6.266E-04	6.266E-04	6.266E-04	6.266E-04	6.265E-04	6.265E-04
TE123M	1.068E-02	9.849E-03	9.082E-03	6.297E-03	3.712E-03	1.290E-03	1.881E-05	2.742E-07	7.039E-12	4.639E-21
TE125M	3.246E+00	3.267E+00	3.281E+00	3.273E+00	3.152E+00	2.814E+00	1.710E+00	1.037E+00	2.970E-01	2.435E-02
TE127	4.794E+01	1.013E+01	6.170E+00	3.927E+00	2.198E+00	6.887E-01	6.638E-03	6.398E-05	5.836E-10	4.855E-20
TE127M	6.915E+00	6.532E+00	5.992E+00	4.009E+00	2.244E+00	7.031E-01	6.777E-03	6.532E-05	5.958E-10	4.956E-20
TE129	1.938E+02	1.430E+01	1.071E+01	2.905E+00	4.422E-01	1.025E-02	2.953E-09	8.510E-16	3.794E-32	0.000E+00
TE129M	2.918E+01	2.197E+01	1.646E+01	4.463E+00	6.794E-01	1.574E-02	4.536E-09	1.307E-15	5.829E-32	0.000E+00
I129	3.740E-05	3.745E-05	3.749E-05	3.756E-05	3.758E-05	3.758E-05	3.758E-05	3.758E-05	3.758E-05	3.758E-05
I131	7.930E+02	2.437E+02	7.291E+01	3.124E-01	1.198E-04	1.761E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.11 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	8.807E+00	6.597E+00	3.726E+00	1.287E-01	6.648E-04	1.611E-08	5.466E-27	1.855E-45	0.000E+00	0.000E+00
XE133	1.829E+03	3.536E+02	5.570E+01	1.306E-02	7.573E-08	2.545E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.305E+02	1.288E+02	1.272E+02	1.200E+02	1.103E+02	9.323E+01	4.761E+01	2.432E+01	4.534E+00	1.576E-01
CS135	1.222E-03	1.223E-03	1.223E-03	1.223E-03	1.223E-03	1.223E-03	1.223E-03	1.223E-03	1.223E-03	1.223E-03
CS136	3.873E+01	1.847E+01	8.805E+00	3.101E-01	2.483E-03	1.591E-07	2.687E-24	4.535E-41	0.000E+00	0.000E+00
CS137	1.611E+02	1.610E+02	1.608E+02	1.602E+02	1.593E+02	1.574E+02	1.503E+02	1.436E+02	1.279E+02	1.015E+02
BA136M	6.386E+00	3.043E+00	1.451E+00	5.111E-02	4.092E-04	2.623E-08	4.428E-25	7.474E-42	0.000E+00	0.000E+00
BA137M	1.525E+02	1.523E+02	1.522E+02	1.515E+02	1.507E+02	1.489E+02	1.422E+02	1.358E+02	1.210E+02	9.605E+01
BA140	1.675E+03	7.843E+02	3.672E+02	1.192E+01	8.480E-02	4.293E-06	2.821E-23	1.853E-40	0.000E+00	0.000E+00
LA140	1.704E+03	9.019E+02	4.226E+02	1.372E+01	9.759E-02	4.941E-06	3.246E-23	2.133E-40	0.000E+00	0.000E+00
CE141	1.591E+03	1.187E+03	8.805E+02	2.287E+02	3.268E+01	6.674E-01	1.162E-07	2.023E-14	2.559E-31	0.000E+00
CE142	4.733E-08	4.733E-08	4.733E-08	4.733E-08	4.733E-08	4.733E-08	4.733E-08	4.733E-08	4.733E-08	4.733E-08
CE144	1.530E+03	1.479E+03	1.429E+03	1.225E+03	9.804E+02	6.283E+02	1.059E+02	1.787E+01	2.086E-01	2.844E-05
PR143	1.582E+03	8.617E+02	4.214E+02	1.664E+01	1.571E-01	1.400E-05	8.829E-22	5.569E-38	0.000E+00	0.000E+00
PR144	1.534E+03	1.479E+03	1.429E+03	1.225E+03	9.804E+02	6.283E+02	1.059E+02	1.787E+01	2.086E-01	2.844E-05
PR144M	1.837E+01	1.774E+01	1.715E+01	1.470E+01	1.177E+01	7.539E+00	1.271E+00	2.144E-01	2.503E-03	3.413E-07
ND144	1.887E-12	1.906E-12	1.924E-12	2.000E-12	2.091E-12	2.221E-12	2.415E-12	2.447E-12	2.454E-12	2.454E-12
ND147	6.170E+02	2.568E+02	1.068E+02	2.028E+00	6.660E-03	7.183E-08	9.717E-28	1.315E-47	0.000E+00	0.000E+00
PM145	4.183E-05	4.245E-05	4.306E-05	4.554E-05	4.852E-05	5.275E-05	5.733E-05	5.494E-05	4.568E-05	3.090E-05
PM147	2.651E+02	2.665E+02	2.656E+02	2.549E+02	2.386E+02	2.091E+02	1.233E+02	7.273E+01	1.942E+01	1.386E+00
PM148M	4.403E+01	3.481E+01	2.752E+01	9.519E+00	2.058E+00	9.618E-02	4.589E-07	2.190E-12	1.089E-25	0.000E+00
PM148	2.467E+02	4.204E+01	8.130E+00	5.385E-01	1.159E-01	5.417E-03	2.585E-08	1.233E-13	6.134E-27	0.000E+00
SM145	4.638E-04	4.507E-04	4.380E-04	3.851E-04	3.197E-04	2.204E-04	4.977E-05	1.124E-05	2.723E-07	1.599E-10
SM147	4.400E-09	4.466E-09	4.532E-09	4.825E-09	5.224E-09	5.947E-09	8.050E-09	9.290E-09	1.060E-08	1.104E-08
SM151	6.508E-01	6.550E-01	6.548E-01	6.539E-01	6.527E-01	6.502E-01	6.403E-01	6.304E-01	6.066E-01	5.617E-01
EU152	2.905E-02	2.899E-02	2.894E-02	2.867E-02	2.832E-02	2.760E-02	2.493E-02	2.252E-02	1.746E-02	1.049E-02
EU154	6.758E+00	6.736E+00	6.716E+00	6.623E+00	6.491E+00	6.235E+00	5.307E+00	4.518E+00	3.020E+00	1.350E+00
EU155	4.104E+00	4.081E+00	4.059E+00	3.962E+00	3.827E+00	3.568E+00	2.699E+00	2.041E+00	1.015E+00	2.512E-01
EU156	4.046E+01	2.144E+01	1.131E+01	6.305E-01	9.790E-03	2.360E-06	7.970E-21	2.692E-35	0.000E+00	0.000E+00
GD153	1.070E-01	1.028E-01	9.878E-02	8.242E-02	6.347E-02	3.763E-02	4.651E-03	5.748E-04	3.086E-06	8.900E-11
TB160	2.277E-01	1.991E-01	1.741E-01	9.494E-02	3.958E-02	6.882E-03	6.286E-06	5.743E-09	1.448E-16	9.210E-32
TL206	7.899E-05	1.002E-11	1.002E-11	1.002E-11	1.002E-11	1.002E-11	1.002E-11	1.002E-11	1.002E-11	1.002E-11
TL207	2.510E-09	2.515E-09	2.528E-09	2.697E-09	3.034E-09	3.806E-09	6.884E-09	1.008E-08	1.895E-08	3.984E-08
TL208	1.172E-06	1.194E-06	1.230E-06	1.413E-06	1.639E-06	2.061E-06	3.372E-06	4.217E-06	5.108E-06	5.082E-06
PB210	1.377E-12	1.413E-12	1.436E-12	1.465E-12	1.462E-12	1.447E-12	1.419E-12	1.461E-12	2.110E-12	8.349E-12
PB211	2.517E-09	2.522E-09	2.535E-09	2.705E-09	3.042E-09	3.817E-09	6.904E-09	1.011E-08	1.900E-08	3.995E-08

Table F.11 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	3.262E-06	3.323E-06	3.423E-06	3.932E-06	4.563E-06	5.735E-06	9.384E-06	1.174E-05	1.422E-05	1.415E-05
BI211	2.524E-09	2.522E-09	2.535E-09	2.705E-09	3.042E-09	3.817E-09	6.904E-09	1.011E-08	1.900E-08	3.995E-08
BI212	3.262E-06	3.323E-06	3.423E-06	3.932E-06	4.563E-06	5.735E-06	9.384E-06	1.174E-05	1.422E-05	1.415E-05
PO212	2.090E-06	2.129E-06	2.193E-06	2.519E-06	2.923E-06	3.675E-06	6.012E-06	7.520E-06	9.108E-06	9.063E-06
PO215	2.517E-09	2.522E-09	2.535E-09	2.705E-09	3.042E-09	3.817E-09	6.904E-09	1.011E-08	1.900E-08	3.995E-08
PO216	3.262E-06	3.323E-06	3.423E-06	3.932E-06	4.563E-06	5.735E-06	9.384E-06	1.174E-05	1.422E-05	1.415E-05
RN219	2.517E-09	2.522E-09	2.535E-09	2.705E-09	3.042E-09	3.817E-09	6.904E-09	1.011E-08	1.900E-08	3.995E-08
RN220	3.262E-06	3.323E-06	3.423E-06	3.932E-06	4.563E-06	5.735E-06	9.384E-06	1.174E-05	1.422E-05	1.415E-05
FR223	3.469E-11	3.542E-11	3.615E-11	3.945E-11	4.426E-11	5.403E-11	9.515E-11	1.393E-10	2.620E-10	5.509E-10
RA223	2.517E-09	2.522E-09	2.535E-09	2.705E-09	3.042E-09	3.817E-09	6.904E-09	1.011E-08	1.900E-08	3.995E-08
RA224	3.262E-06	3.323E-06	3.423E-06	3.932E-06	4.563E-06	5.735E-06	9.384E-06	1.174E-05	1.422E-05	1.415E-05
RA226	3.211E-13	3.294E-13	3.380E-13	3.781E-13	4.409E-13	5.852E-13	1.451E-12	2.881E-12	9.816E-12	4.501E-11
RA228	5.432E-10	5.474E-10	5.516E-10	5.704E-10	5.969E-10	6.479E-10	8.276E-10	9.737E-10	1.231E-09	1.475E-09
AC227	2.514E-09	2.567E-09	2.619E-09	2.859E-09	3.207E-09	3.916E-09	6.895E-09	1.010E-08	1.898E-08	3.992E-08
TH227	2.488E-09	2.496E-09	2.522E-09	2.722E-09	3.061E-09	3.757E-09	6.808E-09	9.973E-09	1.874E-08	3.940E-08
TH228	3.256E-06	3.359E-06	3.461E-06	3.915E-06	4.544E-06	5.715E-06	9.369E-06	1.171E-05	1.421E-05	1.414E-05
TH229	6.774E-10	6.902E-10	7.033E-10	7.631E-10	8.502E-10	1.025E-09	1.723E-09	2.423E-09	4.174E-09	7.688E-09
TH230	5.009E-10	5.088E-10	5.168E-10	5.537E-10	6.090E-10	7.271E-10	1.300E-09	2.033E-09	4.547E-09	1.237E-08
TH231	8.824E-04	1.555E-04	1.555E-04	1.554E-04	1.554E-04	1.554E-04	1.554E-04	1.554E-04	1.554E-04	1.554E-04
TH232	1.610E-09	1.610E-09	1.610E-09	1.610E-09	1.610E-09	1.610E-09	1.610E-09	1.610E-09	1.610E-09	1.610E-09
TH234	2.702E-05	2.428E-05	2.245E-05	1.935E-05	1.879E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05
PA231	4.550E-08	4.570E-08	4.584E-08	4.642E-08	4.726E-08	4.892E-08	5.550E-08	6.208E-08	7.852E-08	1.114E-07
PA233	3.623E-01	2.532E-01	1.769E-01	3.526E-02	3.818E-03	5.056E-04	4.748E-04	4.749E-04	4.753E-04	4.766E-04
PA234M	1.886E-03	2.428E-05	2.245E-05	1.935E-05	1.879E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05
PA234	3.734E-03	3.157E-08	2.918E-08	2.515E-08	2.443E-08	2.437E-08	2.437E-08	2.437E-08	2.437E-08	2.437E-08
U232	1.068E-05	1.076E-05	1.081E-05	1.103E-05	1.133E-05	1.187E-05	1.341E-05	1.424E-05	1.477E-05	1.386E-05
U233	3.529E-06	3.580E-06	3.616E-06	3.682E-06	3.698E-06	3.700E-06	3.704E-06	3.709E-06	3.719E-06	3.740E-06
U234	2.291E-05	2.308E-05	2.325E-05	2.403E-05	2.515E-05	2.740E-05	3.632E-05	4.512E-05	6.651E-05	1.068E-04
U235	1.554E-04	1.554E-04	1.554E-04	1.554E-04	1.554E-04	1.554E-04	1.554E-04	1.554E-04	1.554E-04	1.554E-04
U236	7.411E-04	7.411E-04	7.411E-04	7.411E-04	7.411E-04	7.411E-04	7.411E-04	7.411E-04	7.411E-04	7.411E-04
U237	9.170E+02	2.178E+02	5.172E+01	7.815E-02	1.216E-05	5.371E-06	4.878E-06	4.431E-06	3.483E-06	2.153E-06
U238	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05	1.875E-05
NP237	4.668E-04	4.728E-04	4.743E-04	4.747E-04	4.747E-04	4.747E-04	4.748E-04	4.749E-04	4.753E-04	4.766E-04
PU236	1.485E-04	1.477E-04	1.463E-04	1.403E-04	1.320E-04	1.169E-04	7.192E-05	4.424E-05	1.313E-05	1.157E-06
PU237	1.056E-03	8.538E-04	6.902E-04	2.639E-04	6.592E-05	4.114E-06	6.239E-11	9.462E-16	8.476E-28	0.000E+00
PU238	1.569E+00	1.581E+00	1.582E+00	1.584E+00	1.586E+00	1.585E+00	1.564E+00	1.540E+00	1.480E+00	1.368E+00

Table F.11 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	8.601E-02	8.656E-02	8.657E-02	8.657E-02	8.657E-02	8.657E-02	8.656E-02	8.656E-02	8.655E-02	8.652E-02
PU240	6.255E-02	6.255E-02	6.255E-02	6.255E-02	6.255E-02	6.255E-02	6.255E-02	6.255E-02	6.254E-02	6.252E-02
PU241	2.297E+01	2.293E+01	2.289E+01	2.270E+01	2.243E+01	2.189E+01	1.988E+01	1.806E+01	1.420E+01	8.777E+00
PU242	1.381E-04	1.381E-04	1.381E-04	1.381E-04	1.381E-04	1.381E-04	1.381E-04	1.381E-04	1.381E-04	1.381E-04
PU244	8.281E-12	8.281E-12	8.281E-12	8.281E-12	8.281E-12	8.281E-12	8.281E-12	8.281E-12	8.281E-12	8.281E-12
AM241	3.170E-02	3.310E-02	3.451E-02	4.083E-02	4.985E-02	6.756E-02	1.341E-01	1.944E-01	3.209E-01	4.949E-01
AM242M	1.031E-03	1.031E-03	1.031E-03	1.030E-03	1.029E-03	1.027E-03	1.017E-03	1.008E-03	9.854E-04	9.415E-04
AM242	7.863E+00	1.030E-03	1.026E-03	1.025E-03	1.024E-03	1.022E-03	1.012E-03	1.003E-03	9.805E-04	9.368E-04
AM243	6.219E-04	6.227E-04	6.227E-04	6.227E-04	6.227E-04	6.227E-04	6.226E-04	6.224E-04	6.221E-04	6.216E-04
CM242	4.113E+00	3.901E+00	3.675E+00	2.810E+00	1.907E+00	8.790E-01	4.038E-02	2.611E-03	8.120E-04	7.748E-04
CM243	8.698E-04	8.690E-04	8.681E-04	8.645E-04	8.593E-04	8.489E-04	8.086E-04	7.702E-04	6.821E-04	5.349E-04
CM244	6.630E-02	6.629E-02	6.619E-02	6.575E-02	6.513E-02	6.390E-02	5.919E-02	5.483E-02	4.529E-02	3.089E-02
CM245	3.855E-06	3.855E-06	3.855E-06	3.855E-06	3.855E-06	3.855E-06	3.854E-06	3.854E-06	3.852E-06	3.849E-06
CM246	3.075E-07	3.075E-07	3.075E-07	3.075E-07	3.075E-07	3.074E-07	3.073E-07	3.072E-07	3.070E-07	3.066E-07
CM247	5.320E-13	5.320E-13	5.320E-13	5.320E-13	5.320E-13	5.320E-13	5.320E-13	5.320E-13	5.320E-13	5.320E-13
Subtotal Ci**	2.522E+04	1.738E+04	1.364E+04	7.632E+03	4.697E+03	2.774E+03	1.200E+03	8.384E+02	5.894E+02	4.185E+02
Total Ci***	1.696E+05	1.791E+04	1.384E+04	7.747E+03	4.775E+03	2.818E+03	1.214E+03	8.454E+02	5.909E+02	4.189E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table F.12 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.12 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.12

BURNUP (BU)

BU: U-235 60.0 g
 BU: % U-235 43.80%
 BU: MWd 57.01
 BU: MWd/MTU 290887
 U-235 DEPL 70.76 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	7.965E-01	7.948E-01	7.931E-01	7.854E-01	7.745E-01	7.530E-01	6.731E-01	6.017E-01	4.545E-01	2.594E-01
BE 10	1.049E-06	1.049E-06	1.049E-06	1.049E-06	1.049E-06	1.049E-06	1.049E-06	1.049E-06	1.049E-06	1.049E-06
C 14	6.696E-03	6.696E-03	6.696E-03	6.696E-03	6.696E-03	6.696E-03	6.694E-03	6.692E-03	6.688E-03	6.680E-03
CL 36	1.427E-04	1.427E-04	1.427E-04	1.427E-04	1.427E-04	1.427E-04	1.427E-04	1.427E-04	1.427E-04	1.427E-04
CR 51	4.208E+02	2.965E+02	2.089E+02	4.293E+01	4.379E+00	4.556E-02	5.342E-10	6.264E-18	9.324E-38	0.000E+00
MN 54	2.384E+01	2.311E+01	2.241E+01	1.947E+01	1.590E+01	1.061E+01	2.101E+00	4.162E-01	7.266E-03	2.214E-06
FE 55	1.583E+02	1.567E+02	1.551E+02	1.481E+02	1.386E+02	1.213E+02	7.118E+01	4.178E+01	1.103E+01	7.681E-01
FE 59	8.169E+00	6.584E+00	5.307E+00	2.003E+00	4.913E-01	2.954E-02	3.865E-07	5.055E-12	3.128E-24	0.000E+00
CO 60	1.276E+02	1.270E+02	1.263E+02	1.235E+02	1.195E+02	1.119E+02	8.603E+01	6.614E+01	3.428E+01	9.209E+00
NI 59	2.631E-02	2.631E-02	2.631E-02	2.631E-02	2.631E-02	2.631E-02	2.631E-02	2.631E-02	2.631E-02	2.631E-02
NI 63	3.425E+00	3.424E+00	3.423E+00	3.419E+00	3.412E+00	3.399E+00	3.349E+00	3.299E+00	3.177E+00	2.946E+00
ZN 65	3.059E+00	2.939E+00	2.825E+00	2.360E+00	1.821E+00	1.084E+00	1.361E-01	1.709E-02	9.548E-05	2.981E-09
SE 79	7.347E-04	7.347E-04	7.347E-04	7.347E-04	7.347E-04	7.347E-04	7.346E-04	7.346E-04	7.346E-04	7.345E-04
KR 85	1.976E+01	1.972E+01	1.967E+01	1.945E+01	1.914E+01	1.853E+01	1.628E+01	1.431E+01	1.036E+01	5.429E+00
RB 87	4.877E-08	4.877E-08	4.877E-08	4.877E-08	4.877E-08	4.877E-08	4.877E-08	4.877E-08	4.877E-08	4.877E-08
SR 89	1.399E+03	1.155E+03	9.531E+02	4.001E+02	1.143E+02	9.337E+00	4.155E-04	1.848E-08	2.440E-19	0.000E+00
SR 90	1.658E+02	1.656E+02	1.655E+02	1.648E+02	1.638E+02	1.619E+02	1.544E+02	1.472E+02	1.307E+02	1.030E+02
Y 90	1.762E+02	1.660E+02	1.655E+02	1.648E+02	1.639E+02	1.619E+02	1.544E+02	1.472E+02	1.307E+02	1.031E+02
Y 91	1.727E+03	1.472E+03	1.247E+03	5.897E+02	2.001E+02	2.302E+01	4.037E-03	7.081E-07	2.885E-16	4.787E-35
ZR 93	4.409E-03	4.410E-03	4.410E-03	4.410E-03	4.410E-03	4.410E-03	4.410E-03	4.410E-03	4.410E-03	4.410E-03
ZR 95	2.107E+03	1.810E+03	1.556E+03	7.841E+02	2.917E+02	4.040E+01	1.485E-02	5.460E-06	1.415E-14	9.496E-32
NB 93M	3.991E-04	4.065E-04	4.139E-04	4.470E-04	4.945E-04	5.874E-04	9.362E-04	1.252E-03	1.912E-03	2.821E-03

Table F.12 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	4.099E-04	4.099E-04	4.099E-04	4.098E-04	4.098E-04	4.098E-04	4.098E-04	4.098E-04	4.097E-04	4.096E-04
NB 95	2.156E+03	2.106E+03	2.002E+03	1.323E+03	5.786E+02	8.778E+01	3.297E-02	1.212E-05	3.141E-14	2.108E-31
NB 95M	1.481E+01	1.338E+01	1.154E+01	5.817E+00	2.165E+00	2.997E-01	1.101E-04	4.050E-08	1.049E-16	7.045E-34
MO 93	1.711E-04	1.711E-04	1.711E-04	1.711E-04	1.711E-04	1.711E-04	1.710E-04	1.710E-04	1.708E-04	1.704E-04
TC 99	2.347E-02	2.353E-02	2.353E-02	2.353E-02	2.353E-02	2.353E-02	2.353E-02	2.353E-02	2.353E-02	2.353E-02
RU103	1.012E+03	7.908E+02	6.177E+02	2.023E+02	4.044E+01	1.615E+00	4.113E-06	1.047E-11	1.083E-25	0.000E+00
RU106	1.725E+02	1.680E+02	1.636E+02	1.452E+02	1.223E+02	8.675E+01	2.195E+01	5.553E+00	1.788E-01	1.853E-04
RH103M	9.117E+02	7.129E+02	5.569E+02	1.824E+02	3.646E+01	1.456E+00	3.707E-06	9.439E-12	9.762E-26	0.000E+00
RH106	1.859E+02	1.680E+02	1.636E+02	1.452E+02	1.223E+02	8.675E+01	2.195E+01	5.553E+00	1.788E-01	1.853E-04
PD107	3.777E-05	3.777E-05	3.777E-05	3.777E-05	3.777E-05	3.777E-05	3.777E-05	3.777E-05	3.777E-05	3.777E-05
AG110	1.784E+01	8.449E-03	8.127E-03	6.818E-03	5.294E-03	3.191E-03	4.212E-04	5.561E-05	3.520E-07	1.411E-11
AG110M	6.603E-01	6.352E-01	6.110E-01	5.127E-01	3.980E-01	2.400E-01	3.167E-02	4.181E-03	2.647E-05	1.061E-09
AG111	1.334E+01	3.635E+00	9.882E-01	2.749E-03	5.653E-07	2.389E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	2.467E-02	2.463E-02	2.458E-02	2.438E-02	2.409E-02	2.353E-02	2.140E-02	1.946E-02	1.535E-02	9.545E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	5.136E-01	4.132E-01	3.324E-01	1.243E-01	3.011E-02	1.765E-03	2.084E-08	2.462E-13	1.180E-25	0.000E+00
IN114	2.234E-01	7.311E-02	6.010E-02	2.479E-02	6.912E-03	5.371E-04	1.958E-08	7.139E-13	5.730E-24	0.000E+00
IN114M	9.294E-02	7.639E-02	6.280E-02	2.591E-02	7.222E-03	5.611E-04	2.046E-08	7.459E-13	5.988E-24	0.000E+00
IN115M	5.097E+00	7.152E-02	9.410E-04	8.731E-06	2.114E-06	1.239E-07	1.464E-12	1.729E-17	8.286E-30	0.000E+00
SN119M	2.462E+01	2.367E+01	2.276E+01	1.902E+01	1.470E+01	8.769E+00	1.112E+00	1.410E-01	8.073E-04	2.647E-08
SN121M	3.230E-03	3.229E-03	3.227E-03	3.220E-03	3.208E-03	3.186E-03	3.099E-03	3.014E-03	2.812E-03	2.448E-03
SN123	3.118E+00	2.893E+00	2.684E+00	1.911E+00	1.171E+00	4.398E-01	8.750E-03	1.740E-04	9.715E-09	3.026E-17
SN125	1.339E+01	4.895E+00	1.789E+00	1.894E-02	2.679E-05	5.358E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	6.855E-04	6.855E-04	6.855E-04	6.855E-04	6.854E-04	6.854E-04	6.854E-04	6.854E-04	6.854E-04	6.854E-04
SB124	1.054E+00	8.969E-01	7.634E-01	3.685E-01	1.289E-01	1.576E-02	3.523E-06	7.877E-10	5.888E-19	3.289E-37
SB125	1.637E+01	1.630E+01	1.617E+01	1.550E+01	1.456E+01	1.285E+01	7.792E+00	4.725E+00	1.353E+00	1.110E-01
SB126	5.339E-01	2.441E-01	1.116E-01	3.343E-03	1.157E-04	9.597E-05	9.596E-05	9.596E-05	9.596E-05	9.595E-05
SB126M	2.016E-01	6.855E-04	6.855E-04	6.855E-04	6.854E-04	6.854E-04	6.854E-04	6.854E-04	6.854E-04	6.854E-04
TE123M	1.443E-02	1.331E-02	1.228E-02	8.510E-03	5.016E-03	1.743E-03	2.542E-05	3.706E-07	9.514E-12	6.269E-21
TE125M	3.606E+00	3.629E+00	3.646E+00	3.639E+00	3.505E+00	3.130E+00	1.902E+00	1.153E+00	3.302E-01	2.708E-02
TE127	5.207E+01	1.105E+01	6.740E+00	4.291E+00	2.402E+00	7.526E-01	7.254E-03	6.992E-05	6.377E-10	5.305E-20
TE127M	7.558E+00	7.138E+00	6.548E+00	4.381E+00	2.452E+00	7.684E-01	7.406E-03	7.138E-05	6.511E-10	5.416E-20
TE129	2.092E+02	1.544E+01	1.157E+01	3.137E+00	4.775E-01	1.106E-02	3.188E-09	9.188E-16	4.096E-32	0.000E+00
TE129M	3.151E+01	2.372E+01	1.777E+01	4.819E+00	7.335E-01	1.699E-02	4.898E-09	1.411E-15	6.293E-32	0.000E+00
I129	4.070E-05	4.076E-05	4.079E-05	4.087E-05	4.089E-05	4.090E-05	4.090E-05	4.090E-05	4.090E-05	4.090E-05
I131	8.526E+02	2.620E+02	7.839E+01	3.359E-01	1.288E-04	1.893E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.12 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	9.470E+00	7.093E+00	4.006E+00	1.383E-01	7.148E-04	1.732E-08	5.877E-27	1.994E-45	0.000E+00	0.000E+00
XE133	1.963E+03	3.795E+02	5.979E+01	1.402E-02	8.128E-08	2.731E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.603E+02	1.583E+02	1.562E+02	1.474E+02	1.355E+02	1.146E+02	5.851E+01	2.988E+01	5.571E+00	1.937E-01
CS135	1.260E-03	1.260E-03	1.260E-03	1.260E-03	1.260E-03	1.260E-03	1.260E-03	1.260E-03	1.260E-03	1.260E-03
CS136	4.590E+01	2.189E+01	1.044E+01	3.675E-01	2.942E-03	1.886E-07	3.184E-24	5.375E-41	0.000E+00	0.000E+00
CS137	1.756E+02	1.754E+02	1.753E+02	1.746E+02	1.736E+02	1.716E+02	1.638E+02	1.564E+02	1.394E+02	1.107E+02
BA136M	7.568E+00	3.607E+00	1.720E+00	6.057E-02	4.849E-04	3.108E-08	5.247E-25	8.858E-42	0.000E+00	0.000E+00
BA137M	1.662E+02	1.660E+02	1.658E+02	1.652E+02	1.642E+02	1.623E+02	1.550E+02	1.480E+02	1.319E+02	1.047E+02
BA140	1.796E+03	8.412E+02	3.939E+02	1.278E+01	9.095E-02	4.605E-06	3.025E-23	1.988E-40	0.000E+00	0.000E+00
LA140	1.832E+03	9.673E+02	4.533E+02	1.471E+01	1.047E-01	5.299E-06	3.482E-23	2.288E-40	0.000E+00	0.000E+00
CE141	1.706E+03	1.272E+03	9.442E+02	2.452E+02	3.504E+01	7.157E-01	1.246E-07	2.170E-14	2.744E-31	0.000E+00
CE142	5.144E-08	5.144E-08	5.144E-08	5.144E-08	5.144E-08	5.144E-08	5.144E-08	5.144E-08	5.144E-08	5.144E-08
CE144	1.661E+03	1.605E+03	1.552E+03	1.330E+03	1.064E+03	6.821E+02	1.150E+02	1.940E+01	2.265E-01	3.088E-05
PR143	1.695E+03	9.232E+02	4.515E+02	1.783E+01	1.683E-01	1.500E-05	9.459E-22	5.966E-38	0.000E+00	0.000E+00
PR144	1.666E+03	1.605E+03	1.552E+03	1.330E+03	1.065E+03	6.822E+02	1.150E+02	1.940E+01	2.265E-01	3.088E-05
PR144M	1.994E+01	1.926E+01	1.862E+01	1.596E+01	1.277E+01	8.186E+00	1.380E+00	2.328E-01	2.718E-03	3.706E-07
ND144	2.102E-12	2.122E-12	2.142E-12	2.225E-12	2.323E-12	2.465E-12	2.675E-12	2.711E-12	2.718E-12	2.718E-12
ND147	6.622E+02	2.756E+02	1.146E+02	2.176E+00	7.148E-03	7.709E-08	1.043E-27	1.411E-47	0.000E+00	0.000E+00
PM145	4.665E-05	4.736E-05	4.805E-05	5.088E-05	5.427E-05	5.910E-05	6.437E-05	6.172E-05	5.132E-05	3.471E-05
PM147	2.708E+02	2.726E+02	2.717E+02	2.608E+02	2.441E+02	2.139E+02	1.262E+02	7.441E+01	1.987E+01	1.418E+00
PM148M	4.761E+01	3.764E+01	2.976E+01	1.029E+01	2.225E+00	1.040E-01	4.962E-07	2.368E-12	1.177E-25	0.000E+00
PM148	2.872E+02	4.882E+01	9.341E+00	5.824E-01	1.253E-01	5.858E-03	2.795E-08	1.334E-13	6.632E-27	0.000E+00
SM145	5.272E-04	5.123E-04	4.979E-04	4.377E-04	3.634E-04	2.505E-04	5.657E-05	1.277E-05	3.096E-07	1.818E-10
SM147	4.545E-09	4.613E-09	4.681E-09	4.980E-09	5.388E-09	6.128E-09	8.280E-09	9.549E-09	1.089E-08	1.134E-08
SM151	6.503E-01	6.548E-01	6.547E-01	6.538E-01	6.524E-01	6.499E-01	6.400E-01	6.303E-01	6.065E-01	5.616E-01
EU152	2.641E-02	2.636E-02	2.631E-02	2.608E-02	2.574E-02	2.510E-02	2.267E-02	2.048E-02	1.587E-02	9.537E-03
EU154	8.379E+00	8.353E+00	8.327E+00	8.211E+00	8.047E+00	7.730E+00	6.580E+00	5.601E+00	3.744E+00	1.673E+00
EU155	4.935E+00	4.908E+00	4.883E+00	4.766E+00	4.602E+00	4.292E+00	3.246E+00	2.454E+00	1.221E+00	3.021E-01
EU156	5.452E+01	2.886E+01	1.523E+01	8.490E-01	1.318E-02	3.177E-06	1.073E-20	3.624E-35	0.000E+00	0.000E+00
GD153	1.163E-01	1.118E-01	1.073E-01	8.955E-02	6.896E-02	4.088E-02	5.053E-03	6.245E-04	3.353E-06	9.670E-11
TB160	2.768E-01	2.420E-01	2.117E-01	1.154E-01	4.813E-02	8.367E-03	7.643E-06	6.981E-09	1.761E-16	1.120E-31
TL206	9.130E-05	1.129E-11	1.129E-11	1.129E-11	1.129E-11	1.129E-11	1.129E-11	1.129E-11	1.129E-11	1.129E-11
TL207	2.531E-09	2.537E-09	2.551E-09	2.724E-09	3.071E-09	3.864E-09	6.995E-09	1.021E-08	1.898E-08	3.917E-08
TL208	1.358E-06	1.384E-06	1.427E-06	1.646E-06	1.920E-06	2.432E-06	4.064E-06	5.149E-06	6.332E-06	6.345E-06
PB210	1.846E-12	1.896E-12	1.927E-12	1.967E-12	1.961E-12	1.940E-12	1.888E-12	1.917E-12	2.637E-12	1.020E-11
PB211	2.539E-09	2.544E-09	2.558E-09	2.732E-09	3.080E-09	3.875E-09	7.014E-09	1.024E-08	1.903E-08	3.928E-08

Table F.12 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	3.779E-06	3.853E-06	3.972E-06	4.582E-06	5.343E-06	6.769E-06	1.131E-05	1.433E-05	1.762E-05	1.766E-05
BI211	2.548E-09	2.544E-09	2.558E-09	2.732E-09	3.080E-09	3.875E-09	7.014E-09	1.024E-08	1.903E-08	3.928E-08
BI212	3.779E-06	3.853E-06	3.972E-06	4.582E-06	5.343E-06	6.769E-06	1.131E-05	1.433E-05	1.762E-05	1.766E-05
PO212	2.421E-06	2.468E-06	2.545E-06	2.936E-06	3.423E-06	4.337E-06	7.248E-06	9.181E-06	1.129E-05	1.131E-05
PO215	2.539E-09	2.544E-09	2.558E-09	2.732E-09	3.080E-09	3.875E-09	7.014E-09	1.024E-08	1.903E-08	3.928E-08
PO216	3.779E-06	3.853E-06	3.972E-06	4.582E-06	5.343E-06	6.769E-06	1.131E-05	1.433E-05	1.762E-05	1.766E-05
RN219	2.539E-09	2.544E-09	2.558E-09	2.732E-09	3.080E-09	3.875E-09	7.014E-09	1.024E-08	1.903E-08	3.928E-08
RN220	3.779E-06	3.853E-06	3.972E-06	4.582E-06	5.343E-06	6.769E-06	1.131E-05	1.433E-05	1.762E-05	1.766E-05
FR223	3.499E-11	3.574E-11	3.649E-11	3.989E-11	4.484E-11	5.487E-11	9.668E-11	1.411E-10	2.623E-10	5.416E-10
RA223	2.539E-09	2.544E-09	2.558E-09	2.732E-09	3.080E-09	3.875E-09	7.014E-09	1.024E-08	1.903E-08	3.928E-08
RA224	3.779E-06	3.853E-06	3.972E-06	4.582E-06	5.343E-06	6.769E-06	1.131E-05	1.433E-05	1.762E-05	1.766E-05
RA226	3.479E-13	3.570E-13	3.662E-13	4.099E-13	4.785E-13	6.368E-13	1.606E-12	3.253E-12	1.155E-11	5.543E-11
RA228	5.404E-10	5.446E-10	5.488E-10	5.675E-10	5.939E-10	6.447E-10	8.236E-10	9.691E-10	1.225E-09	1.468E-09
AC227	2.536E-09	2.590E-09	2.644E-09	2.891E-09	3.249E-09	3.976E-09	7.006E-09	1.022E-08	1.901E-08	3.925E-08
TH227	2.510E-09	2.518E-09	2.544E-09	2.751E-09	3.100E-09	3.814E-09	6.918E-09	1.010E-08	1.877E-08	3.874E-08
TH228	3.772E-06	3.895E-06	4.018E-06	4.562E-06	5.321E-06	6.745E-06	1.129E-05	1.430E-05	1.761E-05	1.766E-05
TH229	7.383E-10	7.522E-10	7.662E-10	8.306E-10	9.244E-10	1.112E-09	1.865E-09	2.619E-09	4.506E-09	8.296E-09
TH230	5.445E-10	5.533E-10	5.622E-10	6.034E-10	6.656E-10	8.004E-10	1.476E-09	2.369E-09	5.525E-09	1.563E-08
TH231	9.801E-04	1.433E-04	1.433E-04	1.432E-04	1.432E-04	1.432E-04	1.432E-04	1.432E-04	1.432E-04	1.432E-04
TH232	1.602E-09	1.602E-09	1.602E-09	1.602E-09	1.602E-09	1.602E-09	1.602E-09	1.602E-09	1.603E-09	1.603E-09
TH234	2.961E-05	2.597E-05	2.353E-05	1.941E-05	1.867E-05	1.861E-05	1.861E-05	1.861E-05	1.861E-05	1.861E-05
PA231	4.689E-08	4.709E-08	4.722E-08	4.776E-08	4.853E-08	5.005E-08	5.612E-08	6.219E-08	7.733E-08	1.076E-07
PA233	4.158E-01	2.906E-01	2.031E-01	4.050E-02	4.410E-03	6.090E-04	5.737E-04	5.738E-04	5.743E-04	5.759E-04
PA234M	2.496E-03	2.597E-05	2.353E-05	1.941E-05	1.867E-05	1.861E-05	1.861E-05	1.861E-05	1.861E-05	1.861E-05
PA234	4.952E-03	3.376E-08	3.059E-08	2.524E-08	2.427E-08	2.420E-08	2.420E-08	2.420E-08	2.420E-08	2.420E-08
U232	1.264E-05	1.274E-05	1.281E-05	1.311E-05	1.353E-05	1.428E-05	1.641E-05	1.758E-05	1.839E-05	1.731E-05
U233	3.790E-06	3.848E-06	3.889E-06	3.966E-06	3.983E-06	3.986E-06	3.991E-06	3.997E-06	4.009E-06	4.034E-06
U234	2.540E-05	2.564E-05	2.587E-05	2.693E-05	2.845E-05	3.150E-05	4.362E-05	5.556E-05	8.460E-05	1.393E-04
U235	1.432E-04	1.432E-04	1.432E-04	1.432E-04	1.432E-04	1.432E-04	1.432E-04	1.432E-04	1.432E-04	1.432E-04
U236	7.978E-04	7.978E-04	7.978E-04	7.978E-04	7.978E-04	7.978E-04	7.978E-04	7.978E-04	7.978E-04	7.979E-04
U237	1.140E+03	2.708E+02	6.431E+01	9.717E-02	1.485E-05	6.408E-06	5.821E-06	5.287E-06	4.156E-06	2.569E-06
U238	1.861E-05	1.861E-05	1.861E-05	1.861E-05	1.861E-05	1.861E-05	1.861E-05	1.861E-05	1.861E-05	1.861E-05
NP237	5.637E-04	5.712E-04	5.730E-04	5.736E-04	5.736E-04	5.736E-04	5.737E-04	5.738E-04	5.743E-04	5.759E-04
PU236	2.026E-04	2.016E-04	1.997E-04	1.915E-04	1.802E-04	1.596E-04	9.817E-05	6.039E-05	1.792E-05	1.579E-06
PU237	1.602E-03	1.295E-03	1.047E-03	4.001E-04	9.996E-05	6.238E-06	9.461E-11	1.435E-15	1.285E-27	0.000E+00
PU238	2.129E+00	2.147E+00	2.148E+00	2.151E+00	2.153E+00	2.152E+00	2.124E+00	2.091E+00	2.010E+00	1.857E+00

Table F.12 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	8.874E-02	8.937E-02	8.938E-02	8.938E-02	8.938E-02	8.938E-02	8.937E-02	8.937E-02	8.936E-02	8.933E-02
PU240	6.788E-02	6.788E-02	6.788E-02	6.788E-02	6.788E-02	6.789E-02	6.789E-02	6.790E-02	6.791E-02	6.791E-02
PU241	2.741E+01	2.736E+01	2.731E+01	2.708E+01	2.676E+01	2.612E+01	2.373E+01	2.155E+01	1.694E+01	1.047E+01
PU242	1.902E-04	1.903E-04	1.903E-04	1.903E-04	1.903E-04	1.903E-04	1.903E-04	1.903E-04	1.903E-04	1.903E-04
PU244	1.502E-11	1.502E-11	1.502E-11	1.502E-11	1.502E-11	1.502E-11	1.502E-11	1.502E-11	1.502E-11	1.502E-11
AM241	3.685E-02	3.853E-02	4.020E-02	4.774E-02	5.851E-02	7.964E-02	1.591E-01	2.310E-01	3.820E-01	5.896E-01
AM242M	1.250E-03	1.250E-03	1.249E-03	1.248E-03	1.247E-03	1.244E-03	1.233E-03	1.222E-03	1.194E-03	1.141E-03
AM242	1.056E+01	1.249E-03	1.243E-03	1.242E-03	1.241E-03	1.238E-03	1.227E-03	1.216E-03	1.188E-03	1.135E-03
AM243	9.588E-04	9.600E-04	9.600E-04	9.600E-04	9.600E-04	9.599E-04	9.598E-04	9.596E-04	9.591E-04	9.582E-04
CM242	5.590E+00	5.302E+00	4.996E+00	3.819E+00	2.592E+00	1.195E+00	5.476E-02	3.427E-03	9.841E-04	9.389E-04
CM243	1.341E-03	1.340E-03	1.338E-03	1.333E-03	1.325E-03	1.309E-03	1.246E-03	1.187E-03	1.051E-03	8.246E-04
CM244	1.175E-01	1.175E-01	1.173E-01	1.165E-01	1.154E-01	1.132E-01	1.049E-01	9.717E-02	8.026E-02	5.475E-02
CM245	7.607E-06	7.607E-06	7.606E-06	7.606E-06	7.606E-06	7.606E-06	7.605E-06	7.603E-06	7.600E-06	7.594E-06
CM246	6.955E-07	6.955E-07	6.955E-07	6.954E-07	6.954E-07	6.954E-07	6.952E-07	6.950E-07	6.945E-07	6.934E-07
CM247	1.364E-12	1.364E-12	1.364E-12	1.364E-12	1.364E-12	1.364E-12	1.364E-12	1.364E-12	1.364E-12	1.364E-12
Subtotal Ci**	2.747E+04	1.887E+04	1.481E+04	8.304E+03	5.123E+03	3.034E+03	1.315E+03	9.187E+02	6.452E+02	4.576E+02
Total Ci***	1.831E+05	1.947E+04	1.505E+04	8.440E+03	5.215E+03	3.085E+03	1.331E+03	9.268E+02	6.469E+02	4.579E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table F.13 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.13 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.13

BURNUP (BU)

BU: U-235 65.0 g
 BU: % U-235 47.44%
 BU: MWd 61.77
 BU: MWd/MTU 315127
 U-235 DEPL 76.35 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	8.621E-01	8.602E-01	8.584E-01	8.501E-01	8.383E-01	8.151E-01	7.286E-01	6.513E-01	4.920E-01	2.808E-01
BE 10	1.176E-06	1.176E-06	1.176E-06	1.176E-06	1.176E-06	1.176E-06	1.176E-06	1.176E-06	1.176E-06	1.176E-06
C 14	7.507E-03	7.507E-03	7.507E-03	7.507E-03	7.507E-03	7.506E-03	7.505E-03	7.503E-03	7.498E-03	7.489E-03
CL 36	1.593E-04	1.593E-04	1.593E-04	1.593E-04	1.593E-04	1.593E-04	1.593E-04	1.593E-04	1.593E-04	1.593E-04
CR 51	4.835E+02	3.406E+02	2.400E+02	4.932E+01	5.031E+00	5.235E-02	6.138E-10	7.197E-18	1.071E-37	0.000E+00
MN 54	2.713E+01	2.630E+01	2.549E+01	2.216E+01	1.810E+01	1.207E+01	2.391E+00	4.735E-01	8.267E-03	2.520E-06
FE 55	1.785E+02	1.767E+02	1.749E+02	1.670E+02	1.563E+02	1.368E+02	8.027E+01	4.712E+01	1.244E+01	8.663E-01
FE 59	9.441E+00	7.610E+00	6.133E+00	2.315E+00	5.678E-01	3.414E-02	4.466E-07	5.842E-12	3.615E-24	0.000E+00
CO 60	1.429E+02	1.422E+02	1.415E+02	1.383E+02	1.338E+02	1.253E+02	9.633E+01	7.406E+01	3.838E+01	1.031E+01
NI 59	2.920E-02	2.920E-02	2.920E-02	2.920E-02	2.920E-02	2.920E-02	2.920E-02	2.920E-02	2.919E-02	2.919E-02
NI 63	3.830E+00	3.829E+00	3.828E+00	3.823E+00	3.816E+00	3.802E+00	3.745E+00	3.689E+00	3.552E+00	3.295E+00
ZN 65	3.493E+00	3.357E+00	3.226E+00	2.695E+00	2.079E+00	1.238E+00	1.554E-01	1.952E-02	1.090E-04	3.404E-09
SE 79	7.944E-04	7.945E-04	7.945E-04	7.945E-04	7.945E-04	7.944E-04	7.944E-04	7.944E-04	7.944E-04	7.943E-04
KR 85	2.135E+01	2.131E+01	2.125E+01	2.102E+01	2.068E+01	2.002E+01	1.759E+01	1.546E+01	1.119E+01	5.866E+00
RB 87	5.266E-08	5.266E-08	5.266E-08	5.266E-08	5.266E-08	5.266E-08	5.266E-08	5.266E-08	5.266E-08	5.266E-08
SR 89	1.490E+03	1.230E+03	1.015E+03	4.261E+02	1.217E+02	9.945E+00	4.425E-04	1.968E-08	2.599E-19	0.000E+00
SR 90	1.790E+02	1.789E+02	1.787E+02	1.780E+02	1.769E+02	1.748E+02	1.667E+02	1.590E+02	1.411E+02	1.113E+02
Y 90	1.913E+02	1.792E+02	1.788E+02	1.780E+02	1.770E+02	1.749E+02	1.668E+02	1.590E+02	1.412E+02	1.113E+02
Y 91	1.842E+03	1.570E+03	1.330E+03	6.290E+02	2.134E+02	2.456E+01	4.307E-03	7.554E-07	3.077E-16	5.108E-35
ZR 93	4.788E-03	4.789E-03	4.789E-03	4.789E-03	4.789E-03	4.789E-03	4.789E-03	4.789E-03	4.789E-03	4.789E-03
ZR 95	2.268E+03	1.949E+03	1.675E+03	8.440E+02	3.140E+02	4.348E+01	1.598E-02	5.876E-06	1.523E-14	1.022E-31
NB 93M	4.333E-04	4.413E-04	4.494E-04	4.853E-04	5.368E-04	6.377E-04	1.017E-03	1.359E-03	2.077E-03	3.064E-03

Table F.13 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	4.577E-04	4.577E-04	4.577E-04	4.577E-04	4.577E-04	4.577E-04	4.576E-04	4.576E-04	4.575E-04	4.574E-04
NB 95	2.321E+03	2.267E+03	2.156E+03	1.425E+03	6.228E+02	9.447E+01	3.549E-02	1.304E-05	3.380E-14	2.269E-31
NB 95M	1.594E+01	1.440E+01	1.242E+01	6.261E+00	2.329E+00	3.226E-01	1.186E-04	4.359E-08	1.129E-16	7.582E-34
MO 93	1.919E-04	1.919E-04	1.919E-04	1.919E-04	1.919E-04	1.918E-04	1.918E-04	1.917E-04	1.915E-04	1.911E-04
TC 99	2.514E-02	2.521E-02	2.521E-02	2.521E-02	2.521E-02	2.521E-02	2.521E-02	2.521E-02	2.521E-02	2.521E-02
RU103	1.091E+03	8.523E+02	6.657E+02	2.181E+02	4.358E+01	1.741E+00	4.432E-06	1.128E-11	1.167E-25	0.000E+00
RU106	1.924E+02	1.874E+02	1.826E+02	1.621E+02	1.365E+02	9.680E+01	2.449E+01	6.196E+00	1.995E-01	2.068E-04
RH103M	9.826E+02	7.683E+02	6.002E+02	1.966E+02	3.929E+01	1.569E+00	3.996E-06	1.017E-11	1.052E-25	0.000E+00
RH106	2.093E+02	1.874E+02	1.826E+02	1.621E+02	1.365E+02	9.680E+01	2.449E+01	6.196E+00	1.995E-01	2.068E-04
PD107	4.221E-05	4.221E-05	4.221E-05	4.221E-05	4.221E-05	4.221E-05	4.221E-05	4.221E-05	4.221E-05	4.221E-05
AG110	2.283E+01	1.065E-02	1.025E-02	8.599E-03	6.675E-03	4.024E-03	5.312E-04	7.012E-05	4.439E-07	1.779E-11
AG110M	8.327E-01	8.010E-01	7.705E-01	6.465E-01	5.019E-01	3.026E-01	3.993E-02	5.272E-03	3.338E-05	1.338E-09
AG111	1.512E+01	4.122E+00	1.120E+00	3.116E-03	6.408E-07	2.708E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	2.727E-02	2.722E-02	2.717E-02	2.695E-02	2.663E-02	2.601E-02	2.365E-02	2.151E-02	1.696E-02	1.055E-02
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	5.601E-01	4.505E-01	3.624E-01	1.357E-01	3.284E-02	1.925E-03	2.274E-08	2.685E-13	1.288E-25	0.000E+00
IN114	2.846E-01	9.309E-02	7.653E-02	3.157E-02	8.800E-03	6.837E-04	2.493E-08	9.090E-13	7.296E-24	0.000E+00
IN114M	1.184E-01	9.727E-02	7.996E-02	3.299E-02	9.195E-03	7.145E-04	2.606E-08	9.498E-13	7.623E-24	0.000E+00
IN115M	5.545E+00	7.779E-02	1.024E-03	9.520E-06	2.305E-06	1.351E-07	1.596E-12	1.885E-17	9.035E-30	0.000E+00
SN119M	2.810E+01	2.701E+01	2.596E+01	2.171E+01	1.677E+01	1.001E+01	1.269E+00	1.609E-01	9.213E-04	3.021E-08
SN121M	3.619E-03	3.617E-03	3.615E-03	3.606E-03	3.594E-03	3.568E-03	3.471E-03	3.376E-03	3.150E-03	2.742E-03
SN123	3.455E+00	3.205E+00	2.974E+00	2.117E+00	1.298E+00	4.873E-01	9.695E-03	1.928E-04	1.076E-08	3.353E-17
SN125	1.504E+01	5.496E+00	2.008E+00	2.127E-02	3.008E-05	6.017E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	7.448E-04	7.448E-04	7.448E-04	7.448E-04	7.448E-04	7.448E-04	7.448E-04	7.448E-04	7.447E-04	7.447E-04
SB124	1.276E+00	1.086E+00	9.245E-01	4.462E-01	1.561E-01	1.909E-02	4.267E-06	9.539E-10	7.130E-19	3.983E-37
SB125	1.810E+01	1.802E+01	1.788E+01	1.714E+01	1.611E+01	1.421E+01	8.618E+00	5.227E+00	1.497E+00	1.228E-01
SB126	6.138E-01	2.807E-01	1.283E-01	3.836E-03	1.269E-04	1.043E-04	1.043E-04	1.043E-04	1.043E-04	1.043E-04
SB126M	2.226E-01	7.448E-04	7.448E-04	7.448E-04	7.448E-04	7.448E-04	7.448E-04	7.448E-04	7.447E-04	7.447E-04
TE123M	1.935E-02	1.784E-02	1.645E-02	1.141E-02	6.723E-03	2.336E-03	3.406E-05	4.967E-07	1.275E-11	8.401E-21
TE125M	3.983E+00	4.009E+00	4.028E+00	4.023E+00	3.875E+00	3.462E+00	2.103E+00	1.276E+00	3.653E-01	2.996E-02
TE127	5.612E+01	1.195E+01	7.311E+00	4.656E+00	2.606E+00	8.166E-01	7.871E-03	7.587E-05	6.920E-10	5.757E-20
TE127M	8.204E+00	7.746E+00	7.105E+00	4.754E+00	2.661E+00	8.337E-01	8.036E-03	7.746E-05	7.065E-10	5.877E-20
TE129	2.239E+02	1.653E+01	1.238E+01	3.359E+00	5.112E-01	1.184E-02	3.413E-09	9.837E-16	4.386E-32	0.000E+00
TE129M	3.373E+01	2.539E+01	1.902E+01	5.160E+00	7.854E-01	1.820E-02	5.244E-09	1.511E-15	6.738E-32	0.000E+00
I129	4.398E-05	4.403E-05	4.407E-05	4.415E-05	4.418E-05	4.418E-05	4.418E-05	4.418E-05	4.418E-05	4.418E-05
I131	9.086E+02	2.793E+02	8.354E+01	3.580E-01	1.373E-04	2.018E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.13 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	1.010E+01	7.560E+00	4.270E+00	1.474E-01	7.618E-04	1.846E-08	6.265E-27	2.126E-45	0.000E+00	0.000E+00
XE133	2.088E+03	4.037E+02	6.360E+01	1.492E-02	8.646E-08	2.906E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.946E+02	1.921E+02	1.896E+02	1.789E+02	1.645E+02	1.391E+02	7.102E+01	3.627E+01	6.763E+00	2.351E-01
CS135	1.289E-03	1.290E-03	1.290E-03	1.290E-03	1.290E-03	1.290E-03	1.290E-03	1.290E-03	1.290E-03	1.290E-03
CS136	5.389E+01	2.569E+01	1.225E+01	4.314E-01	3.454E-03	2.214E-07	3.738E-24	6.310E-41	0.000E+00	0.000E+00
CS137	1.900E+02	1.899E+02	1.897E+02	1.889E+02	1.879E+02	1.857E+02	1.773E+02	1.693E+02	1.509E+02	1.198E+02
BA136M	8.885E+00	4.234E+00	2.019E+00	7.110E-02	5.692E-04	3.649E-08	6.160E-25	1.040E-41	0.000E+00	0.000E+00
BA137M	1.799E+02	1.796E+02	1.795E+02	1.787E+02	1.777E+02	1.757E+02	1.677E+02	1.602E+02	1.427E+02	1.133E+02
BA140	1.909E+03	8.941E+02	4.187E+02	1.359E+01	9.668E-02	4.895E-06	3.216E-23	2.113E-40	0.000E+00	0.000E+00
LA140	1.954E+03	1.028E+03	4.818E+02	1.564E+01	1.113E-01	5.633E-06	3.701E-23	2.432E-40	0.000E+00	0.000E+00
CE141	1.813E+03	1.352E+03	1.003E+03	2.606E+02	3.724E+01	7.606E-01	1.324E-07	2.306E-14	2.916E-31	0.000E+00
CE142	5.555E-08	5.555E-08	5.555E-08	5.555E-08	5.555E-08	5.555E-08	5.555E-08	5.555E-08	5.555E-08	5.555E-08
CE144	1.790E+03	1.730E+03	1.672E+03	1.433E+03	1.147E+03	7.352E+02	1.240E+02	2.091E+01	2.441E-01	3.329E-05
PR143	1.800E+03	9.802E+02	4.793E+02	1.892E+01	1.786E-01	1.592E-05	1.004E-21	6.334E-38	0.000E+00	0.000E+00
PR144	1.796E+03	1.730E+03	1.672E+03	1.433E+03	1.147E+03	7.352E+02	1.240E+02	2.091E+01	2.441E-01	3.329E-05
PR144M	2.150E+01	2.076E+01	2.007E+01	1.720E+01	1.377E+01	8.823E+00	1.488E+00	2.509E-01	2.929E-03	3.994E-07
ND144	2.327E-12	2.350E-12	2.371E-12	2.460E-12	2.566E-12	2.719E-12	2.945E-12	2.984E-12	2.991E-12	2.991E-12
ND147	7.044E+02	2.932E+02	1.219E+02	2.315E+00	7.604E-03	8.201E-08	1.109E-27	1.501E-47	0.000E+00	0.000E+00
PM145	5.174E-05	5.254E-05	5.332E-05	5.653E-05	6.038E-05	6.586E-05	7.190E-05	6.897E-05	5.735E-05	3.879E-05
PM147	2.734E+02	2.754E+02	2.746E+02	2.636E+02	2.468E+02	2.163E+02	1.276E+02	7.523E+01	2.009E+01	1.433E+00
PM148M	5.055E+01	3.996E+01	3.159E+01	1.093E+01	2.362E+00	1.104E-01	5.268E-07	2.514E-12	1.250E-25	0.000E+00
PM148	3.287E+02	5.573E+01	1.056E+01	6.185E-01	1.331E-01	6.219E-03	2.967E-08	1.416E-13	7.041E-27	0.000E+00
SM145	5.965E-04	5.798E-04	5.634E-04	4.953E-04	4.112E-04	2.835E-04	6.401E-05	1.446E-05	3.503E-07	2.057E-10
SM147	4.647E-09	4.715E-09	4.783E-09	5.086E-09	5.499E-09	6.247E-09	8.422E-09	9.705E-09	1.106E-08	1.152E-08
SM151	6.504E-01	6.554E-01	6.552E-01	6.543E-01	6.531E-01	6.505E-01	6.406E-01	6.308E-01	6.070E-01	5.620E-01
EU152	2.378E-02	2.373E-02	2.368E-02	2.347E-02	2.317E-02	2.260E-02	2.041E-02	1.843E-02	1.429E-02	8.584E-03
EU154	1.022E+01	1.019E+01	1.015E+01	1.001E+01	9.814E+00	9.427E+00	8.024E+00	6.831E+00	4.567E+00	2.041E+00
EU155	5.929E+00	5.897E+00	5.866E+00	5.725E+00	5.529E+00	5.156E+00	3.899E+00	2.949E+00	1.467E+00	3.629E-01
EU156	7.342E+01	3.885E+01	2.051E+01	1.143E+00	1.774E-02	4.278E-06	1.445E-20	4.878E-35	0.000E+00	0.000E+00
GD153	1.247E-01	1.197E-01	1.151E-01	9.596E-02	7.388E-02	4.380E-02	5.414E-03	6.691E-04	3.593E-06	1.036E-10
TB160	3.354E-01	2.933E-01	2.565E-01	1.399E-01	5.832E-02	1.014E-02	9.261E-06	8.460E-09	2.134E-16	1.357E-31
TL206	1.052E-04	1.265E-11	1.265E-11	1.265E-11	1.265E-11	1.265E-11	1.265E-11	1.265E-11	1.265E-11	1.265E-11
TL207	2.539E-09	2.544E-09	2.559E-09	2.737E-09	3.094E-09	3.906E-09	7.084E-09	1.031E-08	1.897E-08	3.846E-08
TL208	1.558E-06	1.589E-06	1.640E-06	1.901E-06	2.228E-06	2.847E-06	4.865E-06	6.242E-06	7.793E-06	7.862E-06
PB210	2.446E-12	2.514E-12	2.556E-12	2.609E-12	2.601E-12	2.571E-12	2.486E-12	2.496E-12	3.291E-12	1.244E-11
PB211	2.546E-09	2.552E-09	2.566E-09	2.745E-09	3.102E-09	3.917E-09	7.104E-09	1.034E-08	1.902E-08	3.856E-08

Table F.13 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	4.337E-06	4.424E-06	4.565E-06	5.290E-06	6.201E-06	7.924E-06	1.354E-05	1.737E-05	2.169E-05	2.188E-05
BI211	2.558E-09	2.552E-09	2.566E-09	2.745E-09	3.102E-09	3.917E-09	7.104E-09	1.034E-08	1.902E-08	3.856E-08
BI212	4.337E-06	4.424E-06	4.565E-06	5.290E-06	6.201E-06	7.924E-06	1.354E-05	1.737E-05	2.169E-05	2.188E-05
PO212	2.779E-06	2.834E-06	2.925E-06	3.390E-06	3.973E-06	5.077E-06	8.675E-06	1.113E-05	1.390E-05	1.402E-05
PO215	2.546E-09	2.552E-09	2.566E-09	2.745E-09	3.102E-09	3.917E-09	7.104E-09	1.034E-08	1.902E-08	3.856E-08
PO216	4.337E-06	4.424E-06	4.565E-06	5.290E-06	6.201E-06	7.924E-06	1.354E-05	1.737E-05	2.169E-05	2.188E-05
RN219	2.546E-09	2.552E-09	2.566E-09	2.745E-09	3.102E-09	3.917E-09	7.104E-09	1.034E-08	1.902E-08	3.856E-08
RN220	4.337E-06	4.424E-06	4.565E-06	5.290E-06	6.201E-06	7.924E-06	1.354E-05	1.737E-05	2.169E-05	2.188E-05
FR223	3.509E-11	3.586E-11	3.663E-11	4.013E-11	4.521E-11	5.547E-11	9.792E-11	1.425E-10	2.622E-10	5.317E-10
RA223	2.546E-09	2.552E-09	2.566E-09	2.745E-09	3.102E-09	3.917E-09	7.104E-09	1.034E-08	1.902E-08	3.856E-08
RA224	4.337E-06	4.424E-06	4.565E-06	5.290E-06	6.201E-06	7.924E-06	1.354E-05	1.737E-05	2.169E-05	2.188E-05
RA226	3.743E-13	3.841E-13	3.941E-13	4.414E-13	5.159E-13	6.887E-13	1.771E-12	3.668E-12	1.358E-11	6.810E-11
RA228	5.374E-10	5.416E-10	5.457E-10	5.643E-10	5.906E-10	6.412E-10	8.192E-10	9.640E-10	1.219E-09	1.461E-09
AC227	2.543E-09	2.599E-09	2.655E-09	2.908E-09	3.276E-09	4.020E-09	7.095E-09	1.032E-08	1.900E-08	3.853E-08
TH227	2.518E-09	2.526E-09	2.553E-09	2.765E-09	3.123E-09	3.855E-09	7.006E-09	1.020E-08	1.876E-08	3.803E-08
TH228	4.328E-06	4.474E-06	4.620E-06	5.268E-06	6.176E-06	7.897E-06	1.352E-05	1.734E-05	2.167E-05	2.188E-05
TH229	8.014E-10	8.162E-10	8.311E-10	8.999E-10	1.000E-09	1.201E-09	2.006E-09	2.812E-09	4.831E-09	8.886E-09
TH230	5.882E-10	5.979E-10	6.078E-10	6.536E-10	7.236E-10	8.772E-10	1.674E-09	2.759E-09	6.705E-09	1.965E-08
TH231	1.091E-03	1.313E-04	1.312E-04	1.312E-04	1.312E-04	1.312E-04	1.312E-04	1.312E-04	1.312E-04	1.312E-04
TH232	1.594E-09	1.594E-09	1.594E-09	1.594E-09	1.594E-09	1.594E-09	1.594E-09	1.594E-09	1.595E-09	1.595E-09
TH234	3.298E-05	2.817E-05	2.496E-05	1.952E-05	1.855E-05	1.847E-05	1.847E-05	1.847E-05	1.847E-05	1.847E-05
PA231	4.818E-08	4.839E-08	4.851E-08	4.900E-08	4.970E-08	5.110E-08	5.665E-08	6.221E-08	7.608E-08	1.038E-07
PA233	4.753E-01	3.322E-01	2.321E-01	4.632E-02	5.069E-03	7.244E-04	6.840E-04	6.841E-04	6.847E-04	6.866E-04
PA234M	3.279E-03	2.817E-05	2.496E-05	1.952E-05	1.855E-05	1.847E-05	1.847E-05	1.847E-05	1.847E-05	1.847E-05
PA234	6.517E-03	3.662E-08	3.244E-08	2.538E-08	2.411E-08	2.401E-08	2.401E-08	2.401E-08	2.401E-08	2.401E-08
U232	1.483E-05	1.497E-05	1.506E-05	1.547E-05	1.603E-05	1.705E-05	1.995E-05	2.155E-05	2.273E-05	2.146E-05
U233	4.037E-06	4.104E-06	4.151E-06	4.238E-06	4.258E-06	4.262E-06	4.268E-06	4.274E-06	4.289E-06	4.319E-06
U234	2.808E-05	2.839E-05	2.870E-05	3.010E-05	3.213E-05	3.620E-05	5.235E-05	6.825E-05	1.069E-04	1.799E-04
U235	1.312E-04	1.312E-04	1.312E-04	1.312E-04	1.312E-04	1.312E-04	1.312E-04	1.312E-04	1.312E-04	1.312E-04
U236	8.520E-04	8.520E-04	8.520E-04	8.520E-04	8.520E-04	8.520E-04	8.520E-04	8.520E-04	8.520E-04	8.521E-04
U237	1.401E+03	3.328E+02	7.904E+01	1.194E-01	1.782E-05	7.465E-06	6.780E-06	6.158E-06	4.842E-06	2.993E-06
U238	1.847E-05	1.847E-05	1.847E-05	1.847E-05	1.847E-05	1.847E-05	1.847E-05	1.847E-05	1.847E-05	1.847E-05
NP237	6.718E-04	6.810E-04	6.832E-04	6.839E-04	6.839E-04	6.839E-04	6.840E-04	6.841E-04	6.847E-04	6.866E-04
PU236	2.715E-04	2.702E-04	2.677E-04	2.567E-04	2.415E-04	2.139E-04	1.316E-04	8.094E-05	2.402E-05	2.116E-06
PU237	2.370E-03	1.916E-03	1.549E-03	5.922E-04	1.479E-04	9.232E-06	1.400E-10	2.123E-15	1.902E-27	0.000E+00
PU238	2.837E+00	2.861E+00	2.862E+00	2.866E+00	2.869E+00	2.867E+00	2.830E+00	2.786E+00	2.678E+00	2.475E+00

Table F.13 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	9.094E-02	9.166E-02	9.167E-02	9.167E-02	9.167E-02	9.167E-02	9.167E-02	9.167E-02	9.166E-02	9.165E-02	9.162E-02
PU240	7.255E-02	7.255E-02	7.255E-02	7.256E-02	7.256E-02	7.257E-02	7.257E-02	7.259E-02	7.261E-02	7.265E-02	7.270E-02
PU241	3.193E+01	3.187E+01	3.181E+01	3.155E+01	3.117E+01	3.043E+01	3.043E+01	2.764E+01	2.510E+01	1.974E+01	1.220E+01
PU242	2.547E-04	2.547E-04	2.547E-04	2.547E-04	2.547E-04	2.547E-04	2.547E-04	2.547E-04	2.547E-04	2.547E-04	2.547E-04
PU244	2.627E-11	2.628E-11	2.628E-11	2.628E-11	2.628E-11	2.628E-11	2.628E-11	2.628E-11	2.628E-11	2.628E-11	2.628E-11
AM241	4.166E-02	4.362E-02	4.558E-02	4.536E-02	4.61E-03	9.151E-02	9.151E-02	1.841E-01	2.678E-01	4.437E-01	6.856E-01
AM242M	1.465E-03	1.465E-03	1.464E-03	1.463E-03	1.461E-03	1.458E-03	1.458E-03	1.445E-03	1.432E-03	1.400E-03	1.337E-03
AM242	1.375E+01	1.464E-03	1.457E-03	1.456E-03	1.454E-03	1.451E-03	1.438E-03	1.425E-03	1.425E-03	1.393E-03	1.331E-03
AM243	1.428E-03	1.430E-03	1.430E-03	1.430E-03	1.430E-03	1.430E-03	1.429E-03	1.429E-03	1.429E-03	1.428E-03	1.427E-03
CM242	7.375E+00	6.993E+00	6.589E+00	5.037E+00	3.419E+00	1.576E+00	1.576E+00	7.208E-02	4.372E-03	1.154E-03	1.100E-03
CM243	1.995E-03	1.993E-03	1.991E-03	1.983E-03	1.971E-03	1.947E-03	1.855E-03	1.855E-03	1.767E-03	1.565E-03	1.227E-03
CM244	2.004E-01	2.004E-01	2.001E-01	1.988E-01	1.969E-01	1.931E-01	1.789E-01	1.789E-01	1.657E-01	1.369E-01	9.338E-02
CM245	1.436E-05	1.436E-05	1.436E-05	1.436E-05	1.435E-05	1.435E-05	1.435E-05	1.435E-05	1.435E-05	1.434E-05	1.433E-05
CM246	1.499E-06	1.499E-06	1.499E-06	1.499E-06	1.499E-06	1.499E-06	1.499E-06	1.499E-06	1.498E-06	1.497E-06	1.495E-06
CM247	3.316E-12	3.316E-12	3.316E-12	3.316E-12	3.316E-12	3.316E-12	3.316E-12	3.316E-12	3.316E-12	3.316E-12	3.316E-12
Subtotal CI**	2.971E+04	2.035E+04	1.596E+04	8.972E+03	5.550E+03	3.297E+03	1.433E+03	1.433E+03	1.001E+03	7.015E+02	4.968E+02
Total CI***	1.961E+05	2.103E+04	1.624E+04	9.131E+03	5.658E+03	3.356E+03	1.451E+03	1.451E+03	1.010E+03	7.034E+02	4.972E+02

* Decay time following fuel element exposure.

** Subtotal CI (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total CI (Curies): Total Activity of the ORIGIN output isotopes.

Table F.14 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

Table F.14 FLIP TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: f.14

BURNUP (BU)

BU: U-235 70.0 g
 BU: % U-235 51.09%
 BU: MWd 66.52
 BU: MWd/MTU 339370
 U-235 DEPL 81.84 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	9.274E-01	9.253E-01	9.234E-01	9.145E-01	9.017E-01	8.768E-01	7.837E-01	7.005E-01	5.292E-01	3.020E-01
BE 10	1.313E-06	1.313E-06	1.313E-06	1.313E-06	1.313E-06	1.313E-06	1.313E-06	1.313E-06	1.313E-06	1.313E-06
C 14	8.380E-03	8.380E-03	8.380E-03	8.379E-03	8.379E-03	8.379E-03	8.377E-03	8.375E-03	8.369E-03	8.359E-03
CL 36	1.771E-04	1.771E-04	1.771E-04	1.771E-04	1.771E-04	1.771E-04	1.771E-04	1.771E-04	1.771E-04	1.771E-04
CR 51	5.537E+02	3.901E+02	2.748E+02	5.648E+01	5.762E+00	5.995E-02	7.030E-10	8.242E-18	1.227E-37	0.000E+00
MN 54	3.075E+01	2.981E+01	2.890E+01	2.511E+01	2.051E+01	1.368E+01	2.710E+00	5.368E-01	9.371E-03	2.856E-06
FE 55	2.005E+02	1.985E+02	1.964E+02	1.876E+02	1.755E+02	1.536E+02	9.016E+01	5.292E+01	1.397E+01	9.730E-01
FE 59	1.088E+01	8.770E+00	7.069E+00	2.668E+00	6.543E-01	3.935E-02	5.147E-07	6.733E-12	4.166E-24	0.000E+00
CO 60	1.593E+02	1.585E+02	1.577E+02	1.541E+02	1.491E+02	1.397E+02	1.074E+02	8.255E+01	4.278E+01	1.149E+01
NI 59	3.223E-02	3.223E-02	3.223E-02	3.223E-02	3.223E-02	3.223E-02	3.223E-02	3.223E-02	3.223E-02	3.223E-02
NI 63	4.264E+00	4.263E+00	4.261E+00	4.256E+00	4.248E+00	4.232E+00	4.169E+00	4.106E+00	3.955E+00	3.668E+00
ZN 65	3.976E+00	3.821E+00	3.672E+00	3.067E+00	2.367E+00	1.409E+00	1.769E-01	2.221E-02	1.241E-04	3.874E-09
SE 79	8.536E-04	8.536E-04	8.536E-04	8.536E-04	8.536E-04	8.536E-04	8.536E-04	8.536E-04	8.535E-04	8.534E-04
KR 85	2.292E+01	2.287E+01	2.282E+01	2.256E+01	2.220E+01	2.149E+01	1.889E+01	1.660E+01	1.202E+01	6.297E+00
RB 87	5.649E-08	5.649E-08	5.649E-08	5.649E-08	5.649E-08	5.649E-08	5.649E-08	5.649E-08	5.649E-08	5.649E-08
SR 89	1.574E+03	1.299E+03	1.072E+03	4.499E+02	1.286E+02	1.050E+01	4.672E-04	2.078E-08	2.744E-19	0.000E+00
SR 90	1.921E+02	1.919E+02	1.917E+02	1.910E+02	1.898E+02	1.876E+02	1.789E+02	1.706E+02	1.514E+02	1.194E+02
Y 90	2.065E+02	1.924E+02	1.918E+02	1.910E+02	1.899E+02	1.876E+02	1.789E+02	1.706E+02	1.515E+02	1.194E+02
Y 91	1.949E+03	1.662E+03	1.407E+03	6.654E+02	2.258E+02	2.598E+01	4.557E-03	7.992E-07	3.256E-16	5.403E-35
ZR 93	5.169E-03	5.170E-03	5.170E-03	5.170E-03	5.170E-03	5.170E-03	5.170E-03	5.170E-03	5.170E-03	5.170E-03
ZR 95	2.424E+03	2.083E+03	1.790E+03	9.020E+02	3.357E+02	4.648E+01	1.709E-02	6.280E-06	1.627E-14	1.092E-31
NB 93M	4.675E-04	4.761E-04	4.849E-04	5.237E-04	5.792E-04	6.882E-04	1.097E-03	1.466E-03	2.241E-03	3.306E-03

Table F.14 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	5.087E-04	5.087E-04	5.087E-04	5.087E-04	5.087E-04	5.087E-04	5.087E-04	5.086E-04	5.085E-04	5.084E-04
NB 95	2.481E+03	2.424E+03	2.303E+03	1.522E+03	6.657E+02	1.010E+02	3.793E-02	1.394E-05	3.613E-14	2.425E-31
NB 95M	1.704E+01	1.539E+01	1.327E+01	6.692E+00	2.491E+00	3.448E-01	1.267E-04	4.660E-08	1.208E-16	8.104E-34
MO 93	2.142E-04	2.142E-04	2.142E-04	2.142E-04	2.142E-04	2.142E-04	2.141E-04	2.140E-04	2.138E-04	2.134E-04
TC 99	2.674E-02	2.682E-02	2.682E-02	2.682E-02	2.682E-02	2.682E-02	2.682E-02	2.682E-02	2.682E-02	2.682E-02
RU103	1.168E+03	9.120E+02	7.124E+02	2.334E+02	4.664E+01	1.863E+00	4.743E-06	1.208E-11	1.249E-25	0.000E+00
RU106	2.137E+02	2.081E+02	2.027E+02	1.800E+02	1.516E+02	1.075E+02	2.719E+01	6.880E+00	2.215E-01	2.296E-04
RH103M	1.051E+03	8.222E+02	6.422E+02	2.104E+02	4.204E+01	1.679E+00	4.276E-06	1.089E-11	1.126E-25	0.000E+00
RH106	2.346E+02	2.081E+02	2.027E+02	1.800E+02	1.516E+02	1.075E+02	2.719E+01	6.880E+00	2.215E-01	2.296E-04
PD107	4.693E-05	4.694E-05	4.694E-05	4.694E-05	4.694E-05	4.694E-05	4.694E-05	4.694E-05	4.694E-05	4.694E-05
AG110	2.896E+01	1.330E-02	1.280E-02	1.074E-02	8.340E-03	5.026E-03	6.635E-04	8.759E-05	5.545E-07	2.222E-11
AG110M	1.040E+00	1.001E+00	9.625E-01	8.076E-01	6.270E-01	3.780E-01	4.989E-02	6.585E-03	4.169E-05	1.671E-09
AG111	1.707E+01	4.653E+00	1.265E+00	3.518E-03	7.234E-07	3.057E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	3.000E-02	2.995E-02	2.989E-02	2.965E-02	2.930E-02	2.861E-02	2.602E-02	2.366E-02	1.866E-02	1.161E-02
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	6.072E-01	4.885E-01	3.930E-01	1.470E-01	3.560E-02	2.087E-03	2.465E-08	2.911E-13	1.396E-25	0.000E+00
IN114	3.596E-01	1.175E-01	9.666E-02	3.987E-02	1.112E-02	8.637E-04	3.149E-08	1.148E-12	9.216E-24	0.000E+00
IN114M	1.494E-01	1.229E-01	1.010E-01	4.166E-02	1.161E-02	9.025E-04	3.291E-08	1.200E-12	9.629E-24	0.000E+00
IN115M	5.996E+00	8.412E-02	1.107E-03	1.032E-05	2.499E-06	1.465E-07	1.730E-12	2.043E-17	9.794E-30	0.000E+00
SN119M	3.196E+01	3.072E+01	2.952E+01	2.469E+01	1.907E+01	1.138E+01	1.443E+00	1.830E-01	1.048E-03	3.435E-08
SN121M	4.036E-03	4.033E-03	4.030E-03	4.021E-03	4.007E-03	3.980E-03	3.870E-03	3.765E-03	3.513E-03	3.058E-03
SN123	3.811E+00	3.536E+00	3.280E+00	2.336E+00	1.431E+00	5.376E-01	1.069E-02	2.127E-04	1.187E-08	3.698E-17
SN125	1.682E+01	6.150E+00	2.247E+00	2.380E-02	3.366E-05	6.733E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	8.043E-04	8.043E-04	8.043E-04	8.042E-04	8.042E-04	8.042E-04	8.042E-04	8.042E-04	8.042E-04	8.041E-04
SB124	1.536E+00	1.308E+00	1.113E+00	5.372E-01	1.878E-01	2.297E-02	5.136E-06	1.148E-09	8.584E-19	4.795E-37
SB125	1.992E+01	1.984E+01	1.968E+01	1.887E+01	1.772E+01	1.564E+01	9.485E+00	5.752E+00	1.648E+00	1.351E-01
SB126	7.051E-01	3.224E-01	1.474E-01	4.400E-03	1.387E-04	1.126E-04	1.126E-04	1.126E-04	1.126E-04	1.126E-04
SB126M	2.446E-01	8.043E-04	8.043E-04	8.042E-04	8.042E-04	8.042E-04	8.042E-04	8.042E-04	8.042E-04	8.041E-04
TE123M	2.573E-02	2.373E-02	2.188E-02	1.517E-02	8.940E-03	3.107E-03	4.530E-05	6.604E-07	1.695E-11	1.117E-20
TE125M	4.378E+00	4.408E+00	4.429E+00	4.425E+00	4.264E+00	3.810E+00	2.315E+00	1.404E+00	4.020E-01	3.297E-02
TE127	6.005E+01	1.284E+01	7.877E+00	5.019E+00	2.810E+00	8.803E-01	8.485E-03	8.178E-05	7.459E-10	6.205E-20
TE127M	8.846E+00	8.350E+00	7.659E+00	5.124E+00	2.868E+00	8.987E-01	8.663E-03	8.349E-05	7.615E-10	6.335E-20
TE129	2.377E+02	1.756E+01	1.315E+01	3.568E+00	5.430E-01	1.258E-02	3.626E-09	1.045E-15	4.659E-32	0.000E+00
TE129M	3.583E+01	2.697E+01	2.021E+01	5.481E+00	8.342E-01	1.933E-02	5.570E-09	1.605E-15	7.157E-32	0.000E+00
I129	4.720E-05	4.726E-05	4.730E-05	4.738E-05	4.741E-05	4.742E-05	4.742E-05	4.742E-05	4.742E-05	4.742E-05
I131	9.603E+02	2.952E+02	8.830E+01	3.784E-01	1.451E-04	2.133E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table F.14 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	1.067E+01	7.992E+00	4.514E+00	1.558E-01	8.053E-04	1.952E-08	6.622E-27	2.247E-45	0.000E+00	0.000E+00
XE133	2.203E+03	4.258E+02	6.708E+01	1.573E-02	9.120E-08	3.065E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	2.335E+02	2.305E+02	2.276E+02	2.147E+02	1.974E+02	1.669E+02	8.523E+01	4.354E+01	8.116E+00	2.821E-01
CS135	1.312E-03	1.314E-03	1.314E-03	1.314E-03	1.314E-03	1.314E-03	1.314E-03	1.314E-03	1.314E-03	1.314E-03
CS136	6.274E+01	2.992E+01	1.426E+01	5.023E-01	4.022E-03	2.578E-07	4.352E-24	7.347E-41	0.000E+00	0.000E+00
CS137	2.044E+02	2.042E+02	2.040E+02	2.032E+02	2.020E+02	1.997E+02	1.907E+02	1.821E+02	1.622E+02	1.288E+02
BA136M	1.034E+01	4.930E+00	2.351E+00	8.278E-02	6.628E-04	4.248E-08	7.172E-25	1.211E-41	0.000E+00	0.000E+00
BA137M	1.934E+02	1.932E+02	1.930E+02	1.922E+02	1.911E+02	1.889E+02	1.804E+02	1.723E+02	1.535E+02	1.218E+02
BA140	2.012E+03	9.422E+02	4.412E+02	1.432E+01	1.019E-01	5.158E-06	3.389E-23	2.227E-40	0.000E+00	0.000E+00
LA140	2.067E+03	1.084E+03	5.077E+02	1.648E+01	1.172E-01	5.936E-06	3.900E-23	2.562E-40	0.000E+00	0.000E+00
CE141	1.910E+03	1.424E+03	1.057E+03	2.745E+02	3.923E+01	8.013E-01	1.395E-07	2.429E-14	3.072E-31	0.000E+00
CE142	5.961E-08	5.961E-08	5.961E-08	5.961E-08	5.961E-08	5.961E-08	5.961E-08	5.961E-08	5.961E-08	5.961E-08
CE144	1.916E+03	1.852E+03	1.790E+03	1.534E+03	1.228E+03	7.870E+02	1.327E+02	2.238E+01	2.613E-01	3.563E-05
PR143	1.894E+03	1.031E+03	5.044E+02	1.991E+01	1.880E-01	1.675E-05	1.057E-21	6.665E-38	0.000E+00	0.000E+00
PR144	1.923E+03	1.852E+03	1.790E+03	1.534E+03	1.228E+03	7.870E+02	1.327E+02	2.238E+01	2.613E-01	3.563E-05
PR144M	2.301E+01	2.223E+01	2.148E+01	1.841E+01	1.474E+01	9.444E+00	1.593E+00	2.685E-01	3.136E-03	4.276E-07
ND144	2.564E-12	2.587E-12	2.610E-12	2.705E-12	2.819E-12	2.982E-12	3.225E-12	3.266E-12	3.274E-12	3.274E-12
ND147	7.430E+02	3.093E+02	1.286E+02	2.442E+00	8.020E-03	8.650E-08	1.170E-27	1.583E-47	0.000E+00	0.000E+00
PM145	5.708E-05	5.799E-05	5.887E-05	6.249E-05	6.684E-05	7.304E-05	7.994E-05	7.672E-05	6.381E-05	4.316E-05
PM147	2.728E+02	2.750E+02	2.743E+02	2.635E+02	2.467E+02	2.161E+02	1.275E+02	7.518E+01	2.008E+01	1.432E+00
PM148M	5.274E+01	4.170E+01	3.297E+01	1.140E+01	2.465E+00	1.152E-01	5.497E-07	2.623E-12	1.304E-25	0.000E+00
PM148	3.700E+02	6.260E+01	1.175E+01	6.456E-01	1.388E-01	6.489E-03	3.096E-08	1.477E-13	7.347E-27	0.000E+00
SM145	6.723E-04	6.533E-04	6.350E-04	5.582E-04	4.634E-04	3.195E-04	7.214E-05	1.629E-05	3.948E-07	2.318E-10
SM147	4.703E-09	4.771E-09	4.839E-09	5.141E-09	5.554E-09	6.302E-09	8.476E-09	9.758E-09	1.111E-08	1.157E-08
SM151	6.516E-01	6.569E-01	6.567E-01	6.558E-01	6.544E-01	6.519E-01	6.420E-01	6.322E-01	6.083E-01	5.633E-01
EU152	2.124E-02	2.119E-02	2.115E-02	2.096E-02	2.070E-02	2.018E-02	1.822E-02	1.646E-02	1.276E-02	7.667E-03
EU154	1.226E+01	1.222E+01	1.219E+01	1.202E+01	1.178E+01	1.131E+01	9.631E+00	8.198E+00	5.481E+00	2.449E+00
EU155	7.092E+00	7.054E+00	7.017E+00	6.849E+00	6.614E+00	6.168E+00	4.664E+00	3.528E+00	1.755E+00	4.341E-01
EU156	9.853E+01	5.211E+01	2.750E+01	1.533E+00	2.380E-02	5.738E-06	1.938E-20	6.544E-35	0.000E+00	0.000E+00
GD153	1.320E-01	1.267E-01	1.218E-01	1.016E-01	7.822E-02	4.638E-02	5.732E-03	7.084E-04	3.804E-06	1.097E-10
TB160	4.053E-01	3.544E-01	3.099E-01	1.690E-01	7.046E-02	1.225E-02	1.119E-05	1.022E-08	2.577E-16	1.639E-31
TL206	1.207E-04	1.413E-11	1.413E-11	1.413E-11	1.413E-11	1.413E-11	1.413E-11	1.413E-11	1.413E-11	1.413E-11
TL207	2.531E-09	2.537E-09	2.552E-09	2.735E-09	3.100E-09	3.930E-09	7.151E-09	1.039E-08	1.893E-08	3.771E-08
TL208	1.771E-06	1.808E-06	1.868E-06	2.176E-06	2.565E-06	3.307E-06	5.782E-06	7.516E-06	9.521E-06	9.669E-06
PB210	3.205E-12	3.296E-12	3.352E-12	3.423E-12	3.412E-12	3.370E-12	3.244E-12	3.226E-12	4.099E-12	1.513E-11
PB211	2.538E-09	2.544E-09	2.559E-09	2.743E-09	3.109E-09	3.941E-09	7.171E-09	1.041E-08	1.898E-08	3.782E-08

Table F.14 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	4.930E-06	5.033E-06	5.199E-06	6.055E-06	7.138E-06	9.205E-06	1.609E-05	2.092E-05	2.650E-05	2.691E-05
BI211	2.554E-09	2.544E-09	2.559E-09	2.743E-09	3.109E-09	3.941E-09	7.171E-09	1.041E-08	1.898E-08	3.782E-08
BI212	4.930E-06	5.033E-06	5.199E-06	6.055E-06	7.138E-06	9.205E-06	1.609E-05	2.092E-05	2.650E-05	2.691E-05
PO212	3.159E-06	3.224E-06	3.331E-06	3.880E-06	4.573E-06	5.898E-06	1.031E-05	1.340E-05	1.698E-05	1.724E-05
PO215	2.538E-09	2.544E-09	2.559E-09	2.743E-09	3.109E-09	3.941E-09	7.171E-09	1.041E-08	1.898E-08	3.782E-08
PO216	4.930E-06	5.033E-06	5.199E-06	6.055E-06	7.138E-06	9.205E-06	1.609E-05	2.092E-05	2.650E-05	2.691E-05
RN219	2.538E-09	2.544E-09	2.559E-09	2.743E-09	3.109E-09	3.941E-09	7.171E-09	1.041E-08	1.898E-08	3.782E-08
RN220	4.930E-06	5.033E-06	5.199E-06	6.055E-06	7.138E-06	9.205E-06	1.609E-05	2.092E-05	2.650E-05	2.691E-05
FR223	3.499E-11	3.578E-11	3.657E-11	4.015E-11	4.535E-11	5.584E-11	9.884E-11	1.435E-10	2.617E-10	5.214E-10
RA223	2.538E-09	2.544E-09	2.559E-09	2.743E-09	3.109E-09	3.941E-09	7.171E-09	1.041E-08	1.898E-08	3.782E-08
RA224	4.930E-06	5.032E-06	5.199E-06	6.055E-06	7.138E-06	9.205E-06	1.609E-05	2.092E-05	2.650E-05	2.691E-05
RA226	4.001E-13	4.107E-13	4.214E-13	4.723E-13	5.526E-13	7.404E-13	1.947E-12	4.129E-12	1.596E-11	8.336E-11
RA228	5.342E-10	5.383E-10	5.425E-10	5.610E-10	5.871E-10	6.374E-10	8.146E-10	9.586E-10	1.212E-09	1.453E-09
AC227	2.535E-09	2.593E-09	2.650E-09	2.910E-09	3.286E-09	4.046E-09	7.163E-09	1.040E-08	1.896E-08	3.778E-08
TH227	2.511E-09	2.519E-09	2.547E-09	2.764E-09	3.131E-09	3.879E-09	7.073E-09	1.027E-08	1.872E-08	3.730E-08
TH228	4.920E-06	5.092E-06	5.263E-06	6.029E-06	7.109E-06	9.174E-06	1.607E-05	2.088E-05	2.648E-05	2.691E-05
TH229	8.669E-10	8.825E-10	8.983E-10	9.713E-10	1.078E-09	1.291E-09	2.146E-09	3.001E-09	5.145E-09	9.456E-09
TH230	6.316E-10	6.424E-10	6.532E-10	7.042E-10	7.827E-10	9.577E-10	1.896E-09	3.212E-09	8.116E-09	2.454E-08
TH231	1.216E-03	1.194E-04	1.193E-04	1.193E-04	1.193E-04	1.193E-04	1.193E-04	1.193E-04	1.193E-04	1.193E-04
TH232	1.586E-09	1.586E-09	1.586E-09	1.586E-09	1.586E-09	1.586E-09	1.586E-09	1.586E-09	1.586E-09	1.587E-09
TH234	3.734E-05	3.103E-05	2.682E-05	1.970E-05	1.842E-05	1.832E-05	1.832E-05	1.832E-05	1.832E-05	1.832E-05
PA231	4.937E-08	4.958E-08	4.969E-08	5.013E-08	5.078E-08	5.205E-08	5.710E-08	6.215E-08	7.476E-08	9.997E-08
PA233	5.412E-01	3.783E-01	2.643E-01	5.276E-02	5.798E-03	8.515E-04	8.054E-04	8.056E-04	8.063E-04	8.084E-04
PA234M	4.282E-03	3.103E-05	2.682E-05	1.970E-05	1.842E-05	1.832E-05	1.832E-05	1.832E-05	1.832E-05	1.832E-05
PA234	8.517E-03	4.034E-08	3.486E-08	2.560E-08	2.394E-08	2.381E-08	2.381E-08	2.381E-08	2.381E-08	2.381E-08
U232	1.728E-05	1.745E-05	1.758E-05	1.812E-05	1.887E-05	2.022E-05	2.408E-05	2.624E-05	2.789E-05	2.640E-05
U233	4.268E-06	4.345E-06	4.398E-06	4.497E-06	4.520E-06	4.524E-06	4.531E-06	4.539E-06	4.556E-06	4.591E-06
U234	3.093E-05	3.134E-05	3.175E-05	3.359E-05	3.625E-05	4.157E-05	6.271E-05	8.354E-05	1.342E-04	2.297E-04
U235	1.193E-04	1.193E-04	1.193E-04	1.193E-04	1.193E-04	1.193E-04	1.193E-04	1.193E-04	1.193E-04	1.193E-04
U236	9.030E-04	9.030E-04	9.030E-04	9.030E-04	9.030E-04	9.030E-04	9.030E-04	9.030E-04	9.030E-04	9.030E-04
U237	1.704E+03	4.047E+02	9.612E+01	1.452E-01	2.109E-05	8.506E-06	7.726E-06	7.017E-06	5.517E-06	3.410E-06
U238	1.832E-05	1.832E-05	1.832E-05	1.832E-05	1.832E-05	1.832E-05	1.832E-05	1.832E-05	1.832E-05	1.832E-05
NP237	7.906E-04	8.018E-04	8.045E-04	8.053E-04	8.053E-04	8.053E-04	8.054E-04	8.056E-04	8.063E-04	8.084E-04
PU236	3.578E-04	3.561E-04	3.528E-04	3.382E-04	3.183E-04	2.819E-04	1.734E-04	1.067E-04	3.166E-05	2.789E-06
PU237	3.429E-03	2.772E-03	2.240E-03	8.566E-04	2.140E-04	1.335E-05	2.025E-10	3.072E-15	2.751E-27	0.000E+00
PU238	3.714E+00	3.747E+00	3.749E+00	3.754E+00	3.757E+00	3.754E+00	3.705E+00	3.647E+00	3.506E+00	3.240E+00

Table F.14 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	9.267E-02	9.350E-02	9.351E-02	9.351E-02	9.351E-02	9.351E-02	9.350E-02	9.350E-02	9.349E-02	9.346E-02
PU240	7.653E-02	7.653E-02	7.653E-02	7.653E-02	7.654E-02	7.655E-02	7.660E-02	7.665E-02	7.674E-02	7.685E-02
PU241	3.638E+01	3.631E+01	3.625E+01	3.595E+01	3.552E+01	3.467E+01	3.149E+01	2.860E+01	2.249E+01	1.390E+01
PU242	3.320E-04	3.320E-04	3.320E-04	3.320E-04	3.320E-04	3.320E-04	3.320E-04	3.320E-04	3.320E-04	3.320E-04
PU244	4.447E-11	4.447E-11	4.447E-11	4.447E-11	4.447E-11	4.447E-11	4.447E-11	4.447E-11	4.447E-11	4.447E-11
AM241	4.589E-02	4.813E-02	5.035E-02	6.036E-02	7.465E-02	1.027E-01	2.081E-01	3.036E-01	5.040E-01	7.796E-01
AM242M	1.664E-03	1.664E-03	1.663E-03	1.662E-03	1.660E-03	1.657E-03	1.641E-03	1.627E-03	1.590E-03	1.519E-03
AM242	1.739E+01	1.664E-03	1.655E-03	1.654E-03	1.652E-03	1.648E-03	1.633E-03	1.618E-03	1.582E-03	1.512E-03
AM243	2.059E-03	2.062E-03	2.062E-03	2.062E-03	2.061E-03	2.061E-03	2.061E-03	2.061E-03	2.060E-03	2.058E-03
CM242	9.460E+00	8.970E+00	8.452E+00	6.461E+00	4.386E+00	2.021E+00	9.228E-02	5.435E-03	1.311E-03	1.250E-03
CM243	2.873E-03	2.870E-03	2.868E-03	2.856E-03	2.838E-03	2.804E-03	2.671E-03	2.544E-03	2.253E-03	1.767E-03
CM244	3.299E-01	3.299E-01	3.294E-01	3.272E-01	3.241E-01	3.179E-01	2.945E-01	2.728E-01	2.253E-01	1.537E-01
CM245	2.600E-05	2.600E-05	2.600E-05	2.600E-05	2.600E-05	2.600E-05	2.599E-05	2.599E-05	2.598E-05	2.596E-05
CM246	3.092E-06	3.092E-06	3.092E-06	3.092E-06	3.092E-06	3.091E-06	3.090E-06	3.089E-06	3.087E-06	3.083E-06
CM247	7.681E-12	7.681E-12	7.681E-12	7.681E-12	7.681E-12	7.681E-12	7.681E-12	7.681E-12	7.681E-12	7.681E-12
Subtotal Ci**	3.193E+04	2.179E+04	1.709E+04	9.629E+03	5.975E+03	3.562E+03	1.552E+03	1.083E+03	7.579E+02	5.358E+02
Total Ci***	2.084E+05	2.255E+04	1.741E+04	9.816E+03	6.101E+03	3.630E+03	1.572E+03	1.093E+03	7.601E+02	5.363E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

APPENDIX L

Low Enrichment FLIP-LEU-I TRIGA fuel element

Activity
vs
Burnup/Decay Time

Table L.1 FLIP-LEU-I TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: leu.org.1b

BURNUP (BU)

BU: U-235 5.0 g
 BU: % U-235 4.95%
 BU: MWd 4.75
 BU: MWd/MTU 9427
 U-235 DEPL 5.94 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	6.798E-02	6.783E-02	6.769E-02	6.703E-02	6.610E-02	6.427E-02	5.745E-02	5.136E-02	3.879E-02	2.214E-02
BE 10	7.337E-08	7.337E-08	7.337E-08	7.337E-08	7.337E-08	7.337E-08	7.337E-08	7.337E-08	7.337E-08	7.337E-08
C 14	4.687E-04	4.687E-04	4.687E-04	4.687E-04	4.687E-04	4.687E-04	4.686E-04	4.685E-04	4.682E-04	4.676E-04
CL 36	1.030E-05	1.030E-05	1.030E-05	1.030E-05	1.030E-05	1.030E-05	1.029E-05	1.029E-05	1.029E-05	1.029E-05
CR 51	2.395E+01	1.687E+01	1.189E+01	2.443E+00	2.492E-01	2.593E-03	3.040E-11	3.564E-19	5.306E-39	0.000E+00
MN 54	1.474E+00	1.429E+00	1.385E+00	1.204E+00	9.834E-01	6.561E-01	1.299E-01	2.574E-02	4.493E-04	1.369E-07
FE 55	1.055E+01	1.044E+01	1.034E+01	9.872E+00	9.236E+00	8.084E+00	4.745E+00	2.785E+00	7.351E-01	5.121E-02
FE 59	4.441E-01	3.580E-01	2.885E-01	1.089E-01	2.671E-02	1.606E-03	2.101E-08	2.748E-13	1.701E-25	0.000E+00
CO 60	9.013E+00	8.968E+00	8.923E+00	8.722E+00	8.440E+00	7.903E+00	6.076E+00	4.671E+00	2.421E+00	6.504E-01
NI 59	1.994E-03	1.994E-03	1.994E-03	1.994E-03	1.994E-03	1.994E-03	1.994E-03	1.994E-03	1.994E-03	1.994E-03
NI 63	2.444E-01	2.443E-01	2.443E-01	2.440E-01	2.435E-01	2.426E-01	2.390E-01	2.354E-01	2.267E-01	2.102E-01
ZN 65	1.833E-01	1.762E-01	1.693E-01	1.414E-01	1.091E-01	6.496E-02	8.156E-03	1.024E-03	5.722E-06	1.786E-10
SE 79	6.207E-05	6.207E-05	6.207E-05	6.207E-05	6.207E-05	6.207E-05	6.207E-05	6.207E-05	6.206E-05	6.206E-05
KR 85	1.666E+00	1.662E+00	1.658E+00	1.639E+00	1.613E+00	1.562E+00	1.373E+00	1.206E+00	8.731E-01	4.576E-01
RB 87	4.312E-09	4.312E-09	4.312E-09	4.312E-09	4.312E-09	4.312E-09	4.312E-09	4.312E-09	4.312E-09	4.312E-09
SR 89	1.280E+02	1.057E+02	8.720E+01	3.660E+01	1.046E+01	8.543E-01	3.800E-05	1.691E-09	2.232E-20	0.000E+00
SR 90	1.401E+01	1.400E+01	1.399E+01	1.393E+01	1.385E+01	1.368E+01	1.305E+01	1.244E+01	1.105E+01	8.709E+00
Y 90	1.445E+01	1.401E+01	1.399E+01	1.393E+01	1.385E+01	1.369E+01	1.305E+01	1.245E+01	1.105E+01	8.711E+00
Y 91	1.565E+02	1.335E+02	1.131E+02	5.347E+01	1.814E+01	2.087E+00	3.661E-04	6.421E-08	2.615E-17	4.342E-36
ZR 93	3.641E-04	3.643E-04	3.643E-04	3.643E-04	3.643E-04	3.643E-04	3.643E-04	3.643E-04	3.643E-04	3.643E-04
ZR 95	1.828E+02	1.570E+02	1.349E+02	6.800E+01	2.531E+01	3.504E+00	1.288E-03	4.735E-07	1.227E-15	8.235E-33
NB 93M	3.305E-05	3.366E-05	3.428E-05	3.701E-05	4.093E-05	4.859E-05	7.741E-05	1.034E-04	1.579E-04	2.331E-04

Table L.1 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	2.956E-05	2.956E-05	2.956E-05	2.956E-05	2.956E-05	2.956E-05	2.956E-05	2.955E-05	2.955E-05	2.954E-05
NB 95	1.871E+02	1.828E+02	1.737E+02	1.148E+02	5.019E+01	7.613E+00	2.860E-03	1.051E-06	2.723E-15	1.829E-32
NB 95M	1.285E+00	1.160E+00	1.001E+00	5.045E-01	1.877E-01	2.600E-02	9.555E-06	3.513E-09	9.101E-18	6.110E-35
MO 93	1.196E-05	1.196E-05	1.196E-05	1.196E-05	1.196E-05	1.196E-05	1.196E-05	1.195E-05	1.194E-05	1.192E-05
TC 99	2.107E-03	2.113E-03	2.114E-03	2.114E-03	2.114E-03	2.114E-03	2.114E-03	2.114E-03	2.114E-03	2.114E-03
RU103	8.778E+01	6.857E+01	5.356E+01	1.754E+01	3.506E+00	1.401E-01	3.566E-07	9.078E-13	9.389E-27	0.000E+00
RU106	1.237E+01	1.205E+01	1.173E+01	1.042E+01	8.771E+00	6.221E+00	1.574E+00	3.982E-01	1.282E-02	1.329E-05
RH103M	7.905E+01	6.181E+01	4.828E+01	1.582E+01	3.161E+00	1.263E-01	3.215E-07	8.184E-13	8.464E-27	0.000E+00
RH106	1.244E+01	1.205E+01	1.173E+01	1.042E+01	8.771E+00	6.221E+00	1.574E+00	3.982E-01	1.282E-02	1.329E-05
PD107	2.688E-06	2.689E-06	2.689E-06	2.689E-06	2.689E-06	2.689E-06	2.689E-06	2.689E-06	2.689E-06	2.689E-06
AG110	1.130E-01	6.511E-05	6.263E-05	5.255E-05	4.080E-05	2.460E-05	3.246E-06	4.285E-07	2.713E-09	1.087E-13
AG110M	5.089E-03	4.896E-03	4.709E-03	3.952E-03	3.068E-03	1.849E-03	2.441E-04	3.222E-05	2.039E-07	8.176E-12
AG111	9.675E-01	2.637E-01	7.168E-02	1.994E-04	4.100E-08	1.733E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	2.069E-03	2.066E-03	2.062E-03	2.045E-03	2.021E-03	1.973E-03	1.795E-03	1.632E-03	1.287E-03	8.007E-04
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	4.978E-02	4.005E-02	3.221E-02	1.206E-02	2.918E-03	1.711E-04	2.020E-09	2.387E-14	1.144E-26	0.000E+00
IN114	1.215E-03	3.958E-04	3.254E-04	1.342E-04	3.742E-05	2.908E-06	1.060E-10	3.865E-15	3.102E-26	0.000E+00
IN114M	5.031E-04	4.135E-04	3.400E-04	1.403E-04	3.910E-05	3.038E-06	1.108E-10	4.039E-15	3.242E-26	0.000E+00
IN115M	5.065E-01	7.103E-03	9.341E-05	8.466E-07	2.050E-07	1.202E-08	1.419E-13	1.676E-18	8.034E-31	0.000E+00
SN119M	1.486E+00	1.428E+00	1.372E+00	1.148E+00	8.865E-01	5.290E-01	6.709E-02	8.506E-03	4.871E-05	1.597E-09
SN121M	2.267E-04	2.266E-04	2.265E-04	2.259E-04	2.251E-04	2.236E-04	2.174E-04	2.115E-04	1.973E-04	1.718E-04
SN123	2.421E-01	2.245E-01	2.083E-01	1.483E-01	9.091E-02	3.414E-02	6.791E-04	1.351E-05	7.540E-10	2.349E-18
SN125	9.434E-01	3.448E-01	1.260E-01	1.334E-03	1.887E-06	3.774E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	5.894E-05	5.894E-05	5.894E-05	5.894E-05	5.894E-05	5.894E-05	5.894E-05	5.893E-05	5.893E-05	5.893E-05
SB124	2.523E-02	2.147E-02	1.828E-02	8.820E-03	3.085E-03	3.772E-04	8.433E-08	1.885E-11	1.409E-20	7.875E-39
SB125	1.287E+00	1.280E+00	1.270E+00	1.217E+00	1.143E+00	1.009E+00	6.119E-01	3.710E-01	1.063E-01	8.716E-03
SB126	3.081E-02	1.409E-02	6.445E-03	1.956E-04	9.388E-06	8.251E-06	8.251E-06	8.251E-06	8.251E-06	8.250E-06
SB126M	1.503E-02	5.894E-05	5.894E-05	5.894E-05	5.894E-05	5.894E-05	5.894E-05	5.893E-05	5.893E-05	5.893E-05
TE123M	3.643E-05	3.359E-05	3.098E-05	2.148E-05	1.266E-05	4.399E-06	6.415E-08	9.353E-10	2.401E-14	1.582E-23
TE125M	2.854E-01	2.869E-01	2.879E-01	2.865E-01	2.755E-01	2.458E-01	1.493E-01	9.056E-02	2.592E-02	2.127E-03
TE127	4.639E+00	9.592E-01	5.753E-01	3.653E-01	2.045E-01	6.407E-02	6.175E-04	5.952E-06	5.429E-11	4.516E-21
TE127M	6.422E-01	6.076E-01	5.574E-01	3.729E-01	2.088E-01	6.541E-02	6.305E-04	6.077E-06	5.542E-11	4.611E-21
TE129	1.897E+01	1.395E+00	1.045E+00	2.834E-01	4.313E-02	9.993E-04	2.880E-10	8.300E-17	3.700E-33	0.000E+00
TE129M	2.846E+00	2.142E+00	1.605E+00	4.353E-01	6.626E-02	1.535E-03	4.424E-10	1.275E-16	5.685E-33	0.000E+00
I129	3.485E-06	3.490E-06	3.493E-06	3.500E-06	3.502E-06	3.503E-06	3.503E-06	3.503E-06	3.503E-06	3.503E-06
I131	7.867E+01	2.417E+01	7.230E+00	3.098E-02	1.188E-05	1.746E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table L.1 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	8.732E-01	6.541E-01	3.695E-01	1.276E-02	6.592E-05	1.598E-09	5.421E-28	1.839E-46	0.000E+00	0.000E+00
XE133	1.826E+02	3.529E+01	5.559E+00	1.304E-03	7.558E-09	2.540E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	9.643E-01	9.520E-01	9.398E-01	8.867E-01	8.152E-01	6.892E-01	3.520E-01	1.798E-01	3.352E-02	1.165E-03
CS135	1.964E-04	1.966E-04	1.966E-04	1.966E-04	1.966E-04	1.966E-04	1.966E-04	1.966E-04	1.966E-04	1.966E-04
CS136	6.299E-01	3.003E-01	1.432E-01	5.043E-03	4.038E-05	2.588E-09	4.369E-26	7.376E-43	0.000E+00	0.000E+00
CS137	1.469E+01	1.468E+01	1.466E+01	1.461E+01	1.452E+01	1.436E+01	1.371E+01	1.309E+01	1.166E+01	9.257E+00
BA136M	1.040E-01	4.950E-02	2.360E-02	8.311E-04	6.654E-06	4.265E-10	7.201E-27	1.216E-43	0.000E+00	0.000E+00
BA137M	1.390E+01	1.389E+01	1.387E+01	1.382E+01	1.374E+01	1.358E+01	1.297E+01	1.238E+01	1.103E+01	8.757E+00
BA140	1.675E+02	7.845E+01	3.673E+01	1.192E+00	8.482E-03	4.295E-07	2.822E-24	1.854E-41	0.000E+00	0.000E+00
LA140	1.679E+02	9.020E+01	4.227E+01	1.372E+00	9.761E-03	4.942E-07	3.247E-24	2.133E-41	0.000E+00	0.000E+00
CE141	1.592E+02	1.188E+02	8.813E+01	2.288E+01	3.270E+00	6.681E-02	1.163E-08	2.025E-15	2.561E-32	0.000E+00
CE142	5.405E-09	5.406E-09	5.406E-09	5.406E-09	5.406E-09	5.406E-09	5.406E-09	5.406E-09	5.406E-09	5.406E-09
CE144	1.422E+02	1.375E+02	1.329E+02	1.139E+02	9.115E+01	5.841E+01	9.850E+00	1.661E+00	1.939E-02	2.644E-06
PR143	1.591E+02	8.660E+01	4.236E+01	1.672E+00	1.579E-02	1.407E-06	8.873E-23	5.597E-39	0.000E+00	0.000E+00
PR144	1.423E+02	1.375E+02	1.329E+02	1.139E+02	9.115E+01	5.841E+01	9.850E+00	1.661E+00	1.940E-02	2.645E-06
PR144M	1.708E+00	1.650E+00	1.594E+00	1.366E+00	1.094E+00	7.009E-01	1.182E-01	1.993E-02	2.327E-04	3.173E-08
ND144	1.440E-13	1.458E-13	1.475E-13	1.545E-13	1.629E-13	1.751E-13	1.931E-13	1.961E-13	1.967E-13	1.967E-13
ND147	6.167E+01	2.567E+01	1.067E+01	2.027E-01	6.657E-04	7.179E-09	9.712E-29	1.314E-48	0.000E+00	0.000E+00
PM145	3.549E-06	3.594E-06	3.638E-06	3.817E-06	4.030E-06	4.331E-06	4.631E-06	4.424E-06	3.674E-06	2.485E-06
PM147	3.849E+01	3.852E+01	3.830E+01	3.671E+01	3.436E+01	3.011E+01	1.776E+01	1.047E+01	2.797E+00	1.996E-01
PM148M	8.622E-01	6.817E-01	5.389E-01	1.864E-01	4.030E-02	1.883E-03	8.987E-09	4.288E-14	2.133E-27	0.000E+00
PM148	2.515E+00	4.432E-01	9.681E-02	1.053E-02	2.270E-03	1.061E-04	5.062E-10	2.415E-15	1.201E-28	0.000E+00
SM145	3.398E-05	3.302E-05	3.209E-05	2.821E-05	2.342E-05	1.615E-05	3.646E-06	8.233E-07	1.995E-08	1.172E-11
SM147	6.568E-10	6.664E-10	6.759E-10	7.180E-10	7.755E-10	8.797E-10	1.182E-09	1.361E-09	1.549E-09	1.613E-09
SM151	2.556E-01	2.560E-01	2.559E-01	2.556E-01	2.551E-01	2.541E-01	2.502E-01	2.463E-01	2.371E-01	2.195E-01
EU152	6.768E-03	6.754E-03	6.741E-03	6.681E-03	6.597E-03	6.431E-03	5.809E-03	5.246E-03	4.067E-03	2.444E-03
EU154	4.185E-02	4.173E-02	4.160E-02	4.102E-02	4.020E-02	3.862E-02	3.287E-02	2.799E-02	1.871E-02	8.360E-03
EU155	3.882E-01	3.861E-01	3.841E-01	3.749E-01	3.620E-01	3.376E-01	2.553E-01	1.930E-01	9.604E-02	2.376E-02
EU156	7.336E-01	3.938E-01	2.079E-01	1.159E-02	1.799E-04	4.336E-08	1.464E-22	4.945E-37	0.000E+00	0.000E+00
GD153	3.340E-03	3.209E-03	3.083E-03	2.573E-03	1.981E-03	1.175E-03	1.452E-04	1.794E-05	9.634E-08	2.778E-12
TB160	8.855E-03	7.742E-03	6.770E-03	3.692E-03	1.539E-03	2.676E-04	2.445E-07	2.233E-10	5.632E-18	3.582E-33
TL206	5.099E-06	7.888E-13	7.888E-13	7.888E-13	7.888E-13	7.888E-13	7.888E-13	7.888E-13	7.888E-13	7.888E-13
TL207	1.280E-09	1.281E-09	1.287E-09	1.366E-09	1.526E-09	1.912E-09	3.678E-09	5.823E-09	1.289E-08	3.315E-08
TL208	4.038E-08	4.099E-08	4.199E-08	4.704E-08	5.300E-08	6.335E-08	8.960E-08	1.015E-07	1.075E-07	9.993E-08
PB210	3.966E-15	4.068E-15	4.143E-15	4.354E-15	4.601E-15	5.195E-15	9.569E-15	1.813E-14	6.600E-14	3.332E-13
PB211	1.284E-09	1.285E-09	1.291E-09	1.370E-09	1.531E-09	1.918E-09	3.689E-09	5.839E-09	1.292E-08	3.324E-08

Table L.1 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.124E-07	1.141E-07	1.169E-07	1.309E-07	1.475E-07	1.763E-07	2.494E-07	2.826E-07	2.993E-07	2.781E-07
BI211	1.284E-09	1.285E-09	1.291E-09	1.370E-09	1.531E-09	1.918E-09	3.689E-09	5.839E-09	1.292E-08	3.324E-08
BI212	1.124E-07	1.141E-07	1.169E-07	1.309E-07	1.475E-07	1.763E-07	2.494E-07	2.826E-07	2.993E-07	2.781E-07
PO212	7.200E-08	7.309E-08	7.488E-08	8.388E-08	9.451E-08	1.130E-07	1.598E-07	1.811E-07	1.917E-07	1.782E-07
PO215	1.284E-09	1.285E-09	1.291E-09	1.370E-09	1.531E-09	1.918E-09	3.689E-09	5.839E-09	1.292E-08	3.324E-08
PO216	1.124E-07	1.141E-07	1.169E-07	1.309E-07	1.475E-07	1.763E-07	2.494E-07	2.826E-07	2.993E-07	2.781E-07
RN219	1.284E-09	1.285E-09	1.291E-09	1.370E-09	1.531E-09	1.918E-09	3.689E-09	5.839E-09	1.292E-08	3.324E-08
RN220	1.124E-07	1.141E-07	1.169E-07	1.309E-07	1.475E-07	1.763E-07	2.494E-07	2.826E-07	2.993E-07	2.781E-07
FR223	1.769E-11	1.802E-11	1.836E-11	1.991E-11	2.222E-11	2.717E-11	5.084E-11	8.047E-11	1.782E-10	4.584E-10
RA223	1.284E-09	1.285E-09	1.291E-09	1.370E-09	1.531E-09	1.918E-09	3.689E-09	5.839E-09	1.292E-08	3.324E-08
RA224	1.124E-07	1.141E-07	1.169E-07	1.309E-07	1.475E-07	1.763E-07	2.494E-07	2.826E-07	2.993E-07	2.781E-07
RA226	2.794E-14	2.864E-14	2.935E-14	3.266E-14	3.778E-14	4.919E-14	1.105E-13	1.970E-13	5.242E-13	1.661E-12
RA228	5.638E-10	5.681E-10	5.725E-10	5.919E-10	6.193E-10	6.719E-10	8.574E-10	1.008E-09	1.273E-09	1.526E-09
AC227	1.282E-09	1.306E-09	1.330E-09	1.442E-09	1.610E-09	1.969E-09	3.684E-09	5.831E-09	1.291E-08	3.322E-08
TH227	1.266E-09	1.270E-09	1.283E-09	1.377E-09	1.539E-09	1.888E-09	3.638E-09	5.759E-09	1.274E-08	3.278E-08
TH228	1.122E-07	1.151E-07	1.179E-07	1.303E-07	1.469E-07	1.757E-07	2.489E-07	2.820E-07	2.990E-07	2.781E-07
TH229	7.671E-11	7.820E-11	7.969E-11	8.651E-11	9.641E-11	1.162E-10	1.955E-10	2.748E-10	4.729E-10	8.690E-10
TH230	4.189E-11	4.245E-11	4.300E-11	4.551E-11	4.912E-11	5.636E-11	8.543E-11	1.147E-10	1.885E-10	3.393E-10
TH231	2.508E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04
TH232	1.665E-09	1.665E-09	1.665E-09	1.665E-09	1.665E-09	1.665E-09	1.665E-09	1.665E-09	1.665E-09	1.665E-09
TH234	1.353E-04	1.353E-04	1.353E-04	1.353E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04
PA231	2.095E-08	2.114E-08	2.132E-08	2.210E-08	2.320E-08	2.539E-08	3.410E-08	4.281E-08	6.455E-08	1.080E-07
PA233	2.508E-02	1.752E-02	1.223E-02	2.416E-03	2.366E-04	7.017E-06	4.878E-06	4.879E-06	4.883E-06	4.893E-06
PA234M	1.436E-04	1.353E-04	1.353E-04	1.353E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04
PA234	1.672E-05	1.759E-07	1.759E-07	1.758E-07	1.758E-07	1.758E-07	1.758E-07	1.758E-07	1.758E-07	1.758E-07
U232	3.208E-07	3.216E-07	3.215E-07	3.212E-07	3.207E-07	3.196E-07	3.150E-07	3.099E-07	2.963E-07	2.695E-07
U233	4.083E-07	4.119E-07	4.143E-07	4.189E-07	4.199E-07	4.201E-07	4.201E-07	4.201E-07	4.202E-07	4.204E-07
U234	1.606E-06	1.606E-06	1.606E-06	1.607E-06	1.608E-06	1.611E-06	1.621E-06	1.630E-06	1.654E-06	1.698E-06
U235	2.056E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04	2.056E-04
U236	6.927E-05	6.927E-05	6.927E-05	6.927E-05	6.927E-05	6.927E-05	6.927E-05	6.927E-05	6.927E-05	6.927E-05
U237	6.502E+00	1.544E+00	3.667E-01	5.542E-04	8.925E-08	4.103E-08	3.727E-08	3.385E-08	2.661E-08	1.645E-08
U238	1.352E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04	1.352E-04
NP237	4.822E-06	4.864E-06	4.875E-06	4.878E-06	4.878E-06	4.878E-06	4.878E-06	4.879E-06	4.883E-06	4.893E-06
PU236	1.223E-07	1.215E-07	1.204E-07	1.154E-07	1.086E-07	9.621E-08	5.918E-08	3.640E-08	1.080E-08	9.522E-10
PU237	6.387E-07	5.163E-07	4.173E-07	1.596E-07	3.986E-08	2.487E-09	3.772E-14	5.721E-19	5.125E-31	0.000E+00
PU238	1.599E-03	1.608E-03	1.608E-03	1.609E-03	1.608E-03	1.605E-03	1.582E-03	1.558E-03	1.497E-03	1.384E-03

Table L.1 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	4.729E-02	4.741E-02	4.742E-02	4.742E-02	4.742E-02	4.742E-02	4.741E-02	4.741E-02	4.740E-02	4.739E-02
PU240	5.390E-03	5.390E-03	5.390E-03	5.389E-03	5.389E-03	5.389E-03	5.388E-03	5.387E-03	5.384E-03	5.378E-03
PU241	1.755E-01	1.752E-01	1.749E-01	1.734E-01	1.713E-01	1.673E-01	1.519E-01	1.380E-01	1.085E-01	6.706E-02
PU242	8.019E-08	8.019E-08	8.019E-08	8.019E-08	8.019E-08	8.019E-08	8.019E-08	8.019E-08	8.019E-08	8.020E-08
PU244	2.407E-17	2.407E-17	2.407E-17	2.407E-17	2.407E-17	2.407E-17	2.407E-17	2.407E-17	2.407E-17	2.407E-17
AM241	2.813E-04	2.920E-04	3.028E-04	3.510E-04	4.199E-04	5.552E-04	1.064E-03	1.524E-03	2.490E-03	3.819E-03
AM242M	1.534E-06	1.534E-06	1.533E-06	1.532E-06	1.530E-06	1.527E-06	1.513E-06	1.499E-06	1.465E-06	1.400E-06
AM242	5.041E-03	1.528E-06	1.526E-06	1.524E-06	1.523E-06	1.519E-06	1.505E-06	1.492E-06	1.458E-06	1.393E-06
AM243	2.874E-08	2.877E-08	2.877E-08	2.877E-08	2.876E-08	2.876E-08	2.876E-08	2.875E-08	2.874E-08	2.871E-08
CM242	2.450E-03	2.324E-03	2.190E-03	1.675E-03	1.137E-03	5.244E-04	2.480E-05	2.296E-06	1.207E-06	1.152E-06
CM243	3.886E-08	3.882E-08	3.879E-08	3.862E-08	3.839E-08	3.793E-08	3.613E-08	3.441E-08	3.047E-08	2.390E-08
CM244	2.047E-07	2.047E-07	2.044E-07	2.030E-07	2.011E-07	1.973E-07	1.828E-07	1.693E-07	1.398E-07	9.538E-08
CM245	1.007E-12	1.007E-12	1.007E-12	1.007E-12	1.007E-12	1.007E-12	1.007E-12	1.007E-12	1.006E-12	1.006E-12
CM246	6.810E-15	6.810E-15	6.810E-15	6.810E-15	6.810E-15	6.809E-15	6.807E-15	6.805E-15	6.800E-15	6.790E-15
CM247	8.527E-22	8.527E-22	8.527E-22	8.527E-22	8.527E-22	8.527E-22	8.527E-22	8.527E-22	8.527E-22	8.527E-22
Subtotal Ci**	2.301E+03	1.621E+03	1.276E+03	7.079E+02	4.312E+02	2.519E+02	1.081E+02	7.527E+01	5.264E+01	3.742E+01
Total Ci***	1.709E+04	1.662E+03	1.286E+03	7.136E+02	4.348E+02	2.538E+02	1.087E+02	7.556E+01	5.271E+01	3.744E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table L.2 FLIP-LEU-I TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: leu.org.2b

BURNUP (BU)

BU: U-235 10.0 g
 BU: % U-235 9.90%
 BU: MWd 9.50
 BU: MWd/MTU 18854
 U-235 DEPL 11.76 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	1.365E-01	1.362E-01	1.359E-01	1.346E-01	1.327E-01	1.291E-01	1.154E-01	1.031E-01	7.789E-02	4.445E-02
BE 10	1.499E-07	1.499E-07	1.499E-07	1.499E-07	1.499E-07	1.499E-07	1.499E-07	1.499E-07	1.499E-07	1.499E-07
C 14	9.577E-04	9.577E-04	9.577E-04	9.577E-04	9.576E-04	9.576E-04	9.573E-04	9.571E-04	9.565E-04	9.554E-04
CL 36	2.098E-05	2.098E-05	2.098E-05	2.098E-05	2.098E-05	2.098E-05	2.098E-05	2.098E-05	2.098E-05	2.098E-05
CR 51	4.967E+01	3.499E+01	2.465E+01	5.067E+00	5.169E-01	5.378E-03	6.306E-11	7.394E-19	1.101E-38	0.000E+00
MN 54	3.039E+00	2.947E+00	2.856E+00	2.483E+00	2.028E+00	1.353E+00	2.679E-01	5.306E-02	9.263E-04	2.823E-07
FE 55	2.164E+01	2.142E+01	2.120E+01	2.024E+01	1.894E+01	1.658E+01	9.729E+00	5.710E+00	1.507E+00	1.050E-01
FE 59	9.246E-01	7.452E-01	6.007E-01	2.267E-01	5.560E-02	3.344E-03	4.374E-08	5.721E-13	3.541E-25	0.000E+00
CO 60	1.840E+01	1.830E+01	1.821E+01	1.780E+01	1.723E+01	1.613E+01	1.240E+01	9.535E+00	4.942E+00	1.328E+00
NI 59	4.049E-03	4.049E-03	4.049E-03	4.049E-03	4.049E-03	4.049E-03	4.049E-03	4.049E-03	4.049E-03	4.048E-03
NI 63	4.986E-01	4.985E-01	4.983E-01	4.977E-01	4.967E-01	4.949E-01	4.875E-01	4.802E-01	4.624E-01	4.289E-01
ZN 65	3.788E-01	3.641E-01	3.499E-01	2.923E-01	2.255E-01	1.342E-01	1.686E-02	2.117E-03	1.183E-05	3.692E-10
SE 79	1.240E-04	1.240E-04	1.240E-04	1.240E-04	1.240E-04	1.240E-04	1.240E-04	1.240E-04	1.240E-04	1.240E-04
KR 85	3.313E+00	3.306E+00	3.298E+00	3.261E+00	3.209E+00	3.107E+00	2.730E+00	2.399E+00	1.737E+00	9.102E-01
RB 87	8.365E-09	8.365E-09	8.365E-09	8.365E-09	8.365E-09	8.365E-09	8.365E-09	8.365E-09	8.365E-09	8.365E-09
SR 89	2.521E+02	2.081E+02	1.717E+02	7.208E+01	2.060E+01	1.682E+00	7.485E-05	3.330E-09	4.396E-20	0.000E+00
SR 90	2.785E+01	2.782E+01	2.780E+01	2.768E+01	2.752E+01	2.720E+01	2.593E+01	2.473E+01	2.195E+01	1.731E+01
Y 90	2.879E+01	2.785E+01	2.781E+01	2.769E+01	2.753E+01	2.720E+01	2.594E+01	2.473E+01	2.196E+01	1.731E+01
Y 91	3.087E+02	2.634E+02	2.231E+02	1.054E+02	3.578E+01	4.118E+00	7.221E-04	1.266E-07	5.160E-17	8.564E-36
ZR 93	7.275E-04	7.278E-04	7.278E-04	7.278E-04	7.278E-04	7.278E-04	7.278E-04	7.278E-04	7.278E-04	7.278E-04
ZR 95	3.635E+02	3.124E+02	2.685E+02	1.353E+02	5.033E+01	6.970E+00	2.562E-03	9.419E-07	2.440E-15	1.639E-32
NB 93M	6.610E-05	6.732E-05	6.853E-05	7.400E-05	8.182E-05	9.714E-05	1.547E-04	2.067E-04	3.156E-04	4.656E-04

Table L.2 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	6.026E-05	6.026E-05	6.026E-05	6.026E-05	6.026E-05	6.026E-05	6.025E-05	6.025E-05	6.024E-05	6.022E-05
NB 95	3.722E+02	3.635E+02	3.455E+02	2.283E+02	9.982E+01	1.515E+01	5.688E-03	2.091E-06	5.418E-15	3.637E-32
NB 95M	2.555E+00	2.308E+00	1.990E+00	1.004E+00	3.735E-01	5.170E-02	1.901E-05	6.988E-09	1.810E-17	1.215E-34
MO 93	2.444E-05	2.444E-05	2.444E-05	2.444E-05	2.444E-05	2.444E-05	2.443E-05	2.442E-05	2.440E-05	2.435E-05
TC 99	4.192E-03	4.204E-03	4.204E-03	4.204E-03	4.204E-03	4.204E-03	4.204E-03	4.204E-03	4.204E-03	4.204E-03
RU103	1.782E+02	1.392E+02	1.087E+02	3.562E+01	7.118E+00	2.843E-01	7.239E-07	1.843E-12	1.906E-26	0.000E+00
RU106	2.719E+01	2.649E+01	2.580E+01	2.290E+01	1.929E+01	1.368E+01	3.461E+00	8.755E-01	2.819E-02	2.922E-05
RH103M	1.605E+02	1.255E+02	9.802E+01	3.211E+01	6.417E+00	2.563E-01	6.526E-07	1.661E-12	1.718E-26	0.000E+00
RH106	2.752E+01	2.649E+01	2.580E+01	2.290E+01	1.929E+01	1.368E+01	3.461E+00	8.755E-01	2.819E-02	2.922E-05
PD107	5.995E-06	5.996E-06	5.996E-06	5.996E-06	5.996E-06	5.996E-06	5.996E-06	5.996E-06	5.996E-06	5.996E-06
AG110	4.390E-01	2.370E-04	2.279E-04	1.912E-04	1.485E-04	8.949E-05	1.181E-05	1.559E-06	9.872E-09	3.956E-13
AG110M	1.852E-02	1.781E-02	1.714E-02	1.438E-02	1.116E-02	6.729E-03	8.882E-04	1.173E-04	7.423E-07	2.975E-11
AG111	2.181E+00	5.944E-01	1.616E-01	4.495E-04	9.242E-08	3.906E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	4.261E-03	4.254E-03	4.247E-03	4.212E-03	4.162E-03	4.064E-03	3.696E-03	3.361E-03	2.651E-03	1.649E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	1.023E-01	8.228E-02	6.618E-02	2.477E-02	5.996E-03	3.515E-04	4.151E-09	4.903E-14	2.351E-26	0.000E+00
IN114	4.516E-03	1.478E-03	1.214E-03	5.012E-04	1.397E-04	1.085E-05	3.958E-10	1.443E-14	1.158E-25	0.000E+00
IN114M	1.879E-03	1.545E-03	1.270E-03	5.237E-04	1.460E-04	1.134E-05	4.136E-10	1.507E-14	1.210E-25	0.000E+00
IN115M	1.039E+00	1.457E-02	1.915E-04	1.739E-06	4.211E-07	2.469E-08	2.916E-13	3.443E-18	1.651E-30	0.000E+00
SN119M	3.069E+00	2.950E+00	2.835E+00	2.371E+00	1.832E+00	1.093E+00	1.385E-01	1.757E-02	1.006E-04	3.298E-09
SN121M	4.638E-04	4.634E-04	4.632E-04	4.622E-04	4.606E-04	4.574E-04	4.448E-04	4.327E-04	4.037E-04	3.514E-04
SN123	4.941E-01	4.584E-01	4.252E-01	3.029E-01	1.856E-01	6.969E-02	1.387E-03	2.758E-05	1.540E-09	4.795E-18
SN125	1.954E+00	7.141E-01	2.609E-01	2.764E-03	3.909E-06	7.818E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	1.197E-04	1.197E-04	1.197E-04	1.197E-04	1.197E-04	1.197E-04	1.197E-04	1.197E-04	1.197E-04	1.197E-04
SB124	5.987E-02	5.096E-02	4.337E-02	2.094E-02	7.320E-03	8.952E-04	2.001E-07	4.475E-11	3.345E-20	1.869E-38
SB125	2.633E+00	2.620E+00	2.599E+00	2.491E+00	2.341E+00	2.065E+00	1.252E+00	7.595E-01	2.176E-01	1.785E-02
SB126	6.561E-02	3.000E-02	1.372E-02	4.156E-04	1.918E-05	1.676E-05	1.676E-05	1.676E-05	1.676E-05	1.676E-05
SB126M	3.244E-02	1.197E-04	1.197E-04	1.197E-04	1.197E-04	1.197E-04	1.197E-04	1.197E-04	1.197E-04	1.197E-04
TE123M	1.626E-04	1.500E-04	1.382E-04	9.586E-05	5.651E-05	1.963E-05	2.863E-07	4.174E-09	1.071E-13	7.062E-23
TE125M	5.836E-01	5.868E-01	5.889E-01	5.863E-01	5.637E-01	5.031E-01	3.057E-01	1.853E-01	5.308E-02	4.354E-03
TE127	9.541E+00	1.973E+00	1.184E+00	7.516E-01	4.207E-01	1.318E-01	1.271E-03	1.225E-05	1.117E-10	9.293E-21
TE127M	1.321E+00	1.250E+00	1.147E+00	7.674E-01	4.295E-01	1.346E-01	1.297E-03	1.250E-05	1.140E-10	9.487E-21
TE129	3.838E+01	2.824E+00	2.116E+00	5.739E-01	8.735E-02	2.024E-03	5.833E-10	1.681E-16	7.494E-33	0.000E+00
TE129M	5.764E+00	4.339E+00	3.250E+00	8.816E-01	1.342E-01	3.109E-03	8.960E-10	2.582E-16	1.151E-32	0.000E+00
I129	7.018E-06	7.028E-06	7.035E-06	7.049E-06	7.053E-06	7.054E-06	7.054E-06	7.054E-06	7.054E-06	7.054E-06
I131	1.571E+02	4.828E+01	1.444E+01	6.189E-02	2.373E-05	3.488E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table L.2 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	1.744E+00	1.306E+00	7.379E-01	2.548E-02	1.317E-04	3.191E-09	1.083E-27	3.674E-46	0.000E+00	0.000E+00
XE133	3.628E+02	7.013E+01	1.105E+01	2.591E-03	1.502E-08	5.047E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	3.929E+00	3.878E+00	3.829E+00	3.613E+00	3.322E+00	2.808E+00	1.434E+00	7.326E-01	1.366E-01	4.747E-03
CS135	3.610E-04	3.613E-04	3.613E-04	3.613E-04	3.613E-04	3.613E-04	3.613E-04	3.613E-04	3.613E-04	3.613E-04
CS136	2.046E+00	9.756E-01	4.652E-01	1.638E-02	1.312E-04	8.407E-09	1.419E-25	2.396E-42	0.000E+00	0.000E+00
CS137	2.939E+01	2.936E+01	2.933E+01	2.922E+01	2.905E+01	2.871E+01	2.742E+01	2.618E+01	2.333E+01	1.852E+01
BA136M	3.376E-01	1.608E-01	7.666E-02	2.700E-03	2.161E-05	1.385E-09	2.339E-26	3.949E-43	0.000E+00	0.000E+00
BA137M	2.781E+01	2.777E+01	2.775E+01	2.764E+01	2.748E+01	2.716E+01	2.594E+01	2.477E+01	2.207E+01	1.752E+01
BA140	3.321E+02	1.555E+02	7.283E+01	2.363E+00	1.682E-02	8.514E-07	5.594E-24	3.676E-41	0.000E+00	0.000E+00
LA140	3.333E+02	1.788E+02	8.381E+01	2.720E+00	1.935E-02	9.798E-07	6.438E-24	4.230E-41	0.000E+00	0.000E+00
CE141	3.158E+02	2.356E+02	1.748E+02	4.538E+01	6.486E+00	1.325E-01	2.306E-08	4.017E-15	5.080E-32	0.000E+00
CE142	9.605E-09	9.605E-09	9.605E-09	9.605E-09	9.605E-09	9.605E-09	9.605E-09	9.605E-09	9.605E-09	9.605E-09
CE144	2.829E+02	2.734E+02	2.642E+02	2.265E+02	1.813E+02	1.162E+02	1.959E+01	3.304E+00	3.858E-02	5.260E-06
PR143	3.146E+02	1.713E+02	8.378E+01	3.308E+00	3.122E-02	2.783E-06	1.755E-22	1.107E-38	0.000E+00	0.000E+00
PR144	2.830E+02	2.734E+02	2.643E+02	2.265E+02	1.813E+02	1.162E+02	1.959E+01	3.304E+00	3.858E-02	5.260E-06
PR144M	3.397E+00	3.281E+00	3.171E+00	2.718E+00	2.176E+00	1.394E+00	2.351E-01	3.964E-02	4.629E-04	6.312E-08
ND144	2.935E-13	2.970E-13	3.004E-13	3.144E-13	3.311E-13	3.553E-13	3.911E-13	3.971E-13	3.984E-13	3.984E-13
ND147	1.223E+02	5.091E+01	2.117E+01	4.020E-01	1.320E-03	1.424E-08	1.926E-28	2.606E-48	0.000E+00	0.000E+00
PM145	7.208E-06	7.301E-06	7.390E-06	7.759E-06	8.198E-06	8.818E-06	9.441E-06	9.021E-06	7.493E-06	5.068E-06
PM147	7.382E+01	7.390E+01	7.349E+01	7.044E+01	6.594E+01	5.779E+01	3.408E+01	2.010E+01	5.368E+00	3.830E-01
PM148M	3.249E+00	2.569E+00	2.031E+00	7.025E-01	1.519E-01	7.098E-03	3.387E-08	1.616E-13	8.037E-27	0.000E+00
PM148	9.944E+00	1.747E+00	3.774E-01	3.968E-02	8.554E-03	3.998E-04	1.908E-09	9.102E-15	4.527E-28	0.000E+00
SM145	6.983E-05	6.787E-05	6.596E-05	5.798E-05	4.814E-05	3.318E-05	7.494E-06	1.692E-06	4.101E-08	2.408E-11
SM147	1.202E-09	1.220E-09	1.238E-09	1.319E-09	1.429E-09	1.629E-09	2.211E-09	2.553E-09	2.914E-09	3.037E-09
SM151	3.845E-01	3.852E-01	3.851E-01	3.846E-01	3.839E-01	3.824E-01	3.766E-01	3.708E-01	3.568E-01	3.304E-01
EU152	1.601E-02	1.597E-02	1.594E-02	1.581E-02	1.560E-02	1.521E-02	1.374E-02	1.241E-02	9.619E-03	5.780E-03
EU154	1.742E-01	1.737E-01	1.732E-01	1.708E-01	1.674E-01	1.608E-01	1.369E-01	1.165E-01	7.787E-02	3.480E-02
EU155	7.064E-01	7.027E-01	6.989E-01	6.822E-01	6.588E-01	6.144E-01	4.646E-01	3.514E-01	1.748E-01	4.324E-02
EU156	2.024E+00	1.083E+00	5.714E-01	3.185E-02	4.945E-04	1.191E-07	4.025E-22	1.359E-36	0.000E+00	0.000E+00
GD153	8.846E-03	8.498E-03	8.164E-03	6.811E-03	5.244E-03	3.110E-03	3.843E-04	4.750E-05	2.551E-07	7.355E-12
TB160	1.980E-02	1.732E-02	1.514E-02	8.256E-03	3.442E-03	5.984E-04	5.467E-07	4.994E-10	1.260E-17	8.009E-33
TL206	1.059E-05	1.612E-12	1.612E-12	1.612E-12	1.612E-12	1.612E-12	1.612E-12	1.612E-12	1.612E-12	1.612E-12
TL207	1.426E-09	1.427E-09	1.434E-09	1.522E-09	1.699E-09	2.121E-09	3.994E-09	6.203E-09	1.327E-08	3.298E-08
TL208	9.324E-08	9.468E-08	9.702E-08	1.088E-07	1.228E-07	1.472E-07	2.099E-07	2.393E-07	2.556E-07	2.386E-07
PB210	1.638E-14	1.679E-14	1.706E-14	1.762E-14	1.806E-14	1.911E-14	2.723E-14	4.370E-14	1.379E-13	6.765E-13
PB211	1.430E-09	1.432E-09	1.438E-09	1.526E-09	1.704E-09	2.127E-09	4.006E-09	6.220E-09	1.331E-08	3.307E-08

Table L.2 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	2.595E-07	2.635E-07	2.700E-07	3.029E-07	3.418E-07	4.096E-07	5.841E-07	6.659E-07	7.114E-07	6.641E-07
BI211	1.430E-09	1.432E-09	1.438E-09	1.526E-09	1.704E-09	2.127E-09	4.006E-09	6.220E-09	1.331E-08	3.307E-08
BI212	2.595E-07	2.635E-07	2.700E-07	3.029E-07	3.418E-07	4.096E-07	5.841E-07	6.659E-07	7.114E-07	6.641E-07
PO212	1.663E-07	1.688E-07	1.730E-07	1.941E-07	2.190E-07	2.625E-07	3.742E-07	4.267E-07	4.558E-07	4.255E-07
PO215	1.430E-09	1.432E-09	1.438E-09	1.526E-09	1.704E-09	2.127E-09	4.006E-09	6.220E-09	1.331E-08	3.307E-08
PO216	2.595E-07	2.635E-07	2.700E-07	3.029E-07	3.418E-07	4.096E-07	5.841E-07	6.659E-07	7.114E-07	6.641E-07
RN219	1.430E-09	1.432E-09	1.438E-09	1.526E-09	1.704E-09	2.127E-09	4.006E-09	6.220E-09	1.331E-08	3.307E-08
RN220	2.595E-07	2.635E-07	2.700E-07	3.029E-07	3.418E-07	4.096E-07	5.841E-07	6.659E-07	7.114E-07	6.641E-07
FR223	1.971E-11	2.008E-11	2.045E-11	2.217E-11	2.473E-11	3.011E-11	5.521E-11	8.572E-11	1.835E-10	4.561E-10
RA223	1.430E-09	1.431E-09	1.438E-09	1.526E-09	1.704E-09	2.127E-09	4.006E-09	6.220E-09	1.331E-08	3.307E-08
RA224	2.595E-07	2.635E-07	2.700E-07	3.029E-07	3.418E-07	4.096E-07	5.841E-07	6.659E-07	7.114E-07	6.641E-07
RA226	5.535E-14	5.674E-14	5.814E-14	6.470E-14	7.482E-14	9.738E-14	2.188E-13	3.907E-13	1.047E-12	3.379E-12
RA228	5.619E-10	5.662E-10	5.706E-10	5.899E-10	6.172E-10	6.697E-10	8.547E-10	1.005E-09	1.269E-09	1.521E-09
AC227	1.428E-09	1.455E-09	1.482E-09	1.607E-09	1.792E-09	2.182E-09	4.001E-09	6.211E-09	1.329E-08	3.305E-08
TH227	1.411E-09	1.416E-09	1.429E-09	1.534E-09	1.713E-09	2.094E-09	3.950E-09	6.134E-09	1.312E-08	3.262E-08
TH228	2.591E-07	2.658E-07	2.725E-07	3.015E-07	3.403E-07	4.081E-07	5.830E-07	6.644E-07	7.109E-07	6.640E-07
TH229	1.503E-10	1.532E-10	1.562E-10	1.696E-10	1.891E-10	2.282E-10	3.843E-10	5.405E-10	9.309E-10	1.712E-09
TH230	8.289E-11	8.398E-11	8.507E-11	9.000E-11	9.714E-11	1.115E-10	1.694E-10	2.285E-10	3.808E-10	7.048E-10
TH231	2.867E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04
TH232	1.660E-09	1.660E-09	1.660E-09	1.660E-09	1.660E-09	1.660E-09	1.660E-09	1.660E-09	1.660E-09	1.660E-09
TH234	1.352E-04	1.351E-04	1.350E-04	1.350E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04
PA231	2.337E-08	2.355E-08	2.373E-08	2.445E-08	2.549E-08	2.755E-08	3.572E-08	4.390E-08	6.430E-08	1.051E-07
PA233	5.189E-02	3.625E-02	2.531E-02	5.004E-03	4.960E-04	2.113E-05	1.671E-05	1.671E-05	1.674E-05	1.682E-05
PA234M	1.709E-04	1.351E-04	1.350E-04	1.350E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04
PA234	7.128E-05	1.756E-07	1.756E-07	1.754E-07	1.754E-07	1.754E-07	1.754E-07	1.754E-07	1.754E-07	1.754E-07
U232	7.472E-07	7.491E-07	7.492E-07	7.492E-07	7.492E-07	7.489E-07	7.444E-07	7.362E-07	7.083E-07	6.457E-07
U233	8.033E-07	8.106E-07	8.157E-07	8.252E-07	8.273E-07	8.276E-07	8.277E-07	8.279E-07	8.282E-07	8.289E-07
U234	3.160E-06	3.161E-06	3.162E-06	3.168E-06	3.175E-06	3.191E-06	3.252E-06	3.313E-06	3.461E-06	3.739E-06
U235	1.930E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04	1.930E-04
U236	1.365E-04	1.365E-04	1.365E-04	1.365E-04	1.365E-04	1.365E-04	1.365E-04	1.365E-04	1.365E-04	1.365E-04
U237	2.428E+01	5.767E+00	1.370E+00	2.070E-03	4.851E-07	3.014E-07	2.738E-07	2.487E-07	1.955E-07	1.208E-07
U238	1.349E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04	1.349E-04
NP237	1.649E-05	1.665E-05	1.669E-05	1.670E-05	1.670E-05	1.670E-05	1.671E-05	1.671E-05	1.674E-05	1.682E-05
PU236	8.210E-07	8.161E-07	8.085E-07	7.752E-07	7.295E-07	6.460E-07	3.974E-07	2.445E-07	7.255E-08	6.394E-09
PU237	3.109E-06	2.513E-06	2.032E-06	7.768E-07	1.940E-07	1.211E-08	1.837E-13	2.785E-18	2.495E-30	0.000E+00
PU238	1.066E-02	1.073E-02	1.074E-02	1.076E-02	1.078E-02	1.079E-02	1.066E-02	1.049E-02	1.009E-02	9.324E-03

Table L.2 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	8.818E-02	8.843E-02	8.843E-02	8.843E-02	8.843E-02	8.843E-02	8.842E-02	8.842E-02	8.841E-02	8.838E-02
PU240	1.958E-02	1.958E-02	1.958E-02	1.958E-02	1.957E-02	1.957E-02	1.957E-02	1.957E-02	1.956E-02	1.953E-02
PU241	1.289E+00	1.287E+00	1.285E+00	1.274E+00	1.259E+00	1.229E+00	1.116E+00	1.014E+00	7.970E-01	4.926E-01
PU242	1.232E-06	1.232E-06	1.232E-06	1.232E-06	1.232E-06	1.232E-06	1.232E-06	1.232E-06	1.232E-06	1.232E-06
PU244	1.586E-15	1.586E-15	1.586E-15	1.586E-15	1.586E-15	1.586E-15	1.586E-15	1.586E-15	1.586E-15	1.586E-15
AM241	2.048E-03	2.127E-03	2.206E-03	2.560E-03	3.067E-03	4.060E-03	7.796E-03	1.118E-02	1.828E-02	2.804E-02
AM242M	2.040E-05	2.040E-05	2.040E-05	2.038E-05	2.036E-05	2.031E-05	2.013E-05	1.995E-05	1.950E-05	1.863E-05
AM242	7.624E-02	2.034E-05	2.030E-05	2.028E-05	2.026E-05	2.021E-05	2.003E-05	1.985E-05	1.940E-05	1.853E-05
AM243	9.010E-07	9.019E-07	9.019E-07	9.019E-07	9.019E-07	9.018E-07	9.017E-07	9.015E-07	9.011E-07	9.002E-07
CM242	3.733E-02	3.542E-02	3.338E-02	2.552E-02	1.732E-02	7.989E-03	3.755E-04	3.260E-05	1.606E-05	1.533E-05
CM243	1.218E-06	1.217E-06	1.216E-06	1.211E-06	1.203E-06	1.189E-06	1.132E-06	1.079E-06	9.553E-07	7.492E-07
CM244	1.333E-05	1.332E-05	1.330E-05	1.322E-05	1.309E-05	1.284E-05	1.190E-05	1.102E-05	9.102E-06	6.209E-06
CM245	1.328E-10	1.328E-10	1.328E-10	1.328E-10	1.328E-10	1.328E-10	1.327E-10	1.327E-10	1.327E-10	1.326E-10
CM246	1.859E-12	1.859E-12	1.859E-12	1.859E-12	1.858E-12	1.858E-12	1.858E-12	1.857E-12	1.856E-12	1.853E-12
CM247	4.783E-19	4.783E-19	4.783E-19	4.783E-19	4.783E-19	4.783E-19	4.783E-19	4.783E-19	4.783E-19	4.783E-19
Subtotal Ci**	4.604E+03	3.236E+03	2.548E+03	1.414E+03	8.629E+02	5.052E+02	2.168E+02	1.509E+02	1.055E+02	7.495E+01
Total Ci***	3.403E+04	3.321E+03	2.569E+03	1.426E+03	8.703E+02	5.089E+02	2.180E+02	1.515E+02	1.056E+02	7.498E+01

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table L.3 FLIP-LEU-I TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: leu.org.3b

BURNUP (BU)

BU: U-235 15.0 g
 BU: % U-235 14.85%
 BU: MWd 14.25
 BU: MWd/MTU 28281
 U-235 DEPL 17.74 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	2.055E-01	2.050E-01	2.046E-01	2.026E-01	1.998E-01	1.942E-01	1.736E-01	1.552E-01	1.172E-01	6.692E-02
BE 10	2.300E-07	2.300E-07	2.300E-07	2.300E-07	2.300E-07	2.300E-07	2.300E-07	2.300E-07	2.300E-07	2.300E-07
C 14	1.469E-03	1.469E-03	1.469E-03	1.469E-03	1.469E-03	1.469E-03	1.469E-03	1.468E-03	1.467E-03	1.466E-03
CL 36	3.211E-05	3.211E-05	3.211E-05	3.211E-05	3.211E-05	3.211E-05	3.211E-05	3.211E-05	3.211E-05	3.211E-05
CR 51	7.744E+01	5.456E+01	3.844E+01	7.900E+00	8.058E-01	8.385E-03	9.832E-11	1.153E-18	1.716E-38	0.000E+00
MN 54	4.708E+00	4.564E+00	4.425E+00	3.846E+00	3.141E+00	2.095E+00	4.150E-01	8.220E-02	1.435E-03	4.373E-07
FE 55	3.332E+01	3.298E+01	3.264E+01	3.117E+01	2.916E+01	2.553E+01	1.498E+01	8.794E+00	2.321E+00	1.617E-01
FE 59	1.447E+00	1.166E+00	9.401E-01	3.549E-01	8.702E-02	5.233E-03	6.846E-08	8.954E-13	5.541E-25	0.000E+00
CO 60	2.820E+01	2.806E+01	2.792E+01	2.729E+01	2.641E+01	2.473E+01	1.901E+01	1.462E+01	7.575E+00	2.035E+00
NI 59	6.171E-03	6.171E-03	6.171E-03	6.171E-03	6.171E-03	6.171E-03	6.171E-03	6.171E-03	6.170E-03	6.170E-03
NI 63	7.637E-01	7.635E-01	7.633E-01	7.623E-01	7.609E-01	7.580E-01	7.467E-01	7.355E-01	7.083E-01	6.570E-01
ZN 65	5.883E-01	5.654E-01	5.433E-01	4.539E-01	3.502E-01	2.085E-01	2.618E-02	3.287E-03	1.837E-05	5.734E-10
SE 79	1.857E-04	1.857E-04	1.857E-04	1.857E-04	1.857E-04	1.857E-04	1.857E-04	1.857E-04	1.857E-04	1.857E-04
KR 85	4.944E+00	4.933E+00	4.920E+00	4.866E+00	4.788E+00	4.635E+00	4.073E+00	3.580E+00	2.591E+00	1.358E+00
RB 87	1.237E-08	1.237E-08	1.237E-08	1.237E-08	1.237E-08	1.237E-08	1.237E-08	1.237E-08	1.237E-08	1.237E-08
SR.89	3.722E+02	3.072E+02	2.535E+02	1.064E+02	3.041E+01	2.483E+00	1.105E-04	4.916E-09	6.492E-20	0.000E+00
SR 90	4.151E+01	4.148E+01	4.144E+01	4.127E+01	4.102E+01	4.054E+01	3.866E+01	3.686E+01	3.273E+01	2.580E+01
Y 90	4.302E+01	4.152E+01	4.145E+01	4.128E+01	4.103E+01	4.055E+01	3.867E+01	3.687E+01	3.273E+01	2.581E+01
Y 91	4.566E+02	3.896E+02	3.300E+02	1.560E+02	5.291E+01	6.089E+00	1.068E-03	1.873E-07	7.632E-17	1.266E-35
ZR 93	1.090E-03	1.091E-03	1.091E-03	1.091E-03	1.091E-03	1.091E-03	1.091E-03	1.091E-03	1.091E-03	1.091E-03
ZR 95	5.422E+02	4.660E+02	4.004E+02	2.018E+02	7.509E+01	1.040E+01	3.822E-03	1.405E-06	3.641E-15	2.444E-32
NB 93M	9.915E-05	1.010E-04	1.028E-04	1.110E-04	1.227E-04	1.457E-04	2.320E-04	3.098E-04	4.731E-04	6.978E-04

Table L.3 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	9.221E-05	9.221E-05	9.221E-05	9.221E-05	9.221E-05	9.221E-05	9.220E-05	9.220E-05	9.218E-05	9.215E-05
NB 95	5.552E+02	5.423E+02	5.154E+02	3.406E+02	1.489E+02	2.259E+01	8.485E-03	3.120E-06	8.082E-15	5.425E-32
NB 95M	3.812E+00	3.442E+00	2.969E+00	1.497E+00	5.571E-01	7.713E-02	2.835E-05	1.042E-08	2.700E-17	1.813E-34
MO 93	3.750E-05	3.750E-05	3.750E-05	3.750E-05	3.750E-05	3.750E-05	3.748E-05	3.747E-05	3.743E-05	3.736E-05
TC 99	6.254E-03	6.272E-03	6.272E-03	6.272E-03	6.272E-03	6.272E-03	6.272E-03	6.272E-03	6.272E-03	6.272E-03
RU103	2.710E+02	2.117E+02	1.654E+02	5.417E+01	1.083E+01	4.324E-01	1.101E-06	2.803E-12	2.899E-26	0.000E+00
RU106	4.444E+01	4.328E+01	4.216E+01	3.742E+01	3.152E+01	2.235E+01	5.655E+00	1.431E+00	4.607E-02	4.775E-05
RH103M	2.441E+02	1.908E+02	1.491E+02	4.883E+01	9.759E+00	3.898E-01	9.925E-07	2.527E-12	2.613E-26	0.000E+00
RH106	4.525E+01	4.328E+01	4.216E+01	3.742E+01	3.152E+01	2.235E+01	5.655E+00	1.431E+00	4.607E-02	4.776E-05
PD107	9.912E-06	9.912E-06	9.912E-06	9.912E-06	9.912E-06	9.912E-06	9.912E-06	9.912E-06	9.912E-06	9.912E-06
AG110	1.085E+00	5.634E-04	5.418E-04	4.547E-04	3.530E-04	2.128E-04	2.809E-05	3.708E-06	2.347E-08	9.408E-13
AG110M	4.404E-02	4.236E-02	4.075E-02	3.418E-02	2.654E-02	1.600E-02	2.112E-03	2.788E-04	1.765E-06	7.074E-11
AG111	3.642E+00	9.926E-01	2.698E-01	7.507E-04	1.543E-07	6.523E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	6.584E-03	6.573E-03	6.561E-03	6.507E-03	6.430E-03	6.279E-03	5.710E-03	5.193E-03	4.096E-03	2.548E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	1.575E-01	1.268E-01	1.020E-01	3.815E-02	9.236E-03	5.415E-04	6.394E-09	7.552E-14	3.620E-26	0.000E+00
IN114	1.026E-02	3.363E-03	2.765E-03	1.140E-03	3.179E-04	2.471E-05	9.007E-10	3.284E-14	2.636E-25	0.000E+00
IN114M	4.275E-03	3.514E-03	2.889E-03	1.192E-03	3.322E-04	2.582E-05	9.412E-10	3.432E-14	2.754E-25	0.000E+00
IN115M	1.597E+00	2.240E-02	2.945E-04	2.679E-06	6.487E-07	3.803E-08	4.491E-13	5.304E-18	2.543E-30	0.000E+00
SN119M	4.764E+00	4.579E+00	4.401E+00	3.680E+00	2.843E+00	1.696E+00	2.151E-01	2.727E-02	1.562E-04	5.121E-09
SN121M	7.122E-04	7.118E-04	7.115E-04	7.097E-04	7.072E-04	7.024E-04	6.832E-04	6.645E-04	6.200E-04	5.398E-04
SN123	7.568E-01	7.021E-01	6.513E-01	4.638E-01	2.842E-01	1.068E-01	2.123E-03	4.224E-05	2.357E-09	7.344E-18
SN125	3.034E+00	1.109E+00	4.052E-01	4.291E-03	6.070E-06	1.214E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	1.822E-04	1.822E-04	1.822E-04	1.822E-04	1.822E-04	1.822E-04	1.822E-04	1.822E-04	1.822E-04	1.822E-04
SB124	1.053E-01	8.963E-02	7.628E-02	3.682E-02	1.288E-02	1.574E-03	3.521E-07	7.871E-11	5.883E-20	3.287E-38
SB125	4.042E+00	4.022E+00	3.990E+00	3.824E+00	3.592E+00	3.170E+00	1.923E+00	1.166E+00	3.339E-01	2.739E-02
SB126	1.045E-01	4.779E-02	2.186E-02	6.610E-04	2.938E-05	2.551E-05	2.551E-05	2.551E-05	2.551E-05	2.551E-05
SB126M	5.201E-02	1.822E-04	1.822E-04	1.822E-04	1.822E-04	1.822E-04	1.822E-04	1.822E-04	1.822E-04	1.822E-04
TE123M	4.091E-04	3.773E-04	3.478E-04	2.411E-04	1.422E-04	4.940E-05	7.203E-07	1.050E-08	2.696E-13	1.777E-22
TE125M	8.949E-01	8.999E-01	9.032E-01	8.996E-01	8.653E-01	7.723E-01	4.693E-01	2.845E-01	8.148E-02	6.682E-03
TE127	1.468E+01	3.038E+00	1.823E+00	1.158E+00	6.480E-01	2.030E-01	1.957E-03	1.886E-05	1.721E-10	1.431E-20
TE127M	2.035E+00	1.926E+00	1.767E+00	1.182E+00	6.616E-01	2.073E-01	1.998E-03	1.926E-05	1.757E-10	1.461E-20
TE129	5.815E+01	4.283E+00	3.209E+00	8.703E-01	1.325E-01	3.069E-03	8.845E-10	2.549E-16	1.137E-32	0.000E+00
TE129M	8.741E+00	6.580E+00	4.930E+00	1.337E+00	2.035E-01	4.715E-03	1.359E-09	3.916E-16	1.746E-32	0.000E+00
I129	1.060E-05	1.061E-05	1.062E-05	1.064E-05	1.065E-05	1.065E-05	1.065E-05	1.065E-05	1.065E-05	1.065E-05
I131	2.351E+02	7.227E+01	2.162E+01	9.264E-02	3.552E-05	5.222E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table L.3 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	2.610E+00	1.955E+00	1.105E+00	3.814E-02	1.971E-04	4.776E-09	1.621E-27	5.499E-46	0.000E+00	0.000E+00
XE133	5.404E+02	1.045E+02	1.646E+01	3.860E-03	2.237E-08	7.518E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	9.037E+00	8.922E+00	8.808E+00	8.310E+00	7.641E+00	6.460E+00	3.299E+00	1.685E+00	3.141E-01	1.092E-02
CS135	4.992E-04	4.996E-04	4.996E-04	4.996E-04	4.996E-04	4.996E-04	4.996E-04	4.996E-04	4.996E-04	4.996E-04
CS136	4.161E+00	1.984E+00	9.460E-01	3.331E-02	2.667E-04	1.710E-08	2.886E-25	4.872E-42	0.000E+00	0.000E+00
CS137	4.409E+01	4.405E+01	4.401E+01	4.383E+01	4.358E+01	4.308E+01	4.114E+01	3.928E+01	3.500E+01	2.778E+01
BA136M	6.863E-01	3.270E-01	1.559E-01	5.490E-03	4.396E-05	2.818E-09	4.756E-26	8.030E-43	0.000E+00	0.000E+00
BA137M	4.173E+01	4.167E+01	4.163E+01	4.147E+01	4.123E+01	4.075E+01	3.891E+01	3.716E+01	3.311E+01	2.628E+01
BA140	4.936E+02	2.311E+02	1.082E+02	3.512E+00	2.499E-02	1.265E-06	8.314E-24	5.462E-41	0.000E+00	0.000E+00
LA140	4.959E+02	2.658E+02	1.246E+02	4.042E+00	2.876E-02	1.456E-06	9.567E-24	6.286E-41	0.000E+00	0.000E+00
CE141	4.695E+02	3.502E+02	2.598E+02	6.746E+01	9.642E+00	1.969E-01	3.429E-08	5.970E-15	7.551E-32	0.000E+00
CE142	1.379E-08	1.379E-08	1.379E-08	1.379E-08	1.379E-08	1.379E-08	1.379E-08	1.379E-08	1.379E-08	1.379E-08
CE144	4.221E+02	4.079E+02	3.942E+02	3.379E+02	2.705E+02	1.733E+02	2.923E+01	4.929E+00	5.755E-02	7.847E-06
PR143	4.665E+02	2.540E+02	1.242E+02	4.904E+00	4.630E-02	4.126E-06	2.602E-22	1.642E-38	0.000E+00	0.000E+00
PR144	4.223E+02	4.079E+02	3.942E+02	3.379E+02	2.705E+02	1.733E+02	2.923E+01	4.929E+00	5.755E-02	7.847E-06
PR144M	5.068E+00	4.895E+00	4.731E+00	4.055E+00	3.246E+00	2.080E+00	3.507E-01	5.914E-02	6.906E-04	9.417E-08
ND144	4.488E-13	4.541E-13	4.591E-13	4.800E-13	5.050E-13	5.411E-13	5.945E-13	6.035E-13	6.053E-13	6.053E-13
ND147	1.819E+02	7.570E+01	3.148E+01	5.978E-01	1.963E-03	2.117E-08	2.864E-28	3.875E-48	0.000E+00	0.000E+00
PM145	1.099E-05	1.113E-05	1.127E-05	1.184E-05	1.252E-05	1.348E-05	1.445E-05	1.381E-05	1.147E-05	7.761E-06
PM147	1.060E+02	1.061E+02	1.056E+02	1.012E+02	9.475E+01	8.303E+01	4.897E+01	2.888E+01	7.713E+00	5.502E-01
PM148M	6.588E+00	5.209E+00	4.118E+00	1.424E+00	3.079E-01	1.439E-02	6.867E-08	3.277E-13	1.629E-26	0.000E+00
PM148	2.210E+01	3.860E+00	8.175E-01	8.046E-02	1.734E-02	8.106E-04	3.868E-09	1.846E-14	9.178E-28	0.000E+00
SM145	1.078E-04	1.048E-04	1.018E-04	8.952E-05	7.432E-05	5.124E-05	1.157E-05	2.613E-06	6.331E-08	3.718E-11
SM147	1.703E-09	1.730E-09	1.756E-09	1.872E-09	2.031E-09	2.318E-09	3.153E-09	3.645E-09	4.164E-09	4.340E-09
SM151	4.480E-01	4.492E-01	4.491E-01	4.485E-01	4.476E-01	4.459E-01	4.391E-01	4.323E-01	4.161E-01	3.852E-01
EU152	2.347E-02	2.343E-02	2.338E-02	2.317E-02	2.288E-02	2.231E-02	2.015E-02	1.819E-02	1.410E-02	8.476E-03
EU154	4.130E-01	4.117E-01	4.105E-01	4.048E-01	3.967E-01	3.810E-01	3.243E-01	2.761E-01	1.845E-01	8.249E-02
EU155	9.869E-01	9.817E-01	9.764E-01	9.531E-01	9.203E-01	8.583E-01	6.491E-01	4.909E-01	2.441E-01	6.041E-02
EU156	3.843E+00	2.052E+00	1.083E+00	6.037E-02	9.373E-04	2.260E-07	7.630E-22	2.577E-36	0.000E+00	0.000E+00
GD153	1.644E-02	1.580E-02	1.518E-02	1.266E-02	9.749E-03	5.781E-03	7.144E-04	8.829E-05	4.741E-07	1.367E-11
TB160	3.354E-02	2.933E-02	2.565E-02	1.398E-02	5.831E-03	1.014E-03	9.259E-07	8.458E-10	2.134E-17	1.357E-32
TL206	1.654E-05	2.473E-12	2.473E-12	2.473E-12	2.473E-12	2.473E-12	2.473E-12	2.473E-12	2.473E-12	2.473E-12
TL207	1.562E-09	1.564E-09	1.571E-09	1.667E-09	1.861E-09	2.317E-09	4.295E-09	6.564E-09	1.363E-08	3.280E-08
TL208	1.591E-07	1.616E-07	1.657E-07	1.861E-07	2.105E-07	2.531E-07	3.649E-07	4.194E-07	4.534E-07	4.260E-07
PB210	4.148E-14	4.249E-14	4.314E-14	4.428E-14	4.485E-14	4.613E-14	5.716E-14	8.076E-14	2.208E-13	1.051E-12
PB211	1.566E-09	1.568E-09	1.575E-09	1.672E-09	1.866E-09	2.324E-09	4.307E-09	6.583E-09	1.367E-08	3.289E-08

Table L.3 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	4.429E-07	4.498E-07	4.611E-07	5.181E-07	5.858E-07	7.045E-07	1.016E-06	1.167E-06	1.262E-06	1.186E-06
BI211	1.566E-09	1.568E-09	1.575E-09	1.672E-09	1.866E-09	2.324E-09	4.307E-09	6.583E-09	1.367E-08	3.289E-08
BI212	4.429E-07	4.498E-07	4.611E-07	5.181E-07	5.858E-07	7.045E-07	1.016E-06	1.167E-06	1.262E-06	1.186E-06
PO212	2.838E-07	2.882E-07	2.954E-07	3.319E-07	3.753E-07	4.514E-07	6.507E-07	7.478E-07	8.085E-07	7.596E-07
PO215	1.566E-09	1.568E-09	1.575E-09	1.672E-09	1.866E-09	2.324E-09	4.307E-09	6.583E-09	1.367E-08	3.289E-08
PO216	4.429E-07	4.498E-07	4.611E-07	5.181E-07	5.858E-07	7.045E-07	1.016E-06	1.167E-06	1.262E-06	1.186E-06
RN219	1.566E-09	1.568E-09	1.575E-09	1.672E-09	1.866E-09	2.324E-09	4.307E-09	6.583E-09	1.367E-08	3.289E-08
RN220	4.429E-07	4.498E-07	4.611E-07	5.181E-07	5.858E-07	7.045E-07	1.016E-06	1.167E-06	1.262E-06	1.186E-06
FR223	2.159E-11	2.200E-11	2.241E-11	2.429E-11	2.707E-11	3.289E-11	5.936E-11	9.071E-11	1.885E-10	4.535E-10
RA223	1.566E-09	1.568E-09	1.575E-09	1.672E-09	1.866E-09	2.324E-09	4.307E-09	6.583E-09	1.367E-08	3.289E-08
RA224	4.429E-07	4.498E-07	4.611E-07	5.181E-07	5.858E-07	7.045E-07	1.016E-06	1.167E-06	1.262E-06	1.186E-06
RA226	8.240E-14	8.445E-14	8.654E-14	9.630E-14	1.113E-13	1.449E-13	3.261E-13	5.846E-13	1.589E-12	5.283E-12
RA228	5.599E-10	5.643E-10	5.686E-10	5.879E-10	6.151E-10	6.675E-10	8.518E-10	1.002E-09	1.265E-09	1.516E-09
AC227	1.564E-09	1.594E-09	1.624E-09	1.760E-09	1.962E-09	2.383E-09	4.302E-09	6.573E-09	1.366E-08	3.286E-08
TH227	1.546E-09	1.551E-09	1.566E-09	1.680E-09	1.875E-09	2.288E-09	4.248E-09	6.492E-09	1.348E-08	3.243E-08
TH228	4.421E-07	4.538E-07	4.654E-07	5.158E-07	5.833E-07	7.020E-07	1.014E-06	1.165E-06	1.261E-06	1.185E-06
TH229	2.211E-10	2.254E-10	2.297E-10	2.496E-10	2.784E-10	3.361E-10	5.668E-10	7.976E-10	1.375E-09	2.529E-09
TH230	1.233E-10	1.249E-10	1.265E-10	1.338E-10	1.444E-10	1.658E-10	2.537E-10	3.451E-10	5.886E-10	1.138E-09
TH231	3.266E-04	1.807E-04	1.806E-04	1.806E-04	1.806E-04	1.806E-04	1.806E-04	1.806E-04	1.806E-04	1.806E-04
TH232	1.655E-09	1.655E-09	1.655E-09	1.655E-09	1.655E-09	1.655E-09	1.655E-09	1.655E-09	1.655E-09	1.655E-09
TH234	1.351E-04	1.350E-04	1.348E-04	1.347E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04
PA231	2.572E-08	2.589E-08	2.606E-08	2.673E-08	2.770E-08	2.963E-08	3.728E-08	4.493E-08	6.403E-08	1.022E-07
PA233	8.068E-02	5.637E-02	3.936E-02	7.790E-03	7.808E-04	4.251E-05	3.564E-05	3.566E-05	3.574E-05	3.597E-05
PA234M	2.218E-04	1.350E-04	1.348E-04	1.347E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04
PA234	1.728E-04	1.754E-07	1.753E-07	1.751E-07	1.750E-07	1.750E-07	1.750E-07	1.750E-07	1.750E-07	1.750E-07
U232	1.288E-06	1.292E-06	1.292E-06	1.294E-06	1.297E-06	1.301E-06	1.308E-06	1.302E-06	1.262E-06	1.155E-06
U233	1.185E-06	1.196E-06	1.204E-06	1.219E-06	1.222E-06	1.223E-06	1.223E-06	1.223E-06	1.224E-06	1.226E-06
U234	4.684E-06	4.688E-06	4.692E-06	4.709E-06	4.734E-06	4.783E-06	4.981E-06	5.177E-06	5.652E-06	6.548E-06
U235	1.806E-04	1.806E-04	1.806E-04	1.806E-04	1.806E-04	1.806E-04	1.806E-04	1.806E-04	1.806E-04	1.806E-04
U236	2.017E-04	2.017E-04	2.017E-04	2.017E-04	2.017E-04	2.017E-04	2.017E-04	2.017E-04	2.018E-04	2.018E-04
U237	5.423E+01	1.288E+01	3.058E+00	4.622E-03	1.349E-06	9.328E-07	8.472E-07	7.695E-07	6.050E-07	3.740E-07
U238	1.346E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04	1.346E-04
NP237	3.516E-05	3.552E-05	3.560E-05	3.563E-05	3.563E-05	3.563E-05	3.564E-05	3.566E-05	3.574E-05	3.597E-05
PU236	2.646E-06	2.630E-06	2.606E-06	2.498E-06	2.351E-06	2.082E-06	1.281E-06	7.878E-07	2.338E-07	2.061E-08
PU237	9.274E-06	7.496E-06	6.059E-06	2.317E-06	5.787E-07	3.612E-08	5.477E-13	8.307E-18	7.441E-30	0.000E+00
PU238	3.430E-02	3.455E-02	3.460E-02	3.474E-02	3.487E-02	3.496E-02	3.460E-02	3.407E-02	3.275E-02	3.027E-02

Table L.3 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	1.233E-01	1.237E-01	1.237E-01	1.237E-01	1.237E-01	1.237E-01	1.237E-01	1.237E-01	1.237E-01	1.236E-01
PU240	3.995E-02	3.995E-02	3.995E-02	3.995E-02	3.995E-02	3.994E-02	3.994E-02	3.993E-02	3.991E-02	3.986E-02
PU241	3.990E+00	3.983E+00	3.975E+00	3.942E+00	3.895E+00	3.803E+00	3.454E+00	3.137E+00	2.466E+00	1.524E+00
PU242	5.988E-06	5.988E-06	5.988E-06	5.988E-06	5.988E-06	5.988E-06	5.988E-06	5.988E-06	5.988E-06	5.988E-06
PU244	1.869E-14	1.869E-14	1.869E-14	1.869E-14	1.869E-14	1.869E-14	1.869E-14	1.869E-14	1.869E-14	1.869E-14
AM241	6.273E-03	6.517E-03	6.761E-03	7.859E-03	9.425E-03	1.250E-02	2.406E-02	3.452E-02	5.649E-02	8.670E-02
AM242M	8.609E-05	8.608E-05	8.606E-05	8.600E-05	8.590E-05	8.570E-05	8.492E-05	8.415E-05	8.226E-05	7.859E-05
AM242	3.646E-01	8.583E-05	8.563E-05	8.557E-05	8.547E-05	8.527E-05	8.450E-05	8.373E-05	8.185E-05	7.820E-05
AM243	6.715E-06	6.722E-06	6.722E-06	6.722E-06	6.722E-06	6.722E-06	6.721E-06	6.719E-06	6.716E-06	6.710E-06
CM242	1.800E-01	1.707E-01	1.609E-01	1.230E-01	8.351E-02	3.850E-02	1.800E-03	1.473E-04	6.775E-05	6.467E-05
CM243	9.072E-06	9.063E-06	9.055E-06	9.017E-06	8.962E-06	8.854E-06	8.434E-06	8.034E-06	7.115E-06	5.580E-06
CM244	1.549E-04	1.549E-04	1.547E-04	1.537E-04	1.522E-04	1.493E-04	1.383E-04	1.281E-04	1.058E-04	7.219E-05
CM245	2.346E-09	2.346E-09	2.346E-09	2.346E-09	2.346E-09	2.345E-09	2.345E-09	2.345E-09	2.344E-09	2.342E-09
CM246	5.107E-11	5.107E-11	5.107E-11	5.107E-11	5.107E-11	5.106E-11	5.105E-11	5.103E-11	5.100E-11	5.092E-11
CM247	2.028E-17	2.028E-17	2.028E-17	2.028E-17	2.028E-17	2.028E-17	2.028E-17	2.028E-17	2.028E-17	2.028E-17
Subtotal CI**	6.909E+03	4.846E+03	3.815E+03	2.120E+03	1.296E+03	7.606E+02	3.270E+02	2.276E+02	1.591E+02	1.129E+02
Total CI***	5.082E+04	4.975E+03	3.847E+03	2.138E+03	1.307E+03	7.665E+02	3.288E+02	2.285E+02	1.593E+02	1.130E+02

* Decay time following fuel element exposure.

** Subtotal CI (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total CI (Curies): Total Activity of the ORIGEN output isotopes.

Table L.4 FLIP-LEU-I TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: leu.org.4b

BURNUP (BU)

BU: U-235 20.0 g
 BU: % U-235 19.80%
 BU: MWd 19.00
 BU: MWd/MTU 37708
 U-235 DEPL 23.08 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	2.749E-01	2.744E-01	2.737E-01	2.711E-01	2.673E-01	2.600E-01	2.324E-01	2.077E-01	1.569E-01	8.954E-02
BE 10	3.140E-07	3.140E-07	3.140E-07	3.140E-07	3.140E-07	3.140E-07	3.140E-07	3.140E-07	3.140E-07	3.140E-07
C 14	2.006E-03	2.006E-03	2.006E-03	2.006E-03	2.006E-03	2.006E-03	2.005E-03	2.005E-03	2.004E-03	2.001E-03
CL 36	4.373E-05	4.373E-05	4.373E-05	4.373E-05	4.373E-05	4.373E-05	4.373E-05	4.373E-05	4.373E-05	4.373E-05
CR 51	1.075E+02	7.577E+01	5.338E+01	1.097E+01	1.119E+00	1.165E-02	1.365E-10	1.601E-18	2.383E-38	0.000E+00
MN 54	6.495E+00	6.296E+00	6.104E+00	5.305E+00	4.333E+00	2.890E+00	5.725E-01	1.134E-01	1.979E-03	6.033E-07
FE 55	4.567E+01	4.521E+01	4.475E+01	4.273E+01	3.998E+01	3.499E+01	2.054E+01	1.205E+01	3.182E+00	2.216E-01
FE 59	2.018E+00	1.626E+00	1.311E+00	4.948E-01	1.213E-01	7.297E-03	9.545E-08	1.249E-12	7.726E-25	0.000E+00
CO 60	3.847E+01	3.827E+01	3.808E+01	3.722E+01	3.602E+01	3.373E+01	2.593E+01	1.994E+01	1.033E+01	2.776E+00
NI 59	8.368E-03	8.368E-03	8.368E-03	8.367E-03	8.367E-03	8.367E-03	8.367E-03	8.367E-03	8.367E-03	8.366E-03
NI 63	1.041E+00	1.041E+00	1.040E+00	1.039E+00	1.037E+00	1.033E+00	1.018E+00	1.003E+00	9.655E-01	8.955E-01
ZN 65	8.137E-01	7.819E-01	7.514E-01	6.278E-01	4.844E-01	2.883E-01	3.621E-02	4.546E-03	2.540E-05	7.930E-10
SE 79	2.472E-04	2.472E-04	2.472E-04	2.472E-04	2.472E-04	2.472E-04	2.472E-04	2.472E-04	2.472E-04	2.471E-04
KR 85	6.557E+00	6.542E+00	6.526E+00	6.453E+00	6.350E+00	6.148E+00	5.403E+00	4.748E+00	3.437E+00	1.801E+00
RB 87	1.633E-08	1.633E-08	1.633E-08	1.633E-08	1.633E-08	1.633E-08	1.633E-08	1.633E-08	1.633E-08	1.633E-08
SR 89	4.883E+02	4.030E+02	3.325E+02	1.396E+02	3.988E+01	3.257E+00	1.449E-04	6.449E-09	8.514E-20	0.000E+00
SR 90	5.501E+01	5.496E+01	5.491E+01	5.468E+01	5.436E+01	5.372E+01	5.122E+01	4.884E+01	4.336E+01	3.419E+01
Y 90	5.718E+01	5.503E+01	5.492E+01	5.470E+01	5.437E+01	5.373E+01	5.123E+01	4.885E+01	4.338E+01	3.419E+01
Y 91	5.999E+02	5.118E+02	4.336E+02	2.049E+02	6.952E+01	8.002E+00	1.403E-03	2.462E-07	1.002E-16	1.664E-35
ZR 93	1.453E-03	1.454E-03	1.454E-03	1.454E-03	1.454E-03	1.454E-03	1.454E-03	1.454E-03	1.454E-03	1.454E-03
ZR 95	7.189E+02	6.178E+02	5.308E+02	2.675E+02	9.956E+01	1.379E+01	5.068E-03	1.863E-06	4.826E-15	3.240E-32
NB 93M	1.322E-04	1.347E-04	1.371E-04	1.481E-04	1.637E-04	1.943E-04	3.091E-04	4.129E-04	6.305E-04	9.299E-04

Table L.4 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	1.256E-04	1.256E-04	1.256E-04	1.256E-04	1.256E-04	1.256E-04	1.255E-04	1.255E-04	1.255E-04	1.255E-04
NB 95	7.362E+02	7.189E+02	6.834E+02	4.516E+02	1.974E+02	2.995E+01	1.125E-02	4.136E-06	1.071E-14	7.193E-32
NB 95M	5.056E+00	4.564E+00	3.937E+00	1.985E+00	7.385E-01	1.023E-01	3.759E-05	1.382E-08	3.580E-17	2.404E-34
MO 93	5.121E-05	5.121E-05	5.121E-05	5.121E-05	5.121E-05	5.120E-05	5.118E-05	5.116E-05	5.111E-05	5.101E-05
TC 99	8.290E-03	8.313E-03	8.314E-03	8.314E-03	8.314E-03	8.314E-03	8.314E-03	8.314E-03	8.314E-03	8.313E-03
RU103	3.661E+02	2.860E+02	2.234E+02	7.317E+01	1.462E+01	5.841E-01	1.487E-06	3.786E-12	3.916E-26	0.000E+00
RU106	6.415E+01	6.248E+01	6.085E+01	5.402E+01	4.550E+01	3.227E+01	8.164E+00	2.065E+00	6.650E-02	6.893E-05
RH103M	3.297E+02	2.578E+02	2.014E+02	6.596E+01	1.318E+01	5.266E-01	1.341E-06	3.413E-12	3.530E-26	0.000E+00
RH106	6.572E+01	6.248E+01	6.085E+01	5.402E+01	4.550E+01	3.227E+01	8.164E+00	2.065E+00	6.650E-02	6.894E-05
PD107	1.445E-05	1.445E-05	1.445E-05	1.445E-05	1.445E-05	1.445E-05	1.445E-05	1.445E-05	1.445E-05	1.445E-05
AG110	2.175E+00	1.098E-03	1.056E-03	8.863E-04	6.881E-04	4.147E-04	5.476E-05	7.227E-06	4.575E-08	1.834E-12
AG110M	8.583E-02	8.257E-02	7.942E-02	6.664E-02	5.174E-02	3.119E-02	4.116E-03	5.435E-04	3.441E-06	1.379E-10
AG111	5.367E+00	1.463E+00	3.977E-01	1.106E-03	2.274E-07	9.613E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	9.047E-03	9.032E-03	9.015E-03	8.941E-03	8.836E-03	8.629E-03	7.847E-03	7.136E-03	5.628E-03	3.501E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	2.157E-01	1.736E-01	1.397E-01	5.225E-02	1.265E-02	7.416E-04	8.759E-09	1.035E-13	4.958E-26	0.000E+00
IN114	1.889E-02	6.196E-03	5.093E-03	2.101E-03	5.856E-04	4.551E-05	1.659E-09	6.050E-14	4.856E-25	0.000E+00
IN114M	7.875E-03	6.474E-03	5.321E-03	2.195E-03	6.119E-04	4.755E-05	1.734E-09	6.321E-14	5.073E-25	0.000E+00
IN115M	2.184E+00	3.063E-02	4.028E-04	3.670E-06	8.885E-07	5.209E-08	6.152E-13	7.265E-18	3.483E-30	0.000E+00
SN119M	6.585E+00	6.330E+00	6.083E+00	5.087E+00	3.929E+00	2.345E+00	2.973E-01	3.770E-02	2.159E-04	7.079E-09
SN121M	9.732E-04	9.726E-04	9.721E-04	9.699E-04	9.665E-04	9.598E-04	9.336E-04	9.080E-04	8.472E-04	7.376E-04
SN123	1.031E+00	9.563E-01	8.871E-01	6.317E-01	3.871E-01	1.454E-01	2.893E-03	5.753E-05	3.211E-09	1.000E-17
SN125	4.187E+00	1.530E+00	5.592E-01	5.922E-03	8.376E-06	1.675E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	2.465E-04	2.465E-04	2.465E-04	2.465E-04	2.465E-04	2.465E-04	2.465E-04	2.465E-04	2.465E-04	2.465E-04
SB124	1.631E-01	1.388E-01	1.182E-01	5.705E-02	1.995E-02	2.439E-03	5.454E-07	1.219E-10	9.115E-20	5.092E-38
SB125	5.516E+00	5.488E+00	5.446E+00	5.219E+00	4.903E+00	4.327E+00	2.624E+00	1.591E+00	4.557E-01	3.738E-02
SB126	1.478E-01	6.756E-02	3.090E-02	9.330E-04	3.997E-05	3.452E-05	3.451E-05	3.451E-05	3.451E-05	3.451E-05
SB126M	7.361E-02	2.465E-04	2.465E-04	2.465E-04	2.465E-04	2.465E-04	2.465E-04	2.465E-04	2.465E-04	2.465E-04
TE123M	8.151E-04	7.516E-04	6.931E-04	4.805E-04	2.832E-04	9.843E-05	1.435E-06	2.093E-08	5.371E-13	3.540E-22
TE125M	1.220E+00	1.227E+00	1.232E+00	1.227E+00	1.181E+00	1.054E+00	6.403E-01	3.884E-01	1.112E-01	9.120E-03
TE127	2.004E+01	4.150E+00	2.492E+00	1.583E+00	8.859E-01	2.776E-01	2.675E-03	2.579E-05	2.352E-10	1.957E-20
TE127M	2.783E+00	2.632E+00	2.415E+00	1.616E+00	9.044E-01	2.834E-01	2.731E-03	2.633E-05	2.401E-10	1.998E-20
TE129	7.823E+01	5.766E+00	4.320E+00	1.172E+00	1.783E-01	4.132E-03	1.191E-09	3.432E-16	1.530E-32	0.000E+00
TE129M	1.177E+01	8.858E+00	6.636E+00	1.800E+00	2.740E-01	6.348E-03	1.829E-09	5.272E-16	2.350E-32	0.000E+00
I129	1.422E-05	1.424E-05	1.425E-05	1.428E-05	1.429E-05	1.429E-05	1.429E-05	1.429E-05	1.429E-05	1.429E-05
I131	3.126E+02	9.609E+01	2.874E+01	1.232E-01	4.723E-05	6.943E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table L.4 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	3.470E+00	2.600E+00	1.469E+00	5.071E-02	2.620E-04	6.351E-09	2.155E-27	7.311E-46	0.000E+00	0.000E+00
XE133	7.151E+02	1.382E+02	2.178E+01	5.107E-03	2.961E-08	9.949E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	1.645E+01	1.624E+01	1.603E+01	1.513E+01	1.391E+01	1.176E+01	6.007E+00	3.068E+00	5.720E-01	1.988E-02
CS135	6.152E-04	6.157E-04	6.157E-04	6.157E-04	6.157E-04	6.157E-04	6.157E-04	6.157E-04	6.157E-04	6.157E-04
CS136	6.914E+00	3.296E+00	1.572E+00	5.535E-02	4.432E-04	2.841E-08	4.796E-25	8.096E-42	0.000E+00	0.000E+00
CS137	5.879E+01	5.874E+01	5.869E+01	5.846E+01	5.812E+01	5.745E+01	5.486E+01	5.238E+01	4.667E+01	3.705E+01
BA136M	1.140E+00	5.433E-01	2.590E-01	9.122E-03	7.303E-05	4.681E-09	7.903E-26	1.334E-42	0.000E+00	0.000E+00
BA137M	5.566E+01	5.557E+01	5.552E+01	5.530E+01	5.498E+01	5.435E+01	5.190E+01	4.956E+01	4.415E+01	3.505E+01
BA140	6.517E+02	3.052E+02	1.429E+02	4.637E+00	3.300E-02	1.671E-06	1.098E-23	7.212E-41	0.000E+00	0.000E+00
LA140	6.557E+02	3.509E+02	1.644E+02	5.337E+00	3.797E-02	1.922E-06	1.263E-23	8.299E-41	0.000E+00	0.000E+00
CE141	6.199E+02	4.625E+02	3.431E+02	8.907E+01	1.273E+01	2.600E-01	4.528E-08	7.883E-15	9.971E-32	0.000E+00
CE142	1.796E-08	1.796E-08	1.796E-08	1.796E-08	1.796E-08	1.796E-08	1.796E-08	1.796E-08	1.796E-08	1.796E-08
CE144	5.597E+02	5.409E+02	5.227E+02	4.480E+02	3.587E+02	2.298E+02	3.876E+01	6.535E+00	7.631E-02	1.041E-05
PR143	6.144E+02	3.345E+02	1.636E+02	6.459E+00	6.098E-02	5.434E-06	3.428E-22	2.162E-38	0.000E+00	0.000E+00
PR144	5.601E+02	5.409E+02	5.228E+02	4.480E+02	3.587E+02	2.298E+02	3.876E+01	6.536E+00	7.632E-02	1.041E-05
PR144M	6.720E+00	6.491E+00	6.273E+00	5.376E+00	4.304E+00	2.758E+00	4.651E-01	7.843E-02	9.158E-04	1.249E-07
ND144	6.105E-13	6.175E-13	6.242E-13	6.519E-13	6.850E-13	7.328E-13	8.037E-13	8.156E-13	8.180E-13	8.180E-13
ND147	2.403E+02	1.000E+02	4.159E+01	7.897E-01	2.593E-03	2.797E-08	3.784E-28	5.119E-48	0.000E+00	0.000E+00
PM145	1.490E-05	1.510E-05	1.529E-05	1.607E-05	1.701E-05	1.833E-05	1.969E-05	1.882E-05	1.564E-05	1.058E-05
PM147	1.350E+02	1.352E+02	1.346E+02	1.290E+02	1.208E+02	1.058E+02	6.241E+01	3.681E+01	9.831E+00	7.013E-01
PM148M	1.057E+01	8.359E+00	6.609E+00	2.286E+00	4.942E-01	2.310E-02	1.102E-07	5.258E-13	2.615E-26	0.000E+00
PM148	3.880E+01	6.742E+00	1.402E+00	1.291E-01	2.784E-02	1.301E-03	6.207E-09	2.962E-14	1.473E-27	0.000E+00
SM145	1.482E-04	1.440E-04	1.400E-04	1.230E-04	1.022E-04	7.043E-05	1.590E-05	3.591E-06	8.703E-08	5.110E-11
SM147	2.162E-09	2.196E-09	2.229E-09	2.377E-09	2.579E-09	2.946E-09	4.010E-09	4.638E-09	5.299E-09	5.523E-09
SM151	4.793E-01	4.809E-01	4.808E-01	4.801E-01	4.792E-01	4.774E-01	4.701E-01	4.630E-01	4.455E-01	4.124E-01
EU152	2.824E-02	2.818E-02	2.813E-02	2.789E-02	2.753E-02	2.683E-02	2.424E-02	2.189E-02	1.697E-02	1.020E-02
EU154	7.774E-01	7.751E-01	7.726E-01	7.620E-01	7.467E-01	7.173E-01	6.105E-01	5.197E-01	3.474E-01	1.553E-01
EU155	1.259E+00	1.253E+00	1.246E+00	1.216E+00	1.175E+00	1.096E+00	8.283E-01	6.264E-01	3.116E-01	7.708E-02
EU156	6.254E+00	3.335E+00	1.760E+00	9.810E-02	1.523E-03	3.671E-07	1.240E-21	4.188E-36	0.000E+00	0.000E+00
GD153	2.546E-02	2.446E-02	2.350E-02	1.960E-02	1.510E-02	8.951E-03	1.106E-03	1.367E-04	7.342E-07	2.117E-11
TB160	5.086E-02	4.448E-02	3.889E-02	2.121E-02	8.842E-03	1.537E-03	1.404E-06	1.283E-09	3.235E-17	2.057E-32
TL206	2.301E-05	3.377E-12	3.377E-12	3.377E-12	3.377E-12	3.377E-12	3.377E-12	3.377E-12	3.377E-12	3.377E-12
TL207	1.688E-09	1.689E-09	1.697E-09	1.802E-09	2.011E-09	2.502E-09	4.579E-09	6.908E-09	1.397E-08	3.260E-08
TL208	2.385E-07	2.422E-07	2.484E-07	2.797E-07	3.170E-07	3.829E-07	5.591E-07	6.485E-07	7.107E-07	6.727E-07
PB210	8.440E-14	8.645E-14	8.775E-14	8.979E-14	9.040E-14	9.162E-14	1.044E-13	1.342E-13	3.201E-13	1.480E-12
PB211	1.692E-09	1.694E-09	1.702E-09	1.807E-09	2.017E-09	2.509E-09	4.592E-09	6.927E-09	1.401E-08	3.269E-08

Table L.4 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	6.637E-07	6.742E-07	6.914E-07	7.785E-07	8.824E-07	1.066E-06	1.556E-06	1.805E-06	1.978E-06	1.872E-06
BI211	1.693E-09	1.694E-09	1.702E-09	1.807E-09	2.017E-09	2.509E-09	4.592E-09	6.927E-09	1.401E-08	3.269E-08
BI212	6.637E-07	6.742E-07	6.914E-07	7.785E-07	8.824E-07	1.066E-06	1.556E-06	1.805E-06	1.978E-06	1.872E-06
PO212	4.252E-07	4.320E-07	4.430E-07	4.988E-07	5.653E-07	6.828E-07	9.969E-07	1.156E-06	1.267E-06	1.199E-06
PO215	1.692E-09	1.694E-09	1.702E-09	1.807E-09	2.017E-09	2.509E-09	4.592E-09	6.927E-09	1.401E-08	3.269E-08
PO216	6.637E-07	6.742E-07	6.914E-07	7.785E-07	8.824E-07	1.066E-06	1.556E-06	1.805E-06	1.978E-06	1.872E-06
RN219	1.692E-09	1.694E-09	1.702E-09	1.807E-09	2.017E-09	2.509E-09	4.592E-09	6.927E-09	1.401E-08	3.269E-08
RN220	6.637E-07	6.742E-07	6.914E-07	7.785E-07	8.824E-07	1.066E-06	1.556E-06	1.805E-06	1.978E-06	1.872E-06
FR223	2.332E-11	2.377E-11	2.421E-11	2.625E-11	2.926E-11	3.549E-11	6.330E-11	9.546E-11	1.932E-10	4.508E-10
RA223	1.692E-09	1.694E-09	1.702E-09	1.807E-09	2.017E-09	2.509E-09	4.592E-09	6.927E-09	1.401E-08	3.269E-08
RA224	6.637E-07	6.742E-07	6.914E-07	7.785E-07	8.824E-07	1.066E-06	1.556E-06	1.805E-06	1.978E-06	1.872E-06
RA226	1.091E-13	1.118E-13	1.146E-13	1.275E-13	1.474E-13	1.919E-13	4.333E-13	7.820E-13	2.169E-12	7.511E-12
RA228	5.579E-10	5.622E-10	5.665E-10	5.857E-10	6.129E-10	6.651E-10	8.488E-10	9.983E-10	1.261E-09	1.511E-09
AC227	1.690E-09	1.722E-09	1.755E-09	1.902E-09	2.120E-09	2.572E-09	4.587E-09	6.917E-09	1.400E-08	3.266E-08
TH227	1.670E-09	1.676E-09	1.692E-09	1.816E-09	2.027E-09	2.469E-09	4.529E-09	6.832E-09	1.382E-08	3.224E-08
TH228	6.625E-07	6.804E-07	6.980E-07	7.750E-07	8.787E-07	1.062E-06	1.553E-06	1.801E-06	1.977E-06	1.872E-06
TH229	2.893E-10	2.949E-10	3.006E-10	3.267E-10	3.645E-10	4.402E-10	7.433E-10	1.046E-09	1.804E-09	3.321E-09
TH230	1.631E-10	1.653E-10	1.674E-10	1.771E-10	1.913E-10	2.199E-10	3.398E-10	4.681E-10	8.245E-10	1.684E-09
TH231	3.710E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04
TH232	1.649E-09	1.649E-09	1.649E-09	1.649E-09	1.649E-09	1.649E-09	1.649E-09	1.649E-09	1.649E-09	1.649E-09
TH234	1.352E-04	1.349E-04	1.347E-04	1.344E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04
PA231	2.798E-08	2.815E-08	2.831E-08	2.894E-08	2.984E-08	3.164E-08	3.878E-08	4.592E-08	6.374E-08	9.936E-08
PA233	1.117E-01	7.806E-02	5.451E-02	1.080E-02	1.094E-03	7.136E-05	6.186E-05	6.190E-05	6.207E-05	6.258E-05
PA234M	3.022E-04	1.349E-04	1.347E-04	1.344E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04
PA234	3.327E-04	1.754E-07	1.751E-07	1.747E-07	1.746E-07	1.746E-07	1.746E-07	1.746E-07	1.746E-07	1.746E-07
U232	1.952E-06	1.959E-06	1.960E-06	1.967E-06	1.976E-06	1.992E-06	2.028E-06	2.034E-06	1.989E-06	1.825E-06
U233	1.553E-06	1.569E-06	1.580E-06	1.600E-06	1.605E-06	1.605E-06	1.606E-06	1.607E-06	1.608E-06	1.611E-06
U234	6.198E-06	6.206E-06	6.215E-06	6.256E-06	6.314E-06	6.431E-06	6.899E-06	7.360E-06	8.483E-06	1.060E-05
U235	1.685E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04	1.685E-04
U236	2.649E-04	2.649E-04	2.649E-04	2.649E-04	2.649E-04	2.649E-04	2.649E-04	2.649E-04	2.649E-04	2.649E-04
U237	9.738E+01	2.313E+01	5.493E+00	8.301E-03	2.780E-06	2.023E-06	1.838E-06	1.669E-06	1.312E-06	8.112E-07
U238	1.343E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04	1.343E-04
NP237	6.099E-05	6.163E-05	6.178E-05	6.183E-05	6.183E-05	6.184E-05	6.186E-05	6.190E-05	6.207E-05	6.258E-05
PU236	6.227E-06	6.191E-06	6.134E-06	5.881E-06	5.534E-06	4.901E-06	3.015E-06	1.855E-06	5.504E-07	4.850E-08
PU237	2.267E-05	1.832E-05	1.481E-05	5.662E-06	1.415E-06	8.827E-08	1.339E-12	2.030E-17	1.819E-29	0.000E+00
PU238	8.066E-02	8.130E-02	8.143E-02	8.190E-02	8.234E-02	8.271E-02	8.197E-02	8.071E-02	7.760E-02	7.172E-02

Table L.4 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	1.533E-01	1.538E-01	1.538E-01	1.538E-01	1.538E-01	1.538E-01	1.538E-01	1.538E-01	1.538E-01	1.537E-01
PU240	6.432E-02	6.432E-02	6.432E-02	6.432E-02	6.432E-02	6.432E-02	6.430E-02	6.429E-02	6.426E-02	6.419E-02
PU241	8.655E+00	8.639E+00	8.623E+00	8.551E+00	8.449E+00	8.248E+00	7.492E+00	6.805E+00	5.350E+00	3.307E+00
PU242	1.818E-05	1.818E-05	1.818E-05	1.818E-05	1.818E-05	1.818E-05	1.818E-05	1.818E-05	1.818E-05	1.818E-05
PU244	1.090E-13	1.090E-13	1.090E-13	1.090E-13	1.090E-13	1.090E-13	1.090E-13	1.090E-13	1.090E-13	1.090E-13
AM241	1.345E-02	1.398E-02	1.451E-02	1.689E-02	2.029E-02	2.696E-02	5.204E-02	7.472E-02	1.224E-01	1.879E-01
AM242M	2.271E-04	2.270E-04	2.270E-04	2.268E-04	2.266E-04	2.260E-04	2.240E-04	2.220E-04	2.170E-04	2.073E-04
AM242	1.087E+00	2.264E-04	2.259E-04	2.257E-04	2.254E-04	2.249E-04	2.229E-04	2.209E-04	2.159E-04	2.063E-04
AM243	2.781E-05	2.784E-05	2.784E-05	2.784E-05	2.784E-05	2.784E-05	2.783E-05	2.783E-05	2.781E-05	2.779E-05
CM242	5.413E-01	5.136E-01	4.839E-01	3.700E-01	2.512E-01	1.158E-01	5.389E-03	4.173E-04	1.787E-04	1.706E-04
CM243	3.751E-05	3.748E-05	3.744E-05	3.729E-05	3.706E-05	3.661E-05	3.488E-05	3.322E-05	2.942E-05	2.307E-05
CM244	8.912E-04	8.911E-04	8.898E-04	8.839E-04	8.755E-04	8.589E-04	7.956E-04	7.371E-04	6.088E-04	4.153E-04
CM245	1.823E-08	1.823E-08	1.823E-08	1.823E-08	1.823E-08	1.823E-08	1.823E-08	1.823E-08	1.822E-08	1.820E-08
CM246	5.498E-10	5.498E-10	5.498E-10	5.498E-10	5.498E-10	5.497E-10	5.496E-10	5.494E-10	5.490E-10	5.482E-10
CM247	3.000E-16	3.000E-16	3.000E-16	3.000E-16	3.000E-16	3.000E-16	3.000E-16	3.000E-16	3.000E-16	3.000E-16
Subtotal Ci**	9.217E+03	6.451E+03	5.077E+03	2.826E+03	1.731E+03	1.019E+03	4.391E+02	3.057E+02	2.138E+02	1.515E+02
Total Ci***	6.745E+04	6.626E+03	5.121E+03	2.850E+03	1.747E+03	1.027E+03	4.416E+02	3.070E+02	2.141E+02	1.516E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table L.5 FLIP-LEU-I TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: leu.org.5b

BURNUP (BU)

BU: U-235 25.0 g
 BU: % U-235 24.75%
 BU: MWd 23.76
 BU: MWd/MTU 47134
 U-235 DEPL 28.55 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	3.446E-01	3.438E-01	3.431E-01	3.398E-01	3.351E-01	3.258E-01	2.912E-01	2.603E-01	1.967E-01	1.123E-01
BE 10	4.021E-07	4.021E-07	4.021E-07	4.021E-07	4.021E-07	4.021E-07	4.021E-07	4.021E-07	4.021E-07	4.021E-07
C 14	2.569E-03	2.569E-03	2.569E-03	2.569E-03	2.569E-03	2.569E-03	2.568E-03	2.568E-03	2.566E-03	2.563E-03
CL 36	5.585E-05	5.585E-05	5.585E-05	5.585E-05	5.585E-05	5.585E-05	5.585E-05	5.585E-05	5.585E-05	5.585E-05
CR 51	1.402E+02	9.879E+01	6.960E+01	1.430E+01	1.459E+00	1.518E-02	1.780E-10	2.087E-18	3.107E-38	0.000E+00
MN 54	8.407E+00	8.150E+00	7.901E+00	6.867E+00	5.609E+00	3.742E+00	7.410E-01	1.468E-01	2.562E-03	7.809E-07
FE 55	5.874E+01	5.814E+01	5.755E+01	5.495E+01	5.141E+01	4.500E+01	2.641E+01	1.550E+01	4.092E+00	2.850E-01
FE 59	2.641E+00	2.129E+00	1.716E+00	6.478E-01	1.589E-01	9.553E-03	1.250E-07	1.635E-12	1.012E-24	0.000E+00
CO 60	4.922E+01	4.897E+01	4.872E+01	4.762E+01	4.609E+01	4.315E+01	3.318E+01	2.551E+01	1.322E+01	3.551E+00
NI 59	1.064E-02	1.064E-02	1.064E-02	1.064E-02	1.064E-02	1.064E-02	1.064E-02	1.064E-02	1.064E-02	1.064E-02
NI 63	1.331E+00	1.331E+00	1.330E+00	1.328E+00	1.326E+00	1.321E+00	1.301E+00	1.282E+00	1.234E+00	1.145E+00
ZN 65	1.056E+00	1.015E+00	9.754E-01	8.149E-01	6.287E-01	3.743E-01	4.700E-02	5.901E-03	3.297E-05	1.029E-09
SE 79	3.083E-04	3.083E-04	3.083E-04	3.083E-04	3.083E-04	3.083E-04	3.083E-04	3.083E-04	3.083E-04	3.082E-04
KR 85	8.148E+00	8.129E+00	8.109E+00	8.019E+00	7.890E+00	7.639E+00	6.713E+00	5.899E+00	4.271E+00	2.238E+00
RB 87	2.022E-08	2.023E-08	2.023E-08	2.023E-08	2.023E-08	2.023E-08	2.023E-08	2.023E-08	2.023E-08	2.023E-08
SR 89	5.996E+02	4.949E+02	4.083E+02	1.714E+02	4.898E+01	4.000E+00	1.780E-04	7.918E-09	1.045E-19	0.000E+00
SR 90	6.829E+01	6.823E+01	6.817E+01	6.789E+01	6.748E+01	6.669E+01	6.359E+01	6.063E+01	5.384E+01	4.244E+01
Y 90	7.121E+01	6.832E+01	6.818E+01	6.790E+01	6.750E+01	6.670E+01	6.360E+01	6.065E+01	5.385E+01	4.245E+01
Y 91	7.381E+02	6.296E+02	5.334E+02	2.522E+02	8.554E+01	9.843E+00	1.726E-03	3.028E-07	1.233E-16	2.047E-35
ZR 93	1.815E-03	1.815E-03	1.815E-03	1.815E-03	1.815E-03	1.815E-03	1.815E-03	1.815E-03	1.815E-03	1.815E-03
ZR 95	8.928E+02	7.673E+02	6.593E+02	3.323E+02	1.236E+02	1.712E+01	6.294E-03	2.314E-06	5.995E-15	4.024E-32
NB 93M	1.653E-04	1.683E-04	1.714E-04	1.850E-04	2.044E-04	2.426E-04	3.861E-04	5.157E-04	7.874E-04	1.161E-03

Table L.5 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	1.604E-04	1.604E-04	1.604E-04	1.604E-04	1.604E-04	1.604E-04	1.604E-04	1.603E-04	1.603E-04	1.603E-04
NB 95	9.142E+02	8.930E+02	8.487E+02	5.609E+02	2.453E+02	3.719E+01	1.397E-02	5.136E-06	1.331E-14	8.933E-32
NB 95M	6.279E+00	5.669E+00	4.889E+00	2.465E+00	9.172E-01	1.270E-01	4.669E-05	1.717E-08	4.447E-17	2.985E-34
MO 93	6.559E-05	6.559E-05	6.559E-05	6.559E-05	6.559E-05	6.558E-05	6.556E-05	6.553E-05	6.547E-05	6.534E-05
TC 99	1.029E-02	1.032E-02	1.032E-02	1.032E-02	1.032E-02	1.032E-02	1.032E-02	1.032E-02	1.032E-02	1.032E-02
RU103	4.631E+02	3.617E+02	2.825E+02	9.255E+01	1.850E+01	7.389E-01	1.881E-06	4.789E-12	4.953E-26	0.000E+00
RU106	8.636E+01	8.412E+01	8.193E+01	7.273E+01	6.125E+01	4.344E+01	1.099E+01	2.781E+00	8.953E-02	9.281E-05
RH103M	4.170E+02	3.261E+02	2.547E+02	8.343E+01	1.668E+01	6.661E-01	1.696E-06	4.317E-12	4.465E-26	0.000E+00
RH106	8.905E+01	8.412E+01	8.193E+01	7.273E+01	6.125E+01	4.344E+01	1.099E+01	2.781E+00	8.953E-02	9.281E-05
PD107	1.961E-05	1.961E-05	1.961E-05	1.961E-05	1.961E-05	1.961E-05	1.961E-05	1.961E-05	1.961E-05	1.961E-05
AG110	3.845E+00	1.900E-03	1.828E-03	1.534E-03	1.191E-03	7.178E-04	9.475E-05	1.251E-05	7.919E-08	3.174E-12
AG110M	1.485E-01	1.428E-01	1.375E-01	1.153E-01	8.954E-02	5.397E-02	7.124E-03	9.404E-04	5.953E-06	2.387E-10
AG111	7.377E+00	2.011E+00	5.466E-01	1.521E-03	3.126E-07	1.321E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.166E-02	1.164E-02	1.162E-02	1.152E-02	1.139E-02	1.112E-02	1.011E-02	9.196E-03	7.252E-03	4.511E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	2.771E-01	2.230E-01	1.793E-01	6.710E-02	1.624E-02	9.524E-04	1.125E-08	1.328E-13	6.367E-26	0.000E+00
IN114	3.090E-02	1.014E-02	8.331E-03	3.437E-03	9.581E-04	7.445E-05	2.714E-09	9.896E-14	7.944E-25	0.000E+00
IN114M	1.289E-02	1.059E-02	8.705E-03	3.591E-03	1.001E-03	7.779E-05	2.836E-09	1.034E-13	8.300E-25	0.000E+00
IN115M	2.800E+00	3.927E-02	5.164E-04	4.712E-06	1.141E-06	6.689E-08	7.899E-13	9.329E-18	4.472E-30	0.000E+00
SN119M	8.544E+00	8.212E+00	7.892E+00	6.600E+00	5.098E+00	3.042E+00	3.858E-01	4.892E-02	2.801E-04	9.183E-09
SN121M	1.247E-03	1.246E-03	1.246E-03	1.243E-03	1.239E-03	1.230E-03	1.196E-03	1.163E-03	1.086E-03	9.453E-04
SN123	1.316E+00	1.221E+00	1.133E+00	8.067E-01	4.943E-01	1.857E-01	3.693E-03	7.347E-05	4.101E-09	1.277E-17
SN125	5.415E+00	1.979E+00	7.232E-01	7.658E-03	1.083E-05	2.166E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	3.124E-04	3.124E-04	3.124E-04	3.124E-04	3.124E-04	3.124E-04	3.123E-04	3.123E-04	3.123E-04	3.123E-04
SB124	2.350E-01	2.000E-01	1.703E-01	8.219E-02	2.874E-02	3.514E-03	7.857E-07	1.757E-10	1.313E-19	7.336E-38
SB125	7.053E+00	7.018E+00	6.963E+00	6.674E+00	6.270E+00	5.533E+00	3.356E+00	2.035E+00	5.829E-01	4.780E-02
SB126	1.955E-01	8.940E-02	4.089E-02	1.232E-03	5.095E-05	4.373E-05	4.373E-05	4.373E-05	4.373E-05	4.372E-05
SB126M	9.702E-02	3.124E-04	3.124E-04	3.124E-04	3.124E-04	3.124E-04	3.123E-04	3.123E-04	3.123E-04	3.123E-04
TE123M	1.429E-03	1.318E-03	1.214E-03	8.420E-04	4.964E-04	1.725E-04	2.515E-06	3.667E-08	9.413E-13	6.203E-22
TE125M	1.558E+00	1.568E+00	1.574E+00	1.569E+00	1.510E+00	1.348E+00	8.189E-01	4.967E-01	1.422E-01	1.166E-02
TE127	2.559E+01	5.304E+00	3.187E+00	2.024E+00	1.133E+00	3.551E-01	3.422E-03	3.299E-05	3.009E-10	2.503E-20
TE127M	3.560E+00	3.367E+00	3.089E+00	2.067E+00	1.157E+00	3.625E-01	3.494E-03	3.368E-05	3.072E-10	2.555E-20
TE129	9.849E+01	7.264E+00	5.442E+00	1.476E+00	2.247E-01	5.205E-03	1.500E-09	4.323E-16	1.927E-32	0.000E+00
TE129M	1.483E+01	1.116E+01	8.360E+00	2.267E+00	3.451E-01	7.997E-03	2.305E-09	6.641E-16	2.961E-32	0.000E+00
I129	1.786E-05	1.789E-05	1.790E-05	1.794E-05	1.795E-05	1.795E-05	1.795E-05	1.795E-05	1.795E-05	1.795E-05
I131	3.891E+02	1.196E+02	3.578E+01	1.533E-01	5.880E-05	8.644E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table L.5 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	4.320E+00	3.236E+00	1.828E+00	6.313E-02	3.262E-04	7.906E-09	2.682E-27	9.101E-46	0.000E+00	0.000E+00
XE133	8.861E+02	1.713E+02	2.698E+01	6.328E-03	3.668E-08	1.233E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	2.634E+01	2.600E+01	2.567E+01	2.422E+01	2.227E+01	1.882E+01	9.613E+00	4.910E+00	9.154E-01	3.182E-02
CS135	7.122E-04	7.127E-04	7.127E-04	7.127E-04	7.127E-04	7.127E-04	7.127E-04	7.127E-04	7.127E-04	7.127E-04
CS136	1.025E+01	4.888E+00	2.331E+00	8.208E-02	6.572E-04	4.212E-08	7.111E-25	1.201E-41	0.000E+00	0.000E+00
CS137	7.347E+01	7.340E+01	7.334E+01	7.304E+01	7.262E+01	7.179E+01	6.855E+01	6.546E+01	5.832E+01	4.630E+01
BA136M	1.691E+00	8.056E-01	3.841E-01	1.353E-02	1.083E-04	6.942E-09	1.172E-25	1.978E-42	0.000E+00	0.000E+00
BA137M	6.955E+01	6.944E+01	6.938E+01	6.910E+01	6.870E+01	6.791E+01	6.485E+01	6.192E+01	5.517E+01	4.380E+01
BA140	8.056E+02	3.772E+02	1.766E+02	5.733E+00	4.079E-02	2.065E-06	1.357E-23	8.915E-41	0.000E+00	0.000E+00
LA140	8.120E+02	4.338E+02	2.033E+02	6.597E+00	4.694E-02	2.377E-06	1.561E-23	1.026E-40	0.000E+00	0.000E+00
CE141	7.663E+02	5.717E+02	4.242E+02	1.101E+02	1.574E+01	3.216E-01	5.598E-08	9.746E-15	1.232E-31	0.000E+00
CE142	2.211E-08	2.211E-08	2.211E-08	2.211E-08	2.211E-08	2.211E-08	2.211E-08	2.211E-08	2.211E-08	2.211E-08
CE144	6.953E+02	6.719E+02	6.494E+02	5.566E+02	4.455E+02	2.855E+02	4.815E+01	8.119E+00	9.480E-02	1.293E-05
PR143	7.576E+02	4.125E+02	2.018E+02	7.965E+00	7.519E-02	6.701E-06	4.227E-22	2.666E-38	0.000E+00	0.000E+00
PR144	6.960E+02	6.720E+02	6.494E+02	5.566E+02	4.456E+02	2.855E+02	4.815E+01	8.119E+00	9.481E-02	1.293E-05
PR144M	8.348E+00	8.064E+00	7.793E+00	6.679E+00	5.347E+00	3.426E+00	5.778E-01	9.743E-02	1.138E-03	1.551E-07
ND144	7.785E-13	7.872E-13	7.956E-13	8.300E-13	8.712E-13	9.305E-13	1.018E-12	1.033E-12	1.036E-12	1.036E-12
ND147	2.972E+02	1.237E+02	5.144E+01	9.768E-01	3.208E-03	3.460E-08	4.681E-28	6.333E-48	0.000E+00	0.000E+00
PM145	1.895E-05	1.920E-05	1.945E-05	2.046E-05	2.167E-05	2.338E-05	2.515E-05	2.405E-05	1.998E-05	1.352E-05
PM147	1.607E+02	1.611E+02	1.603E+02	1.537E+02	1.439E+02	1.261E+02	7.437E+01	4.386E+01	1.171E+01	8.357E-01
PM148M	1.491E+01	1.179E+01	9.321E+00	3.224E+00	6.970E-01	3.258E-02	1.554E-07	7.417E-13	3.688E-26	0.000E+00
PM148	5.976E+01	1.034E+01	2.113E+00	1.822E-01	3.926E-02	1.835E-03	8.755E-09	4.177E-14	2.077E-27	0.000E+00
SM145	1.911E-04	1.858E-04	1.805E-04	1.587E-04	1.318E-04	9.083E-05	2.051E-05	4.632E-06	1.122E-07	6.591E-11
SM147	2.577E-09	2.617E-09	2.657E-09	2.834E-09	3.074E-09	3.511E-09	4.779E-09	5.527E-09	6.315E-09	6.582E-09
SM151	4.938E-01	4.959E-01	4.957E-01	4.951E-01	4.941E-01	4.922E-01	4.847E-01	4.773E-01	4.592E-01	4.252E-01
EU152	3.047E-02	3.042E-02	3.036E-02	3.009E-02	2.971E-02	2.896E-02	2.616E-02	2.362E-02	1.832E-02	1.101E-02
EU154	1.286E+00	1.282E+00	1.278E+00	1.260E+00	1.235E+00	1.186E+00	1.010E+00	8.596E-01	5.747E-01	2.568E-01
EU155	1.551E+00	1.543E+00	1.535E+00	1.498E+00	1.446E+00	1.348E+00	1.020E+00	7.715E-01	3.837E-01	9.493E-02
EU156	9.405E+00	5.010E+00	2.644E+00	1.474E-01	2.288E-03	5.517E-07	1.863E-21	6.291E-36	0.000E+00	0.000E+00
GD153	3.507E-02	3.369E-02	3.237E-02	2.700E-02	2.079E-02	1.233E-02	1.524E-03	1.884E-04	1.011E-06	2.916E-11
TB160	7.268E-02	6.355E-02	5.557E-02	3.031E-02	1.264E-02	2.197E-03	2.007E-06	1.833E-09	4.622E-17	2.940E-32
TL206	3.005E-05	4.325E-12	4.325E-12	4.325E-12	4.325E-12	4.325E-12	4.325E-12	4.325E-12	4.325E-12	4.325E-12
TL207	1.802E-09	1.804E-09	1.813E-09	1.925E-09	2.150E-09	2.672E-09	4.847E-09	7.231E-09	1.429E-08	3.238E-08
TL208	3.314E-07	3.367E-07	3.455E-07	3.899E-07	4.432E-07	5.378E-07	7.965E-07	9.334E-07	1.038E-06	9.897E-07
PB210	1.512E-13	1.549E-13	1.572E-13	1.606E-13	1.611E-13	1.618E-13	1.749E-13	2.096E-13	4.422E-13	1.987E-12
PB211	1.807E-09	1.809E-09	1.818E-09	1.930E-09	2.156E-09	2.680E-09	4.860E-09	7.251E-09	1.433E-08	3.247E-08

Table L.5 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	9.223E-07	9.372E-07	9.616E-07	1.085E-06	1.233E-06	1.497E-06	2.217E-06	2.598E-06	2.888E-06	2.755E-06
BI211	1.808E-09	1.809E-09	1.818E-09	1.930E-09	2.156E-09	2.680E-09	4.860E-09	7.251E-09	1.433E-08	3.247E-08
BI212	9.223E-07	9.372E-07	9.616E-07	1.085E-06	1.233E-06	1.497E-06	2.217E-06	2.598E-06	2.888E-06	2.755E-06
PO212	5.909E-07	6.005E-07	6.161E-07	6.953E-07	7.903E-07	9.590E-07	1.420E-06	1.664E-06	1.851E-06	1.765E-06
PO215	1.807E-09	1.809E-09	1.818E-09	1.930E-09	2.156E-09	2.680E-09	4.860E-09	7.251E-09	1.433E-08	3.247E-08
PO216	9.223E-07	9.372E-07	9.616E-07	1.085E-06	1.233E-06	1.497E-06	2.217E-06	2.598E-06	2.888E-06	2.755E-06
RN219	1.807E-09	1.809E-09	1.818E-09	1.930E-09	2.156E-09	2.680E-09	4.860E-09	7.251E-09	1.433E-08	3.247E-08
RN220	9.223E-07	9.372E-07	9.616E-07	1.085E-06	1.233E-06	1.497E-06	2.217E-06	2.598E-06	2.888E-06	2.755E-06
FR223	2.490E-11	2.538E-11	2.586E-11	2.805E-11	3.127E-11	3.791E-11	6.699E-11	9.992E-11	1.976E-10	4.478E-10
RA223	1.807E-09	1.809E-09	1.818E-09	1.930E-09	2.156E-09	2.680E-09	4.860E-09	7.251E-09	1.433E-08	3.247E-08
RA224	9.223E-07	9.372E-07	9.616E-07	1.085E-06	1.233E-06	1.497E-06	2.217E-06	2.598E-06	2.888E-06	2.755E-06
RA226	1.354E-13	1.388E-13	1.422E-13	1.582E-13	1.830E-13	2.383E-13	5.412E-13	9.856E-13	2.807E-12	1.021E-11
RA228	5.557E-10	5.600E-10	5.643E-10	5.835E-10	6.105E-10	6.625E-10	8.457E-10	9.947E-10	1.256E-09	1.506E-09
AC227	1.804E-09	1.839E-09	1.874E-09	2.033E-09	2.266E-09	2.747E-09	4.854E-09	7.241E-09	1.432E-08	3.245E-08
TH227	1.783E-09	1.789E-09	1.807E-09	1.940E-09	2.167E-09	2.638E-09	4.793E-09	7.151E-09	1.413E-08	3.202E-08
TH228	9.206E-07	9.459E-07	9.710E-07	1.080E-06	1.228E-06	1.491E-06	2.213E-06	2.592E-06	2.886E-06	2.754E-06
TH229	3.550E-10	3.619E-10	3.690E-10	4.010E-10	4.475E-10	5.406E-10	9.133E-10	1.286E-09	2.218E-09	4.085E-09
TH230	2.025E-10	2.051E-10	2.078E-10	2.200E-10	2.377E-10	2.739E-10	4.293E-10	6.013E-10	1.102E-09	2.393E-09
TH231	4.204E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04
TH232	1.643E-09	1.643E-09	1.643E-09	1.643E-09	1.643E-09	1.643E-09	1.643E-09	1.643E-09	1.643E-09	1.643E-09
TH234	1.355E-04	1.350E-04	1.346E-04	1.341E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04
PA231	3.017E-08	3.033E-08	3.047E-08	3.106E-08	3.190E-08	3.357E-08	4.021E-08	4.684E-08	6.341E-08	9.653E-08
PA233	1.452E-01	1.015E-01	7.086E-02	1.405E-02	1.436E-03	1.078E-04	9.545E-05	9.552E-05	9.581E-05	9.671E-05
PA234M	4.189E-04	1.350E-04	1.346E-04	1.341E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04
PA234	5.644E-04	1.755E-07	1.750E-07	1.743E-07	1.741E-07	1.741E-07	1.741E-07	1.741E-07	1.741E-07	1.741E-07
U232	2.748E-06	2.759E-06	2.762E-06	2.777E-06	2.798E-06	2.834E-06	2.925E-06	2.959E-06	2.919E-06	2.688E-06
U233	1.906E-06	1.927E-06	1.941E-06	1.968E-06	1.974E-06	1.975E-06	1.975E-06	1.976E-06	1.978E-06	1.983E-06
U234	7.715E-06	7.732E-06	7.749E-06	7.828E-06	7.943E-06	8.174E-06	9.100E-06	1.001E-05	1.223E-05	1.642E-05
U235	1.567E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04	1.567E-04
U236	3.258E-04	3.258E-04	3.258E-04	3.258E-04	3.258E-04	3.258E-04	3.258E-04	3.258E-04	3.258E-04	3.258E-04
U237	1.548E+02	3.676E+01	8.729E+00	1.319E-02	4.814E-06	3.602E-06	3.272E-06	2.972E-06	2.337E-06	1.444E-06
U238	1.339E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04	1.339E-04
NP237	9.405E-05	9.507E-05	9.531E-05	9.539E-05	9.539E-05	9.540E-05	9.545E-05	9.552E-05	9.581E-05	9.671E-05
PU236	1.227E-05	1.220E-05	1.209E-05	1.159E-05	1.091E-05	9.659E-06	5.942E-06	3.655E-06	1.085E-06	9.559E-08
PU237	4.883E-05	3.947E-05	3.191E-05	1.220E-05	3.047E-06	1.902E-07	2.884E-12	4.375E-17	3.919E-29	0.000E+00
PU238	1.587E-01	1.600E-01	1.603E-01	1.615E-01	1.625E-01	1.635E-01	1.622E-01	1.597E-01	1.536E-01	1.419E-01

Table L.5 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	1.785E-01	1.792E-01	1.792E-01	1.792E-01	1.792E-01	1.792E-01	1.792E-01	1.792E-01	1.792E-01	1.791E-01
PU240	9.080E-02	9.080E-02	9.080E-02	9.080E-02	9.079E-02	9.079E-02	9.077E-02	9.075E-02	9.070E-02	9.061E-02
PU241	1.541E+01	1.538E+01	1.535E+01	1.522E+01	1.504E+01	1.468E+01	1.334E+01	1.211E+01	9.525E+00	5.887E+00
PU242	4.251E-05	4.251E-05	4.251E-05	4.251E-05	4.251E-05	4.251E-05	4.251E-05	4.252E-05	4.252E-05	4.252E-05
PU244	4.317E-13	4.317E-13	4.317E-13	4.317E-13	4.317E-13	4.317E-13	4.317E-13	4.317E-13	4.317E-13	4.317E-13
AM241	2.363E-02	2.457E-02	2.552E-02	2.976E-02	3.581E-02	4.768E-02	9.233E-02	1.327E-01	2.176E-01	3.343E-01
AM242M	4.619E-04	4.619E-04	4.618E-04	4.614E-04	4.609E-04	4.598E-04	4.557E-04	4.515E-04	4.414E-04	4.217E-04
AM242	2.494E+00	4.608E-04	4.595E-04	4.591E-04	4.586E-04	4.575E-04	4.534E-04	4.493E-04	4.392E-04	4.196E-04
AM243	8.322E-05	8.330E-05	8.330E-05	8.330E-05	8.330E-05	8.330E-05	8.328E-05	8.327E-05	8.323E-05	8.315E-05
CM242	1.254E+00	1.189E+00	1.121E+00	8.566E-01	5.815E-01	2.681E-01	1.243E-02	9.149E-04	3.636E-04	3.470E-04
CM243	1.120E-04	1.119E-04	1.118E-04	1.113E-04	1.107E-04	1.093E-04	1.041E-04	9.919E-05	8.784E-05	6.889E-05
CM244	3.477E-03	3.476E-03	3.471E-03	3.448E-03	3.415E-03	3.351E-03	3.104E-03	2.875E-03	2.375E-03	1.620E-03
CM245	9.009E-08	9.009E-08	9.009E-08	9.009E-08	9.009E-08	9.009E-08	9.007E-08	9.006E-08	9.002E-08	8.995E-08
CM246	3.531E-09	3.531E-09	3.531E-09	3.531E-09	3.531E-09	3.531E-09	3.530E-09	3.529E-09	3.526E-09	3.521E-09
CM247	2.483E-15	2.483E-15	2.483E-15	2.483E-15	2.483E-15	2.483E-15	2.483E-15	2.483E-15	2.483E-15	2.483E-15
Subtotal Ci**	1.152E+04	8.045E+03	6.331E+03	3.530E+03	2.168E+03	1.280E+03	5.532E+02	3.854E+02	2.696E+02	1.907E+02
Total Ci***	8.388E+04	8.268E+03	6.388E+03	3.561E+03	2.188E+03	1.291E+03	5.564E+02	3.870E+02	2.699E+02	1.908E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table L.6 FLIP-LEU-I TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: leu.org.6b

BURNUP (BU)

BU: U-235 30.0 g
 BU: % U-235 29.70%
 BU: MWd 28.51
 BU: MWd/MTU 56561
 U-235 DEPL 33.92 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	4.148E-01	4.139E-01	4.130E-01	4.091E-01	4.034E-01	3.922E-01	3.505E-01	3.133E-01	2.367E-01	1.351E-01
BE 10	4.953E-07	4.953E-07	4.953E-07	4.953E-07	4.953E-07	4.953E-07	4.953E-07	4.953E-07	4.953E-07	4.953E-07
C 14	3.164E-03	3.164E-03	3.164E-03	3.164E-03	3.164E-03	3.164E-03	3.163E-03	3.162E-03	3.161E-03	3.157E-03
CL 36	6.859E-05	6.859E-05	6.859E-05	6.859E-05	6.859E-05	6.859E-05	6.859E-05	6.859E-05	6.859E-05	6.859E-05
CR 51	1.760E+02	1.240E+02	8.734E+01	1.795E+01	1.831E+00	1.905E-02	2.234E-10	2.619E-18	3.899E-38	0.000E+00
MN 54	1.047E+01	1.015E+01	9.841E+00	8.553E+00	6.986E+00	4.660E+00	9.230E-01	1.828E-01	3.192E-03	9.727E-07
FE 55	7.267E+01	7.193E+01	7.120E+01	6.799E+01	6.360E+01	5.567E+01	3.268E+01	1.918E+01	5.062E+00	3.526E-01
FE 59	3.329E+00	2.684E+00	2.163E+00	8.165E-01	2.002E-01	1.204E-02	1.575E-07	2.060E-12	1.275E-24	0.000E+00
CO 60	6.056E+01	6.025E+01	5.995E+01	5.860E+01	5.671E+01	5.310E+01	4.082E+01	3.139E+01	1.627E+01	4.370E+00
NI 59	1.300E-02	1.300E-02	1.300E-02	1.300E-02	1.300E-02	1.300E-02	1.300E-02	1.300E-02	1.300E-02	1.300E-02
NI 63	1.636E+00	1.636E+00	1.635E+00	1.633E+00	1.630E+00	1.624E+00	1.600E+00	1.576E+00	1.518E+00	1.407E+00
ZN 65	1.319E+00	1.268E+00	1.218E+00	1.018E+00	7.854E-01	4.675E-01	5.871E-02	7.372E-03	4.119E-05	1.286E-09
SE 79	3.694E-04	3.694E-04	3.694E-04	3.694E-04	3.694E-04	3.694E-04	3.694E-04	3.693E-04	3.693E-04	3.693E-04
KR 85	9.723E+00	9.701E+00	9.677E+00	9.569E+00	9.416E+00	9.117E+00	8.011E+00	7.040E+00	5.097E+00	2.671E+00
RB 87	2.408E-08	2.408E-08	2.408E-08	2.408E-08	2.408E-08	2.408E-08	2.408E-08	2.408E-08	2.408E-08	2.408E-08
SR 89	7.064E+02	5.830E+02	4.811E+02	2.019E+02	5.771E+01	4.713E+00	2.097E-04	9.329E-09	1.232E-19	0.000E+00
SR 90	8.142E+01	8.135E+01	8.127E+01	8.094E+01	8.046E+01	7.951E+01	7.581E+01	7.229E+01	6.418E+01	5.060E+01
Y 90	8.520E+01	8.147E+01	8.129E+01	8.096E+01	8.048E+01	7.953E+01	7.583E+01	7.231E+01	6.420E+01	5.061E+01
Y 91	8.713E+02	7.433E+02	6.297E+02	2.977E+02	1.009E+02	1.162E+01	2.038E-03	3.575E-07	1.456E-16	2.417E-35
ZR 93	2.176E-03	2.177E-03	2.177E-03	2.177E-03	2.177E-03	2.177E-03	2.177E-03	2.177E-03	2.177E-03	2.177E-03
ZR 95	1.065E+03	9.150E+02	7.862E+02	3.963E+02	1.474E+02	2.041E+01	7.505E-03	2.759E-06	7.148E-15	4.799E-32
NB 93M	1.984E-04	2.021E-04	2.057E-04	2.221E-04	2.455E-04	2.913E-04	4.634E-04	6.188E-04	9.446E-04	1.393E-03

Table L.6 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	1.970E-04	1.970E-04	1.970E-04	1.970E-04	1.970E-04	1.969E-04	1.969E-04	1.969E-04	1.969E-04	1.968E-04
NB 95	1.090E+03	1.065E+03	1.012E+03	6.689E+02	2.924E+02	4.435E+01	1.666E-02	6.125E-06	1.587E-14	1.065E-31
NB 95M	7.490E+00	6.760E+00	5.830E+00	2.940E+00	1.094E+00	1.515E-01	5.568E-05	2.047E-08	5.303E-17	3.560E-34
MO 93	8.080E-05	8.080E-05	8.080E-05	8.080E-05	8.079E-05	8.079E-05	8.075E-05	8.072E-05	8.064E-05	8.048E-05
TC 99	1.227E-02	1.230E-02	1.230E-02	1.230E-02	1.230E-02	1.230E-02	1.230E-02	1.230E-02	1.230E-02	1.230E-02
RU103	5.624E+02	4.393E+02	3.432E+02	1.124E+02	2.247E+01	8.974E-01	2.285E-06	5.817E-12	6.016E-26	0.000E+00
RU106	1.114E+02	1.085E+02	1.056E+02	9.378E+01	7.898E+01	5.601E+01	1.417E+01	3.585E+00	1.154E-01	1.197E-04
RH103M	5.065E+02	3.960E+02	3.094E+02	1.013E+02	2.025E+01	8.090E-01	2.060E-06	5.244E-12	5.423E-26	0.000E+00
RH106	1.156E+02	1.085E+02	1.056E+02	9.378E+01	7.898E+01	5.601E+01	1.417E+01	3.585E+00	1.154E-01	1.197E-04
PD107	2.545E-05	2.545E-05	2.545E-05	2.545E-05	2.545E-05	2.545E-05	2.545E-05	2.545E-05	2.545E-05	2.545E-05
AG110	6.278E+00	3.047E-03	2.931E-03	2.458E-03	1.909E-03	1.150E-03	1.519E-04	2.005E-05	1.269E-07	5.088E-12
AG110M	2.381E-01	2.291E-01	2.203E-01	1.849E-01	1.435E-01	8.651E-02	1.142E-02	1.507E-03	9.543E-06	3.825E-10
AG111	9.719E+00	2.649E+00	7.201E-01	2.003E-03	4.119E-07	1.741E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.445E-02	1.442E-02	1.440E-02	1.428E-02	1.411E-02	1.378E-02	1.253E-02	1.140E-02	8.988E-03	5.591E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	3.421E-01	2.753E-01	2.215E-01	8.285E-02	2.005E-02	1.176E-03	1.389E-08	1.640E-13	7.863E-26	0.000E+00
IN114	4.697E-02	1.542E-02	1.267E-02	5.227E-03	1.457E-03	1.133E-04	4.127E-09	1.504E-13	1.208E-24	0.000E+00
IN114M	1.959E-02	1.610E-02	1.324E-02	5.461E-03	1.523E-03	1.183E-04	4.313E-09	1.573E-13	1.263E-24	0.000E+00
IN115M	3.453E+00	4.842E-02	6.369E-04	5.819E-06	1.409E-06	8.259E-08	9.754E-13	1.152E-17	5.522E-30	0.000E+00
SN119M	1.066E+01	1.025E+01	9.853E+00	8.239E+00	6.365E+00	3.798E+00	4.816E-01	6.108E-02	3.497E-04	1.147E-08
SN121M	1.537E-03	1.536E-03	1.535E-03	1.532E-03	1.527E-03	1.516E-03	1.475E-03	1.434E-03	1.338E-03	1.165E-03
SN123	1.616E+00	1.499E+00	1.390E+00	9.900E-01	6.067E-01	2.279E-01	4.532E-03	9.017E-05	5.032E-09	1.568E-17
SN125	6.728E+00	2.458E+00	8.984E-01	9.514E-03	1.346E-05	2.691E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	3.800E-04	3.800E-04	3.800E-04	3.800E-04	3.800E-04	3.800E-04	3.800E-04	3.800E-04	3.800E-04	3.800E-04
SB124	3.235E-01	2.753E-01	2.344E-01	1.131E-01	3.956E-02	4.837E-03	1.082E-06	2.418E-10	1.808E-19	1.010E-37
SB125	8.666E+00	8.624E+00	8.556E+00	8.202E+00	7.705E+00	6.799E+00	4.123E+00	2.501E+00	7.161E-01	5.874E-02
SB126	2.485E-01	1.137E-01	5.198E-02	1.565E-03	6.238E-05	5.321E-05	5.320E-05	5.320E-05	5.320E-05	5.320E-05
SB126M	1.223E-01	3.800E-04	3.800E-04	3.800E-04	3.800E-04	3.800E-04	3.800E-04	3.800E-04	3.800E-04	3.800E-04
TE123M	2.316E-03	2.136E-03	1.969E-03	1.365E-03	8.047E-04	2.796E-04	4.077E-06	5.945E-08	1.526E-12	1.006E-21
TE125M	1.913E+00	1.924E+00	1.933E+00	1.927E+00	1.855E+00	1.656E+00	1.006E+00	6.102E-01	1.747E-01	1.433E-02
TE127	3.134E+01	6.505E+00	3.912E+00	2.485E+00	1.391E+00	4.359E-01	4.201E-03	4.049E-05	3.693E-10	3.072E-20
TE127M	4.370E+00	4.134E+00	3.792E+00	2.537E+00	1.420E+00	4.450E-01	4.289E-03	4.134E-05	3.771E-10	3.137E-20
TE129	1.190E+02	8.781E+00	6.578E+00	1.784E+00	2.716E-01	6.292E-03	1.813E-09	5.226E-16	2.330E-32	0.000E+00
TE129M	1.792E+01	1.349E+01	1.011E+01	2.741E+00	4.172E-01	9.666E-03	2.786E-09	8.028E-16	3.579E-32	0.000E+00
I129	2.155E-05	2.158E-05	2.160E-05	2.164E-05	2.166E-05	2.166E-05	2.166E-05	2.166E-05	2.166E-05	2.166E-05
I131	4.649E+02	1.429E+02	4.276E+01	1.832E-01	7.026E-05	1.033E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table L.6 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	5.161E+00	3.867E+00	2.184E+00	7.543E-02	3.898E-04	9.446E-09	3.205E-27	1.088E-45	0.000E+00	0.000E+00
XE133	1.054E+03	2.037E+02	3.209E+01	7.526E-03	4.362E-08	1.466E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	3.894E+01	3.844E+01	3.795E+01	3.579E+01	3.291E+01	2.783E+01	1.421E+01	7.259E+00	1.353E+00	4.704E-02
CS135	7.933E-04	7.939E-04	7.939E-04	7.939E-04	7.939E-04	7.939E-04	7.939E-04	7.939E-04	7.939E-04	7.939E-04
CS136	1.417E+01	6.755E+00	3.221E+00	1.134E-01	9.082E-04	5.821E-08	9.827E-25	1.659E-41	0.000E+00	0.000E+00
CS137	8.818E+01	8.810E+01	8.802E+01	8.767E+01	8.717E+01	8.616E+01	8.228E+01	7.856E+01	7.000E+01	5.556E+01
BA136M	2.336E+00	1.113E+00	5.308E-01	1.869E-02	1.497E-04	9.594E-09	1.620E-25	2.734E-42	0.000E+00	0.000E+00
BA137M	8.347E+01	8.334E+01	8.327E+01	8.294E+01	8.246E+01	8.151E+01	7.783E+01	7.432E+01	6.622E+01	5.256E+01
BA140	9.559E+02	4.476E+02	2.096E+02	6.802E+00	4.840E-02	2.450E-06	1.610E-23	1.058E-40	0.000E+00	0.000E+00
LA140	9.652E+02	5.147E+02	2.412E+02	7.827E+00	5.570E-02	2.820E-06	1.853E-23	1.217E-40	0.000E+00	0.000E+00
CE141	9.092E+02	6.782E+02	5.032E+02	1.306E+02	1.867E+01	3.815E-01	6.641E-08	1.156E-14	1.462E-31	0.000E+00
CE142	2.625E-08	2.625E-08	2.625E-08	2.625E-08	2.625E-08	2.625E-08	2.625E-08	2.625E-08	2.625E-08	2.625E-08
CE144	8.295E+02	8.016E+02	7.747E+02	6.640E+02	5.315E+02	3.406E+02	5.744E+01	9.686E+00	1.131E-01	1.542E-05
PR143	8.965E+02	4.882E+02	2.388E+02	9.426E+00	8.898E-02	7.930E-06	5.002E-22	3.155E-38	0.000E+00	0.000E+00
PR144	8.306E+02	8.017E+02	7.747E+02	6.640E+02	5.316E+02	3.406E+02	5.744E+01	9.686E+00	1.131E-01	1.542E-05
PR144M	9.960E+00	9.620E+00	9.297E+00	7.968E+00	6.379E+00	4.087E+00	6.893E-01	1.162E-01	1.357E-03	1.851E-07
ND144	9.541E-13	9.644E-13	9.744E-13	1.015E-12	1.064E-12	1.135E-12	1.240E-12	1.258E-12	1.262E-12	1.262E-12
ND147	3.529E+02	1.469E+02	6.108E+01	1.160E+00	3.809E-03	4.108E-08	5.558E-28	7.519E-48	0.000E+00	0.000E+00
PM145	2.316E-05	2.348E-05	2.379E-05	2.505E-05	2.655E-05	2.868E-05	3.089E-05	2.956E-05	2.456E-05	1.661E-05
PM147	1.833E+02	1.839E+02	1.830E+02	1.755E+02	1.643E+02	1.440E+02	8.490E+01	5.007E+01	1.337E+01	9.541E-01
PM148M	1.940E+01	1.534E+01	1.213E+01	4.195E+00	9.069E-01	4.238E-02	2.022E-07	9.650E-13	4.799E-26	0.000E+00
PM148	8.482E+01	1.461E+01	2.939E+00	2.371E-01	5.108E-02	2.387E-03	1.139E-08	5.435E-14	2.703E-27	0.000E+00
SM145	2.372E-04	2.305E-04	2.240E-04	1.969E-04	1.635E-04	1.127E-04	2.545E-05	5.747E-06	1.393E-07	8.178E-11
SM147	2.951E-09	2.997E-09	3.042E-09	3.244E-09	3.518E-09	4.016E-09	5.464E-09	6.318E-09	7.218E-09	7.523E-09
SM151	5.009E-01	5.034E-01	5.032E-01	5.026E-01	5.016E-01	4.996E-01	4.920E-01	4.845E-01	4.662E-01	4.316E-01
EU152	3.085E-02	3.079E-02	3.074E-02	3.046E-02	3.008E-02	2.933E-02	2.648E-02	2.392E-02	1.854E-02	1.114E-02
EU154	1.961E+00	1.955E+00	1.949E+00	1.921E+00	1.883E+00	1.809E+00	1.540E+00	1.311E+00	8.762E-01	3.916E-01
EU155	1.890E+00	1.880E+00	1.870E+00	1.825E+00	1.763E+00	1.643E+00	1.242E+00	9.400E-01	4.675E-01	1.157E-01
EU156	1.358E+01	7.230E+00	3.816E+00	2.126E-01	3.302E-03	7.960E-07	2.688E-21	9.078E-36	0.000E+00	0.000E+00
GD153	4.475E-02	4.299E-02	4.130E-02	3.446E-02	2.653E-02	1.573E-02	1.944E-03	2.403E-04	1.290E-06	3.721E-11
TB160	1.003E-01	8.767E-02	7.667E-02	4.181E-02	1.744E-02	3.031E-03	2.768E-06	2.529E-09	6.378E-17	4.056E-32
TL206	3.777E-05	5.328E-12	5.328E-12	5.328E-12	5.328E-12	5.328E-12	5.328E-12	5.328E-12	5.328E-12	5.328E-12
TL207	1.905E-09	1.907E-09	1.917E-09	2.037E-09	2.276E-09	2.830E-09	5.098E-09	7.535E-09	1.459E-08	3.215E-08
TL208	4.387E-07	4.459E-07	4.578E-07	5.180E-07	5.906E-07	7.204E-07	1.084E-06	1.284E-06	1.449E-06	1.392E-06
PB210	2.496E-13	2.558E-13	2.596E-13	2.650E-13	2.653E-13	2.650E-13	2.764E-13	3.146E-13	5.955E-13	2.604E-12
PB211	1.910E-09	1.913E-09	1.922E-09	2.042E-09	2.283E-09	2.838E-09	5.112E-09	7.557E-09	1.463E-08	3.224E-08

Table L.6 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.221E-06	1.241E-06	1.274E-06	1.442E-06	1.644E-06	2.005E-06	3.016E-06	3.572E-06	4.032E-06	3.875E-06
BI211	1.912E-09	1.913E-09	1.922E-09	2.042E-09	2.283E-09	2.838E-09	5.112E-09	7.557E-09	1.463E-08	3.224E-08
BI212	1.221E-06	1.241E-06	1.274E-06	1.442E-06	1.644E-06	2.005E-06	3.016E-06	3.572E-06	4.032E-06	3.875E-06
PO212	7.822E-07	7.952E-07	8.164E-07	9.237E-07	1.053E-06	1.285E-06	1.932E-06	2.289E-06	2.583E-06	2.483E-06
PO215	1.910E-09	1.913E-09	1.922E-09	2.042E-09	2.283E-09	2.838E-09	5.112E-09	7.557E-09	1.463E-08	3.224E-08
PO216	1.221E-06	1.241E-06	1.274E-06	1.442E-06	1.644E-06	2.005E-06	3.016E-06	3.572E-06	4.032E-06	3.875E-06
RN219	1.910E-09	1.913E-09	1.922E-09	2.042E-09	2.283E-09	2.838E-09	5.112E-09	7.557E-09	1.463E-08	3.224E-08
RN220	1.221E-06	1.241E-06	1.274E-06	1.442E-06	1.644E-06	2.005E-06	3.016E-06	3.572E-06	4.032E-06	3.875E-06
FR223	2.633E-11	2.684E-11	2.735E-11	2.969E-11	3.312E-11	4.015E-11	7.046E-11	1.041E-10	2.016E-10	4.445E-10
RA223	1.910E-09	1.913E-09	1.922E-09	2.042E-09	2.283E-09	2.838E-09	5.112E-09	7.557E-09	1.463E-08	3.224E-08
RA224	1.221E-06	1.241E-06	1.274E-06	1.442E-06	1.644E-06	2.005E-06	3.016E-06	3.572E-06	4.032E-06	3.875E-06
RA226	1.614E-13	1.655E-13	1.696E-13	1.887E-13	2.183E-13	2.845E-13	6.514E-13	1.200E-12	3.531E-12	1.357E-11
RA228	5.535E-10	5.578E-10	5.620E-10	5.811E-10	6.081E-10	6.599E-10	8.424E-10	9.908E-10	1.252E-09	1.500E-09
AC227	1.908E-09	1.945E-09	1.982E-09	2.152E-09	2.400E-09	2.909E-09	5.106E-09	7.545E-09	1.461E-08	3.221E-08
TH227	1.886E-09	1.892E-09	1.911E-09	2.053E-09	2.294E-09	2.794E-09	5.042E-09	7.452E-09	1.443E-08	3.179E-08
TH228	1.219E-06	1.253E-06	1.287E-06	1.435E-06	1.637E-06	1.998E-06	3.011E-06	3.565E-06	4.029E-06	3.875E-06
TH229	4.189E-10	4.271E-10	4.353E-10	4.731E-10	5.280E-10	6.380E-10	1.078E-09	1.518E-09	2.620E-09	4.825E-09
TH230	2.416E-10	2.448E-10	2.481E-10	2.627E-10	2.842E-10	3.286E-10	5.245E-10	7.497E-10	1.438E-09	3.325E-09
TH231	4.755E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04
TH232	1.637E-09	1.637E-09	1.637E-09	1.637E-09	1.637E-09	1.637E-09	1.637E-09	1.637E-09	1.637E-09	1.637E-09
TH234	1.360E-04	1.352E-04	1.347E-04	1.337E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04
PA231	3.227E-08	3.243E-08	3.256E-08	3.310E-08	3.388E-08	3.543E-08	4.157E-08	4.772E-08	6.306E-08	9.372E-08
PA233	1.816E-01	1.269E-01	8.863E-02	1.759E-02	1.813E-03	1.522E-04	1.367E-04	1.369E-04	1.373E-04	1.387E-04
PA234M	5.816E-04	1.352E-04	1.347E-04	1.337E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04
PA234	8.872E-04	1.758E-07	1.751E-07	1.739E-07	1.737E-07	1.736E-07	1.736E-07	1.736E-07	1.736E-07	1.736E-07
U232	3.691E-06	3.707E-06	3.713E-06	3.742E-06	3.781E-06	3.849E-06	4.033E-06	4.114E-06	4.095E-06	3.785E-06
U233	2.246E-06	2.272E-06	2.290E-06	2.323E-06	2.330E-06	2.332E-06	2.333E-06	2.334E-06	2.337E-06	2.343E-06
U234	9.263E-06	9.293E-06	9.324E-06	9.463E-06	9.665E-06	1.007E-05	1.171E-05	1.332E-05	1.724E-05	2.464E-05
U235	1.451E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04	1.451E-04
U236	3.845E-04	3.845E-04	3.845E-04	3.845E-04	3.845E-04	3.845E-04	3.845E-04	3.845E-04	3.845E-04	3.846E-04
U237	2.280E+02	5.415E+01	1.286E+01	1.944E-02	7.461E-06	5.666E-06	5.147E-06	4.675E-06	3.675E-06	2.272E-06
U238	1.336E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04	1.336E-04
NP237	1.347E-04	1.362E-04	1.365E-04	1.367E-04	1.367E-04	1.367E-04	1.367E-04	1.369E-04	1.373E-04	1.387E-04
PU236	2.165E-05	2.152E-05	2.132E-05	2.044E-05	1.924E-05	1.704E-05	1.048E-05	6.447E-06	1.913E-06	1.686E-07
PU237	9.613E-05	7.771E-05	6.281E-05	2.402E-05	6.000E-06	3.744E-07	5.678E-12	8.612E-17	7.715E-29	0.000E+00
PU238	2.791E-01	2.815E-01	2.822E-01	2.844E-01	2.866E-01	2.886E-01	2.866E-01	2.823E-01	2.714E-01	2.508E-01

Table L.6 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	1.997E-01	2.006E-01	2.006E-01	2.006E-01	2.006E-01	2.006E-01	2.006E-01	2.006E-01	2.006E-01	2.005E-01
PU240	1.180E-01	1.180E-01	1.180E-01	1.180E-01	1.180E-01	1.180E-01	1.180E-01	1.180E-01	1.179E-01	1.178E-01
PU241	2.424E+01	2.419E+01	2.415E+01	2.395E+01	2.366E+01	2.310E+01	2.098E+01	1.906E+01	1.498E+01	9.261E+00
PU242	8.456E-05	8.457E-05	8.457E-05	8.457E-05	8.457E-05	8.457E-05	8.457E-05	8.457E-05	8.457E-05	8.457E-05
PU244	1.347E-12	1.347E-12	1.347E-12	1.347E-12	1.347E-12	1.347E-12	1.347E-12	1.347E-12	1.347E-12	1.347E-12
AM241	3.662E-02	3.811E-02	3.959E-02	4.626E-02	5.577E-02	7.445E-02	1.447E-01	2.082E-01	3.417E-01	5.252E-01
AM242M	7.990E-04	7.989E-04	7.987E-04	7.981E-04	7.972E-04	7.954E-04	7.881E-04	7.810E-04	7.634E-04	7.294E-04
AM242	4.859E+00	7.972E-04	7.947E-04	7.941E-04	7.932E-04	7.914E-04	7.842E-04	7.771E-04	7.596E-04	7.258E-04
AM243	2.036E-04	2.038E-04	2.038E-04	2.038E-04	2.038E-04	2.038E-04	2.038E-04	2.037E-04	2.036E-04	2.034E-04
CM242	2.466E+00	2.340E+00	2.205E+00	1.685E+00	1.144E+00	5.274E-01	2.436E-02	1.711E-03	6.289E-04	6.002E-04
CM243	2.733E-04	2.730E-04	2.727E-04	2.716E-04	2.700E-04	2.667E-04	2.540E-04	2.420E-04	2.143E-04	1.681E-04
CM244	1.067E-02	1.067E-02	1.066E-02	1.059E-02	1.049E-02	1.029E-02	9.529E-03	8.827E-03	7.291E-03	4.973E-03
CM245	3.366E-07	3.366E-07	3.366E-07	3.366E-07	3.366E-07	3.366E-07	3.365E-07	3.365E-07	3.364E-07	3.361E-07
CM246	1.651E-08	1.651E-08	1.651E-08	1.651E-08	1.651E-08	1.651E-08	1.650E-08	1.650E-08	1.648E-08	1.646E-08
CM247	1.439E-14	1.439E-14	1.439E-14	1.439E-14	1.439E-14	1.439E-14	1.439E-14	1.439E-14	1.439E-14	1.439E-14
Subtotal Ci**	1.383E+04	9.635E+03	7.582E+03	4.236E+03	2.609E+03	1.546E+03	6.700E+02	4.670E+02	3.267E+02	2.307E+02
Total Ci***	1.002E+05	9.908E+03	7.653E+03	4.275E+03	2.634E+03	1.559E+03	6.740E+02	4.690E+02	3.271E+02	2.308E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table L.7 FLIP-LEU-I TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: leu.org.7b

BURNUP (BU)

BU: U-235 35.0 g
 BU: % U-235 34.65%
 BU: MWd 33.26
 BU: MWd/MTU 65988
 U-235 DEPL 39.15 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	4.853E-01	4.842E-01	4.832E-01	4.784E-01	4.718E-01	4.588E-01	4.101E-01	3.666E-01	2.769E-01	1.580E-01
BE 10	5.935E-07	5.935E-07	5.935E-07	5.935E-07	5.935E-07	5.935E-07	5.935E-07	5.935E-07	5.935E-07	5.935E-07
C 14	3.791E-03	3.791E-03	3.791E-03	3.791E-03	3.791E-03	3.791E-03	3.790E-03	3.789E-03	3.787E-03	3.782E-03
CL 36	8.193E-05	8.193E-05	8.193E-05	8.193E-05	8.193E-05	8.193E-05	8.193E-05	8.193E-05	8.193E-05	8.193E-05
CR 51	2.149E+02	1.514E+02	1.067E+02	2.193E+01	2.237E+00	2.327E-02	2.729E-10	3.200E-18	4.763E-38	0.000E+00
MN 54	1.269E+01	1.231E+01	1.193E+01	1.037E+01	8.468E+00	5.649E+00	1.119E+00	2.216E-01	3.869E-03	1.179E-06
FE 55	8.746E+01	8.658E+01	8.569E+01	8.183E+01	7.656E+01	6.701E+01	3.933E+01	2.308E+01	6.093E+00	4.244E-01
FE 59	4.086E+00	3.293E+00	2.654E+00	1.002E+00	2.457E-01	1.478E-02	1.933E-07	2.528E-12	1.565E-24	0.000E+00
CO 60	7.248E+01	7.211E+01	7.175E+01	7.013E+01	6.787E+01	6.355E+01	4.886E+01	3.756E+01	1.947E+01	5.230E+00
NI 59	1.546E-02	1.546E-02	1.546E-02	1.546E-02	1.546E-02	1.546E-02	1.546E-02	1.546E-02	1.545E-02	1.545E-02
NI 63	1.957E+00	1.956E+00	1.955E+00	1.953E+00	1.949E+00	1.942E+00	1.913E+00	1.884E+00	1.815E+00	1.683E+00
ZN 65	1.604E+00	1.542E+00	1.481E+00	1.238E+00	9.549E-01	5.684E-01	7.138E-02	8.963E-03	5.008E-05	1.563E-09
SE 79	4.299E-04	4.299E-04	4.299E-04	4.299E-04	4.299E-04	4.299E-04	4.299E-04	4.298E-04	4.298E-04	4.298E-04
KR 85	1.127E+01	1.125E+01	1.122E+01	1.109E+01	1.092E+01	1.057E+01	9.288E+00	8.162E+00	5.909E+00	3.096E+00
RB 87	2.786E-08	2.786E-08	2.786E-08	2.786E-08	2.786E-08	2.786E-08	2.786E-08	2.786E-08	2.786E-08	2.786E-08
SR 89	8.076E+02	6.666E+02	5.500E+02	2.308E+02	6.597E+01	5.388E+00	2.397E-04	1.066E-08	1.408E-19	0.000E+00
SR 90	9.430E+01	9.422E+01	9.413E+01	9.374E+01	9.319E+01	9.208E+01	8.781E+01	8.373E+01	7.434E+01	5.860E+01
Y 90	9.906E+01	9.437E+01	9.415E+01	9.377E+01	9.321E+01	9.211E+01	8.783E+01	8.375E+01	7.436E+01	5.862E+01
Y 91	9.984E+02	8.516E+02	7.215E+02	3.410E+02	1.157E+02	1.331E+01	2.335E-03	4.095E-07	1.668E-16	2.769E-35
ZR 93	2.537E-03	2.538E-03	2.538E-03	2.538E-03	2.538E-03	2.538E-03	2.538E-03	2.538E-03	2.538E-03	2.537E-03
ZR 95	1.234E+03	1.060E+03	9.107E+02	4.590E+02	1.708E+02	2.365E+01	8.694E-03	3.196E-06	8.279E-15	5.558E-32
NB 93M	2.315E-04	2.358E-04	2.400E-04	2.591E-04	2.864E-04	3.397E-04	5.404E-04	7.215E-04	1.101E-03	1.624E-03

Table L.7 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	2.353E-04	2.353E-04	2.353E-04	2.353E-04	2.353E-04	2.353E-04	2.352E-04	2.352E-04	2.352E-04	2.351E-04
NB 95	1.263E+03	1.234E+03	1.172E+03	7.747E+02	3.387E+02	5.138E+01	1.930E-02	7.095E-06	1.839E-14	1.234E-31
NB 95M	8.677E+00	7.830E+00	6.754E+00	3.405E+00	1.267E+00	1.755E-01	6.449E-05	2.370E-08	6.142E-17	4.123E-34
MO 93	9.682E-05	9.682E-05	9.682E-05	9.682E-05	9.681E-05	9.680E-05	9.677E-05	9.673E-05	9.663E-05	9.644E-05
TC 99	1.420E-02	1.424E-02	1.424E-02	1.424E-02	1.424E-02	1.424E-02	1.424E-02	1.424E-02	1.424E-02	1.424E-02
RU103	6.635E+02	5.183E+02	4.049E+02	1.326E+02	2.651E+01	1.059E+00	2.696E-06	6.863E-12	7.098E-26	0.000E+00
RU106	1.392E+02	1.356E+02	1.320E+02	1.172E+02	9.871E+01	7.001E+01	1.771E+01	4.481E+00	1.443E-01	1.496E-04
RH103M	5.976E+02	4.673E+02	3.650E+02	1.196E+02	2.390E+01	9.545E-01	2.430E-06	6.187E-12	6.398E-26	0.000E+00
RH106	1.455E+02	1.356E+02	1.320E+02	1.172E+02	9.871E+01	7.001E+01	1.771E+01	4.481E+00	1.443E-01	1.496E-04
PD107	3.199E-05	3.199E-05	3.199E-05	3.199E-05	3.199E-05	3.199E-05	3.199E-05	3.199E-05	3.199E-05	3.199E-05
AG110	9.660E+00	4.612E-03	4.436E-03	3.722E-03	2.890E-03	1.742E-03	2.300E-04	3.036E-05	1.922E-07	7.702E-12
AG110M	3.605E-01	3.468E-01	3.336E-01	2.798E-01	2.173E-01	1.310E-01	1.729E-02	2.282E-03	1.445E-05	5.790E-10
AG111	1.242E+01	3.385E+00	9.201E-01	2.560E-03	5.262E-07	2.224E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	1.742E-02	1.739E-02	1.736E-02	1.722E-02	1.701E-02	1.662E-02	1.511E-02	1.374E-02	1.084E-02	6.741E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	4.110E-01	3.306E-01	2.660E-01	9.951E-02	2.410E-02	1.412E-03	1.668E-08	1.970E-13	9.444E-26	0.000E+00
IN114	6.781E-02	2.224E-02	1.828E-02	7.542E-03	2.103E-03	1.633E-04	5.956E-09	2.172E-13	1.743E-24	0.000E+00
IN114M	2.828E-02	2.324E-02	1.911E-02	7.881E-03	2.197E-03	1.707E-04	6.224E-09	2.269E-13	1.822E-24	0.000E+00
IN115M	4.143E+00	5.809E-02	7.641E-04	6.989E-06	1.692E-06	9.919E-08	1.172E-12	1.384E-17	6.633E-30	0.000E+00
SN119M	1.296E+01	1.246E+01	1.197E+01	1.001E+01	7.734E+00	4.615E+00	5.852E-01	7.421E-02	4.249E-04	1.393E-08
SN121M	1.842E-03	1.841E-03	1.840E-03	1.836E-03	1.830E-03	1.817E-03	1.768E-03	1.719E-03	1.604E-03	1.396E-03
SN123	1.928E+00	1.789E+00	1.659E+00	1.181E+00	7.240E-01	2.720E-01	5.409E-03	1.076E-04	6.006E-09	1.871E-17
SN125	8.124E+00	2.969E+00	1.085E+00	1.149E-02	1.625E-05	3.251E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	4.491E-04	4.491E-04	4.491E-04	4.491E-04	4.491E-04	4.491E-04	4.491E-04	4.491E-04	4.491E-04	4.491E-04
SB124	4.305E-01	3.664E-01	3.119E-01	1.506E-01	5.265E-02	6.438E-03	1.439E-06	3.218E-10	2.406E-19	1.344E-37
SB125	1.035E+01	1.030E+01	1.022E+01	9.794E+00	9.201E+00	8.120E+00	4.925E+00	2.986E+00	8.552E-01	7.015E-02
SB126	3.071E-01	1.404E-01	6.422E-02	1.931E-03	7.423E-05	6.288E-05	6.288E-05	6.288E-05	6.288E-05	6.287E-05
SB126M	1.492E-01	4.491E-04	4.491E-04	4.491E-04	4.491E-04	4.491E-04	4.491E-04	4.491E-04	4.491E-04	4.491E-04
TE123M	3.551E-03	3.275E-03	3.019E-03	2.093E-03	1.234E-03	4.288E-04	6.252E-06	9.116E-08	2.340E-12	1.542E-21
TE125M	2.281E+00	2.296E+00	2.306E+00	2.301E+00	2.215E+00	1.978E+00	1.202E+00	7.288E-01	2.087E-01	1.711E-02
TE127	3.726E+01	7.744E+00	4.662E+00	2.962E+00	1.658E+00	5.195E-01	5.007E-03	4.826E-05	4.402E-10	3.662E-20
TE127M	5.209E+00	4.926E+00	4.520E+00	3.024E+00	1.693E+00	5.304E-01	5.112E-03	4.927E-05	4.494E-10	3.738E-20
TE129	1.395E+02	1.030E+01	7.718E+00	2.093E+00	3.186E-01	7.383E-03	2.128E-09	6.131E-16	2.734E-32	0.000E+00
TE129M	2.103E+01	1.583E+01	1.186E+01	3.216E+00	4.895E-01	1.134E-02	3.269E-09	9.419E-16	4.200E-32	0.000E+00
I129	2.525E-05	2.529E-05	2.531E-05	2.536E-05	2.538E-05	2.538E-05	2.538E-05	2.538E-05	2.538E-05	2.538E-05
I131	5.393E+02	1.659E+02	4.961E+01	2.126E-01	8.151E-05	1.198E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table L.7 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	5.988E+00	4.486E+00	2.534E+00	8.752E-02	4.522E-04	1.096E-08	3.719E-27	1.262E-45	0.000E+00	0.000E+00	0.000E+00
XE133	1.217E+03	2.352E+02	3.705E+01	8.689E-03	5.037E-08	1.693E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	5.438E+01	5.369E+01	5.300E+01	5.001E+01	4.598E+01	3.887E+01	1.986E+01	1.014E+01	1.890E+00	6.571E-02	8.610E-04
CS135	8.604E-04	8.610E-04	8.610E-04	8.610E-04	8.610E-04	8.610E-04	8.610E-04	8.610E-04	8.610E-04	8.610E-04	8.610E-04
CS136	1.862E+01	8.880E+00	4.234E+00	1.491E-01	1.194E-03	7.652E-08	1.292E-24	2.181E-41	0.000E+00	0.000E+00	0.000E+00
CS137	1.028E+02	1.027E+02	1.026E+02	1.022E+02	1.016E+02	1.005E+02	9.595E+01	9.162E+01	8.163E+01	6.480E+01	0.000E+00
BA136M	3.071E+00	1.463E+00	6.978E-01	2.457E-02	1.967E-04	1.261E-08	2.129E-25	3.594E-42	0.000E+00	0.000E+00	0.000E+00
BA137M	9.735E+01	9.719E+01	9.710E+01	9.672E+01	9.616E+01	9.506E+01	9.077E+01	8.667E+01	7.722E+01	6.130E+01	0.000E+00
BA140	1.101E+03	5.156E+02	2.414E+02	7.835E+00	5.575E-02	2.823E-06	1.855E-23	1.218E-40	0.000E+00	0.000E+00	0.000E+00
LA140	1.114E+03	5.929E+02	2.778E+02	9.017E+00	6.416E-02	3.248E-06	2.134E-23	1.402E-40	0.000E+00	0.000E+00	0.000E+00
CE141	1.047E+03	7.812E+02	5.796E+02	1.505E+02	2.150E+01	4.393E-01	7.648E-08	1.331E-14	1.684E-31	0.000E+00	0.000E+00
CE142	3.035E-08	3.035E-08	3.035E-08	3.035E-08	3.035E-08	3.035E-08	3.035E-08	3.035E-08	3.035E-08	3.035E-08	3.035E-08
CE144	9.613E+02	9.290E+02	8.978E+02	7.695E+02	6.160E+02	3.947E+02	6.656E+01	1.122E+01	1.311E-01	1.787E-05	0.000E+00
PR143	1.030E+03	5.607E+02	2.742E+02	1.083E+01	1.022E-01	9.109E-06	5.745E-22	3.624E-38	0.000E+00	0.000E+00	0.000E+00
PR144	9.628E+02	9.290E+02	8.978E+02	7.695E+02	6.160E+02	3.947E+02	6.657E+01	1.122E+01	1.311E-01	1.787E-05	0.000E+00
PR144M	1.154E+01	1.115E+01	1.077E+01	9.234E+00	7.392E+00	4.737E+00	7.988E-01	1.347E-01	1.573E-03	2.145E-07	1.493E-12
ND144	1.137E-12	1.149E-12	1.160E-12	1.208E-12	1.265E-12	1.347E-12	1.468E-12	1.489E-12	1.493E-12	1.493E-12	1.493E-12
ND147	4.068E+02	1.693E+02	7.042E+01	1.337E+00	4.391E-03	4.736E-08	6.407E-28	8.669E-48	0.000E+00	0.000E+00	0.000E+00
PM145	2.733E-05	2.792E-05	2.829E-05	2.981E-05	3.163E-05	3.421E-05	3.691E-05	3.533E-05	2.936E-05	1.986E-05	1.056E+00
PM147	2.027E+02	2.033E+02	2.024E+02	1.941E+02	1.818E+02	1.593E+02	9.394E+01	5.540E+01	1.480E+01	1.480E+01	1.480E+01
PM148M	2.383E+01	1.884E+01	1.489E+01	5.152E+00	1.114E+00	5.206E-02	2.484E-07	1.185E-12	5.894E-26	0.000E+00	0.000E+00
PM148	1.135E+02	1.947E+01	3.861E+00	2.913E-01	6.274E-02	2.932E-03	1.399E-08	6.675E-14	3.320E-27	0.000E+00	0.000E+00
SM145	2.863E-04	2.782E-04	2.704E-04	2.377E-04	1.974E-04	1.360E-04	3.072E-05	6.938E-06	1.681E-07	9.872E-11	8.336E-09
SM147	3.279E-09	3.329E-09	3.380E-09	3.602E-09	3.906E-09	4.457E-09	6.059E-09	7.004E-09	8.000E-09	4.702E-01	4.354E-01
SM151	5.047E-01	5.076E-01	5.075E-01	5.068E-01	5.059E-01	5.039E-01	4.963E-01	4.886E-01	4.801E-02	1.801E-02	1.082E-02
EU152	2.999E-02	2.992E-02	2.986E-02	2.961E-02	2.923E-02	2.850E-02	2.574E-02	2.325E-02	1.882E+00	1.259E+00	5.625E-01
EU154	2.817E+00	2.807E+00	2.799E+00	2.760E+00	2.705E+00	2.598E+00	2.212E+00	1.882E+00	1.143E+00	5.686E-01	1.407E-01
EU155	2.299E+00	2.286E+00	2.274E+00	2.220E+00	2.143E+00	1.999E+00	1.511E+00	1.280E-35	0.000E+00	0.000E+00	0.000E+00
EU156	1.916E+01	1.019E+01	5.378E+00	2.998E-01	4.655E-03	1.122E-06	3.789E-21	2.901E-04	1.558E-06	4.493E-11	5.456E-32
GD153	5.404E-02	5.192E-02	4.987E-02	4.161E-02	3.204E-02	1.900E-02	2.348E-03	3.401E-09	8.578E-17	6.385E-12	6.385E-12
TB160	1.349E-01	1.179E-01	1.031E-01	5.624E-02	2.345E-02	4.076E-03	3.724E-06	6.385E-12	6.385E-12	1.486E-08	3.190E-08
TL206	4.623E-05	6.385E-12	6.385E-12	6.385E-12	6.385E-12	6.385E-12	6.385E-12	7.818E-09	1.955E-06	1.893E-06	3.360E-12
TL207	1.996E-09	1.999E-09	2.008E-09	2.136E-09	2.390E-09	2.974E-09	5.330E-09	1.424E-06	4.570E-13	7.884E-13	3.199E-08
TL208	5.600E-07	5.695E-07	5.850E-07	6.638E-07	7.593E-07	9.316E-07	1.424E-06	1.706E-06	1.955E-06	1.955E-06	1.955E-06
PB210	3.882E-13	3.980E-13	4.040E-13	4.121E-13	4.120E-13	4.101E-13	4.174E-13	4.570E-13	7.884E-13	7.884E-13	7.884E-13
PB211	2.001E-09	2.004E-09	2.014E-09	2.142E-09	2.396E-09	2.982E-09	5.345E-09	7.840E-09	1.490E-08	1.490E-08	1.490E-08

Table L.7 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.559E-06	1.585E-06	1.628E-06	1.848E-06	2.113E-06	2.593E-06	3.964E-06	4.748E-06	5.440E-06	5.269E-06
BI211	2.003E-09	2.004E-09	2.014E-09	2.142E-09	2.396E-09	2.982E-09	5.345E-09	7.840E-09	1.490E-08	3.199E-08
BI212	1.559E-06	1.585E-06	1.628E-06	1.848E-06	2.113E-06	2.593E-06	3.964E-06	4.748E-06	5.440E-06	5.269E-06
PO212	9.986E-07	1.016E-06	1.043E-06	1.184E-06	1.354E-06	1.661E-06	2.540E-06	3.042E-06	3.486E-06	3.376E-06
PO215	2.001E-09	2.004E-09	2.014E-09	2.142E-09	2.396E-09	2.982E-09	5.345E-09	7.840E-09	1.490E-08	3.199E-08
PO216	1.559E-06	1.585E-06	1.628E-06	1.848E-06	2.113E-06	2.593E-06	3.964E-06	4.748E-06	5.440E-06	5.269E-06
RN219	2.001E-09	2.004E-09	2.014E-09	2.142E-09	2.396E-09	2.982E-09	5.345E-09	7.840E-09	1.490E-08	3.199E-08
RN220	1.559E-06	1.585E-06	1.628E-06	1.848E-06	2.113E-06	2.593E-06	3.964E-06	4.748E-06	5.440E-06	5.269E-06
FR223	2.758E-11	2.813E-11	2.867E-11	3.116E-11	3.478E-11	4.218E-11	7.367E-11	1.080E-10	2.054E-10	4.411E-10
RA223	2.001E-09	2.004E-09	2.014E-09	2.142E-09	2.396E-09	2.982E-09	5.345E-09	7.840E-09	1.490E-08	3.199E-08
RA224	1.559E-06	1.585E-06	1.628E-06	1.848E-06	2.113E-06	2.593E-06	3.964E-06	4.748E-06	5.440E-06	5.269E-06
RA226	1.871E-13	1.918E-13	1.965E-13	2.188E-13	2.532E-13	3.304E-13	7.641E-13	1.428E-12	4.362E-12	1.775E-11
RA228	5.511E-10	5.554E-10	5.596E-10	5.786E-10	6.055E-10	6.571E-10	8.389E-10	9.868E-10	1.247E-09	1.494E-09
AC227	1.999E-09	2.038E-09	2.078E-09	2.258E-09	2.520E-09	3.057E-09	5.338E-09	7.828E-09	1.488E-08	3.196E-08
TH227	1.976E-09	1.983E-09	2.002E-09	2.154E-09	2.409E-09	2.935E-09	5.271E-09	7.732E-09	1.469E-08	3.155E-08
TH228	1.556E-06	1.600E-06	1.645E-06	1.839E-06	2.105E-06	2.584E-06	3.958E-06	4.738E-06	5.436E-06	5.269E-06
TH229	4.809E-10	4.903E-10	4.998E-10	5.431E-10	6.060E-10	7.321E-10	1.237E-09	1.742E-09	3.005E-09	5.535E-09
TH230	2.805E-10	2.842E-10	2.880E-10	3.053E-10	3.308E-10	3.840E-10	6.269E-10	9.173E-10	1.847E-09	4.538E-09
TH231	5.368E-04	1.338E-04	1.338E-04	1.337E-04	1.337E-04	1.337E-04	1.337E-04	1.337E-04	1.337E-04	1.337E-04
TH232	1.630E-09	1.630E-09	1.630E-09	1.630E-09	1.630E-09	1.630E-09	1.631E-09	1.631E-09	1.631E-09	1.631E-09
TH234	1.368E-04	1.356E-04	1.348E-04	1.334E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04
PA231	3.428E-08	3.443E-08	3.455E-08	3.506E-08	3.577E-08	3.720E-08	4.286E-08	4.853E-08	6.267E-08	9.094E-08
PA233	2.210E-01	1.545E-01	1.079E-01	2.142E-02	2.226E-03	2.044E-04	1.857E-04	1.858E-04	1.865E-04	1.885E-04
PA234M	8.006E-04	1.356E-04	1.348E-04	1.334E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04
PA234	1.321E-03	1.763E-07	1.753E-07	1.735E-07	1.732E-07	1.731E-07	1.731E-07	1.731E-07	1.731E-07	1.731E-07
U232	4.785E-06	4.809E-06	4.820E-06	4.868E-06	4.934E-06	5.052E-06	5.374E-06	5.529E-06	5.554E-06	5.150E-06
U233	2.570E-06	2.601E-06	2.623E-06	2.663E-06	2.672E-06	2.674E-06	2.675E-06	2.677E-06	2.681E-06	2.689E-06
U234	1.085E-05	1.090E-05	1.095E-05	1.118E-05	1.151E-05	1.217E-05	1.483E-05	1.745E-05	2.383E-05	3.586E-05
U235	1.337E-04	1.337E-04	1.337E-04	1.337E-04	1.337E-04	1.337E-04	1.337E-04	1.337E-04	1.337E-04	1.337E-04
U236	4.406E-04	4.406E-04	4.406E-04	4.406E-04	4.406E-04	4.406E-04	4.406E-04	4.406E-04	4.406E-04	4.407E-04
U237	3.181E+02	7.555E+01	1.794E+01	2.712E-02	1.066E-05	8.153E-06	7.405E-06	6.726E-06	5.288E-06	3.269E-06
U238	1.332E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04	1.332E-04
NP237	1.828E-04	1.849E-04	1.854E-04	1.855E-04	1.855E-04	1.856E-04	1.857E-04	1.858E-04	1.865E-04	1.885E-04
PU236	3.524E-05	3.505E-05	3.472E-05	3.329E-05	3.133E-05	2.774E-05	1.707E-05	1.050E-05	3.116E-06	2.745E-07
PU237	1.756E-04	1.419E-04	1.147E-04	4.387E-05	1.096E-05	6.839E-07	1.037E-11	1.573E-16	1.409E-28	0.000E+00
PU238	4.525E-01	4.566E-01	4.577E-01	4.617E-01	4.656E-01	4.693E-01	4.664E-01	4.593E-01	4.416E-01	4.081E-01

Table L.7 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	2.172E-01	2.183E-01	2.183E-01	2.183E-01	2.183E-01	2.183E-01	2.183E-01	2.182E-01	2.182E-01	2.181E-01
PU240	1.446E-01	1.446E-01	1.446E-01	1.446E-01	1.446E-01	1.446E-01	1.446E-01	1.446E-01	1.445E-01	1.444E-01
PU241	3.487E+01	3.481E+01	3.475E+01	3.446E+01	3.405E+01	3.324E+01	3.019E+01	2.742E+01	2.156E+01	1.332E+01
PU242	1.498E-04	1.498E-04	1.498E-04	1.498E-04	1.498E-04	1.498E-04	1.498E-04	1.498E-04	1.498E-04	1.498E-04
PU244	3.546E-12	3.546E-12	3.546E-12	3.546E-12	3.546E-12	3.546E-12	3.546E-12	3.546E-12	3.546E-12	3.546E-12
AM241	5.182E-02	5.396E-02	5.609E-02	6.569E-02	7.938E-02	1.063E-01	2.073E-01	2.988E-01	4.908E-01	7.549E-01
AM242M	1.231E-03	1.231E-03	1.230E-03	1.229E-03	1.228E-03	1.225E-03	1.214E-03	1.203E-03	1.176E-03	1.124E-03
AM242	8.413E+00	1.228E-03	1.224E-03	1.223E-03	1.222E-03	1.219E-03	1.208E-03	1.197E-03	1.170E-03	1.118E-03
AM243	4.313E-04	4.318E-04	4.318E-04	4.318E-04	4.318E-04	4.318E-04	4.317E-04	4.316E-04	4.314E-04	4.310E-04
CM242	4.317E+00	4.095E+00	3.859E+00	2.950E+00	2.002E+00	9.229E-01	4.251E-02	2.861E-03	9.689E-04	9.245E-04
CM243	5.768E-04	5.762E-04	5.757E-04	5.733E-04	5.698E-04	5.629E-04	5.362E-04	5.108E-04	4.523E-04	3.547E-04
CM244	2.762E-02	2.762E-02	2.757E-02	2.739E-02	2.713E-02	2.662E-02	2.466E-02	2.284E-02	1.887E-02	1.287E-02
CM245	1.030E-06	1.030E-06	1.030E-06	1.030E-06	1.030E-06	1.030E-06	1.030E-06	1.030E-06	1.030E-06	1.029E-06
CM246	6.154E-08	6.154E-08	6.154E-08	6.153E-08	6.153E-08	6.153E-08	6.151E-08	6.149E-08	6.145E-08	6.136E-08
CM247	6.469E-14	6.469E-14	6.469E-14	6.469E-14	6.469E-14	6.469E-14	6.469E-14	6.469E-14	6.469E-14	6.469E-14
Subtotal Ci**	1.613E+04	1.121E+04	8.821E+03	4.939E+03	3.051E+03	1.815E+03	7.889E+02	5.501E+02	3.847E+02	2.712E+02
Total Ci***	1.163E+05	1.154E+04	8.908E+03	4.986E+03	3.081E+03	1.830E+03	7.937E+02	5.525E+02	3.852E+02	2.713E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

Table L.8 FLIP-LEU-I TRIGA Fuel Activity (Curies) as a function of Decay Time.

Case: leu.org.8b

BURNUP (BU)

BU: U-235 40.0 g
 BU: % U-235 39.60%
 BU: MWd 38.01
 BU: MWd/MTU 75415
 U-235 DEPL 44.25 g

ISOTOPE	ACTIVITY (CURIES)									
	0-days*	14-days	28-days	0.25-years	0.5-years	1-years	3-years	5-years	10-years	20-years
H 3	5.560E-01	5.547E-01	5.536E-01	5.483E-01	5.406E-01	5.256E-01	4.699E-01	4.200E-01	3.173E-01	1.811E-01
BE 10	6.974E-07	6.974E-07	6.974E-07	6.974E-07	6.974E-07	6.974E-07	6.974E-07	6.974E-07	6.974E-07	6.974E-07
C 14	4.455E-03	4.455E-03	4.455E-03	4.455E-03	4.455E-03	4.455E-03	4.453E-03	4.452E-03	4.450E-03	4.444E-03
CL 36	9.596E-05	9.596E-05	9.596E-05	9.596E-05	9.596E-05	9.596E-05	9.596E-05	9.596E-05	9.596E-05	9.596E-05
CR 51	2.577E+02	1.816E+02	1.279E+02	2.629E+01	2.682E+00	2.790E-02	3.272E-10	3.836E-18	5.710E-38	0.000E+00
MN 54	1.510E+01	1.464E+01	1.419E+01	1.233E+01	1.007E+01	6.719E+00	1.331E+00	2.636E-01	4.601E-03	1.402E-06
FE 55	1.033E+02	1.022E+02	1.012E+02	9.662E+01	9.039E+01	7.912E+01	4.644E+01	2.726E+01	7.194E+00	5.011E-01
FE 59	4.922E+00	3.968E+00	3.198E+00	1.207E+00	2.960E-01	1.780E-02	2.329E-07	3.046E-12	1.885E-24	0.000E+00
CO 60	8.507E+01	8.464E+01	8.422E+01	8.232E+01	7.966E+01	7.459E+01	5.735E+01	4.409E+01	2.285E+01	6.139E+00
NI 59	1.801E-02	1.801E-02	1.801E-02	1.801E-02	1.801E-02	1.801E-02	1.801E-02	1.801E-02	1.801E-02	1.801E-02
NI 63	2.294E+00	2.294E+00	2.293E+00	2.290E+00	2.286E+00	2.277E+00	2.243E+00	2.210E+00	2.128E+00	1.974E+00
ZN 65	1.914E+00	1.839E+00	1.767E+00	1.477E+00	1.139E+00	6.782E-01	8.516E-02	1.069E-02	5.975E-05	1.865E-09
SE 79	4.899E-04	4.899E-04	4.899E-04	4.899E-04	4.899E-04	4.899E-04	4.899E-04	4.899E-04	4.899E-04	4.898E-04
KR 85	1.280E+01	1.277E+01	1.274E+01	1.260E+01	1.239E+01	1.200E+01	1.055E+01	9.267E+00	6.708E+00	3.516E+00
RB 87	3.159E-08	3.159E-08	3.159E-08	3.159E-08	3.159E-08	3.159E-08	3.159E-08	3.159E-08	3.159E-08	3.159E-08
SR 89	9.030E+02	7.453E+02	6.151E+02	2.581E+02	7.377E+01	6.025E+00	2.680E-04	1.192E-08	1.575E-19	0.000E+00
SR 90	1.070E+02	1.069E+02	1.068E+02	1.063E+02	1.057E+02	1.044E+02	9.960E+01	9.497E+01	8.432E+01	6.647E+01
Y 90	1.128E+02	1.070E+02	1.068E+02	1.064E+02	1.057E+02	1.045E+02	9.962E+01	9.499E+01	8.434E+01	6.649E+01
Y 91	1.119E+03	9.546E+02	8.086E+02	3.822E+02	1.296E+02	1.492E+01	2.617E-03	4.590E-07	1.870E-16	3.104E-35
ZR 93	2.897E-03	2.898E-03	2.898E-03	2.898E-03	2.898E-03	2.898E-03	2.898E-03	2.898E-03	2.898E-03	2.898E-03
ZR 95	1.398E+03	1.202E+03	1.033E+03	5.206E+02	1.937E+02	2.682E+01	9.859E-03	3.625E-06	9.391E-15	6.303E-32
NB 93M	2.646E-04	2.695E-04	2.743E-04	2.961E-04	3.272E-04	3.882E-04	6.172E-04	8.242E-04	1.258E-03	1.855E-03

Table L.8 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

NB 94	2.757E-04	2.757E-04	2.757E-04	2.757E-04	2.757E-04	2.757E-04	2.756E-04	2.756E-04	2.756E-04	2.755E-04
NB 95	1.433E+03	1.399E+03	1.330E+03	8.787E+02	3.841E+02	5.827E+01	2.189E-02	8.046E-06	2.085E-14	1.399E-31
NB 95M	9.842E+00	8.881E+00	7.659E+00	3.862E+00	1.437E+00	1.990E-01	7.314E-05	2.688E-08	6.966E-17	4.677E-34
MO 93	1.138E-04	1.138E-04	1.138E-04	1.138E-04	1.138E-04	1.138E-04	1.137E-04	1.137E-04	1.136E-04	1.133E-04
TC 99	1.611E-02	1.615E-02	1.616E-02	1.616E-02	1.616E-02	1.616E-02	1.615E-02	1.615E-02	1.615E-02	1.615E-02
RU103	7.668E+02	5.990E+02	4.679E+02	1.533E+02	3.063E+01	1.224E+00	3.115E-06	7.931E-12	8.202E-26	0.000E+00
RU106	1.701E+02	1.657E+02	1.614E+02	1.433E+02	1.207E+02	8.558E+01	2.165E+01	5.478E+00	1.764E-01	1.828E-04
RH103M	6.906E+02	5.400E+02	4.218E+02	1.382E+02	2.761E+01	1.103E+00	2.808E-06	7.149E-12	7.394E-26	0.000E+00
RH106	1.791E+02	1.657E+02	1.614E+02	1.433E+02	1.207E+02	8.558E+01	2.165E+01	5.478E+00	1.764E-01	1.828E-04
PD107	3.929E-05	3.929E-05	3.929E-05	3.929E-05	3.929E-05	3.929E-05	3.929E-05	3.929E-05	3.929E-05	3.929E-05
AG110	1.424E+01	6.698E-03	6.443E-03	5.406E-03	4.198E-03	2.530E-03	3.340E-04	4.408E-05	2.791E-07	1.119E-11
AG110M	5.236E-01	5.036E-01	4.844E-01	4.064E-01	3.155E-01	1.903E-01	2.511E-02	3.314E-03	2.099E-05	8.410E-10
AG111	1.552E+01	4.231E+00	1.150E+00	3.200E-03	6.578E-07	2.781E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD113M	2.061E-02	2.058E-02	2.054E-02	2.037E-02	2.013E-02	1.966E-02	1.788E-02	1.626E-02	1.282E-02	7.975E-03
CD113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CD115M	4.842E-01	3.895E-01	3.133E-01	1.172E-01	2.838E-02	1.664E-03	1.965E-08	2.321E-13	1.113E-25	0.000E+00
IN114	9.435E-02	3.094E-02	2.543E-02	1.049E-02	2.924E-03	2.272E-04	8.285E-09	3.021E-13	2.425E-24	0.000E+00
IN114M	3.933E-02	3.233E-02	2.657E-02	1.096E-02	3.056E-03	2.374E-04	8.658E-09	3.157E-13	2.533E-24	0.000E+00
IN115M	4.876E+00	6.838E-02	8.993E-04	8.233E-06	1.993E-06	1.169E-07	1.380E-12	1.630E-17	7.814E-30	0.000E+00
SN119M	1.545E+01	1.485E+01	1.428E+01	1.194E+01	9.222E+00	5.503E+00	6.978E-01	8.849E-02	5.067E-04	1.661E-08
SN121M	2.166E-03	2.165E-03	2.163E-03	2.158E-03	2.151E-03	2.136E-03	2.077E-03	2.021E-03	1.886E-03	1.641E-03
SN123	2.256E+00	2.092E+00	1.941E+00	1.382E+00	8.471E-01	3.181E-01	6.328E-03	1.259E-04	7.026E-09	2.189E-17
SN125	9.617E+00	3.514E+00	1.284E+00	1.360E-02	1.924E-05	3.847E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00
SN126	5.199E-04	5.199E-04	5.199E-04	5.199E-04	5.199E-04	5.199E-04	5.199E-04	5.199E-04	5.199E-04	5.198E-04
SB124	5.592E-01	4.760E-01	4.051E-01	1.956E-01	6.839E-02	8.362E-03	1.870E-06	4.181E-10	3.124E-19	1.746E-37
SB125	1.211E+01	1.205E+01	1.196E+01	1.146E+01	1.077E+01	9.503E+00	5.763E+00	3.495E+00	1.001E+00	8.210E-02
SB126	3.722E-01	1.701E-01	7.782E-02	2.336E-03	8.654E-05	7.279E-05	7.278E-05	7.278E-05	7.278E-05	7.278E-05
SB126M	1.779E-01	5.199E-04	5.199E-04	5.199E-04	5.199E-04	5.199E-04	5.199E-04	5.199E-04	5.199E-04	5.198E-04
TE123M	5.240E-03	4.832E-03	4.455E-03	3.089E-03	1.821E-03	6.328E-04	9.226E-06	1.345E-07	3.453E-12	2.275E-21
TE125M	2.667E+00	2.685E+00	2.696E+00	2.692E+00	2.592E+00	2.314E+00	1.406E+00	8.529E-01	2.442E-01	2.003E-02
TE127	4.335E+01	9.025E+00	5.439E+00	3.456E+00	1.935E+00	6.062E-01	5.843E-03	5.631E-05	5.136E-10	4.273E-20
TE127M	6.079E+00	5.749E+00	5.274E+00	3.528E+00	1.975E+00	6.189E-01	5.965E-03	5.749E-05	5.244E-10	4.362E-20
TE129	1.602E+02	1.183E+01	8.863E+00	2.404E+00	3.659E-01	8.478E-03	2.443E-09	7.041E-16	3.139E-32	0.000E+00
TE129M	2.415E+01	1.818E+01	1.362E+01	3.693E+00	5.621E-01	1.302E-02	3.753E-09	1.082E-15	4.823E-32	0.000E+00
I129	2.898E-05	2.902E-05	2.904E-05	2.910E-05	2.912E-05	2.912E-05	2.912E-05	2.912E-05	2.912E-05	2.912E-05
I131	6.124E+02	1.884E+02	5.634E+01	2.414E-01	9.258E-05	1.361E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Table L.8 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

XE131M	6.800E+00	5.095E+00	2.878E+00	9.939E-02	5.136E-04	1.245E-08	4.223E-27	1.433E-45	0.000E+00	0.000E+00
XE133	1.375E+03	2.658E+02	4.187E+01	9.820E-03	5.692E-08	1.913E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CS134	7.297E+01	7.204E+01	7.112E+01	6.710E+01	6.169E+01	5.216E+01	2.664E+01	1.361E+01	2.537E+00	8.817E-02
CS135	9.156E-04	9.163E-04	9.163E-04	9.163E-04	9.163E-04	9.163E-04	9.163E-04	9.163E-04	9.163E-04	9.163E-04
CS136	2.363E+01	1.127E+01	5.372E+00	1.892E-01	1.515E-03	9.709E-08	1.639E-24	2.767E-41	0.000E+00	0.000E+00
CS137	1.175E+02	1.174E+02	1.173E+02	1.168E+02	1.161E+02	1.148E+02	1.096E+02	1.047E+02	9.325E+01	7.402E+01
BA136M	3.896E+00	1.857E+00	8.853E-01	3.118E-02	2.496E-04	1.600E-08	2.701E-25	4.560E-42	0.000E+00	0.000E+00
BA137M	1.112E+02	1.110E+02	1.109E+02	1.105E+02	1.098E+02	1.086E+02	1.037E+02	9.901E+01	8.821E+01	7.002E+01
BA140	1.241E+03	5.813E+02	2.722E+02	8.833E+00	6.285E-02	3.182E-06	2.091E-23	1.374E-40	0.000E+00	0.000E+00
LA140	1.259E+03	6.684E+02	3.132E+02	1.017E+01	7.233E-02	3.662E-06	2.406E-23	1.581E-40	0.000E+00	0.000E+00
CE141	1.180E+03	8.804E+02	6.532E+02	1.696E+02	2.424E+01	4.951E-01	8.621E-08	1.501E-14	1.898E-31	0.000E+00
CE142	3.443E-08	3.444E-08	3.444E-08	3.444E-08	3.444E-08	3.444E-08	3.444E-08	3.444E-08	3.444E-08	3.444E-08
CE144	1.091E+03	1.054E+03	1.019E+03	8.733E+02	6.991E+02	4.480E+02	7.554E+01	1.274E+01	1.487E-01	2.028E-05
PR143	1.157E+03	6.302E+02	3.082E+02	1.217E+01	1.149E-01	1.024E-05	6.457E-22	4.073E-38	0.000E+00	0.000E+00
PR144	1.093E+03	1.054E+03	1.019E+03	8.733E+02	6.991E+02	4.480E+02	7.554E+01	1.274E+01	1.487E-01	2.028E-05
PR144M	1.310E+01	1.265E+01	1.223E+01	1.048E+01	8.389E+00	5.376E+00	9.065E-01	1.529E-01	1.785E-03	2.434E-07
ND144	1.327E-12	1.341E-12	1.354E-12	1.408E-12	1.472E-12	1.566E-12	1.704E-12	1.727E-12	1.732E-12	1.732E-12
ND147	4.591E+02	1.911E+02	7.947E+01	1.509E+00	4.955E-03	5.344E-08	7.230E-28	9.782E-48	0.000E+00	0.000E+00
PM145	3.208E-05	3.254E-05	3.298E-05	3.478E-05	3.694E-05	4.001E-05	4.325E-05	4.140E-05	3.441E-05	2.327E-05
PM147	2.187E+02	2.196E+02	2.187E+02	2.098E+02	1.964E+02	1.721E+02	1.015E+02	5.986E+01	1.599E+01	1.141E+00
PM148M	2.806E+01	2.218E+01	1.754E+01	6.065E+00	1.311E+00	6.128E-02	2.924E-07	1.395E-12	6.939E-26	0.000E+00
PM148	1.455E+02	2.487E+01	4.865E+00	3.430E-01	7.386E-02	3.452E-03	1.647E-08	7.859E-14	3.908E-27	0.000E+00
SM145	3.390E-04	3.295E-04	3.202E-04	2.815E-04	2.337E-04	1.611E-04	3.638E-05	8.216E-06	1.991E-07	1.169E-10
SM147	3.562E-09	3.617E-09	3.671E-09	3.912E-09	4.240E-09	4.836E-09	6.567E-09	7.588E-09	8.663E-09	9.027E-09
SM151	5.075E-01	5.109E-01	5.108E-01	5.101E-01	5.091E-01	5.072E-01	4.994E-01	4.918E-01	4.732E-01	4.382E-01
EU152	2.835E-02	2.829E-02	2.824E-02	2.799E-02	2.763E-02	2.694E-02	2.432E-02	2.197E-02	1.703E-02	1.024E-02
EU154	3.869E+00	3.857E+00	3.846E+00	3.792E+00	3.717E+00	3.570E+00	3.039E+00	2.586E+00	1.729E+00	7.727E-01
EU155	2.801E+00	2.786E+00	2.771E+00	2.705E+00	2.612E+00	2.436E+00	1.842E+00	1.393E+00	6.930E-01	1.714E-01
EU156	2.671E+01	1.419E+01	7.489E+00	4.173E-01	6.480E-03	1.562E-06	5.276E-21	1.781E-35	0.000E+00	0.000E+00
GD153	6.271E-02	6.024E-02	5.788E-02	4.829E-02	3.718E-02	2.205E-02	2.725E-03	3.368E-04	1.808E-06	5.215E-11
TB160	1.783E-01	1.559E-01	1.363E-01	7.433E-02	3.100E-02	5.388E-03	4.922E-06	4.496E-09	1.134E-16	7.212E-32
TL206	5.554E-05	7.504E-12	7.504E-12	7.504E-12	7.504E-12	7.504E-12	7.504E-12	7.504E-12	7.504E-12	7.504E-12
TL207	2.074E-09	2.077E-09	2.088E-09	2.222E-09	2.490E-09	3.102E-09	5.543E-09	8.079E-09	1.510E-08	3.163E-08
TL208	6.958E-07	7.079E-07	7.277E-07	8.283E-07	9.509E-07	1.174E-06	1.826E-06	2.212E-06	2.572E-06	2.510E-06
PB210	5.783E-13	5.930E-13	6.020E-13	6.140E-13	6.131E-13	6.089E-13	6.088E-13	6.475E-13	1.032E-12	4.291E-12
PB211	2.080E-09	2.083E-09	2.094E-09	2.228E-09	2.497E-09	3.111E-09	5.559E-09	8.102E-09	1.514E-08	3.172E-08

Table L.8 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PB212	1.936E-06	1.970E-06	2.025E-06	2.305E-06	2.647E-06	3.267E-06	5.082E-06	6.156E-06	7.160E-06	6.987E-06
BI211	2.083E-09	2.083E-09	2.094E-09	2.228E-09	2.497E-09	3.111E-09	5.559E-09	8.102E-09	1.514E-08	3.172E-08
BI212	1.936E-06	1.970E-06	2.025E-06	2.305E-06	2.647E-06	3.267E-06	5.082E-06	6.156E-06	7.160E-06	6.987E-06
PO212	1.241E-06	1.262E-06	1.298E-06	1.477E-06	1.696E-06	2.093E-06	3.256E-06	3.944E-06	4.587E-06	4.476E-06
PO215	2.080E-09	2.083E-09	2.094E-09	2.228E-09	2.497E-09	3.111E-09	5.559E-09	8.102E-09	1.514E-08	3.172E-08
PO216	1.936E-06	1.970E-06	2.025E-06	2.305E-06	2.647E-06	3.267E-06	5.082E-06	6.156E-06	7.160E-06	6.987E-06
RN219	2.080E-09	2.083E-09	2.094E-09	2.228E-09	2.497E-09	3.111E-09	5.559E-09	8.102E-09	1.514E-08	3.172E-08
RN220	1.936E-06	1.970E-06	2.025E-06	2.305E-06	2.647E-06	3.267E-06	5.082E-06	6.156E-06	7.160E-06	6.987E-06
FR223	2.867E-11	2.924E-11	2.982E-11	3.244E-11	3.626E-11	4.401E-11	7.662E-11	1.116E-10	2.088E-10	4.374E-10
RA223	2.080E-09	2.083E-09	2.094E-09	2.228E-09	2.497E-09	3.111E-09	5.559E-09	8.102E-09	1.514E-08	3.172E-08
RA224	1.936E-06	1.970E-06	2.025E-06	2.305E-06	2.647E-06	3.267E-06	5.082E-06	6.156E-06	7.160E-06	6.987E-06
RA226	2.124E-13	2.178E-13	2.232E-13	2.485E-13	2.877E-13	3.762E-13	8.810E-13	1.675E-12	5.331E-12	2.297E-11
RA228	5.486E-10	5.528E-10	5.571E-10	5.760E-10	6.027E-10	6.542E-10	8.353E-10	9.825E-10	1.241E-09	1.488E-09
AC227	2.077E-09	2.119E-09	2.161E-09	2.351E-09	2.627E-09	3.189E-09	5.552E-09	8.089E-09	1.513E-08	3.169E-08
TH227	2.054E-09	2.061E-09	2.082E-09	2.241E-09	2.510E-09	3.063E-09	5.482E-09	7.990E-09	1.493E-08	3.128E-08
TH228	1.933E-06	1.990E-06	2.046E-06	2.295E-06	2.636E-06	3.255E-06	5.073E-06	6.143E-06	7.154E-06	6.986E-06
TH229	5.417E-10	5.522E-10	5.628E-10	6.114E-10	6.820E-10	8.236E-10	1.390E-09	1.957E-09	3.375E-09	6.218E-09
TH230	3.192E-10	3.235E-10	3.279E-10	3.479E-10	3.777E-10	4.408E-10	7.388E-10	1.110E-09	2.348E-09	6.102E-09
TH231	6.052E-04	1.228E-04	1.227E-04	1.227E-04	1.227E-04	1.227E-04	1.227E-04	1.227E-04	1.227E-04	1.227E-04
TH232	1.624E-09	1.624E-09	1.624E-09	1.624E-09	1.624E-09	1.624E-09	1.624E-09	1.624E-09	1.624E-09	1.624E-09
TH234	1.380E-04	1.363E-04	1.351E-04	1.331E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04
PA231	3.619E-08	3.635E-08	3.646E-08	3.692E-08	3.758E-08	3.889E-08	4.408E-08	4.928E-08	6.226E-08	8.820E-08
PA233	2.640E-01	1.845E-01	1.289E-01	2.560E-02	2.679E-03	2.648E-04	2.424E-04	2.426E-04	2.435E-04	2.463E-04
PA234M	1.090E-03	1.363E-04	1.351E-04	1.331E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04
PA234	1.895E-03	1.771E-07	1.756E-07	1.731E-07	1.726E-07	1.726E-07	1.726E-07	1.726E-07	1.726E-07	1.726E-07
U232	6.046E-06	6.079E-06	6.097E-06	6.173E-06	6.278E-06	6.465E-06	6.985E-06	7.248E-06	7.344E-06	6.833E-06
U233	2.877E-06	2.914E-06	2.940E-06	2.989E-06	3.000E-06	3.001E-06	3.003E-06	3.006E-06	3.011E-06	3.021E-06
U234	1.251E-05	1.259E-05	1.266E-05	1.301E-05	1.351E-05	1.453E-05	1.860E-05	2.262E-05	3.239E-05	5.083E-05
U235	1.227E-04	1.227E-04	1.227E-04	1.227E-04	1.227E-04	1.227E-04	1.227E-04	1.227E-04	1.227E-04	1.227E-04
U236	4.941E-04	4.941E-04	4.941E-04	4.941E-04	4.941E-04	4.941E-04	4.941E-04	4.941E-04	4.942E-04	4.942E-04
U237	4.269E+02	1.014E+02	2.408E+01	3.639E-02	1.436E-05	1.099E-05	9.983E-06	9.067E-06	7.129E-06	4.406E-06
U238	1.328E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04	1.328E-04
NP237	2.386E-04	2.414E-04	2.420E-04	2.422E-04	2.423E-04	2.423E-04	2.424E-04	2.426E-04	2.435E-04	2.463E-04
PU236	5.417E-05	5.387E-05	5.337E-05	5.117E-05	4.816E-05	4.265E-05	2.623E-05	1.614E-05	4.789E-06	4.220E-07
PU237	3.024E-04	2.444E-04	1.976E-04	7.554E-05	1.887E-05	1.178E-06	1.786E-11	2.709E-16	2.426E-28	0.000E+00
PU238	6.916E-01	6.982E-01	6.999E-01	7.064E-01	7.128E-01	7.188E-01	7.147E-01	7.038E-01	6.767E-01	6.254E-01

Table L.8 Fuel Life Improvement Program (FLIP) TRIGA Fuel Activity (Curies) as a function of Decay Time.

PU239	2.314E-01	2.327E-01	2.327E-01	2.327E-01	2.327E-01	2.327E-01	2.327E-01	2.327E-01	2.326E-01	2.326E-01
PU240	1.698E-01	1.698E-01	1.698E-01	1.698E-01	1.698E-01	1.698E-01	1.697E-01	1.697E-01	1.696E-01	1.695E-01
PU241	4.701E+01	4.692E+01	4.684E+01	4.645E+01	4.589E+01	4.480E+01	4.069E+01	3.696E+01	2.906E+01	1.796E+01
PU242	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04	2.440E-04
PU244	8.269E-12	8.269E-12	8.269E-12	8.269E-12	8.269E-12	8.269E-12	8.269E-12	8.269E-12	8.269E-12	8.269E-12
AM241	6.855E-02	7.144E-02	7.431E-02	8.724E-02	1.057E-01	1.419E-01	2.782E-01	4.014E-01	6.604E-01	1.016E+00
AM242M	1.742E-03	1.741E-03	1.741E-03	1.740E-03	1.738E-03	1.734E-03	1.718E-03	1.703E-03	1.664E-03	1.590E-03
AM242	1.337E+01	1.739E-03	1.732E-03	1.731E-03	1.729E-03	1.725E-03	1.710E-03	1.694E-03	1.656E-03	1.582E-03
AM243	8.237E-04	8.246E-04	8.246E-04	8.246E-04	8.246E-04	8.246E-04	8.244E-04	8.243E-04	8.239E-04	8.231E-04
CM242	6.942E+00	6.584E+00	6.204E+00	4.743E+00	3.219E+00	1.484E+00	6.815E-02	4.408E-03	1.371E-03	1.308E-03
CM243	1.096E-03	1.095E-03	1.094E-03	1.090E-03	1.083E-03	1.070E-03	1.019E-03	9.710E-04	8.599E-04	6.743E-04
CM244	6.324E-02	6.323E-02	6.313E-02	6.272E-02	6.212E-02	6.094E-02	5.645E-02	5.230E-02	4.319E-02	2.947E-02
CM245	2.734E-06	2.734E-06	2.734E-06	2.734E-06	2.734E-06	2.734E-06	2.733E-06	2.733E-06	2.732E-06	2.730E-06
CM246	1.952E-07	1.952E-07	1.952E-07	1.952E-07	1.952E-07	1.952E-07	1.951E-07	1.951E-07	1.949E-07	1.946E-07
CM247	2.427E-13	2.427E-13	2.427E-13	2.427E-13	2.427E-13	2.427E-13	2.427E-13	2.427E-13	2.427E-13	2.427E-13
Subtotal Ci**	1.842E+04	1.277E+04	1.005E+04	5.642E+03	3.496E+03	2.088E+03	9.101E+02	6.348E+02	4.436E+02	3.121E+02
Total Ci***	1.322E+05	1.316E+04	1.016E+04	5.698E+03	3.532E+03	2.106E+03	9.158E+02	6.376E+02	4.442E+02	3.123E+02

* Decay time following fuel element exposure.

** Subtotal Ci (Curies): Total Activity of the 145 isotopes listed here in the table.

*** Total Ci (Curies): Total Activity of the ORIGEN output isotopes.

APPENDIX Y

ISOTOPIC CONVERSION FACTORS

***SPECIFIC ACTIVITY (curies/gram)**

***SPECIFIC DECAY HEATS (watts/gram)**

***ACTIVITY per DECAY HEAT (curies/watt)**

ISOTOPIC CONVERSIONS FACTORS

ISOTOPE	Specific Activity (Ci/gm)	Specific Heat (W/gm)	Specific Heat per Curie (W/Ci)
H 3	9.653E+03	3.250E-01	3.366E-05
BE 10	2.235E-02	2.683E-05	1.201E-03
C 14	4.459E+00	1.308E-03	2.933E-04
CL 36	3.301E-02	4.826E-05	1.462E-03
CR 51	9.244E+04	1.978E+01	2.140E-04
MN 54	7.743E+03	3.855E+01	4.979E-03
FE 55	2.501E+03	3.439E+00	1.375E-03
FE 59	4.920E+04	4.588E+02	9.324E-03
CO 60	1.131E+03	1.744E+01	1.542E-02
NI 59	7.578E-02	4.824E-04	6.366E-03
NI 63	6.171E+01	2.450E-02	3.971E-04
ZN 65	8.239E+03	2.887E+01	3.505E-03
SE 79	6.969E-02	1.734E-05	2.489E-04
KR 85	3.926E+02	5.879E-01	1.497E-03
RB 87	8.752E-08	7.315E-11	8.358E-04
SR 89	2.907E+04	1.005E+02	3.457E-03
SR 90	1.365E+02	1.585E-01	1.161E-03
Y 90	5.443E+05	3.017E+03	5.543E-03
Y 91	2.454E+04	8.813E+01	3.592E-03
ZR 93	2.515E-03	2.922E-07	1.162E-04
ZR 95	2.149E+04	1.089E+02	5.066E-03
NB 93M	2.829E+02	5.010E-02	1.771E-04
NB 94	1.874E-01	1.910E-03	1.019E-02
NB 95	3.914E+04	1.877E+02	4.795E-03
NB 95M	3.811E+05	5.293E+02	1.389E-03
MO 93	1.100E+00	1.028E-04	9.344E-05
TC 99	1.696E-02	8.504E-06	5.014E-04
RU103	3.229E+04	1.080E+02	3.345E-03
RU106	3.347E+03	1.990E-01	5.947E-05
RH103M	3.255E+07	7.494E+03	2.302E-04
RH106	3.563E+09	3.417E+07	9.592E-03
PD107	5.145E-04	3.051E-08	5.929E-05
AG110	4.170E+09	2.996E+07	7.183E-03
AG110M	4.751E+03	7.936E+01	1.670E-02
AG111	1.580E+05	3.538E+02	2.240E-03
CD113M	2.170E+02	3.653E-01	1.683E-03
CD113	0.000E+00	0.000E+00	0.000E+00
CD115M	2.547E+04	9.498E+01	3.728E-03
IN114	1.377E+09	6.321E+06	4.591E-03
IN114M	2.314E+04	3.263E+01	1.410E-03
IN115M	6.339E+06	1.264E+04	1.994E-03
SN119M	4.482E+03	2.316E+00	5.168E-04
SN121M	5.912E+01	1.185E-01	2.004E-03
SN123	8.223E+03	2.569E+01	3.124E-03

SN125	1.084E+05	7.184E+02	6.627E-03
SN126	2.838E-02	3.540E-05	1.247E-03
SB124	1.751E+04	2.325E+02	1.328E-02
SB125	1.032E+03	3.228E+00	3.127E-03
SB126	8.362E+04	1.545E+03	1.848E-02
SB126M	7.855E+07	1.001E+06	1.274E-02
TE123M	8.873E+03	1.293E+01	1.457E-03
TE125M	1.801E+04	1.514E+01	8.405E-04
TE127	2.641E+06	3.566E+03	1.350E-03
TE127M	9.436E+03	5.076E+00	5.380E-04
TE129	2.095E+07	7.485E+04	3.573E-03
TE129M	3.013E+04	5.284E+01	1.754E-03
I129	1.766E-04	8.170E-08	4.625E-04
I131	1.240E+05	4.213E+02	3.396E-03
XE131M	8.379E+04	8.061E+01	9.620E-04
XE133	1.873E+05	2.005E+02	1.071E-03
CS134	1.294E+03	1.317E+01	1.018E-02
CS135	1.152E-03	3.844E-07	3.337E-04
CS136	7.331E+04	9.996E+02	1.364E-02
CS137	8.703E+01	9.621E-02	1.105E-03
BA136M	2.694E+11	3.259E+09	1.210E-02
BA137M	5.381E+08	2.113E+06	3.926E-03
BA140	7.296E+04	2.036E+02	2.790E-03
LA140	5.567E+05	9.332E+03	1.676E-02
CE141	2.849E+04	4.171E+01	1.464E-03
CE142	2.401E-08	0.000E+00	0.000E+00
CE144	3.192E+03	2.117E+00	6.632E-04
PR143	6.734E+04	1.255E+02	1.863E-03
PR144	7.558E+07	5.555E+05	7.350E-03
PR144M	1.815E+08	6.208E+04	3.421E-04
ND144	1.184E-12	0.000E+00	0.000E+00
ND147	8.034E+04	1.939E+02	2.413E-03
PM145	1.393E+02	3.553E-02	2.550E-04
PM147	9.273E+02	3.327E-01	3.588E-04
PM148M	2.137E+04	2.710E+02	1.268E-02
PM148	1.643E+05	1.265E+03	7.698E-03
SM145	2.649E+03	1.464E+00	5.527E-04
SM147	2.274E-08	3.113E-10	1.369E-02
SM151	2.632E+01	3.085E-03	1.172E-04
EU152	1.730E+02	1.312E+00	7.582E-03
EU154	2.702E+02	2.417E+00	8.946E-03
EU155	4.652E+02	3.384E-01	7.273E-04
EU156	5.517E+04	5.694E+02	1.032E-02
GD153	3.528E+03	3.041E+00	8.619E-04
TB160	1.129E+04	9.198E+01	8.145E-03
TL206	2.179E+08	1.969E+06	9.034E-03
TL207	1.905E+08	5.595E+05	2.937E-03
TL208	2.946E+08	6.930E+06	2.353E-02
PB210	7.637E+01	1.769E-02	2.317E-04
PB211	2.469E+07	7.399E+04	2.996E-03
PB212	1.390E+06	2.646E+03	1.904E-03
BI211	4.185E+08	1.669E+07	3.989E-02
BI212	1.466E+07	2.492E+05	1.700E-02

PO212	1.774E+17	9.405E+15	5.300E-02
PO215	2.949E+13	1.317E+12	4.465E-02
PO216	3.484E+11	1.426E+10	4.093E-02
RN219	1.302E+10	5.401E+08	4.149E-02
RN220	9.225E+08	3.502E+07	3.797E-02
FR223	3.869E+07	1.005E+05	2.597E-03
RA223	5.123E+04	1.824E+03	3.561E-02
RA224	1.594E+05	5.468E+03	3.431E-02
RA226	9.892E-01	2.856E-02	2.887E-02
RA228	2.341E+02	1.804E-02	7.706E-05
AC227	7.238E+01	3.505E-02	4.842E-04
TH227	3.074E+04	1.122E+03	3.651E-02
TH228	8.203E+02	2.682E+01	3.269E-02
TH229	2.128E-01	6.511E-03	3.060E-02
TH230	2.019E-02	5.715E-04	2.831E-02
TH231	5.318E+05	2.983E+02	5.610E-04
TH232	1.097E-07	2.656E-09	2.420E-02
TH234	2.317E+04	9.393E+00	4.054E-04
PA231	4.725E-02	1.424E-03	3.013E-02
PA233	2.076E+04	4.713E+01	2.270E-03
PA234M	6.871E+08	3.396E+06	4.943E-03
PA234	2.000E+06	2.872E+04	1.436E-02
U232	2.142E+01	6.875E-01	3.210E-02
U233	9.682E-03	2.814E-04	2.907E-02
U234	6.251E-03	1.800E-04	2.880E-02
U235	2.163E-06	5.664E-08	2.619E-02
U236	6.473E-05	1.753E-06	2.708E-02
U237	8.166E+04	1.546E+02	1.893E-03
U238	3.364E-07	8.532E-09	2.536E-02
NP237	7.051E-04	2.155E-05	3.056E-02
PU236	5.314E+02	1.850E+01	3.481E-02
PU237	1.208E+04	1.161E+00	9.606E-05
PU238	1.712E+01	5.676E-01	3.315E-02
PU239	6.217E-02	1.916E-03	3.082E-02
PU240	2.280E-01	7.097E-03	3.113E-02
PU241	1.031E+02	3.196E-03	3.101E-05
PU242	3.819E-03	1.128E-04	2.954E-02
PU244	1.774E-05	5.147E-07	2.900E-02
AM241	3.434E+00	1.141E-01	3.322E-02
AM242M	9.721E+00	3.840E-03	3.951E-04
AM242	8.087E+05	9.395E+02	1.162E-03
AM243	1.994E-01	6.409E-03	3.214E-02
CM242	3.307E+03	3.842E+00	1.162E-03
CM243	5.165E+01	1.895E+00	3.670E-02
CM244	8.093E+01	2.831E+00	3.498E-02
CM245	1.718E-01	5.699E-03	3.317E-02
CM246	3.073E-01	1.006E-02	3.273E-02
CM247	9.282E-05	2.966E-06	3.196E-02

APPENDIX Z

Materials + Impurities:

Aluminum-1100
Stainless Steel 304
Nuclear-grade Graphite
Zircaloy-4

1100 Aluminum Nominal Specifications - (Al-Clad TRIGA element)

Mass= 280 g/element
Density= 2.7100 g/cc
Volume= 103.3210332 cc

Element	Weight Fraction (wt%)	Mass (gm/fuel element)
Al	99.30000	278.04
Si	0.25000	0.70
Mn	0.02500	0.07
Fe	0.25000	0.70
Cu	0.12500	0.35
Zn	0.05000	0.14
Total	100.00000	280.000000

INITIAL TOTAL MASS BY ISOTOPE PER FUEL ELEMENT

ORIGEN ISOTOPE ID	Isotope	Atom Fraction (at%)	Atomic Weight (gm/mole)	Weight Fraction (wt%)	Mass (gm/fuel element)
130270	Al-27	100.0000	26.98153800	100.0000	278.040000
140280	Si-28	92.2300	27.97692700	0.9187	0.643114
140290	Si-29	4.6700	28.97649400	0.0482	0.033727
140300	Si-30	3.1000	29.97377000	0.0331	0.023159
250550	Mn-55	100.0000	54.93804800	100.0000	0.070000
260540	Fe-54	5.9000	53.93961300	0.0570	0.039892
260560	Fe-56	91.7200	55.93494000	0.9187	0.643088
260570	Fe-57	2.1000	56.93539000	0.0214	0.014987
260580	Fe-58	0.2800	57.93327600	0.0029	0.002033
290630	Cu-63	69.1700	62.92959900	0.6850	0.239748
290650	Cu-65	30.8300	64.92779200	0.3150	0.110252
300640	Zn-64	48.6000	63.92914400	0.4751	0.066513
300660	Zn-66	27.9000	65.92603500	0.2813	0.039376
300670	Zn-67	4.1000	66.92712900	0.0420	0.005874
300680	Zn-68	18.8000	67.92484600	0.1953	0.027338
300700	Zn-70	0.6000	69.92532400	0.0064	0.000898
Total					280.000000

Stainless Steel 304 (SS-304) Nominal Specifications

SS304 Clad TRIGA Elements

- (1) Reference: J.C. Evans, et. al., "Long-Lived Activation Products in Reactor Materials," NUREG/CR-3474, Prepared for the U.S. Nuclear Regulatory Commission by Battelle, Pacific Northwest Laboratory, Richland, WA, August 1984.
- (2) Reference: E.A. Avallone and T. Baumeister III, "MARK'S Standard Handbook for Mechanical Engineers," Ninth Edition
- (3) Reference: F.W. Walker, et al., "Nuclides and Isotopes: Chart of the Nuclides," General Electric Co., 1989.
- Note: Maximum ppm value for impurities is used.

Total Grams/Element= 800.000 g
 Density= 7.920 g/cc
 Volume= 101.010 cc
 Ref. SCALE Standard Lib

Element	Impurity (ppm)	Weight Fraction (wt%)	Mass (gm/fuel element)
Li	0.13		1.0400E-04
C		0.08	6.4000E-01
N	525		4.2000E-01
Na	37		2.9600E-02
Al	200		1.6000E-01
Si		1.00	8.0000E+00
Cl	130		1.0400E-01
K	3		2.4000E-03
Ca	19		1.5200E-02
Sc	0.03		2.4000E-05
Ti	600		4.8000E-01
V	690		5.5200E-01
Cr		18.40	1.4720E+02
Mn		1.53	1.2240E+01
Fe		68.99	5.5192E+02
Co	2570		2.0560E+00
Ni		10.00	8.0000E+01
Cu	8150		6.5200E+00
Zn	2230		1.7840E+00
Ga	450		3.6000E-01
As	1010		8.0800E-01
Se	70		5.6000E-02
Br	8		6.4000E-03
Rb	10		8.0000E-03
Sr	0.2		1.6000E-04
Y	5		4.0000E-03
Zr	20		1.6000E-02
Nb	300		2.4000E-01
Mo	5500		4.4000E+00
Ag	2		1.6000E-03
Sb	17		1.3600E-02
Os	0.3		2.4000E-04
Ba	500		4.0000E-01
La	2.1		1.6800E-03
Ce	550		4.4000E-01
Sm	0.15		1.2000E-04
Eu	0.02		1.6000E-05
Tb	0.71		5.6800E-04
Dy	1		8.0000E-04
Ho	1		8.0000E-04
Yb	2		1.6000E-03
Lu	0.8		6.4000E-04
Hf	2		1.6000E-03
W	520		4.1600E-01
Pb	139		1.1120E-01
Th	1		8.0000E-04
U	2		1.6000E-03

Total 100.00000 819.414752
 800.000000
 Additional grams due to impurities= 19.4148

INITIAL TOTAL MASS BY ISOTOPE PER FUEL ELEMENT

ORIGEN CONC ID	ORIGEN ISOTOPE ID	Isotope	Atom Fraction (at%)	Atomic Weight (gm/mole)	Weight Fraction (#)	Mass (gm/fuel element)
1	30060	Li-6	7.5000	6.01512200	0.0650	6.7596E-06
1	30070	Li-7	92.5000	7.01600300	0.9350	9.7240E-05
1	60120	C-12	98.9000	12.00000000	0.9881	6.3238E-01
1	60130	C-13	1.1000	13.00335483	0.0119	7.6216E-03
1	70140	N-14	99.6300	14.00307000	0.9960	4.1834E-01
1	70150	N-15	0.3700	15.00010000	0.0040	1.6642E-03
1	110230	Na-23	100.0000	22.98970000	1.0000	2.9600E-02
1	130270	Al-27	100.0000	26.98153800	1.0000	1.6000E-01
1	140280	Si-28	92.2300	27.97692700	0.9187	7.3499E+00
1	140290	Si-29	4.6700	28.97649400	0.0482	3.8545E-01
1	140300	Si-30	3.1000	29.97377000	0.0331	2.6467E-01
1	170350	Cl-35	75.7700	34.96885000	0.7474	7.7725E-02
1	170370	Cl-37	24.2300	36.96590000	0.2526	2.6275E-02
1	190390	K-39	93.2581	38.96370000	0.9294	2.2305E-03
1	190400	K-40	0.0117	39.96200000	0.0001	2.8700E-07
1	190410	K-41	6.7302	40.96180000	0.0705	1.6922E-04
1	200400	Ca-40	96.9410	39.96259000	0.9666	1.4693E-02
1	200420	Ca-42	0.6470	41.95860000	0.0068	1.0296E-04
1	200430	Ca-43	0.1350	42.95870000	0.0014	2.1995E-05
1	200440	Ca-44	2.0860	43.95548000	0.0229	3.4775E-04
1	200460	Ca-46	0.0040	45.95368700	0.0000	6.9714E-07
1	200480	Ca-48	0.1870	47.95253500	0.0022	3.4009E-05
1	210450	Sc-45	100.0000	44.95590000	1.0000	2.4000E-05
1	220460	Ti-46	8.0000	45.95263000	0.0768	3.6855E-02
1	220470	Ti-47	7.3000	46.95176400	0.0716	3.4362E-02
1	220480	Ti-48	73.8000	47.94794700	0.7391	3.5475E-01
1	220490	Ti-49	5.5000	48.94787100	0.0562	2.6990E-02
1	220500	Ti-50	5.4000	49.94479200	0.0563	2.7039E-02
1	230500	V-50	0.2500	49.94716200	0.0025	1.3531E-03
1	230510	V-51	99.7500	50.94390000	0.9975	5.5065E-01
1	240500	Cr-50	4.3450	49.94604700	0.0417	6.1437E+00
1	240520	Cr-52	83.7900	51.94051100	0.8370	1.2321E+02
1	240530	Cr-53	9.5000	52.94065200	0.0967	1.4238E+01
1	240540	Cr-54	2.3650	53.93888400	0.0245	3.6114E+00
1	250550	Mn-55	100.0000	54.93804800	1.0000	1.2240E+01
1	260540	Fe-54	5.9000	53.93961300	0.0570	3.1453E+01
1	260560	Fe-56	91.7200	55.93494000	0.9187	5.0705E+02
1	260570	Fe-57	2.1000	56.93539000	0.0214	1.1817E+01
1	260580	Fe-58	0.2800	57.93327600	0.0029	1.6032E+00
1	270590	Co-59	100.0000	58.93319800	1.0000	2.0560E+00
1	280580	Ni-58	68.2700	57.93534600	0.6739	5.3916E+01
1	280600	Ni-60	26.1000	59.93078800	0.2665	2.1322E+01
1	280610	Ni-61	1.1300	60.93105800	0.0117	9.3855E-01
1	280620	Ni-62	3.5900	61.92834600	0.0379	3.0306E+00
1	280640	Ni-64	0.9100	63.92796800	0.0099	7.9300E-01
1	290630	Cu-63	69.1700	62.92959900	0.6850	4.4662E+00
1	290650	Cu-65	30.8300	64.92779200	0.3150	2.0538E+00
1	300640	Zn-64	48.6000	63.92914400	0.4751	8.4757E-01
1	300660	Zn-66	27.9000	65.92603500	0.2813	5.0177E-01
1	300670	Zn-67	4.1000	66.92712900	0.0420	7.4856E-02
1	300680	Zn-68	18.8000	67.92484600	0.1953	3.4836E-01
1	300700	Zn-70	0.6000	69.92532400	0.0064	1.1445E-02
1	310690	Ga-69	60.1100	68.92558000	0.5942	2.1392E-01
1	310710	Ga-71	39.8900	70.92470300	0.4058	1.4608E-01
1	330750	As-75	100.0000	74.92159400	1.0000	8.0800E-01
1	340740	Se-74	0.9000	73.92247400	0.0084	4.7174E-04
1	340760	Se-76	9.1000	75.91920000	0.0875	4.8987E-03
1	340770	Se-77	7.6000	76.91991200	0.0740	4.1451E-03
1	340780	Se-78	23.6000	77.91730000	0.2328	1.3039E-02

1	340800	Se-80	49.9000	79.91650000	0.5049	2.8276E-02
1	340820	Se-82	8.9000	81.91660000	0.0923	5.1695E-03
1	350790	Br-79	50.6900	78.91833600	0.5007	3.2042E-03
1	350810	Br-81	49.3100	80.91629000	0.4993	3.1958E-03
1	370850	Rb-85	72.1600	84.91179400	0.7169	5.7352E-03
1	370870	Rb-87	27.8400	86.90910000	0.2831	2.2648E-03
1	380840	Sr-84	0.5600	83.91342900	0.0054	8.5813E-07
1	380860	Sr-86	9.8600	85.90925600	0.0967	1.5469E-05
1	380870	Sr-87	7.0000	86.90888300	0.0694	1.1110E-05
1	380880	Sr-88	82.5800	87.90561800	0.8285	1.3256E-04
1	390890	Y-89	100.0000	88.90584800	1.0000	4.0000E-03
1	400900	Zr-90	51.4500	89.90470200	0.5071	8.1130E-03
1	400910	Zr-91	11.2200	90.90564300	0.1118	1.7889E-03
1	400920	Zr-92	17.1500	91.90503800	0.1728	2.7645E-03
1	400940	Zr-94	17.3800	93.90631400	0.1789	2.8626E-03
1	400960	Zr-96	2.8000	95.90827500	0.0294	4.7101E-04
1	410930	Nb-93	100.0000	92.90637600	1.0000	2.4000E-01
1	420920	Mo-92	14.8400	91.90680700	0.1422	6.2557E-01
1	420940	Mo-94	9.2500	93.90508500	0.0905	3.9840E-01
1	420950	Mo-95	15.9200	94.90584100	0.1575	6.9299E-01
1	420960	Mo-96	16.6800	95.90467800	0.1668	7.3372E-01
1	420970	Mo-97	9.5500	96.90602000	0.0965	4.2447E-01
1	420980	Mo-98	24.1300	97.90540700	0.2463	1.0836E+00
1	421000	Mo-100	9.6300	99.90748000	0.1003	4.4128E-01
1	471070	Ag-107	51.8390	106.90509000	0.5138	8.2202E-04
1	471090	Ag-109	48.1610	108.90475500	0.4862	7.7798E-04
1	511210	Sb-121	57.4000	120.90382000	0.5700	7.7518E-03
1	511230	Sb-123	42.6000	122.90421500	0.4300	5.8482E-03
1	551330	Cs-133	100.0000	132.90544000	1.0000	2.4000E-04
1	561300	Ba-130	0.1060	129.90629000	0.0010	4.0109E-04
1	561320	Ba-132	0.1010	131.90504000	0.0010	3.8805E-04
1	561340	Ba-134	2.4200	133.90449000	0.0236	9.4388E-03
1	561350	Ba-135	6.5930	134.90567000	0.0648	2.5907E-02
1	561360	Ba-136	7.8500	135.90456000	0.0777	3.1075E-02
1	561370	Ba-137	11.2300	136.90582000	0.1120	4.4782E-02
1	561380	Ba-138	71.7000	137.90524000	0.7200	2.8801E-01
1	571380	La-138	0.0900	137.90711000	0.0009	1.5011E-06
1	571390	La-139	99.9100	138.90634700	0.9991	1.6785E-03
1	581360	Ce-136	0.1900	135.90714000	0.0018	8.1089E-04
1	581380	Ce-138	0.2500	137.90599000	0.0025	1.0827E-03
1	581400	Ce-140	88.4300	139.90543400	0.8830	3.8851E-01
1	581420	Ce-142	11.1300	141.90924100	0.1127	4.9599E-02
1	621440	Sm-144	3.1000	143.91199700	0.0297	3.5605E-06
1	621470	Sm-147	15.0000	146.91489400	0.1466	1.7588E-05
1	621480	Sm-148	11.3000	147.91481900	0.1112	1.3339E-05
1	621490	Sm-149	13.8000	148.91718100	0.1367	1.6401E-05
1	621500	Sm-150	7.4000	149.91727300	0.0738	8.8538E-06
1	621520	Sm-152	26.7000	151.91972900	0.2698	3.2372E-05
1	621540	Sm-154	22.7000	153.92220600	0.2324	2.7885E-05
1	631510	Eu-151	47.8000	150.91984600	0.4747	7.5954E-06
1	631530	Eu-153	52.2000	152.92122600	0.5253	8.4046E-06
1	651590	Tb-159	100.0000	158.92534400	1.0000	5.6800E-04
1	661560	Dy-156	0.0600	155.92428000	0.0006	4.6058E-07
1	661580	Dy-158	0.1000	157.92440300	0.0010	7.7749E-07
1	661600	Dy-160	2.3400	159.92519400	0.0230	1.8424E-05
1	661610	Dy-161	18.9000	160.92693100	0.1872	1.4974E-04
1	661620	Dy-162	25.5000	161.92679600	0.2541	2.0328E-04
1	661630	Dy-163	24.9000	162.92872900	0.2497	1.9973E-04
1	661640	Dy-164	28.2000	163.92917300	0.2845	2.2759E-04
1	671650	Ho-165	100.0000	164.93032000	1.0000	8.0000E-04
1	701680	Yb-168	0.1300	167.93389700	0.0013	2.0187E-06
1	701700	Yb-170	3.0500	169.93476100	0.0300	4.7926E-05
1	701710	Yb-171	14.3000	170.93632500	0.1413	2.2603E-04
1	701720	Yb-172	21.9000	171.93638000	0.2176	3.4818E-04
1	701730	Yb-173	16.1200	172.93820900	0.1611	2.5778E-04
1	701740	Yb-174	31.8000	173.93886100	0.3197	5.1146E-04
1	701760	Yb-176	12.7000	175.94256500	0.1291	2.0662E-04
1	711750	Lu-175	97.4100	174.94077100	0.9740	6.2333E-04
1	711760	Lu-176	2.5900	175.94268000	0.0260	1.6668E-05

1	721740	Hf-174	0.1620	173.94004200	0.0016	2.5260E-06
1	721760	Hf-176	5.2060	175.94140400	0.0513	8.2108E-05
1	721770	Hf-177	18.6060	176.94321900	0.1845	2.9512E-04
1	721780	Hf-178	27.2970	177.94369700	0.2721	4.3542E-04
1	721790	Hf-179	13.6290	178.94581300	0.1366	2.1863E-04
1	721800	Hf-180	35.1000	179.94654800	0.3539	5.6619E-04
1	741800	W-180	0.1200	179.94670200	0.0012	4.8860E-04
1	741820	W-182	26.3000	181.94820200	0.2603	1.0828E-01
1	741830	W-183	14.2800	182.95022100	0.1421	5.9114E-02
1	741840	W-184	30.7000	183.95092900	0.3072	1.2778E-01
1	741860	W-186	28.6000	185.95435800	0.2893	1.2034E-01
1	822040	Pb-204	1.4000	203.97302000	0.0138	1.5324E-03
1	822060	Pb-206	24.1000	205.97444000	0.2396	2.6639E-02
1	822070	Pb-207	22.1000	206.97587100	0.2207	2.4547E-02
1	822080	Pb-208	52.4000	207.97662700	0.5259	5.8482E-02
2	902320	Th-232	100.0000	232.03805100	1.0000	8.0000E-04
2	922340	U-234	0.0055	234.04094700	0.0001	8.6526E-08
2	922350	U-235	0.7200	235.04392400	0.0071	1.1376E-05
2	922380	U-238	99.2745	238.05078500	0.9928	1.5885E-03
Total						819.414752

Zircaloy-4 Nominal Specifications for Zirconium in ZrH

Note: Ref.1 ppm values supercede Ref.2, and Ref. 1 extra nuclides are added (*)

- (1) Reference: "Summary of the Nuclear Design and Performance of the Light Water breeder Reactor (LWBR)", WAPD-TM-1326, June 1979.
 (2) Reference: "Characteristics of Potential Repository Wastes", DOE/RW-0184-V1-R1, Volume 1, July, 1992, prepared for the U.S. Department of Energy
 Office of Civilian Radioactive Waste Management, Washington, D.C. 20585
 prepared bt ORNL, Oak Ridge, Tn 37831

Note: Maximum ppm value for impurities is used.

Total Grams/Element= 2070.000 g
 Density= 6.440 g/cc
 Volume= 321.429 cc
 Ref. SCALE Standard Lib

Element	Impurity (ppm)	Weight Fraction (wt%)	Mass (gm/element)
H	25	0.002497	5.1750E-02
B	0.5	0.000050	1.0350E-03
C	270	0.026968	5.5890E-01
N	80	0.007990	1.6560E-01
O	950	0.094887	1.9665E+00
Al	75	0.007491	1.5525E-01
Si*	120	0.011986	2.4840E-01
P*	100	0.009988	2.0700E-01
S	35	0.003496	7.2450E-02
Ti	50	0.004994	1.0350E-01
V	50	0.004994	1.0350E-01
Cr	1250	0.124851	2.5875E+00
Mn	50	0.004994	1.0350E-01
Fe	2250	0.224731	4.6575E+00
Co	20	0.001998	4.1400E-02
Ni	70	0.006992	1.4490E-01
Cu	50	0.004994	1.0350E-01
Zn*	100	0.009988	2.0700E-01
Zr	979069	97.789992	2.0267E+03
Nb	70	0.006992	1.4490E-01
Mo*	50	0.004994	1.0350E-01
Cd	0.5	0.000050	1.0350E-03
Sn	16000	1.598089	3.3120E+01
Sm*	10	0.000999	2.0700E-02
Gd*	5	0.000499	1.0350E-02
Hf	35	0.003496	7.2450E-02
Ta*	200	0.019976	4.1400E-01
W	100	0.009988	2.0700E-01
Pb*	100	0.009988	2.0700E-01
Th*	7	0.000699	1.4490E-02
U	3.5	0.000350	7.2450E-03
Total		100.000000	2072.474685 g
			2070.000000 g
Additional grams due to impurities=			2.4747 g

<40 ppm lwbr

INITIAL TOTAL MASS BY ISOTOPE PER FUEL ELEMENT

ORIGEN CONC ID	ORIGEN ISOTOPE ID	Isotope	Atom Fraction (at%)	Atomic Weight (gm/mole)	Weight Fraction (#)	Mass (gm/fuel element)
1	10010	H-1	99.9850	1.00782503	0.9997	5.1734E-02
1	10020	H-2	0.0150	2.01410178	0.0003	1.5511E-05
1	50100	B-10	19.9000	10.01293720	0.1843	1.9076E-04
1	50110	B-11	80.1000	11.00930560	0.8157	8.4424E-04
1	60120	C-12	98.9000	12.00000000	0.9881	5.5224E-01
1	60130	C-13	1.1000	13.00335483	0.0119	6.6558E-03
1	70140	N-14	99.6300	14.00307000	0.9960	1.6494E-01
1	70150	N-15	0.3700	15.00010000	0.0040	6.5617E-04
1	80160	O-16	99.7600	15.99491462	0.9973	1.9612E+00
1	80170	O-17	0.0400	16.99913140	0.0004	8.3576E-04
1	80180	O-18	0.2000	17.99916000	0.0022	4.4246E-03
1	130270	Al-27	100.0000	26.98153800	1.0000	1.5525E-01
1	140280	Si-28	92.2300	27.97692700	0.9187	2.2821E-01
1	140290	Si-29	4.6700	28.97649400	0.0482	1.1968E-02
1	140300	Si-30	3.1000	29.97377000	0.0331	8.2181E-03
1	150310	P-31	100.0000	30.97376200	1.0000	2.0700E-01
1	160320	S-32	95.0200	31.97207050	0.9475	6.8644E-02
1	160330	S-33	0.7500	32.97145830	0.0077	5.5875E-04
1	160340	S-34	4.2100	33.96786650	0.0446	3.2312E-03
1	160350	S-35	0.0200	35.96708080	0.0002	1.6254E-05
1	220460	Ti-46	8.0000	45.95263000	0.0768	7.9470E-03
1	220470	Ti-47	7.3000	46.95176400	0.0716	7.4093E-03
1	220480	Ti-48	73.8000	47.94794700	0.7391	7.6494E-02
1	220490	Ti-49	5.5000	48.94787100	0.0562	5.8197E-03
1	220500	Ti-50	5.4000	49.94479200	0.0563	5.8302E-03
1	230500	V-50	0.2500	49.94716200	0.0025	2.5370E-04
1	230510	V-51	99.7500	50.94390000	0.9975	1.0325E-01
1	240500	Cr-50	4.3450	49.94604700	0.0417	1.0799E-01
1	240520	Cr-52	83.7900	51.94051100	0.8370	2.1657E+00
1	240530	Cr-53	9.5000	52.94065200	0.0967	2.5028E-01
1	240540	Cr-54	2.3650	53.93888400	0.0245	6.3481E-02
1	250550	Mn-55	100.0000	54.93804800	1.0000	1.0350E-01
1	260540	Fe-54	5.9000	53.93961300	0.0570	2.6542E-01
1	260560	Fe-56	91.7200	55.93494000	0.9187	4.2788E+00
1	260570	Fe-57	2.1000	56.93539000	0.0214	9.9719E-02
1	260580	Fe-58	0.2800	57.93327600	0.0029	1.3529E-02
1	270590	Co-59	100.0000	58.93319800	1.0000	4.1400E-02
1	280580	Ni-58	68.2700	57.93534600	0.6739	9.7655E-02
1	280600	Ni-60	26.1000	59.93078800	0.2665	3.8620E-02
1	280610	Ni-61	1.1300	60.93105800	0.0117	1.7000E-03
1	280620	Ni-62	3.5900	61.92834600	0.0379	5.4891E-03
1	280640	Ni-64	0.9100	63.92796800	0.0099	1.4363E-03
1	290630	Cu-63	69.1700	62.92959900	0.6850	7.0897E-02
1	290650	Cu-65	30.8300	64.92779200	0.3150	3.2603E-02
1	300640	Zn-64	48.6000	63.92914400	0.4751	9.8345E-02
1	300660	Zn-66	27.9000	65.92603500	0.2813	5.8221E-02
1	300670	Zn-67	4.1000	66.92712900	0.0420	8.6857E-03
1	300680	Zn-68	18.8000	67.92484600	0.1953	4.0421E-02
1	300700	Zn-70	0.6000	69.92532400	0.0064	1.3280E-03
1	400900	Zr-90	51.4500	89.90470200	0.5071	1.0276E+03
1	400910	Zr-91	11.2200	90.90564300	0.1118	2.2660E+02
1	400920	Zr-92	17.1500	91.90503800	0.1728	3.5017E+02
1	400940	Zr-94	17.3800	93.90631400	0.1789	3.6259E+02
1	400960	Zr-96	2.8000	95.90827500	0.0294	5.9661E+01
1	410930	Nb-93	100.0000	92.90637600	1.0000	1.4490E-01
1	420920	Mo-92	14.8400	91.90680700	0.1422	1.4715E-02
1	420940	Mo-94	9.2500	93.90508500	0.0905	9.3715E-03
1	420950	Mo-95	15.9200	94.90584100	0.1575	1.6301E-02
1	420960	Mo-96	16.6800	95.90467800	0.1668	1.7259E-02
1	420970	Mo-97	9.5500	96.90602000	0.0965	9.9847E-03

1	420980	Mo-98	24.1300	97.90540700	0.2463	2.5488E-02
1	421000	Mo-100	9.6300	99.90748000	0.1003	1.0380E-02
1	481060	Cd-106	1.2500	105.90546000	0.0118	1.2189E-05
1	481080	Cd-108	0.8900	107.90418000	0.0085	8.8421E-06
1	481100	Cd-110	12.4900	109.90300500	0.1221	1.2639E-04
1	481110	Cd-111	12.8000	110.90418200	0.1263	1.3070E-04
1	481120	Cd-112	24.1300	111.90275800	0.2402	2.4862E-04
1	481130	Cd-113	12.2200	112.90440200	0.1227	1.2703E-04
1	481140	Cd-114	28.7300	113.90335800	0.2911	3.0130E-04
1	481160	Cd-116	7.4900	115.90475600	0.0772	7.9930E-05
1	501120	Sn-112	0.9700	111.90482000	0.0091	3.0203E-01
1	501140	Sn-114	0.6500	113.90276100	0.0062	2.0600E-01
1	501150	Sn-115	0.3600	114.90334500	0.0035	1.1510E-01
1	501160	Sn-116	14.5300	115.90174300	0.1415	4.6858E+00
1	501170	Sn-117	7.6800	116.90295300	0.0754	2.4981E+00
1	501180	Sn-118	24.2200	117.90160600	0.2399	7.9455E+00
1	501190	Sn-119	8.8500	118.90330900	0.0884	2.9280E+00
1	501200	Sn-120	32.5900	119.90219700	0.3283	1.0873E+01
1	501220	Sn-122	4.6300	121.90344000	0.0474	1.5705E+00
1	501240	Sn-124	5.7900	123.90527400	0.0603	1.9962E+00
1	621440	Sm-144	3.1000	143.91199700	0.0297	6.1418E-04
1	621470	Sm-147	15.0000	146.91489400	0.1466	3.0339E-03
1	621480	Sm-148	11.3000	147.91481900	0.1112	2.3011E-03
1	621490	Sm-149	13.8000	148.91718100	0.1367	2.8292E-03
1	621500	Sm-150	7.4000	149.91727300	0.0738	1.5273E-03
1	621520	Sm-152	26.7000	151.91972900	0.2698	5.5842E-03
1	621540	Sm-154	22.7000	153.92220600	0.2324	4.8102E-03
1	641520	Gd-152	0.2000	151.91978800	0.0019	1.9998E-05
1	641540	Gd-154	2.1800	153.92086200	0.0213	2.2085E-04
1	641550	Gd-155	14.8000	154.92261900	0.1458	1.5091E-03
1	641560	Gd-156	20.4700	155.92211900	0.2030	2.1007E-03
1	641570	Gd-157	15.6500	156.92395700	0.1562	1.6164E-03
1	641580	Gd-158	24.8400	157.92410000	0.2495	2.5819E-03
1	641600	Gd-160	21.8600	159.92705000	0.2223	2.3010E-03
1	721740	Hf-174	0.1620	173.94004200	0.0016	1.1438E-04
1	721760	Hf-176	5.2060	175.94140400	0.0513	3.7180E-03
1	721770	Hf-177	18.6060	176.94321900	0.1845	1.3363E-02
1	721780	Hf-178	27.2970	177.94369700	0.2721	1.9717E-02
1	721790	Hf-179	13.6290	178.94581300	0.1366	9.8986E-03
1	721800	Hf-180	35.1000	179.94654800	0.3539	2.5638E-02
1	731800	Ta-180	0.0120	179.94746200	0.0001	4.9405E-05
1	731810	Ta-181	99.9880	180.94799400	0.9999	4.1395E-01
1	741800	W-180	0.1200	179.94670200	0.0012	2.4313E-04
1	741820	W-182	26.3000	181.94820200	0.2603	5.3878E-02
1	741830	W-183	14.2800	182.95022100	0.1421	2.9415E-02
1	741840	W-184	30.7000	183.95092900	0.3072	6.3584E-02
1	741860	W-186	28.6000	185.95435800	0.2893	5.9880E-02
1	822040	Pb-204	1.4000	203.97302000	0.0138	2.8526E-03
1	822060	Pb-206	24.1000	205.97444000	0.2396	4.9588E-02
1	822070	Pb-207	22.1000	206.97587100	0.2207	4.5694E-02
1	822080	Pb-208	52.4000	207.97662700	0.5259	1.0887E-01
2	902320	Th-232	100.0000	232.03805100	1.0000	1.4490E-02
2	922340	U-234	0.0055	234.04094700	0.0001	3.9180E-07
2	922350	U-235	0.7200	235.04392400	0.0071	5.1510E-05
2	922380	U-238	99.2745	238.05078500	0.9928	7.1931E-03

Total

2072.474685

H451 GRAPHITE: TRIGA Fuel Element Graphite End Reflectors

- (1) Reference: R.W. Johnson and G.B. Engle, "Properties of Unirradiated Fuel Element Graphites H-451 and TS-1240," GA-A13752, UC-77, January 31, 1976.
 (2) Reference: F.W. Walker, et al., "Nuclides and Isotopes: Chart of the Nuclides," General Electric Co., 1989.

Note: Maximum ppm value for impurities are used for either H-451 or TS-1240.

Total Grams/Element= 450.000 g
 Density= 1.850 g/cc
 Volume= 243.243 cc

Element	Impurity (ppm)	Weight Fraction (wt%)	Mass (gm/fuel element)
Li	0.45		2.0250E-04
Be	0.005		2.2500E-06
B	2.5		1.1250E-03
C		100.00	4.5000E+02
Na	10.4		4.6800E-03
Mg	1		4.5000E-04
Al	4.1		1.8450E-03
Si	26		1.1700E-02
P	1		4.5000E-04
S	9.4		4.2300E-03
Cl	3		1.3500E-03
K	3		1.3500E-03
Ca	22.5		1.0125E-02
Sc	0.01		4.5000E-06
Ti	16		7.2000E-03
V	18.9		8.5050E-03
Cr	1		4.5000E-04
Mn	1		4.5000E-04
Fe	11.1		4.9950E-03
Co	4		1.8000E-03
Ni	4.6		2.0700E-03
Cu	0.47		2.1150E-04
Zn	1		4.5000E-04
Br	0		0.0000E+00
Rb	1		4.5000E-04
Sr	0.47		2.1150E-04
Zr	0.5		2.2500E-04
Nb	1.74		7.8300E-04
Mo	1		4.5000E-04
Ag	0.5		2.2500E-04
Cd	0.5		2.2500E-04
In	1		4.5000E-04
Sn	1		4.5000E-04
Sb	1		4.5000E-04
Cs	1		4.5000E-04
Ba	2.9		1.3050E-03
La	1.38		6.2100E-04
Ce	0.56		2.5200E-04
Pr	0.64		2.8800E-04
Nd	0.36		1.6200E-04
Sm	0.61		2.7450E-04
Eu	0.07		3.1500E-05
Gd	0.08		3.6000E-05
Tb	0.26		1.1700E-04
Dy	0.16		7.2000E-05
Ho	0.08		3.6000E-05
Er	0.04		1.8000E-05
Tm	0.04		1.8000E-05
Yb	0.06		2.7000E-05
Lu	0.02		9.0000E-06
Hf	0.17		7.6500E-05
Ta	0.35		1.5750E-04
W	25.5		1.1475E-02

Tl	1		4.5000E-04
Pb	6.9		3.1050E-03
Bi	1		4.5000E-04
Total		100.00000	450.086996
			450.000000
		Additional grams due to impurities=	0.086996

INITIAL TOTAL MASS BY ISOTOPE PER FUEL ELEMENT

ORIGEN CONC ID	ORIGEN ISOTOPE ID	Isotope	Atom Fraction (at%)	Atomic Weight (gm/mole)	Weight Fraction (#)	Mass (gm/fuel element)
1	30060	Li-6	7.5000	6.01512200	0.0650	1.3162E-05
1	30070	Li-7	92.5000	7.01600300	0.9350	1.8934E-04
1	40090	Be-9	100.0000	9.01218220	1.0000	2.2500E-06
1	50100	B-10	19.9000	10.01293720	0.1843	2.0735E-04
1	50110	B-11	80.1000	11.00930560	0.8157	9.1765E-04
1	60120	C-12	98.9000	12.00000000	0.9881	4.4464E+02
1	60130	C-13	1.1000	13.00335483	0.0119	5.3590E+00
1	110230	Na-23	100.0000	22.98970000	1.0000	4.6800E-03
1	120240	Mg-24	78.9900	23.98504200	0.7795	3.5077E-04
1	120250	Mg-25	10.0000	24.98583700	0.1028	4.6260E-05
1	120260	Mg-26	11.0100	25.98259400	0.1177	5.2965E-05
1	130270	Al-27	100.0000	26.98153800	1.0000	1.8450E-03
1	140280	Si-28	92.2300	27.97692700	0.9187	1.0749E-02
1	140290	Si-29	4.6700	28.97649400	0.0482	5.6372E-04
1	140300	Si-30	3.1000	29.97377000	0.0331	3.8709E-04
1	150310	P-31	100.0000	30.97376200	1.0000	4.5000E-04
1	160320	S-32	95.0200	31.97207050	0.9475	4.0078E-03
1	160330	S-33	0.7500	32.97145830	0.0077	3.2622E-05
1	160340	S-34	4.2100	33.96786650	0.0446	1.8865E-04
1	160360	S-36	0.0200	35.96708080	0.0002	9.4897E-07
1	170350	Cl-35	75.7700	34.96885000	0.7474	1.0089E-03
1	170370	Cl-37	24.2300	36.96590000	0.2526	3.4107E-04
1	190390	K-39	93.2581	38.96370000	0.9294	1.2547E-03
1	190400	K-40	0.0117	39.96200000	0.0001	1.6144E-07
1	190410	K-41	6.7302	40.96180000	0.0705	9.5188E-05
1	200400	Ca-40	96.9410	39.96259000	0.9666	9.7870E-03
1	200420	Ca-42	0.6470	41.95860000	0.0068	6.8583E-05
1	200430	Ca-43	0.1350	42.95870000	0.0014	1.4651E-05
1	200440	Ca-44	2.0860	43.95548000	0.0229	2.3164E-04
1	200460	Ca-46	0.0040	45.95368700	0.0000	4.6438E-07
1	200480	Ca-48	0.1870	47.95253500	0.0022	2.2654E-05
1	210450	Sc-45	100.0000	44.95590000	1.0000	4.5000E-06
1	220460	Ti-46	8.0000	45.95263000	0.0768	5.5283E-04
1	220470	Ti-47	7.3000	46.95176400	0.0716	5.1543E-04
1	220480	Ti-48	73.8000	47.94794700	0.7391	5.3213E-03
1	220490	Ti-49	5.5000	48.94787100	0.0562	4.0485E-04
1	220500	Ti-50	5.4000	49.94479200	0.0563	4.0558E-04
1	230500	V-50	0.2500	49.94716200	0.0025	2.0848E-05
1	230510	V-51	99.7500	50.94390000	0.9975	8.4842E-03
1	240500	Cr-50	4.3450	49.94604700	0.0417	1.8782E-05
1	240520	Cr-52	83.7900	51.94051100	0.8370	3.7665E-04
1	240530	Cr-53	9.5000	52.94065200	0.0967	4.3527E-05
1	240540	Cr-54	2.3650	53.93888400	0.0245	1.1040E-05
1	250550	Mn-55	100.0000	54.93804800	1.0000	4.5000E-04
1	260540	Fe-54	5.9000	53.93961300	0.0570	2.8466E-04
1	260560	Fe-56	91.7200	55.93494000	0.9187	4.5889E-03
1	260570	Fe-57	2.1000	56.93539000	0.0214	1.0695E-04
1	260580	Fe-58	0.2800	57.93327600	0.0029	1.4509E-05
1	270590	Co-59	100.0000	58.93319800	1.0000	1.8000E-03
1	280580	Ni-58	68.2700	57.93534600	0.6739	1.3951E-03
1	280600	Ni-60	26.1000	59.93078800	0.2665	5.5171E-04
1	280610	Ni-61	1.1300	60.93105800	0.0117	2.4285E-05
1	280620	Ni-62	3.5900	61.92834600	0.0379	7.8416E-05
1	280640	Ni-64	0.9100	63.92796800	0.0099	2.0519E-05
1	290630	Cu-63	69.1700	62.92959900	0.6850	1.4488E-04
1	290650	Cu-65	30.8300	64.92779200	0.3150	6.6624E-05

1	300640	Zn-64	48.6000	63.92914400	0.4751	2.1379E-04
1	300660	Zn-66	27.9000	65.92603500	0.2813	1.2657E-04
1	300670	Zn-67	4.1000	66.92712900	0.0420	1.8882E-05
1	300680	Zn-68	18.8000	67.92484600	0.1953	8.7871E-05
1	300700	Zn-70	0.6000	69.92532400	0.0064	2.8870E-06
1	350790	Br-79	50.6900	78.91833600	0.5007	0.0000E+00
1	350810	Br-81	49.3100	80.91629000	0.4993	0.0000E+00
1	370850	Rb-85	72.1600	84.91179400	0.7169	3.2261E-04
1	370870	Rb-87	27.8400	86.90910000	0.2831	1.2739E-04
1	380840	Sr-84	0.5600	83.91342900	0.0054	1.1343E-06
1	380860	Sr-86	9.8600	85.90925600	0.0967	2.0448E-05
1	380870	Sr-87	7.0000	86.90888300	0.0694	1.4685E-05
1	380880	Sr-88	82.5800	87.90561800	0.8285	1.7523E-04
1	400900	Zr-90	51.4500	89.90470200	0.5071	1.1409E-04
1	400910	Zr-91	11.2200	90.90564300	0.1118	2.5157E-05
1	400920	Zr-92	17.1500	91.90503800	0.1728	3.8876E-05
1	400940	Zr-94	17.3800	93.90631400	0.1789	4.0255E-05
1	400960	Zr-96	2.8000	95.90827500	0.0294	6.6235E-06
1	410930	Nb-93	100.0000	92.90637600	1.0000	7.8300E-04
1	420920	Mo-92	14.8400	91.90680700	0.1422	6.3978E-05
1	420940	Mo-94	9.2500	93.90508500	0.0905	4.0746E-05
1	420950	Mo-95	15.9200	94.90584100	0.1575	7.0874E-05
1	420960	Mo-96	16.6800	95.90467800	0.1668	7.5039E-05
1	420970	Mo-97	9.5500	96.90602000	0.0965	4.3412E-05
1	420980	Mo-98	24.1300	97.90540700	0.2463	1.1082E-04
1	421000	Mo-100	9.6300	99.90748000	0.1003	4.5131E-05
1	471070	Ag-107	51.8390	106.90509000	0.5138	1.1560E-04
1	471090	Ag-109	48.1610	108.90475500	0.4862	1.0940E-04
1	481060	Cd-106	1.2500	105.90546000	0.0118	2.6497E-06
1	481080	Cd-108	0.8900	107.90418000	0.0085	1.9222E-06
1	481100	Cd-110	12.4900	109.90300500	0.1221	2.7475E-05
1	481110	Cd-111	12.8000	110.90418200	0.1263	2.8414E-05
1	481120	Cd-112	24.1300	111.90275800	0.2402	5.4047E-05
1	481130	Cd-113	12.2200	112.90440200	0.1227	2.7616E-05
1	481140	Cd-114	28.7300	113.90335800	0.2911	6.5500E-05
1	481160	Cd-116	7.4900	115.90475600	0.0772	1.7376E-05
1	491130	In-113	4.3000	112.90406000	0.0423	1.9027E-05
1	491150	In-115	95.7000	114.90387600	0.9577	4.3097E-04
1	501120	Sn-112	0.9700	111.90482000	0.0091	4.1037E-06
1	501140	Sn-114	0.6500	113.90276100	0.0062	2.7990E-06
1	501150	Sn-115	0.3600	114.90334500	0.0035	1.5638E-06
1	501160	Sn-116	14.5300	115.90174300	0.1415	6.3666E-05
1	501170	Sn-117	7.6800	116.90295300	0.0754	3.3942E-05
1	501180	Sn-118	24.2200	117.90160600	0.2399	1.0796E-04
1	501190	Sn-119	8.8500	118.90330900	0.0884	3.9782E-05
1	501200	Sn-120	32.5900	119.90219700	0.3283	1.4773E-04
1	501220	Sn-122	4.6300	121.90344000	0.0474	2.1338E-05
1	501240	Sn-124	5.7900	123.90527400	0.0603	2.7122E-05
1	511210	Sb-121	57.4000	120.90382000	0.5700	2.5649E-04
1	511230	Sb-123	42.6000	122.90421500	0.4300	1.9351E-04
1	551330	Cs-133	100.0000	132.90544000	1.0000	4.5000E-04
1	561300	Ba-130	0.1060	129.90629000	0.0010	1.3086E-06
1	561320	Ba-132	0.1010	131.90504000	0.0010	1.2660E-06
1	561340	Ba-134	2.4200	133.90449000	0.0236	3.0794E-05
1	561350	Ba-135	6.5930	134.90567000	0.0648	8.4522E-05
1	561360	Ba-136	7.8500	135.90456000	0.0777	1.0138E-04
1	561370	Ba-137	11.2300	136.90582000	0.1120	1.4610E-04
1	561380	Ba-138	71.7000	137.90524000	0.7200	9.3963E-04
1	571380	La-138	0.0900	137.90711000	0.0009	5.5488E-07
1	571390	La-139	99.9100	138.90634700	0.9991	6.2045E-04
1	581360	Ce-136	0.1900	135.90714000	0.0018	4.6442E-07
1	581380	Ce-138	0.2500	137.90599000	0.0025	6.2006E-07
1	581400	Ce-140	88.4300	139.90543400	0.8830	2.2251E-04
1	581420	Ce-142	11.1300	141.90924100	0.1127	2.8407E-05
1	591410	Pr-141	1.0000	140.90764800	1.0000	2.8800E-04
1	601420	Nd-142	27.1300	141.90771900	0.2669	4.3239E-05
1	601430	Nd-143	12.1800	142.90981000	0.1207	1.9549E-05
1	601440	Nd-144	23.8000	143.91008300	0.2375	3.8467E-05
1	601450	Nd-145	8.3000	144.91257000	0.0834	1.3508E-05
1	601460	Nd-146	17.1900	145.91311300	0.1739	2.8170E-05
1	601480	Nd-148	5.7600	147.91688900	0.0591	9.5689E-06
1	601500	Nd-150	5.6400	149.92088800	0.0586	9.4965E-06

1	621440	Sm-144	3.1000	143.91199700	0.0297	8.1446E-06
1	621470	Sm-147	15.0000	146.91489400	0.1466	4.0232E-05
1	621480	Sm-148	11.3000	147.91481900	0.1112	3.0514E-05
1	621490	Sm-149	13.8000	148.91718100	0.1367	3.7517E-05
1	621500	Sm-150	7.4000	149.91727300	0.0738	2.0253E-05
1	621520	Sm-152	26.7000	151.91972900	0.2698	7.4052E-05
1	621540	Sm-154	22.7000	153.92220600	0.2324	6.3788E-05
1	631510	Eu-151	47.8000	150.91984600	0.4747	1.4953E-05
1	631530	Eu-153	52.2000	152.92122600	0.5253	1.6547E-05
1	641520	Gd-152	0.2000	151.91978800	0.0019	6.9559E-08
1	641540	Gd-154	2.1800	153.92086200	0.0213	7.6817E-07
1	641550	Gd-155	14.8000	154.92261900	0.1458	5.2491E-06
1	641560	Gd-156	20.4700	155.92211900	0.2030	7.3069E-06
1	641570	Gd-157	15.6500	156.92395700	0.1562	5.6222E-06
1	641580	Gd-158	24.8400	157.92410000	0.2495	8.9806E-06
1	641600	Gd-160	21.8600	159.92705000	0.2223	8.0035E-06
1	651590	Tb-159	100.0000	158.92534400	1.0000	1.1700E-04
1	661560	Dy-156	0.0600	155.92428000	0.0006	4.1452E-08
1	661580	Dy-158	0.1000	157.92440300	0.0010	6.9974E-08
1	661600	Dy-160	2.3400	159.92519400	0.0230	1.6581E-06
1	661610	Dy-161	18.9000	160.92693100	0.1872	1.3476E-05
1	661620	Dy-162	25.5000	161.92679600	0.2541	1.8296E-05
1	661630	Dy-163	24.9000	162.92872900	0.2497	1.7976E-05
1	661640	Dy-164	28.2000	163.92917300	0.2845	2.0483E-05
1	671650	Ho-165	100.0000	164.93032000	1.0000	3.6000E-05
1	681620	Er-162	0.1400	161.92877600	0.0014	2.4397E-08
1	681640	Er-164	1.6100	163.92919900	0.0158	2.8404E-07
1	681660	Er-166	33.6000	165.93029200	0.3333	6.0001E-06
1	681670	Er-167	22.9500	166.93204700	0.2291	4.1230E-06
1	681680	Er-168	26.8000	167.93237000	0.2691	4.8435E-06
1	681700	Er-170	14.9000	169.93546300	0.1514	2.7250E-06
1	691690	Tm-169	100.0000	168.93421300	1.0000	1.8000E-05
1	701680	Yb-168	0.1300	167.93389700	0.0013	3.4065E-08
1	701700	Yb-170	3.0500	169.93476100	0.0300	8.0875E-07
1	701710	Yb-171	14.3000	170.93632500	0.1413	3.8142E-06
1	701720	Yb-172	21.9000	171.93638000	0.2176	5.8755E-06
1	701730	Yb-173	16.1200	172.93820900	0.1611	4.3500E-06
1	701740	Yb-174	31.8000	173.93886100	0.3197	8.6309E-06
1	701760	Yb-176	12.7000	175.94256500	0.1291	3.4866E-06
1	711750	Lu-175	97.4100	174.94077100	0.9740	8.7656E-06
1	711760	Lu-176	2.5900	175.94268000	0.0260	2.3440E-07
1	721740	Hf-174	0.1620	173.94004200	0.0016	1.2077E-07
1	721760	Hf-176	5.2060	175.94140400	0.0513	3.9258E-06
1	721770	Hf-177	18.6060	176.94321900	0.1845	1.4111E-05
1	721780	Hf-178	27.2970	177.94369700	0.2721	2.0819E-05
1	721790	Hf-179	13.6290	178.94581300	0.1366	1.0453E-05
1	721800	Hf-180	35.1000	179.94654800	0.3539	2.7071E-05
1	731800	Ta-180	0.0120	179.94746200	0.0001	1.8796E-08
1	731810	Ta-181	99.9880	180.94799400	0.9999	1.5748E-04
1	741800	W-180	0.1200	179.94670200	0.0012	1.3478E-05
1	741820	W-182	26.3000	181.94820200	0.2603	2.9867E-03
1	741830	W-183	14.2800	182.95022100	0.1421	1.6306E-03
1	741840	W-184	30.7000	183.95092900	0.3072	3.5248E-03
1	741860	W-186	28.6000	185.95435800	0.2893	3.3194E-03
1	812030	Tl-203	29.5200	202.97232000	0.2932	1.3192E-04
1	812050	Tl-205	70.4800	204.97440100	0.7068	3.1808E-04
1	822040	Pb-204	1.4000	203.97302000	0.0138	4.2790E-05
1	822060	Pb-206	24.1000	205.97444000	0.2396	7.4382E-04
1	822070	Pb-207	22.1000	206.97587100	0.2207	6.8541E-04
1	822080	Pb-208	52.4000	207.97662700	0.5259	1.6330E-03
1	832090	Bi-209	100.0000	208.96037300	1.0000	4.5000E-04
Total						450.086996